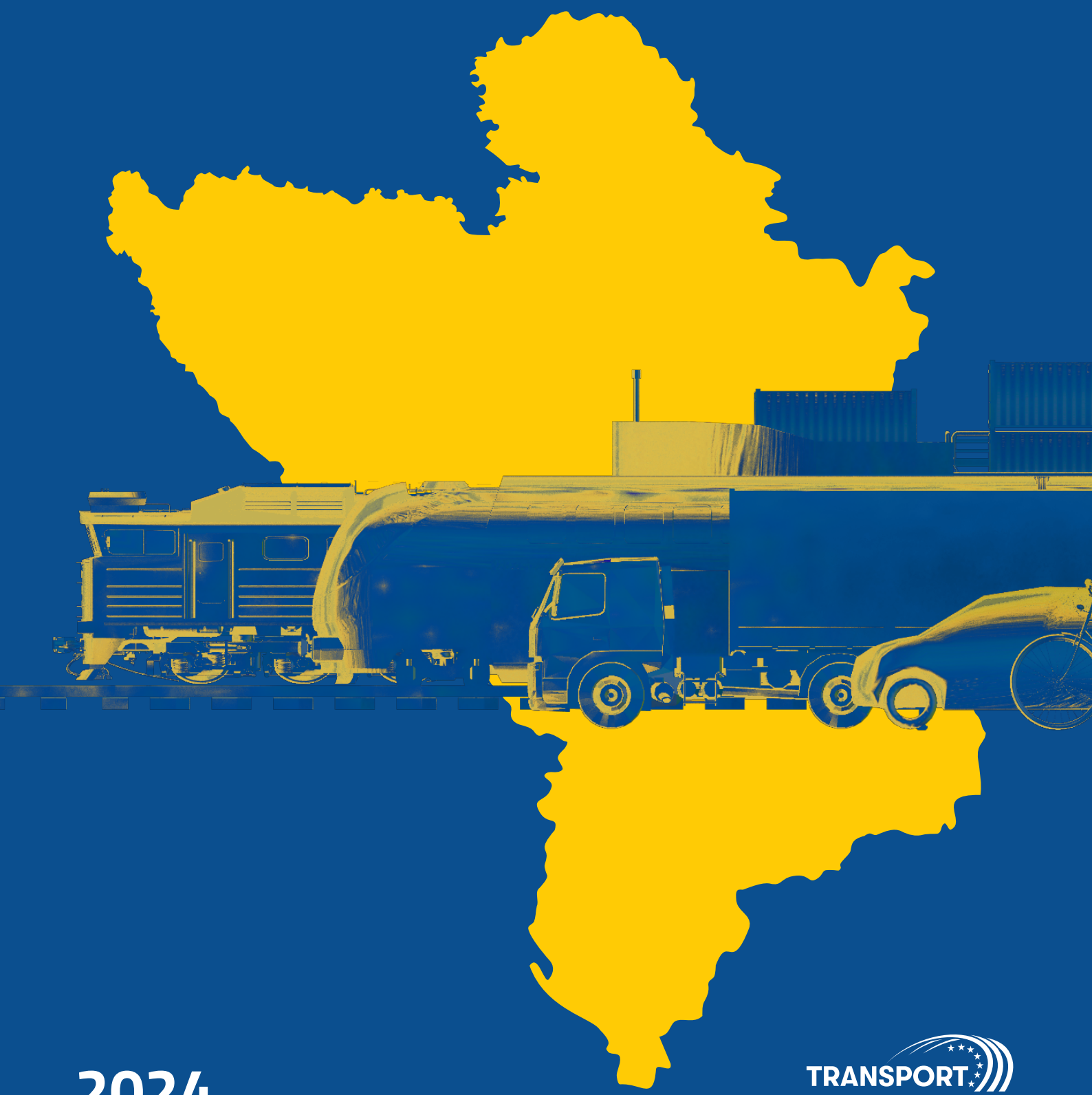
Developement of Indicative TEN-T Extension of Comprehensive and Core Network in Western Balkans



2024

TRANSPORT COMMUNITY

Developement of Indicative TEN-T Extension of Comprehensive and Core Network in Western Balkans

2024

TRANSPORT COMMUNITY

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Glossary of Terms

AND	European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways
ADR	Agreement concerning the International Carriage of Dangerous Goods by Road
AF	Alternative Fuels
AGN	European Agreement on Main Inland Waterways of International Importance
AIS	Automatic Identification System
Annex 1	Annex 1 of the Transport Community Treaty
BHMAC	Bosnia and Herzegovina Mine Action Centre
CBA	Cost Benefit Analysis
CEF	Connecting Europe Facility
CEFTA	Central European Free Trade Agreement
CEMT/ ECMT	European Conference of Ministers of Transport
CEN	European Committee for Standardisation
CESNI	European Committee for drawing up standards in the field of inland navigation
COTIF	Convention concerning International Carriage by Railway
EBRD	European Bank for Reconstruction and Development
EC	European Commission
EIA	Environmental Impact Assessment
EIB	European Investment Bank
EIP	EU's Economic and Investment Plan for the Western Balkans
ERTMS	European Railway Traffic Management System
ETCS	European Train Control System
EU	European Union
EUSAIR	EU Strategy for the Adriatic – Ionian Region
EVCS	Electric Vehicles Charging Station
IFI	International Financial Institution
IPA	Instrument for Pre-Accession
ITS	Intelligent Transport Systems
IRI	International Roughness Index
IWW	Inland Waterways
JBCP	Joint Border Crossing Points
KPIs	Key performance indicators
LNG	Liquified Natural Gas
NAIADES	Navigation and Inland Waterway Action and Development in Europe

RID	Regulations concerning the International Carriage of Dangerous Goods by Railway
RIS	River Information System
RP	Regional Partners (Albania, Bosnia and Herzegovina, Kosovo*, North Macedonia, Montenegro, Serbia)
RSC	Regional Steering Committee
SEE	South East Europe
SLA	Service Level Agreement
SPP	Single Project Pipeline
TC	Transport Community
TCPS	The Transport Community Permanent Secretariat
TEN-T	Trans-European Networks Transport
TODIS	Transport Observatory Database/Information System
VHF	Very High Frequency
VTMIS	Vessel Traffic Management Information System
VTS	Vessel Traffic Services
WB	Western Balkans
WBEM	Western Balkan – Eastern Mediterranean
WBIF	Western Balkans Investment Framework

* This designation is without prejudice to positions on status and is in line with UNSCR 1244 (1999) and the ICJ Opinion on the Kosovo declaration of independence.

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1. Foreword

As we mark the fifth anniversary of the Treaty Establishing the Transport Community, 2024 represents a milestone towards a more connected, resilient, and integrated transport network across the Western Balkans and beyond. Over the past five years, we have worked together to lay the foundation for sustainable, modern, and efficient transport systems through comprehensive Action Plans. Developed collaboratively by the Transport Community, regional leaders, and experts, these plans demonstrate the region's commitment to EU integration, providing roadmaps that align transport policies with EU standards and best practices.

While the achievements are commendable, progress has varied across the region, highlighting the need for renewed effort. This disparity reminds us that, while progress is evident, more work is required to integrate fully within the Transport Community.

A New Political Reality and Unprecedented Momentum

The current political landscape offers an exceptional opportunity to accelerate progress. With advancements in the EU integration process and active participation from observers such as Georgia, Moldova, and Ukraine, the region now stands at an important moment. The New Growth Plan for the Western Balkans further strengthens this momentum, while the 2024 revision of the TEN-T Regulation aims to reduce transport's environmental impact, increase safety, and improve resilience. For the first time, this revision also integrates the six Western Balkan partners into the newly established Western Balkans-Eastern Mediterranean European Transport Corridor. In this context, fast-tracking the transposition of EU standards and advancing reforms is essential.

In line with Article 8 of the Treaty, the Regional Steering Committee reports annually on progress in extending the trans-European transport network (TEN-T) across the Western Balkans. The region has made tangible progress in connectivity, completing new projects across all transport modes. However, while progress has been made towards meeting TEN-T indicators, it is insufficient to achieve full compliance within the timelines set by the new Regulation 1679/2024, and the pace remains uneven.

The revised Regulation 1679/2024, which replaces Regulation 1315/2013, introduces key changes, including the establishment of the Western Balkans Eastern Mediterranean Core Corridor and new Key Performance Indicators/requirements that will influence project planning.

Despite significant EU funding through the Economic and Investment Plan and the New Growth Plan, a substantial funding gap remains, and cost overruns raise concerns about the region's capacity to meet both current and future funding needs. Strategic prioritisation will be crucial to optimise resources and maximise the economic returns of this investment package.

TRANSPORT COMMUNITY

For the Regional Steering Committee
Ms Jasmina Radonjic

For the Transport Community
Permanent Secretariat
Matej Zakonjšek

2. Executive Summary

1. **Progress towards compliance with specific key TEN-T indicators remained steady and, in some instances, even accelerated.** The Core Road Network compliance rate has increased by 9%, from 45% (in 2021) to 54% (to date). No less than 1,929 km of high-quality roads on the region's Core Network now comply with the TEN-T profile and quality standards. Due to the new road sections added to the Comprehensive Network in the latest TEN-T revision, the compliance rate has decreased from 70% in 2023 to 68% in 2024. It is important to note that the region does not conduct regular annual checks on road conditions, which may lead to discrepancies between reported data and actual conditions on the ground. Moving forward, establishing a consistent and systematic approach to annual road condition assessments will help ensure that data reflects current realities and effectively guides targeted improvements.

2. **Railway sector performance has been inconsistent.** An impressive surge has been observed in the train length indicator, soaring from 3.44% to 15.89%. Operating speed compliance on the Core Network increased from 15.79% to 17.24%. There has also been a notable increase in the railway axle load capacity on the Comprehensive Network by 5%, from 69.96% in 2023 to 73.49% in 2024**,** primarily due to maintenance. Meanwhile, other indicators have either stagnated or decreased slightly. Some of these developments may indicate shifts in baseline data or alterations in reporting methodologies, and additional annual data series may be required to establish a definitive trend in this regard.

3. **Infrastructure conditions.** The condition of the infrastructure across the Core Networks for both road and rail varies significantly. On the Road Core Network, 35% of the sections are rated in very good condition, with an additional 52% in good condition, leaving only 13% in average condition. This indicates that the majority of the road network is in relatively good shape. In contrast, the Rail Core Network faces more challenges. Here, only 39% of the sections are in good or very good condition, while 15% are rated as average. A concerning 46% of the rail network falls into poor or very poor condition, underscoring the need for continued investments and upgrades to improve these critical segments of the rail infrastructure.

4. **The waterborne and air transport sectors have exhibited remarkably consistent with the implementation of the KPI.** While recent infrastructure projects completed and ongoing don't directly impact KPIs, they significantly support infrastructure upkeep and service improvements. Addressing remaining compliance gaps requires a systematic, coordinated approach to ensure sustainable alignment with regional and international standards.

5. The ongoing rail and road infrastructure upgrades demonstrate a strong focus on enhancing the Core Network. Currently, 965 kilometres of rail lines are being upgraded—a significant increase from the 691 kilometres upgraded last year. All eighteen rail projects are strategically concentrated on the Core Network, reflecting the priority given to this crucial part of the transportation infrastructure. The total investment in these rail projects reaches EUR 3.612 billion. A substantial 40 projects are underway across the region on the road network. Of these, 32 projects are focused on the Core Network, while the remaining eight target the Comprehensive Network. These upgrades cover a combined road length of 1002 kilometres, with 662 kilometres dedicated to the Core Network and 379.7 kilometres on the Comprehensive Network. The overall financial commitment to these road projects is EUR 11.3 billion, of which EUR 8.3 billion is allocated to the Core Network and EUR 3.03 billion to the Comprehensive Network.

   This distribution of resources underscores the priority of the Core Network within the broader strategy, ensuring that it receives the bulk of the funding and development efforts.

6. **While the deterioration in road infrastructure conditions appears to have halted, the state of the railway network is not increasing and remains on a similar level, emphasising the urgency of implementing improved practices and increased maintenance budgets.** Compared with large projects, maintenance tends to be more cost-effective in the long run. Regular maintenance and timely repairs can extend the lifespan of infrastructure, thus reducing the need for costly replacements or extensive upgrades. Secondly, well-maintained infrastructure typically operates more efficiently and reliably, minimising disruptions and ensuring consistent service delivery. Moreover, maintenance projects are often quicker to implement and have a smaller environmental footprint than large-scale construction, contributing to sustainability goals.

7. The TEN-T compliance assessment for Western Balkans airports **highlights a gap in rail connectivity**, which is essential for meeting updated TEN-T requirements. While airports like Belgrade, Tirana, and Sarajevo comply with baseline terminal standards, the lack of direct rail links limits full multimodal integration. Airport project Tirana Airport's connection to the Durres-Tirana railway line is a positive step toward compliance, yet similar rail enhancements are needed at other Core Network airports. Clean fuel and digital infrastructure upgrades remain priorities for aligning with EU Green Deal objectives, as do emerging climate resilience measures to support sustainable and efficient airport operations. To achieve a fully integrated and resilient transport network, accelerating TEN-T compliance requires prioritising rail connectivity at Core Network airports, supported by targeted funding for rail-linked infrastructure and sustainable upgrades.

8. **Progress has been made in implementing the Economic and Investment Plan flagship projects, yet the pace of progress needs to improve.** Albania has made substantial headway on the Adriatic Ionian Corridor with the opening of Thumana - Kashar. The implementation of Corridor Vc continues steadily, but certain key sections along this route are experiencing delays. The Sarajevo - Podgorica link and Podgorica bypass have made some strides in the preparatory stage but have yet to secure funding for the execution phase. Overall, the EIP has unlocked substantial investments, but there is room for improvement in the pace of on-ground implementation.

   More focused, long-term planning in the region is needed to ensure coherence and consistency in investment policies. Such progress can be effectively facilitated by aligning with the relevant strategic documents established at national, regional, or European levels, such as sectoral transport strategies, a Five-year rolling work plan, EUSAIR, EUSDR or Smart and Sustainable Mobility Strategy.

9. **Progress has been made in TEN-T compliance criteria requiring policy reform and horizontal action (ITS, tolling interoperability, road safety), but tangible results on the ground have yet to materialise.** This has mainly been achieved within the framework of the dedicated Action Plans steered by the Transport Community. These once again proved to be essential tools for catalysing regional policy reforms. Nonetheless, a considerable amount of work lies ahead before that progress is translatable into quantifiable improvements on the TEN-T Network in the Western Balkans. These efforts will be supported further by the Growth Plan with its respective Growth Plan Agenda.

10. **Regional cooperation keeps improving, strengthening ties between regional partners and paving the way for the synchronised implementation of the TEN-T Network.** The regular meetings of the Technical Committees established under the Transport Community Treaty framework have been complemented by the region's inaugural sessions of the road and railway infrastructure managers. These initiatives represent vital strides toward the gradual harmonisation of investment policies among regional partners, thereby accelerating the delivery of projects having transboundary implications and impacts.

3. Scope and Methodology

The progress made by the South-East European Parties in aligning their infrastructure with TEN-T standards is monitored through a tracking system established under Article 8 of the Transport Community Treaty. This system mandates the Regional Steering Committee to produce dedicated annual reports for submission to the Ministerial Council. ([...] *"The Regional Steering Committee shall report every year to the Ministerial Council on the implementation of the TEN-T described in this Treaty. Technical Committees shall assist the Regional Steering Committee in drawing up the report."*).

The monitored compliance indicators are set down under Arts. 12, 15, 18, 22, 25 and 28 (for the Comprehensive Network) and Art. 39 (for the Core Network) of Regulation No 1315/2013. The list of indicators is the same as in the previous year (thus facilitating progress tracking) and aligned with the EC's TEN-T biannual reporting.

This report is based on the TEN-T requirements outlined in the previous Regulation 1315/2013, as the data collection process began in May 2024, prior to the adoption of Regulation 1679/2024. With the update, the TEN-T Report for 2025 will follow the requirements established in the new regulation.

A key change under Regulation 1679/2024 is the establishment of the Western Balkan – Eastern Mediterranean Core Corridor (WBEM), along with enhancements to the Rhine-Danube Core Corridor. The WBEM corridor includes both EU Member States and Western Balkans partners, encompassing a network of critical transport infrastructure:

Main figures about WBEM:

- **Fourteen parties:** Eight EU Member States and six Western Balkan Partners
- Motorways - **5 750 km**
- Railways - **6 201 km**
- Seaports - **20 locations**
- Airports - **14 locations**
- Multimodal Freight Terminals - **14 locations**
- Urban nodes - **25 locations**

This expanded and upgraded WBEM corridor aims to strengthen connectivity between the Western Balkans and the European Union, supporting a more integrated and efficient trans-European transport network.

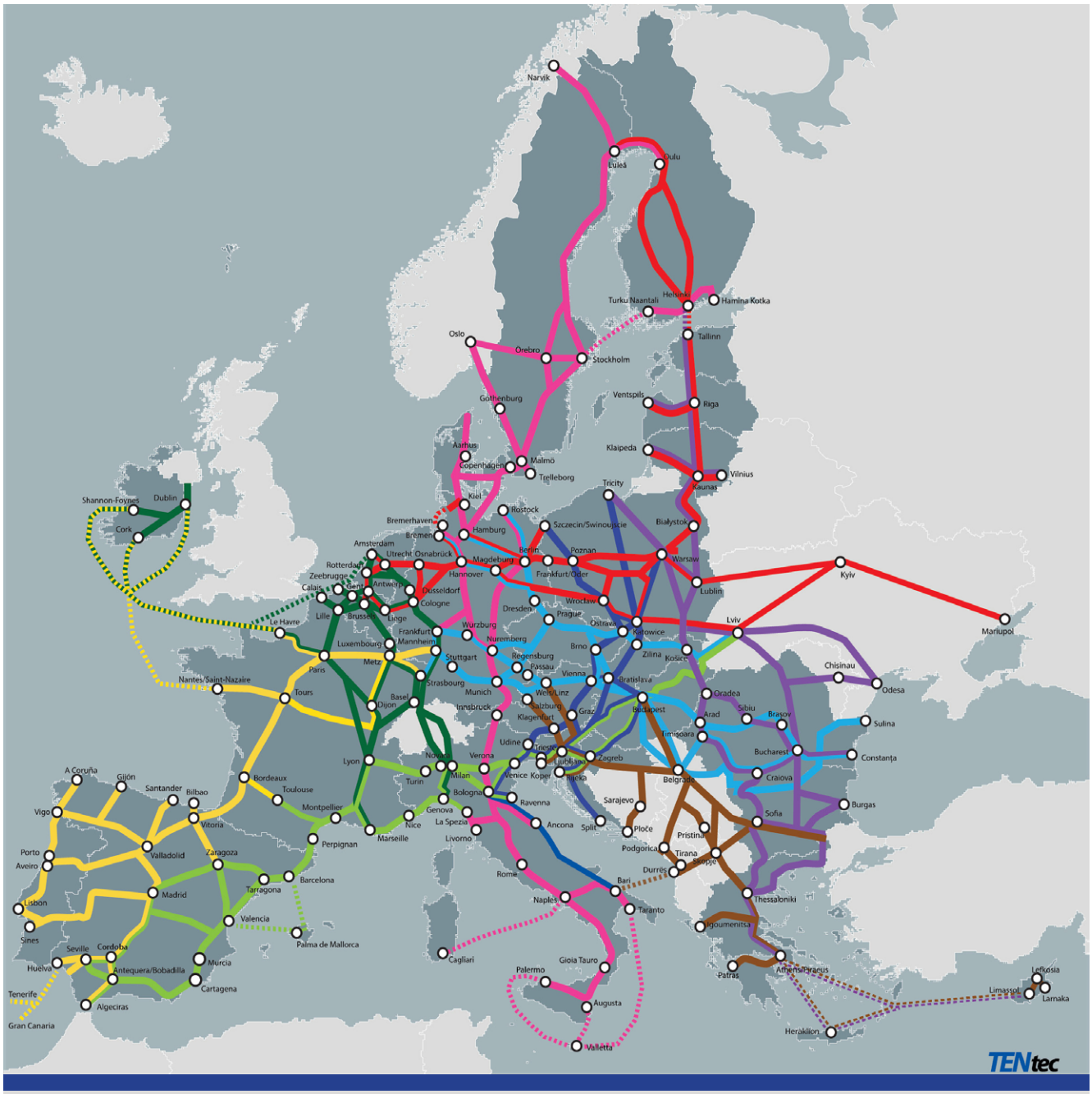
The Rhine–Danube Core Corridor is a vital part of the Trans-European Transport Network (TEN-T), aimed at strengthening connectivity and economic integration across Europe. In Serbia, it includes two important rail and road sections and the entire inland waterway network:

- Belgrade – Vršac: This section connects Belgrade to Vršac, leading toward the Romanian border and improving links between Serbia and Romania.
- Belgrade – Hungarian Border: Extending from Belgrade to Hungary's border, this section is shared by both the Rhine–Danube and Orient/East-Med Core Corridors. It plays a strategic role in enhancing transportation links between Central and Southeastern Europe.
- The entire Inland Waterway Network, comprising the Danube, Sava, and Tisa Rivers, are an integral part of the Rhine–Danube Corridor. This corridor is facilitating efficient, multimodal connectivity between Central and Eastern Europe.

These routes are essential for both freight and passenger transport, supporting trade, mobility, and economic development in the region.

Figure 1. Europe Network of Core Corridors

Map Finder Chart for European Transport Corridors



- ATLANTIC
- NORTH SEA – RHINE – MEDITERRANEAN
- NORTH SEA - BALTIC
- SCANDINAVIAN - MEDITERRANEAN
- BALTIC SEA - ADRIATIC SEA
- RHINE - DANUBE
- MEDITERRANEAN
- WESTERN BALKANS – EASTERN MEDITERRANEAN
- BALTIC SEA - BLACK SEA - AEGEAN SEA

The indicative extension of the TEN-T Core, the Extended Core and the Comprehensive Networks in the Western Balkans as provided for by the EU Regulation 2024/1679 and included in Annex I.1 to the Treaty establishing the Transport Community is given below.

Figure 2. Indicative trans-European transport network (TEN-T) extension of Comprehensive and Core Networks to the Western Balkans

Comprehensive Network:
Railways and airports,

Core Network:
Railways (passengers) and airports

Comprehensive and Core Networks:
Roads, ports, rail-road terminals and airports

Comprehensive and Core Networks:
Inland Waterways and Ports

Based on the latest developments and adjustments, the indicative extension of TEN-T in the Western Balkans currently includes:

- 5,593 km of TEN-T roads, of which 3,573 km on the Core Network;
- 4,293 km of TEN-T railways, of which 3,006 km on the Core Network;
- 1,260 km of TEN-T Core Network Inland Waterways;
- 8 inland waterways ports, 3 seaports, and
- 11 airports.

The network has been split into sections and nodes to facilitate performance monitoring. The fourth Trans-European Networks Transport (TEN-T) Annual Report relied on TODIS logistics, collecting and confirming data through the network of appointed Regional Users and through Technical Committees inputs. Consequently, some important modifications occurred as compared with the previous papers, namely:

- Adjustments in the network's layout resulting from the progress of projects on the ground (specifically for the road network), past modifications that have only now been captured properly and corrections of previous layout/reporting errors.

- Enhanced network granularity for the road and rail network, resulting in increased precision and heightened reporting accuracy.

With the latest TEN-T revision reflected in Regulation 1679/2024, rail and road networks, as well as inland waterway ports, have been changed by adding new sections or upgrading existing ones. This resulted in a longer extended TEN-T Core and Comprehensive Network in the Western Balkan.

Regulation 1679/2024 introduced several new requirements for TEN-T (Trans-European Transport Network) compliance. In addition to the existing six compliance indicators for railway infrastructure, six new indicators have been added. Key updates include criteria for waiting times at borders, loading gauge specifications, passenger design speed, identification of current or potential future capacity bottlenecks, addressing steep inclines, and a migration plan for constructing new railway lines with the European standard track gauge of 1,435 mm.

The revised TEN-T Regulation strengthens road compliance standards, introducing more frequent rest areas every 100 km on the comprehensive network and every 60 km on core and extended core networks, with parking and sanitary facilities. Safe and secure parking is now required every 150 km or within 3 km of exits on core networks to be fully compliant by 2040. Alternative fuels must be available on both core and comprehensive networks. Tolling standards now include general road user charges and weigh-in-motion systems to be installed every 300 km on busy routes. Urban nodes on the TEN-T network must adopt Sustainable Urban Mobility Plans (SUMPs) by 2025, report on mobility data like emissions and congestion annually, and develop multimodal hubs for efficient last-mile transport.

The new TEN-T Regulation places a stronger emphasis on environmental sustainability. It mandates that ports within the comprehensive network provide alternative fuelling facilities and adopt measures to enhance the environmental performance of vessels in port. This includes the installation of waste reception and degassing facilities, noise reduction systems, and initiatives to curb air and water pollution. For the inland waterway network, the regulation also prioritises maintaining Good Navigation Status by ensuring the efficient operation and upkeep of locks to minimise vessel waiting times, along with the timely publication of navigation status data.

With the revised TEN-T Regulation, Tivat Airport has been newly added to the TEN-T network, reflecting the growing focus on enhancing connectivity in the region. The updated regulation introduces two key compliance criteria for Core Network airports. Firstly, **Digital Infrastructure** mandates that airports integrate advanced ICT systems to improve operational efficiency, safety, and data exchange capabilities across various transport modes. This includes deploying real-time passenger information systems and multimodal data flows, enabling seamless connectivity and supporting overall operational resilience. Secondly, the regulation emphasizes **Climate Resilience**, requiring infrastructure projects to incorporate climate resilience measures. This involves conducting climate vulnerability and risk assessments to ensure airport infrastructure can withstand environmental challenges, including natural and human-made disasters, thus securing long-term functionality and adaptability.

4. TEN-T Network Compliance Assessment

4.1 Railway network

The legal basis for extending the TEN-T Core and Comprehensive Rail Network to the Western Balkans was originally set in Regulation No. 1315/2013, last updated in 2019. In 2024, however, Regulation 1315/2013 was repealed and replaced by Regulation 1679/2024. This new regulation will serve as the foundation for the upcoming 2025 annual TEN-T compliance assessment.

Due to the timing of data collection, this report is still based on the requirements from the previous regulations, assessing compliance based on six indicators rather than the twelve introduced in Regulation 1679/2024. This regulation lays out a long-term strategy for creating a unified trans-European transport network (TEN-T), covering all types of transportation infrastructure, with a strong focus on rail.

Specific requirements now include technical standards, infrastructure interoperability, and priority projects for TEN-T development. In particular, this regulation sets requirements for freight terminals, the implementation of the European Rail Traffic Management System (ERTMS), compliance with Technical Specifications for Interoperability (TSI), network electrification, and accessibility to freight terminals. It also outlines the conditions that railway infrastructure must meet, which include:

- deploying ERTMS;
- migrating to a 1,435 mm nominal track gauge;
- mitigating the impact of noise and vibration caused by rail transport, in particular through measures for rolling stock and infrastructure, including noise protection barriers;
- meeting infrastructure requirements and enhancing interoperability;
- improving the safety of level crossings;
- where appropriate, connecting railway transport infrastructure with inland waterway port infrastructure.

Regulation 1679/2024 introduced updates to the TEN-T Rail Core and Comprehensive Network, which fall into two main categories: new requirements and KPIs for the TEN-T and changes to the network itself. This report will focus on describing the network changes, while the newly introduced KPIs will be applied in next year's assessment.

Five changes were made under the latest revision of TEN-T Network.

- **Durres to Skopje**: The section from Durres in Albania to Skopje in North Macedonia (386 km) has been upgraded from the Comprehensive to the Extended Core Railway Network. There is an existing rail line from Durres to Lin (at the border between Albania and North Macedonia) and from Struga via Kicevo to Skopje in North Macedonia. However, the segment from Lin to Kicevo is a missing link. Completing this connection will boost regional connectivity, linking ports in the Adriatic and Black Seas.
- **Baja to Subotica**: The section from Baja in Hungary to Subotica in Serbia is now part of the TEN-T Rail Comprehensive Network. This missing link spans approximately 15 km and connects Baja (Hungary) with the Subotica (Serbia) – Szeged (Hungary) rail line. Its completion will significantly enhance cross-border traffic between Serbia and Hungary.
- **Novi Grad to Dobrljin**: The Novi Grad (Bosnia and Herzegovina) – Dobrljin (on the border with Croatia) section has been included in the TEN-T Rail Comprehensive Network. This 17 km electrified single-track line connects Bosnia and Herzegovina's rail network with Croatia's.

- **Pristina to Pristina Airport**: The section from Pristina to Pristina Airport in Kosovo is newly added to the TEN-T Rail Core Network. This 9 km line is scheduled for completion by 2040 and will enhance urban transport and passenger service quality.
- **Podgorica to Capljina**: The section from Podgorica in Montenegro to Capljina in Bosnia and Herzegovina has joined the TEN-T Rail Comprehensive Network. This route is about 210 km long, 120 km in Montenegro and 90 km in Bosnia and Herzegovina. While a 45 km segment from Podgorica to Niksic exists, the remaining 165 km is a missing link. This line will connect Bosnia and Herzegovina's rail backbone (Ploce-Samac) with Montenegro's main rail line (Bar to the border with Serbia), significantly improving regional connectivity. The target completion date is 2050.

Railway Compliance indicators

Based on the above requirements, this report covers compliance with the specific indicators as follows:

- Electrification - rail network to be electrified by 2030 (including sidings where necessary);
- Axle load: freight lines 22.5 t axle load by 2030;
- Line speed: Freight lines must allow 100 km/h by 2030 (no speed requirement for passenger lines);
- Train length: freight lines to allow for 740 m trains by 2030;
- Track gauge: nominal track gauge for new railway lines 1,435 mm;
- ERTMS / signalling system: Core network to be equipped with ERTMS by 2030.

In addition to assessing compliance with TEN-T requirements, the report also provides an assessment of the state of railway infrastructure based on the ratio between the operational and the design speed, as well as distances with small radius of curves and high inclines.

Primary infrastructure characteristics and physical state

Western Balkan Eastern Mediterranean Core Network Corridor (WBEM)

The extension of the TEN-T Core and Comprehensive Network to the Western Balkans began in 2016 as part of a network-wide revision. The latest update in 2024 introduced major changes to the railway network, including the historic establishment of the Western Balkan East Mediterranean (WBEM) Corridor for the first time.

Figure 3. WBEM Rail Core Corridor

The parts of the map pertaining to corridor alignment in third countries are indicative.

The WBEM Corridor spans six Regional Partners and eight EU member states, covering a total rail network length of 6,201 km. Alongside the Core and Comprehensive Network layers, a new layer, the Extended Core Network, has been introduced. In the Western Balkans, this includes the section from Durres (Albania) through Rogozhine, Pogradec, and Lin (Albania) via Struga (North Macedonia) and Kicevo to Skopje (North Macedonia), totalling 386 km. This section has been upgraded in status from the Comprehensive Network to the Extended Core, with a target completion date of 2040.

Rhine - Danube Core Network Corridor (RD)

As laid out in Regulation 1679/2024, the Rhine-Danube Core Network Corridor spans several key regions of Europe, linking Western Europe's Rhine River Basin with Central and Eastern Europe along the Danube River. The corridor primarily connects Germany, Austria, Slovakia, Hungary and continues eastward through Serbia, Romania and Bulgaria, reaching the Black Sea.

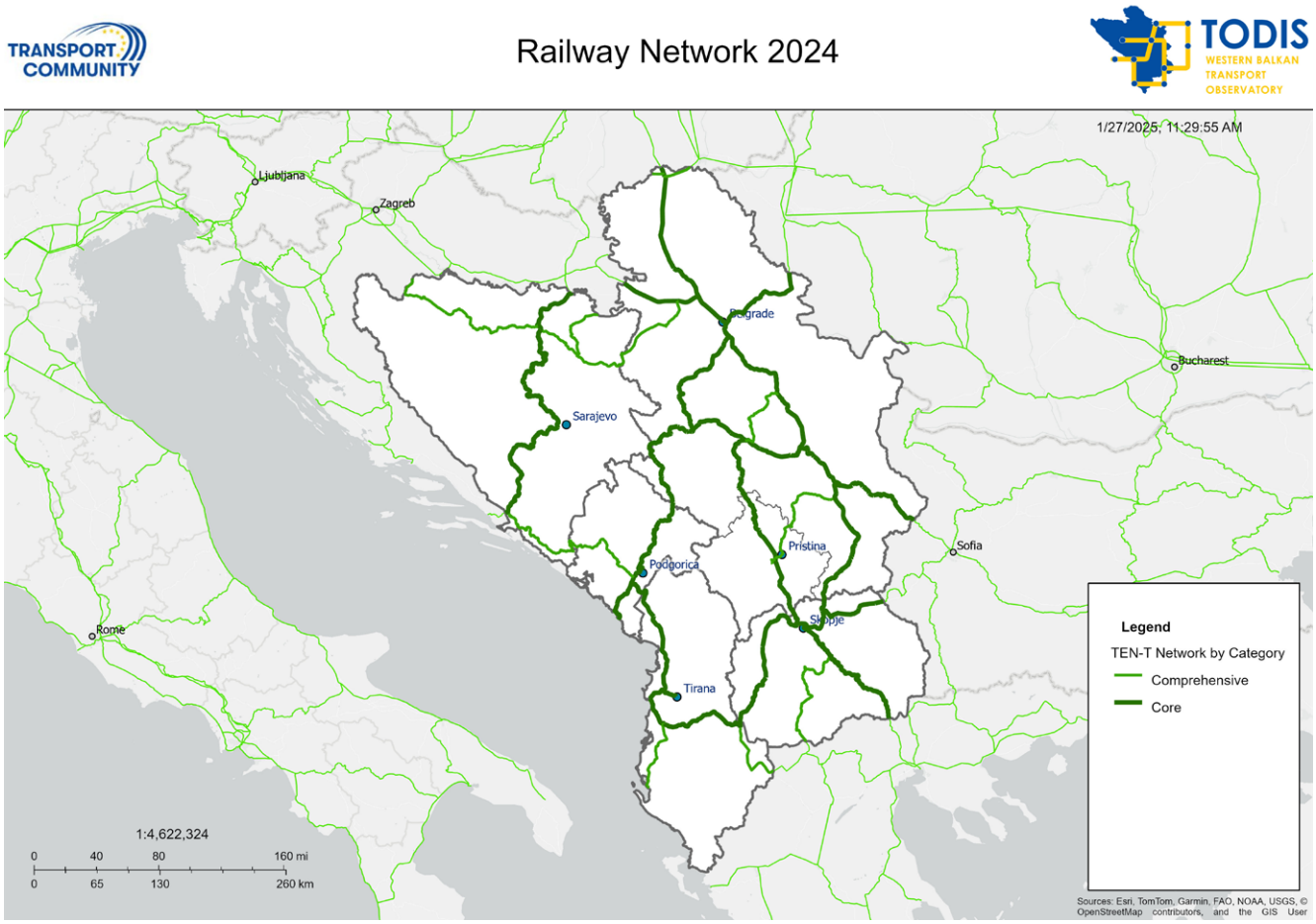
The corridor includes direct links with the Western Balkans. According to EU Regulation 1679/2024, specific rail and road extensions connect the Rhine-Danube Corridor to the Western Balkan region, enabling more integrated transport links.

Notable inclusions are in Serbia. Major rail in Serbia is integrated into the Corridor, particularly Belgrade - Subotica linking with Hungary to the north, and Belgrade – Vrsac linking with Romania to the east enhancing the cross-border movement of goods and passengers.

TEN-T Rail Core and Comprehensive Network

The TEN-T rail network consists of three layers: the Core, the Extended Core and the Comprehensive Network. The total length of the Railway Comprehensive Network is 4,293 km, of which 3,896 km exist. In total, there are 397 km of missing links. The Railway Core Network spans 3,006 km, with 2,882 km on the ground. The length of missing links is 124km. At the same time , 630 km of the Comprehensive Network and 630 km of the Core Network are under construction (and temporarily without traffic). Finally, 90 km of Core Network have been temporarily closed for safety reasons (lack of maintenance).

Figure 4. Indicative extension of the TEN-T Core and Comprehensive Rail Network to the Western Balkans



TEN-T Core and Comprehensive Network Compliance

Over the past 18 years, the region has invested over EUR 4 billion in rail projects. Yet, despite these significant investments, infrastructure conditions and service quality have seen limited improvement. Passenger rail services still average speeds of around 50 km/h, leaving them at a disadvantage compared to road transport. Freight rail faces similar issues, with lengthy delays for train preparation, loading, unloading, and border processing. As a result, rail traffic has sharply declined in both passenger and freight segments over the past decade, and the region's total annual freight volume remains stagnant at approximately 25 million tonnes.

This situation is driven by two main factors: inadequate infrastructure maintenance and the lack of policy reform. A 2018 study by CONNECTA, funded by the European Commission, estimated the annual cost of basic maintenance to be around EUR 50,000 per kilometre. However, due to budget constraints, regional partners can only allocate EUR 15,000 per kilometre per year. In addition, staffing shortages across all areas of railway operations and management have further contributed to the declining state of railway infrastructure.

The TEN-T Comprehensive and Core Railway Network continues to suffer from insufficient investment, with only 15% of total funds directed towards transport infrastructure. Without essential repairs and upgrades, maintenance costs will rise, business productivity will be affected, and the decline in rail transport will persist.

Accelerating railway reforms is crucial to fully leverage the advantages of rail transport in South East Europe. A coordinated approach that integrates infrastructure development with policy reforms can help reduce fragmentation in the sector, while an open market would enhance performance across multimodal transport corridors. Though progress in rail infrastructure development and reform is underway, further effort is needed to unlock the region's full potential.

As the 2030 deadline for completing the Core Network, the 2040 target for the Extended Core Network, and the 2050 goal for the Comprehensive Network approach, regional partners will face significant challenges in meeting these objectives. This compliance assessment will focus on existing lines within the Core and Comprehensive Railway Networks, meaning the missing links on 397 km of the Comprehensive Network and 124 km of the Core Network will not be included in this assessment.

These are sections:

- Pogradec – Korca in Albania – 80 km
- Niksic (Montenegro) – border with Bosnia and Herzegovina – 50 km
- Capljina (Bosnia and Herzegovina) – border with Montenegro – 100 km
- Kicevo (North Macedonia) – Lin (Albania) – 60 km
- Kumanovo - Beljakovce - Kriva Palanka – border with Bulgaria – 92 km
- Subotica (Serbia) – border with Hungary (towards Baja) – 15 km

Electrification

As of 2024, the electrification compliance rate for the operational rail network stands at 65.09% on the Core Network and 55.34% on the Comprehensive Network. These figures reflect changes compared to 2023 data, primarily due to the reclassification of the Durres – Elbasan – Lin – Kicevo section (290 km total) from Comprehensive to Core. This section, between Albania and North Macedonia, includes a 230 km diesel-only segment from Durres to Lin.

This reclassification has impacted overall compliance percentages: the Core Network's electrification compliance decreased by 6%, while the Comprehensive Network's compliance increased by 3.5%.

Note: *The decrease in electrification compliance on the Core Network is due to the recent upgrade of the Western Balkans railway line as part of EU Regulation 1679/2024. This upgrade reclassified certain non-electrified sections into the Core Network, impacting the overall electrification percentage.*

Figure 5. Percentages of electrified and non-electrified lines 2021/2022/2023/2024

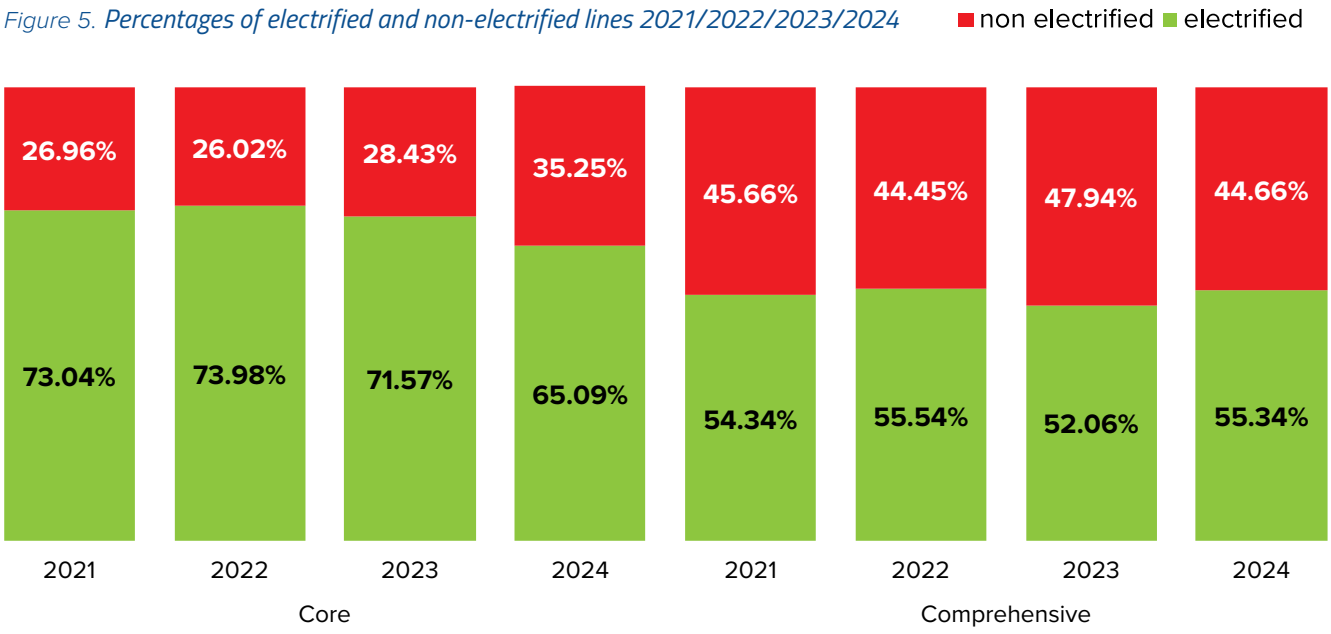
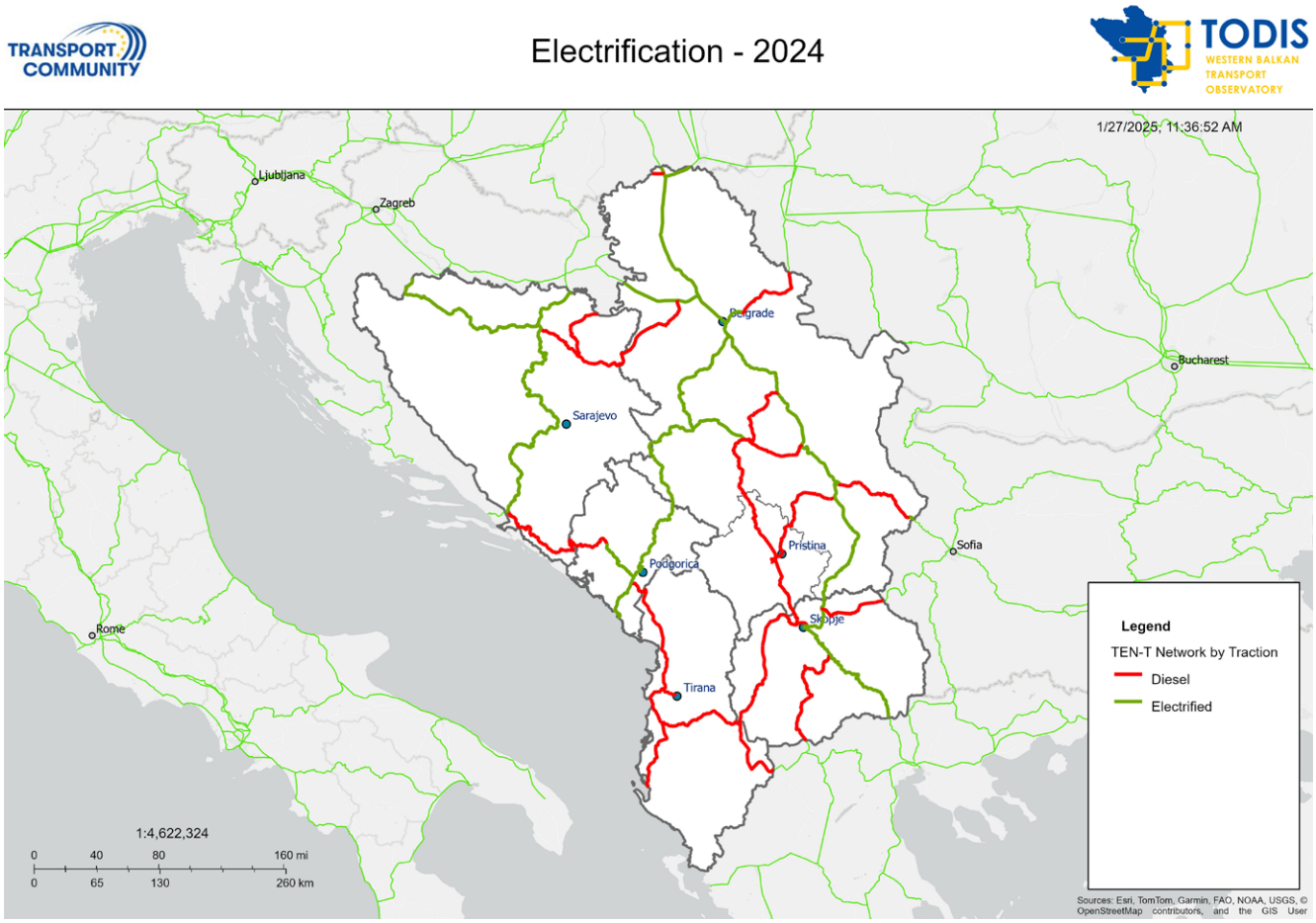


Figure 6. Map of electrified lines



Axle Load

The Core Network's freight axle load compliance, set at 22.5 tonnes per axle, remains unchanged from 2023. However, there are new deficiencies in axle load compliance on the Comprehensive Network. This is due to the expansion of the Comprehensive Network in 2024, which now includes the upgraded Durres – Elbasan – Pogradec – Struga – Kicevo – Skopje section. This additional length has introduced more segments that do not yet meet the 22.5 tonnes per axle standard.

Note: The slight decrease in axle load compliance is a result of the upgrades made to the railway TEN-T Network in the Western Balkans under EU Regulation 1679/2024. These upgrades have included the reclassification of certain segments, which has impacted the overall axle load metrics.

Figure 7. Axle load in tonnes/axle on Core and Comprehensive Network 2021/2022/2023/2024

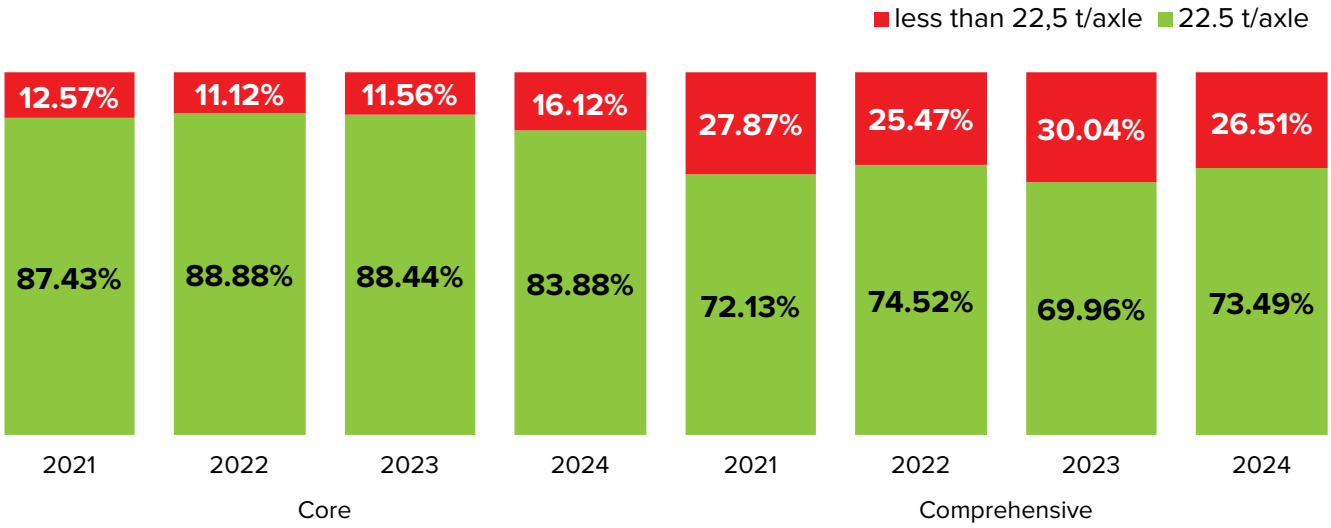
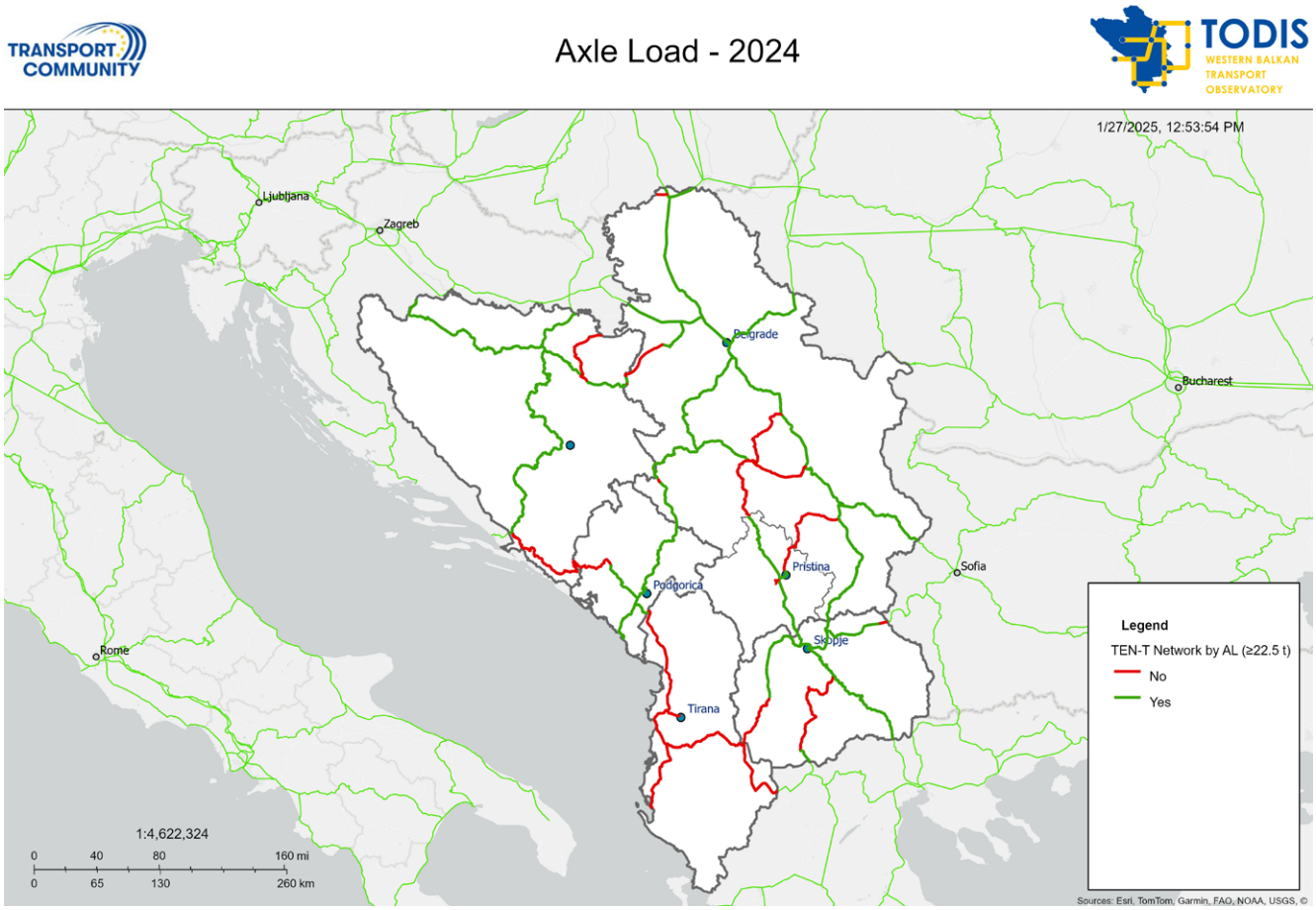


Figure 8. Map of axle load in tonnes/axle on Core and Comprehensive Network



Freight line speed

As of 2024, 60.32% of the Core Network and 58.98% of the Comprehensive Network meet the freight line design speed requirement of 100 km/h or more. This represents a significant change compared to 2023, influenced by two main factors: the revised lengths of the networks due to TEN-T updates and improved data collection through the TODIS system by regional users.

There has been a slight increase of nearly 2%, in terms of operational speed, rising from 15.79% in 2023 to 17.24% for segments operating at speeds over 100 km/h. This modest increase is primarily attributed to the completion of various construction and maintenance projects. While the progress is small, it mirrors advancements made in 2023, indicating a positive trend in operational speeds.

Note: The decrease in Design speed Compliance on the Core Network is a result of the implementation of the new EU Regulation 1679/2024 and the different lengths of the Core and Comprehensive networks compared with previous years.

Figure 9. Design Speed 100 km/h and over 2021/2022/2023/2024

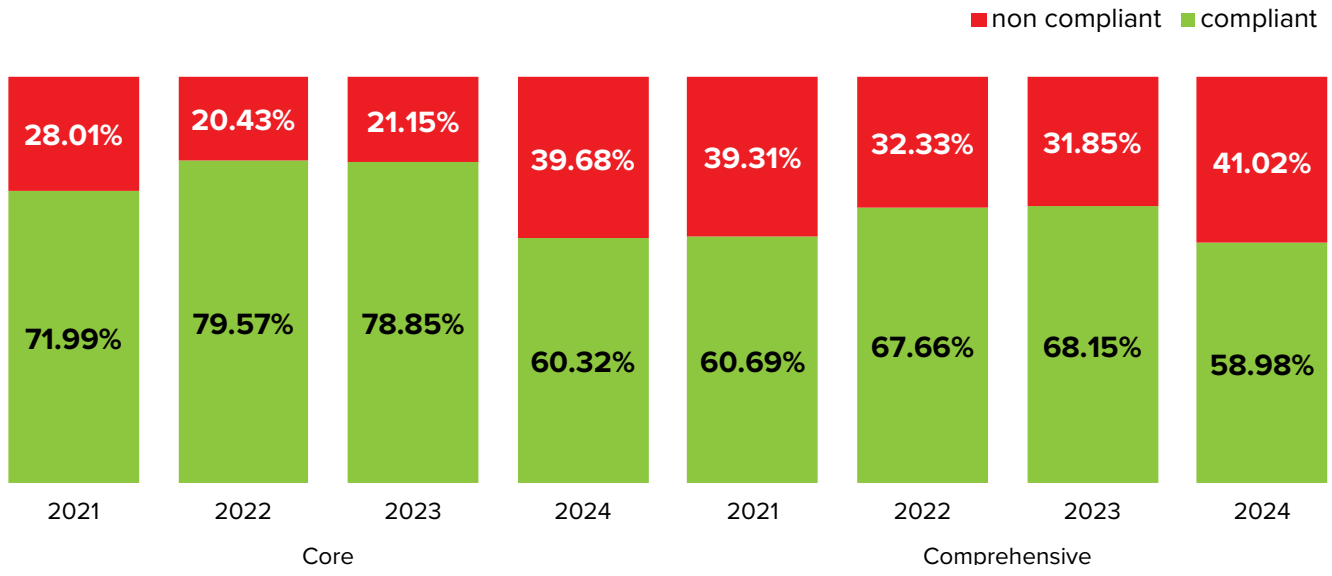
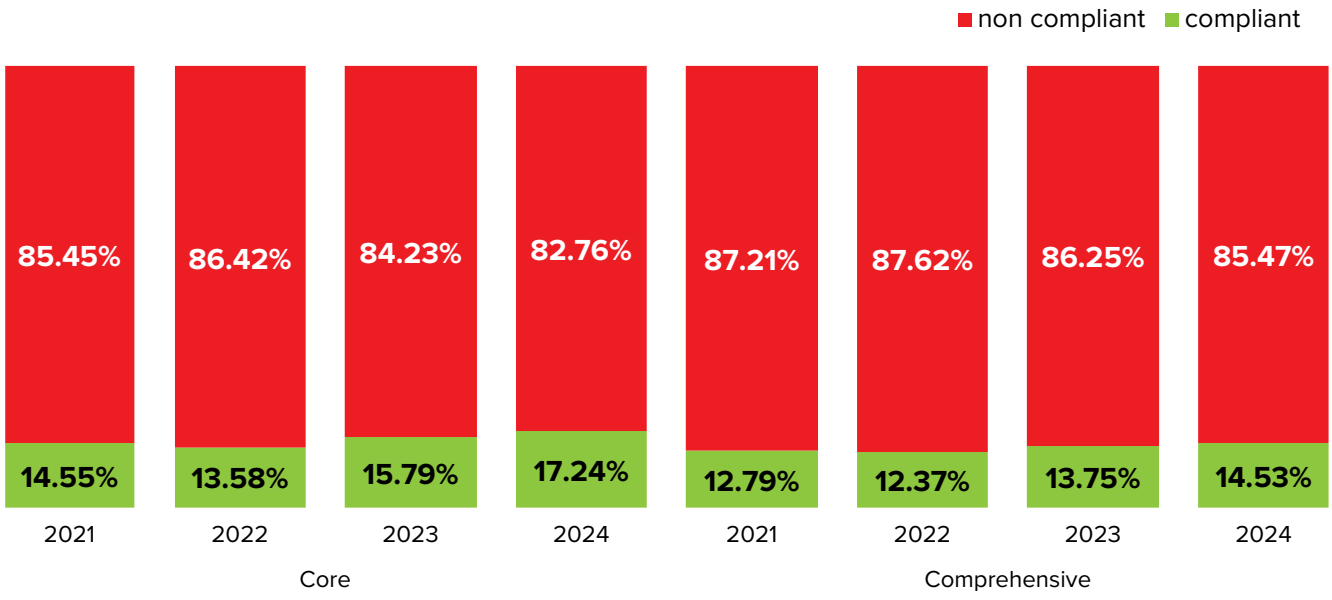


Figure 10. **Operating Speed 100 km/h and over for 2021/2022/2023/2024**

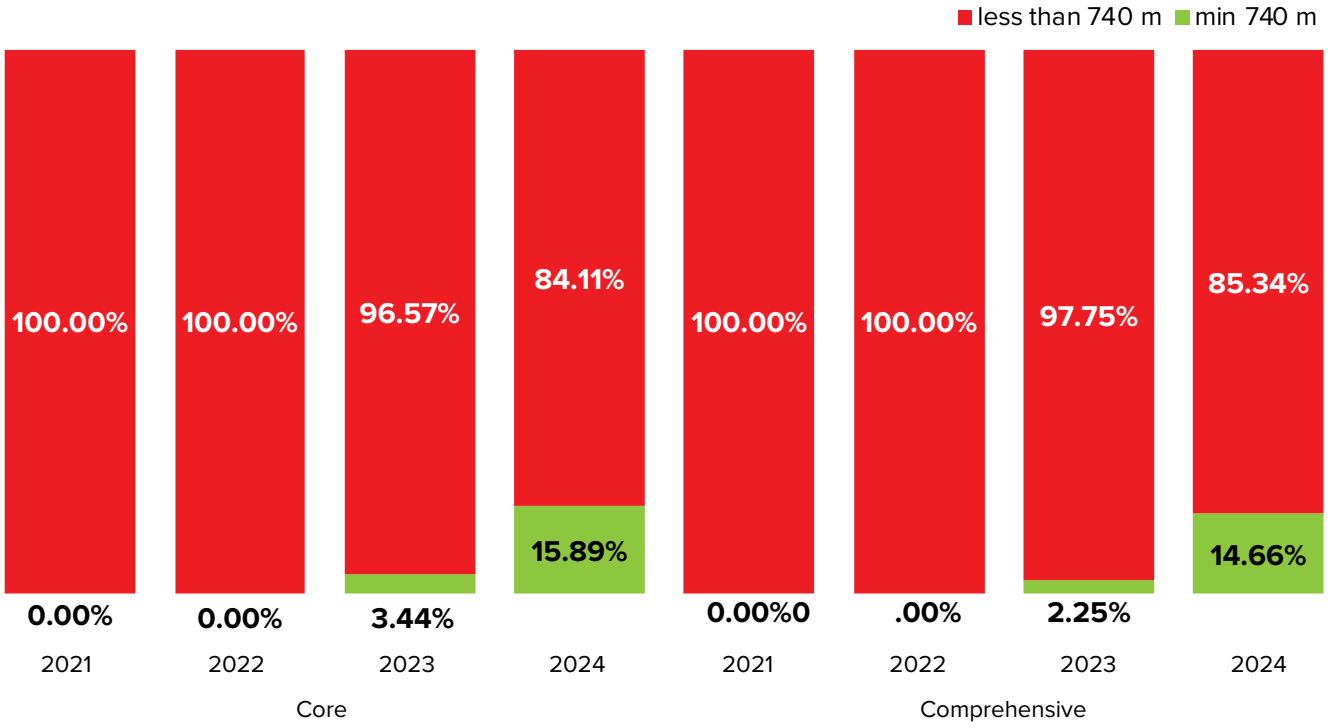


Train length

There has been a significant change in the compliance rate for freight train length, with 15.89% of the Core Network now able to accommodate 740 meters or longer trains. This represents a notable improvement from the previous year, but it is primarily attributed to enhancements in the data collection process rather than actual infrastructure developments.

Overall, the region largely meets the 550-meter train length requirement, with Albania being the only exception. However, it is crucial to interpret these statistics with care, as ongoing infrastructure upgrades and operational complexities can create gaps between nominal compliance and actual operational capabilities. For example, while a rail line may be technically equipped to handle 740-meter trains, practical limitations, such as inadequate sidings, may prevent the effective realisation of this capability.

Figure 11. Train length 2021/2022/2023/2024



Track gauge

The rail track gauge has achieved historical full compliance, with a rate of 100%. There is one exception: the Mokra Gora narrow gauge rail line in Serbia. This narrow-gauge line is not part of the Core and Comprehensive Network and is primarily used for tourism. This situation has remained unchanged for many years and does not affect interoperability across the broader rail network.

ERTMS

The rollout of the ERTMS system has begun in the Western Balkans, marking a significant milestone. For the first time, 2.20% of the Core Network and 1.63% of the Comprehensive Network are now equipped with the ERTMS system, thanks to the opening of the newly reconstructed Belgrade – Novi Sad line. A second section, extending from Novi Sad to Subotica and the Hungarian border, is expected to be completed by the end of 2024.

Most regional partners have partially transposed the interoperability directive (third or fourth rail package). With ongoing projects supported by funding, there are plans to implement ERTMS with ETCS level 1 or 2 in Albania, Kosovo, Serbia, and North Macedonia, which could increase ERTMS coverage to 16% on the Core Network by 2027.

However, deploying the ERTMS system presents significant challenges in meeting TEN-T parameters, and progress has been slower than expected. Therefore, all regional partners must intensify their efforts to transpose and implement the interoperability directive fully.

Note: The decrease in ERTMS compliance on the Core and Comprehensive Network is due to the implementation of the new EU Regulation 1679/2024, and changes in the lengths of the Core and Comprehensive Networks compared to previous years. These adjustments have impacted the overall compliance metrics for ERTMS deployment.

Figure 12. ERTMS deployment 2021/2022/2023/2024

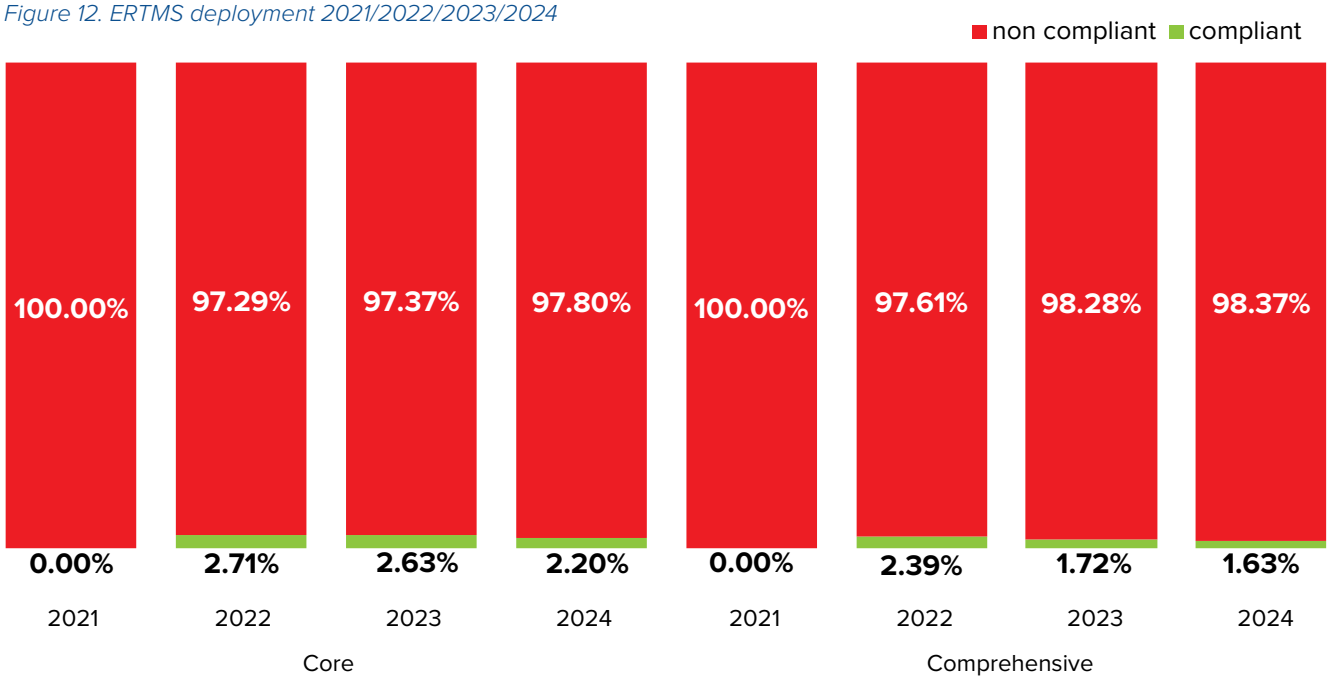
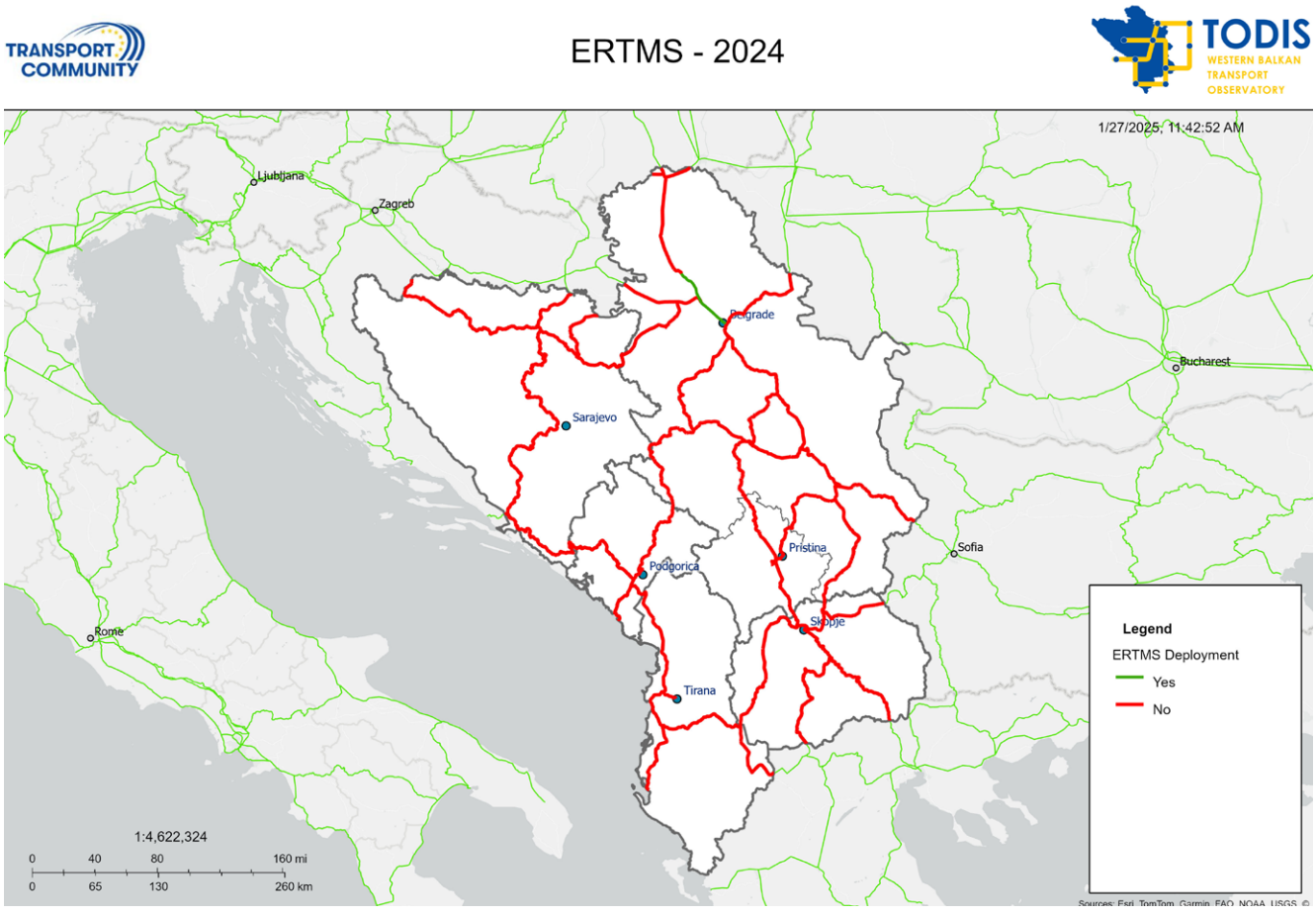


Figure 13. Map ERTMS deployment



Overall compliance assessment

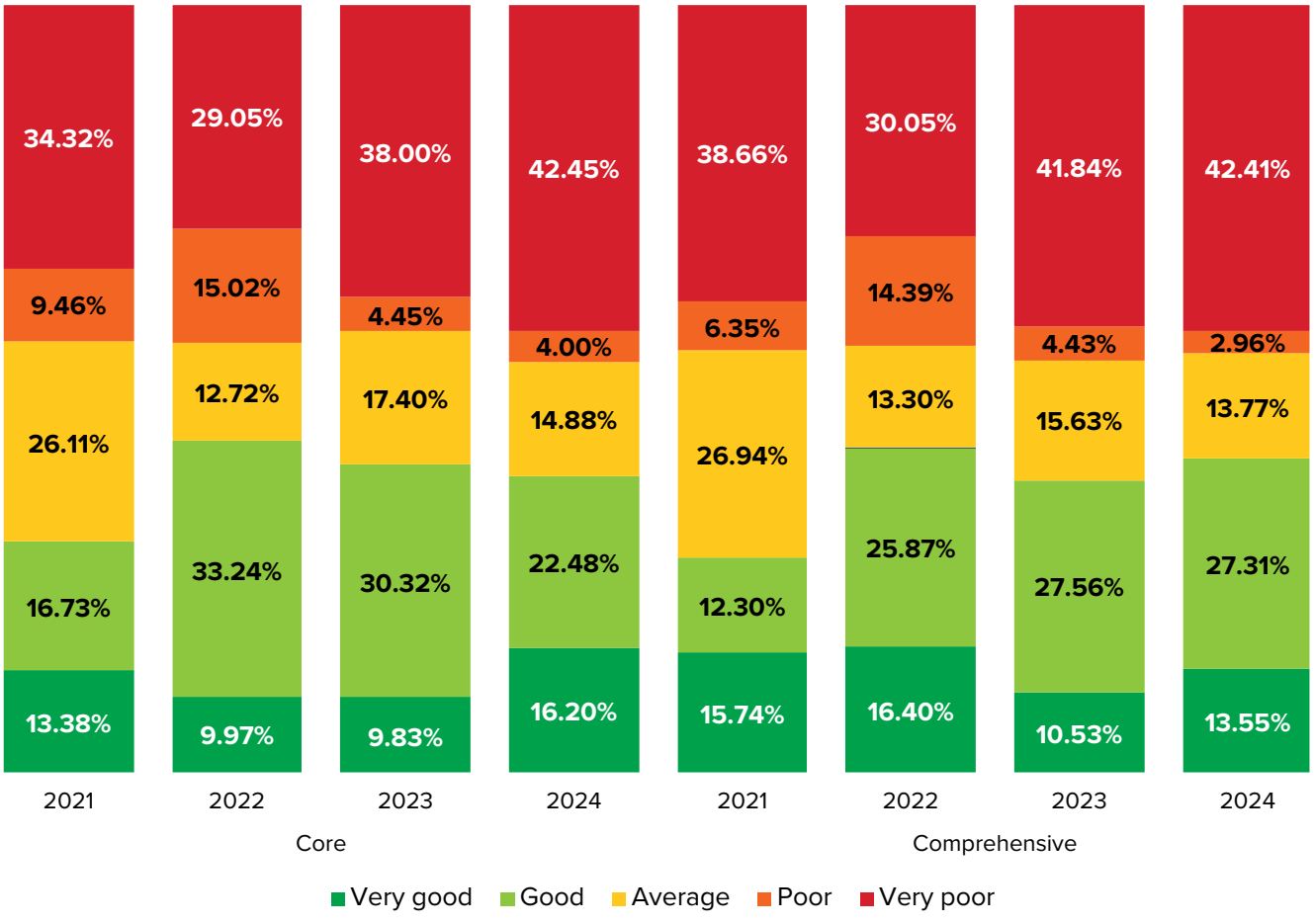
The present network status was evaluated by analysing data provided by regional partners regarding the state of play on their respective tracks. Track condition has been divided into five parts based on the ratio between the current maximum operational speed and maximum design speed on the network. This was done to provide a better description of current railway conditions.

Figure 14. Assessment Methodology Criteria

Condition of railways	Operational/Design speed
Very good	**0.86 – 1**
Good	**0.71 - 0.85**
Medium	**0.61 - 0.70**
Poor	**0.51 - 0.60**
Very poor	**0 - 0.50**

Following the criteria applied, an overview of the network is given in the figure below.

Figure 15. Condition of the Rail Network 2021/2022/2023/2024

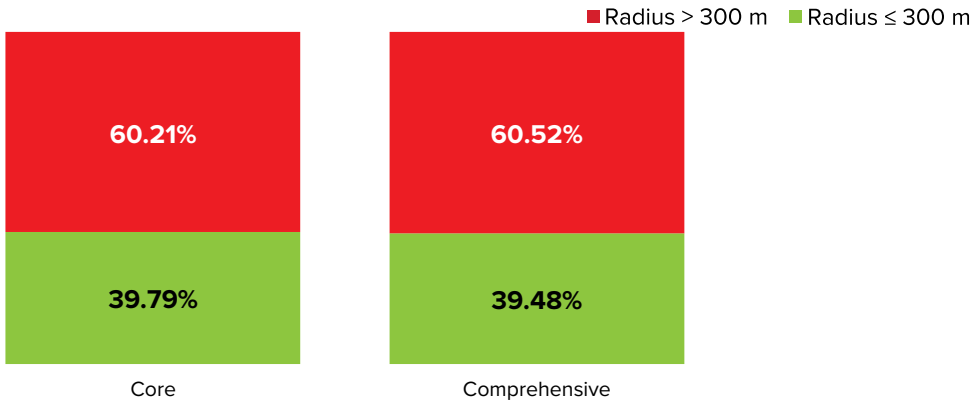


In 2024, it was reported by the Regional Partners that 39% of the Core Rail Network and 41% of the Comprehensive Rail Network were classified as being in either very good or good condition, allowing for speeds between 70% and 100% of their design capabilities. However, there was a slight decline of about 0.1% in the very good category and a more significant 2.9% decrease in the good category. This decline can be attributed to a slower pace of improvement due to limited investment. Approximately 15.4% of the rail sections were rated as having an average condition, with considerable variations in their maximum allowed speeds, marking an almost 2.5% decrease in this category.

Unfortunately, a significant portion of the Core (46%) and Comprehensive Network (45%) was rated as being in poor or very poor condition, with their design speeds averaging only 50% and showing minimal improvement since 2023 on the Core Network. A critical concern is the reliability of the assessment system, as some sections exhibited significant discrepancies between their reported condition, design specifications, and maximum allowed speeds. Additionally, it appears that different assessment systems are being utilised by various regional partners.

The radius of curves is another important parameter influencing the development of the Rail Core and Comprehensive Network. Currently, 39.79% of the Core Network and 39.48% of the Comprehensive Network have curves with a radius of 300 meters or less. This limitation means that achieving speeds of 100 km/h or more would require significant reconstruction and realignment of these sections. Such sections can become potential bottlenecks during periods of higher traffic. This parameter has been included in the report for the first time and shall be monitored continuously in the coming years.

Figure 16. Radius of curves of the Rail Network 2024



The Comprehensive Rail Network has 1,264 level crossings, of which only 25% are equipped with active signalling (protection). In contrast, EU member states average 55% active signalling and 45% passive protection at their level crossings.

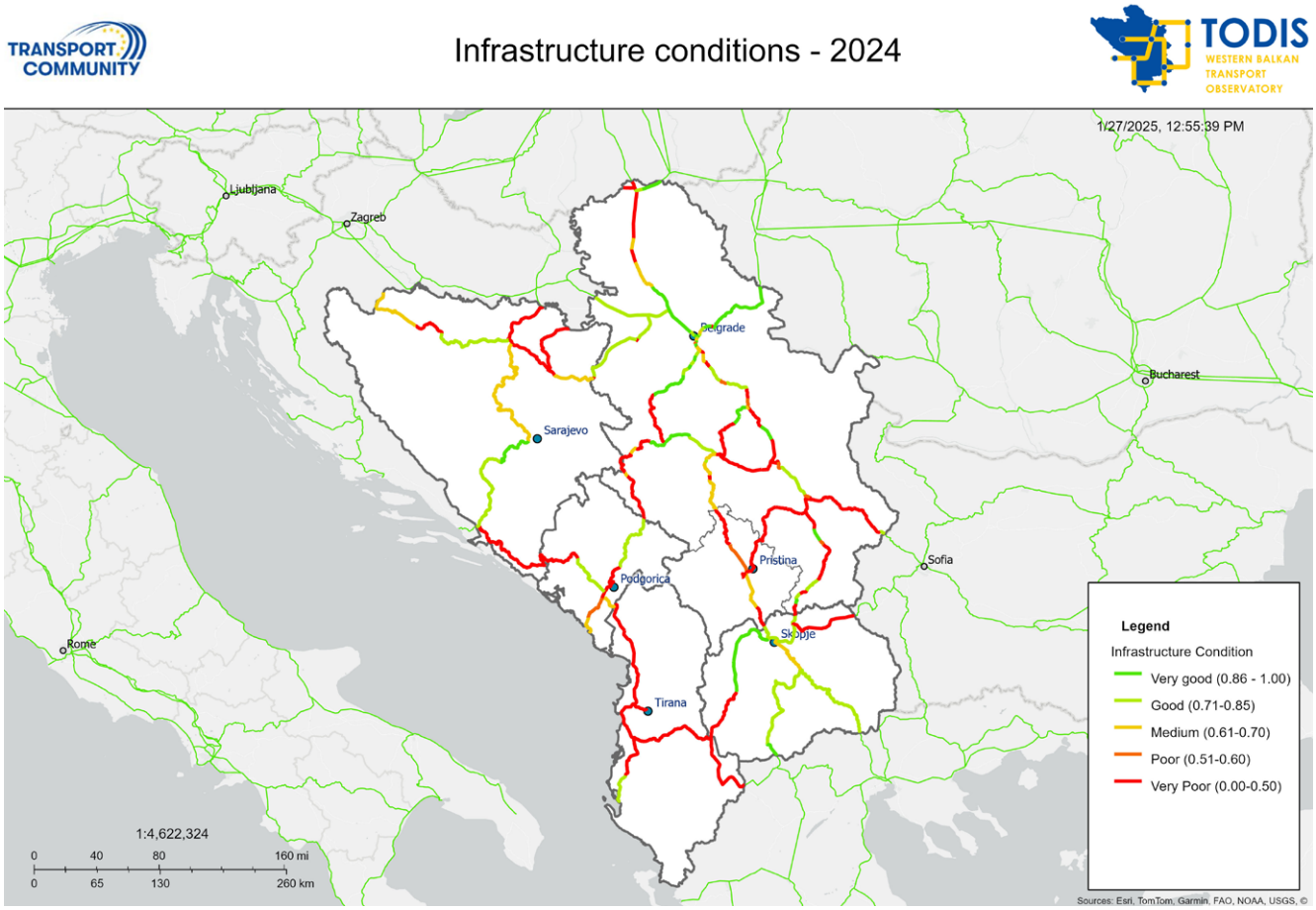
The widespread deterioration of the network is primarily due to the lack of routine and condition-based maintenance (CBM). This issue has arisen from planning and insufficient funding to meet basic maintenance needs in the past. As a result, the rail network now requires significant reconstruction efforts instead of just routine maintenance, which will likely lead to more severe traffic disruptions in the future.

A viable solution to this problem is the implementation of routine condition-based maintenance through multi-annual contracts between the infrastructure manager and relevant authorities, supported by timely and adequate funding. This approach, part of the Transport Community Rail Action Plan, is not only cost-effective but also promotes sustainability by preventing the negative impacts of sporadic maintenance. These negative impacts include increased funding requirements for reconstruction, indirect losses from underperformance, traffic disruptions, and safety concerns, which can escalate the costs associated with routine CBM. Furthermore, it is crucial to comply with EU Technical Specifications for Interoperability and TEN-T standards.

Recognising that rail transport is one of the most environmentally friendly modes of transportation, the transportation industry's future seems promising. The EU Sustainable and Smart Mobility Strategy, along with the Growth Plan and

the European Green Deal, focuses on advancing the rail transport system. Therefore, the Southeast European countries should not only follow but also lead the way toward a modern, interoperable, sustainable, and environmentally friendly transport system by significantly enhancing their rail infrastructure.

Figure 17. Railway infrastructure condition map



4.2. **Road network**

Regarding the road network, the new Regulation 1679/2024 now includes technical standards, infrastructure interoperability, and priority projects for TEN-T development. In particular

- Rest area. To be located every 100 km (comprehensive network) and every 60 km (core and extended core network). To provide “sufficient parking space, and appropriate facilities, including sanitary facilities”.
- Safe and secure parking. Only applicable to core and extended core networks. To be compliant with Article 8a (1) of Regulation (EC) No 561/2006 and located every 150 km or within 3 km from the nearest exit. Compliance to be ensured by 2040
- Alternative fuels availability. Applicable for both core and comprehensive network
- Tolling & user charging. The applicability area has been extended from tolling interoperability to road users charging in general (with reference to Directive 1999/62/EC).
- Weigh-in motion systems. To be installed on average every 300 km (focus on sections with higher traffic intensity)

Regulation 1679/2024 introduced updates to the TEN-T Road Core and Comprehensive Network, which fall into two main categories: new requirements and KPIs for the TEN-T and changes to the network itself. This report will focus on describing the network changes, while the newly introduced KPIs will be applied in next year’s assessment.

Revision impacted the Comprehensive Network with the following changes:

Tuzla-Zvornik section in Bosnia and Herzegovina is 56 km of conventional road with medium-quality conditions and serves as an essential link between Bosnia and Herzegovina and Serbia.

Mostar-Vinjani 53.78 km express route connects Bosnia and Herzegovina with Croatia in the western part, supporting cross-border trade and travel with Croatia.

Ruma to Zvornik is the link connecting Serbia and Bosnia and Herzegovina. This section is comprised of three subsections with different characteristics. **Ruma-Šabac** section is a 33.8 km highway offering a very good driving experience with upgraded facilities and faster transit times. Šabac-Loznica 56.67 km section is built to expressway standard and is maintained in very good conditions, facilitating efficient regional movement between Serbia and Bosnia and Herzegovina. **Loznica to Zvornik** is the last remaining 20.27 km section with conventional roads of medium-quality conditions.

Lipjan – Duhel, with 36.17 km conventional road, is in good condition, reinforcing the internal connectivity in Kosovo.

These upgrades will enhance transport efficiency and accessibility throughout the Western Balkans.

Western Balkan Eastern Mediterranean Core Network Corridor (WBEM)

The extension of the TEN-T Core and Comprehensive Network to the Western Balkans began in 2016 as part of a network-wide revision. The latest update in 2024 introduced major changes to the road comprehensive network, including the historic establishment of the Western Balkan East Mediterranean (WBEM) Corridor for the first time.

Figure 18. WBEM Road Core Corridor

The WBEM Corridor spans six Regional Partners and eight EU member states: Austria, Slovenia, Croatia, Hungary, Bulgaria, Greece, Cyprus and Italy.

Rhine - Danube Core Network Corridor (RD)

As laid out in Regulation 1679/2024, the Rhine-Danube Core Network Corridor spans several key regions of Europe, linking Western Europe's Rhine River Basin with Central and Eastern Europe along the Danube River. The corridor primarily connects Germany, Austria, Slovakia, Hungary and continues eastward through Serbia, Romania and Bulgaria, reaching the Black Sea.

The corridor includes direct links with the Western Balkans. According to Regulation 1679/2024, specific rail and road extensions connect the Rhine-Danube Corridor to the Western Balkan region, enabling more integrated transport links.

Road sections in Serbia are included in both Core Corridors, particularly Belgrade Subotica linking to Hungary in the north and Belgrade – Vrsac linking with Romania to the east, enhancing the cross-border movement of goods and passengers.

TEN-T Compliance Indicators

The Road compliance indicators per the 1315/2013 TEN T Regulation are provided and explained in the table below.

Table 1. Road compliance indicators

Indicator	TEN-T Network	Details
Motorway/ express road	**Core & Comprehensive**	As per the provisions of points (a) and (b) of Art. 17(3) of Regulation No 1315/2013. For Core Network roads to be labelled compliant, they should: a. Be either motorway or express roads (unless and until the EC grants a specific exemption under Art. 39(3) of Regulation No 1315/2013). b. Be properly maintained (IRI < 2.84). c. Ensure safe parking approx. every 100 km.
Conventional strategic high-quality roads	**Comprehensive**	For a TEN-T road that is neither a motorway nor an express road to be considered compliant, it should: a. Be on the Comprehensive Network. b. Play an important role in long-distance freight and passenger traffic, integrate main urban and economic centres, interconnect with other transport modes and link mountainous, remote, landlocked and peripheral NUTS 2 regions to central regions. c. Be adequately maintained to allow safe and secure traffic. Ideally, for a TEN-T road that is neither a motorway nor an express road to be considered compliant, it should have passed through: • a feasibility assessment confirming that its current capacity is sufficient to accommodate demand. • an upgrading process aimed at ensuring adequate safety-improvement measures and proper pavement condition (IRI < 2.84).

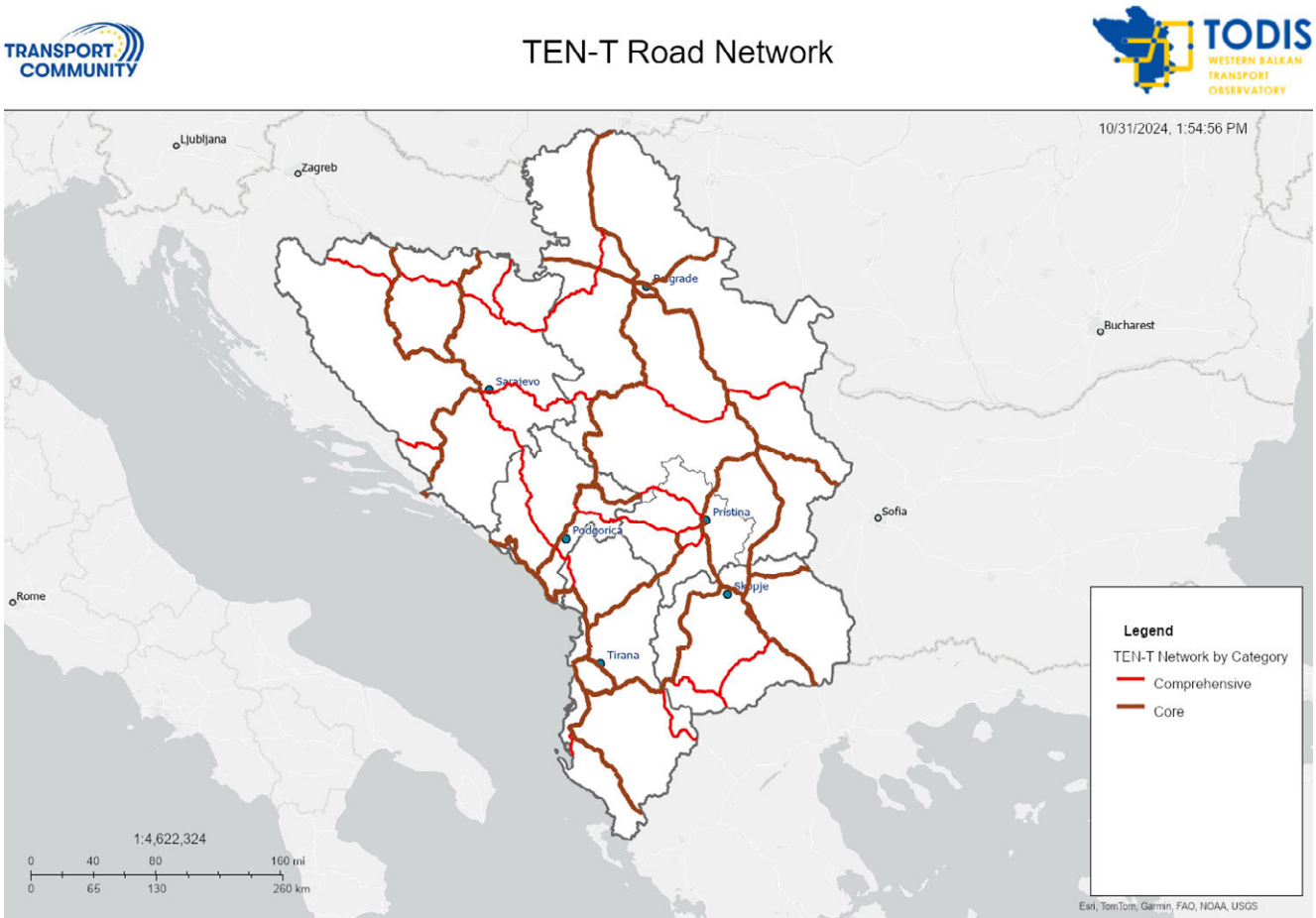
Availability of alternative fuels	**Core**	Alternative fuel availability has been measured against the provisions of Directive 2014/94/EU and indicators currently used by the EC for assessing EU Member States' compliance in this regard.
ITS compliance	**Core & Comprehensive**	Under the provisions of Art. 18(e) of Regulation No 1315/2016, any intelligent transport system deployed by a public authority on road transport infrastructure should comply with Directive 2010/40/ EU and be deployed in a manner consistent with delegated acts adopted under that Directive.
Tolling **Interoperability**	**Core & Comprehensive**	Where applicable, the interoperability of toll collection systems should be ensured in accordance with Directive 2004/52/EC and Commission Decision No 2009/750/EC.
Safety compliance	**Core & Comprehensive**	The safety of TEN-T roads should be assured, monitored and, when necessary, improved in accordance with the procedure provided by Directive 2008/96/EC.
Road tunnels compliance	**Core & Comprehensive**	Road tunnels over 500 m in length should comply with the provisions of Directive 2004/54/EC.

Primary infrastructure characteristics and layout

The total length of the TEN-T road network in the Western Balkans is **5,593 km**, of which **3,373 km** are on the Core Network, and **2019.8 km** are Comprehensive network after the network modifications.

The network's current general layout is depicted below.

Figure 19. Map of the TEN-T Extension of Core and Comprehensive Road Network to Western Balkans



TEN-T Core Network Compliance

The TEN-T Core Network incorporates those parts having the highest strategic importance for the Comprehensive Network. Its current length is **3,573 km**, of which:

- **1,690 km** are motorways;
- **231.4 km** are express roads;
- **1,651 km** are conventional roads.

The TEN-T Core Network compliance assessment is based on the above-listed criteria, namely the infrastructure profile and condition.

Overall compliance with ITS, e-tolling and safety directives has not been quantified with numerical data, a pre-condition in this regard being the implementation of structural/institutional reforms mainly addressed under the dedicated Action Plans rolled out by the Transport Community Permanent Secretariat. The availability of alternative fuels is monitored through the CONNECTA study, 2023.

Details of Core network compliance against each relevant criterion are provided below.

Infrastructure profile and condition

Under the provisions of Art. 39(2)(c) of Regulation No 1315/2013, roads on the TEN-T Core Network should be either a motorway or an express road and include safe and secure parking areas approximately every 100 km.

A comprehensive evaluation of safe and secure parking facilities across the TEN-T Network in the region is yet to be conducted. The significance of this issue extends beyond a mere infrastructure compliance criterion and has been raised by industry stakeholders during Transport Community Social Forums.

In summary, within the framework of the current analysis, Core Network roads are considered compliant with the infrastructure profile and condition criteria if they satisfy the following cumulative conditions:

- Possess a motorway/express road profile.
- Undergo proper maintenance to maintain very good or good road surface condition status, ensuring smooth traffic flow and safety.

Road condition has been rated under 5 distinct categories, using the International Roughness Index (IRI), as follows:

- very good (IRI < 1.24);
- good (IRI 1.24 - 2.84);
- medium (IRI 2.84 - 5.09);
- poor (IRI 5.09 - 8.94);
- very poor (IRI > 8.94).

The same methodology was employed in the report's previous editions, allowing comparability of the outcomes despite the differences in base data resulting from the use of TODIS.

The outcomes of the compliance assessment exercise are given in the charts below, highlighting progress made since the start of the reporting exercise.

Figure 20. Core Network Road Profile 2021 - 2024

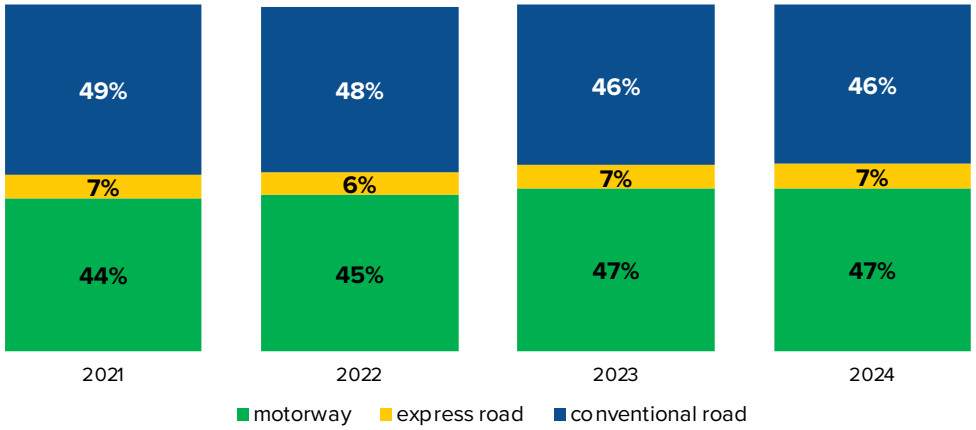


Figure 21. Core Network Road Condition 2021 – 2024

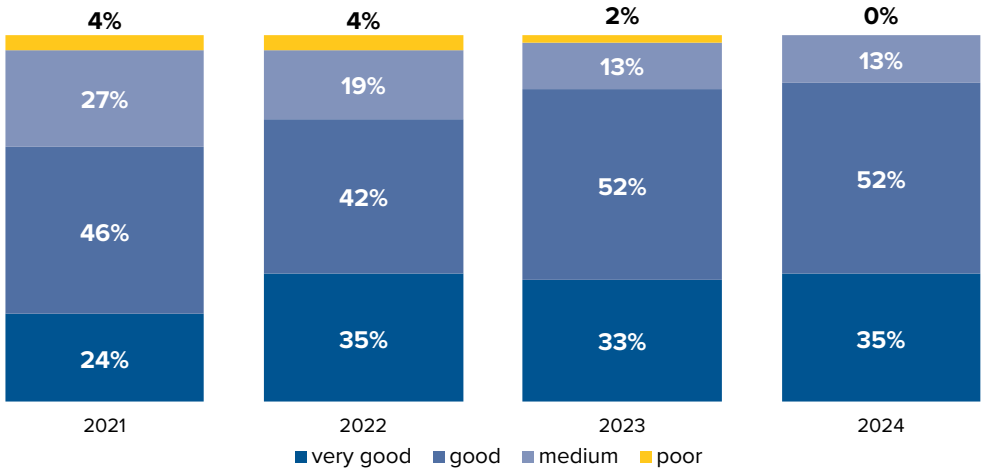


Figure 22. Core Network Road conditions per each road category 2021 – 2024

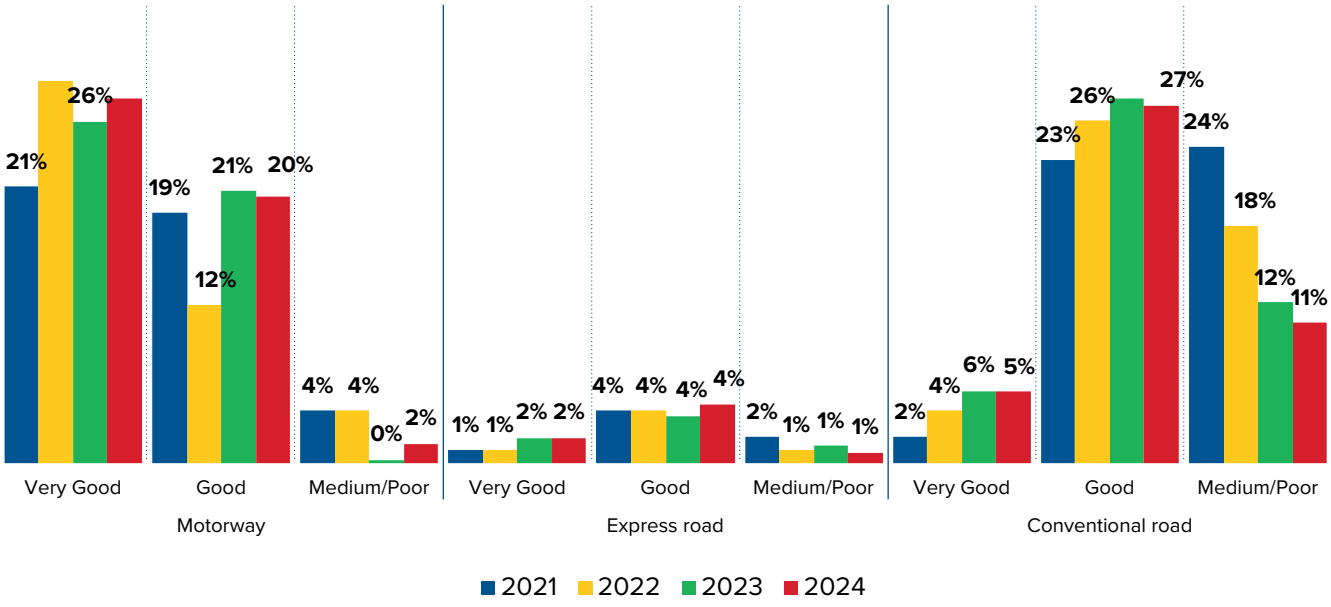
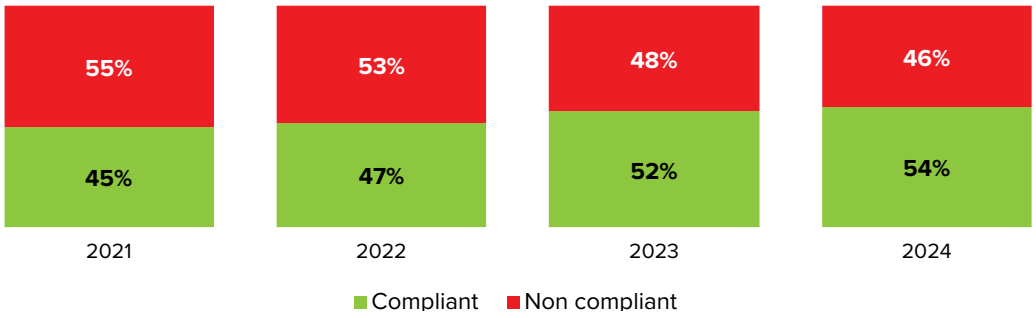


Figure 23. Core Network Compliance rate 2021 - 2024



There has been progress across all key indicators compared to last year's report. The following differences are noteworthy:

There are notable slight improvements, when comparing the transport network conditions between 2023 and 2024, it. Overall, the percentage of roads rated as "very good" increased from 33% in 2023 to 35% in 2024, and "good" ratings remained stable at 52%. Notably, the percentage of roads in "poor" condition dropped from 2% in 2023 to 0% in 2024, reflecting an overall enhancement in network quality.

Breaking down by road types, the proportion of motorways, express roads, and conventional roads remained stable in terms of distribution, with 47% of roads being motorways, 7% express roads, and 46% conventional roads.

The changes result from 68 km of new high-speed roads in operation since last year, specifically Thumane – Kashar in Albania and 3 sections of Corridor VIII in North Macedonia.

The total length of compliant road sections on the Core Network now stands at 1,929 km due to the new highway sections operating during 2023/2024.

Alternative fuel availability

The 'Fit for 55' package led to the adoption of Regulation (EU) 2023/1804, replacing Directive 2014/94/EU, effective April 13, 2024. The regulation seeks to establish minimum infrastructure for alternative fuel vehicles across all EU transport modes, ensuring full interoperability and offering comprehensive user information and payment options. Key targets include:

- Electric recharging infrastructure: Fleet-based and distance-based targets, such as for every battery electric light-duty vehicle, 1.3 kW of publicly accessible recharging power must be provided, while plug-in hybrid vehicles require 0.8 kW. By 2025, the TEN-T core network will have recharging stations every 60 km for light-duty vehicles and every 120 km for heavy-duty vehicles.
- Hydrogen refuelling stations: Every 200 km along the TEN-T core and comprehensive networks by 31 December 2030.
- Liquefied methane refuelling: For heavy-duty vehicles and maritime TEN-T ports.

The regulation also outlines user-friendly recharging provisions (payment options, price transparency) and sets national policy frameworks and reporting requirements for alternative fuels infrastructure.

Albania has been actively involved in integrating alternative fuels and associated infrastructure into its national energy policy framework. It has included some elements of the Directive 2014/94/EU on the deployment of alternative fuels infrastructure in their national legislation. The Albanian Government is firmly committed to implementing the new Regulation 2023/1804 on alternative fuels by 2025, as outlined in the National Plan for European Integration.

Additionally, in the National Plan for European Integration 2024-2026 of Albania (approved by a decision of the Council of Ministers in January 2024), the Ministry of Infrastructure and Energy has foreseen the transposition of Directive 2009/33/EC of the European Parliament and of the Council of 23 April 2009, "On the promotion of clean and energy-efficient road transport vehicles", which establishes a framework for the purchase of road vehicles by contracting authorities and operators to fulfil public service obligations under a public service contract by 2026.

In Montenegro, the Ministry of Transport has initiated activities to prepare a Strategy, Feasibility Study, and Environmental Impact Assessment related to the use of alternative fuels, together with related regulations. It is expected that these activities will commence in early 2025.

In North Macedonia, the Ministry of Economy on the Bilateral Screening has undertaken the obligation for the Regulation for the deployment of alternative fuels infrastructure and has a plan within the provided technical assistance in 2024 to prepare an analysis to determine which law this regulation will be transposed in.

As for Serbia, in May 2024, the Minister in charge of transport established a working group to draf the Law on Deployment of Alternative Fuels Infrastructure. This law will be in line with AFIR (R1679/2024). It is planned for the Law to be adopted until the end of 2024.

It is worth noting, however, that the alternative fuels network in the Western Balkans is in its infancy. Most existing refuelling stations have been established on the back of private initiatives. These stations are primarily situated in the region's major cities, reflecting current market demand. However, their presence on the TEN-T Network is minimal, primarily due to the region's limited adoption of alternative fuel vehicles.

Table 2. Overview of the total number of stations available for each regional partner

Regional Partner	No. of Alternative Fuel stations[1]			
	Electricity[2]	CNG	LNG	Hydrogen
Albania	60	-	-	-
Bosnia and Herzegovina	93	3	-	-
North Macedonia	59	6	-	-
Kosovo	13	-	-	-
Montenegro	49	-	-	-
Serbia	85	30	1	-
Western Balkans	359	39	1	-

Among the facilities listed above, only a few are actually located on the TEN-T road network, and 18 e-charging stations are deployed on Corridor X in Serbia, resulting in approx. 500 km of the TEN-T Core Network complying with the sufficiency requirements for electric vehicle charging points

The rollout of EVCS on the TEN-T road network in the region remains sporadic among the regional partners, and the region still needs to approve the strategic framework for the extension of EVCS across the entire road network.

1 Home | EAFO, Open Charge Map - The global public registry of electric vehicle charging locations, NGVA Europe | Stations map - NGVA Europe, HRS Availability Map (h2-map.eu)

2 CONNECTA Final Report, August 2023: Strategic Framework for deployment of e-charging Infrastructure in the Western Balkans

Despite recent progress in this area, the region's overall compliance remains relatively low when considering the cumulative application of sufficiency requirements for all mandatory alternative fuels.

TEN-T Comprehensive Network Compliance

The total length of the TEN-T Road Comprehensive network (outside the TEN-T Core) is **2019.89.79 km**, of which:

- **144.8 km** of motorways;
- **172.33 km** of express roads;
- **1,702.76 km** of conventional roads.

The conformity assessment with the TEN-T Comprehensive Network primarily focused on the infrastructure profile and condition criterion. Compliance with Intelligent Transport Systems (ITS), tolling, and safety directives was evaluated through a horizontal approach. Further details are provided below.

Infrastructure profile and conditions

Article 18 of Regulation No. 1315/2013 states that TEN-T roads should be motorways, express roads, or conventional strategic roads. Conventional strategic roads are further defined under Art. 17(3)(c) as roads that are neither motorways nor express roads but still:

- play an important role in long-distance freight and passenger traffic;
- integrate the main urban and economic centres;
- interconnect with other transport modes;
- link mountainous, remote, landlocked and peripheral NUTS 2 regions to central regions of the Union.

Such roads should be *"adequately maintained to allow safe and secure traffic"*.

Compliance with TEN-T standards for motorways and express roads within the Comprehensive Network was evaluated based on the current state of the infrastructure, mirroring the approach used for the Core Network. A similar methodology was applied to assess Comprehensive Network conventional roads, recognising that the region does not currently conduct systematic safety assessments under the provisions of Directive 2008/96/EC.

For the purposes of this report, it was assumed that a conventional road in very good or good condition automatically meets the safety requirements. However, it is acknowledged that this assumption does not always hold true. Progress in transposing road safety legislation by regional partners and systematic performance of road safety inspections on the TEN-T Network will likely provide sufficient input for a revised methodological approach in future reports.

The methodology employed for the 2024 report closely aligns with the approach used in previous years. While it is acknowledged that the transition to the new TODIS baseline data introduces inherent limitations in this regard, the consistent methodologic approach still facilitates meaningful comparisons between the findings of this report and those of its predecessors.

The results of this analysis are given in the charts below, highlighting the changes that have occurred since last year.

Figure 24. Comprehensive Road Network Profile 2021 - 2024

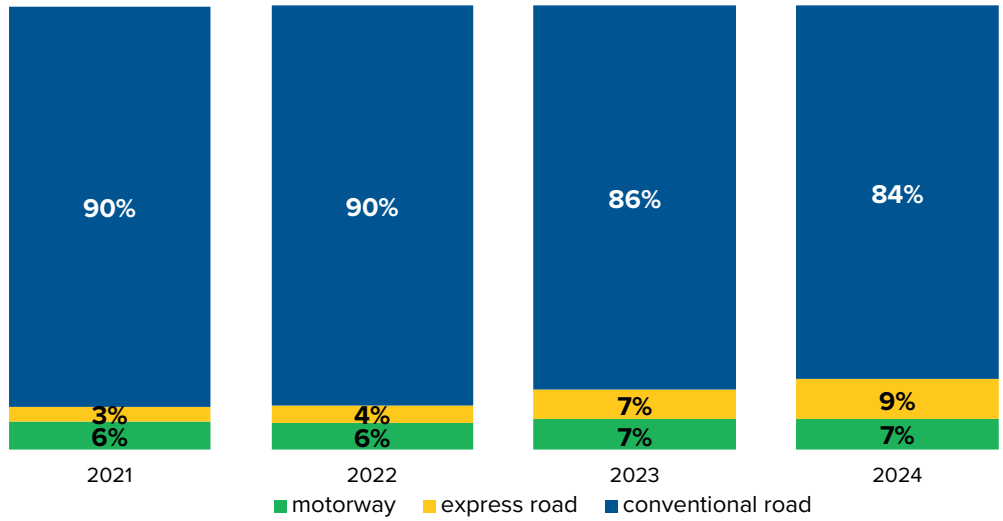


Figure 25. Comprehensive Road Network Condition 2021 - 2024

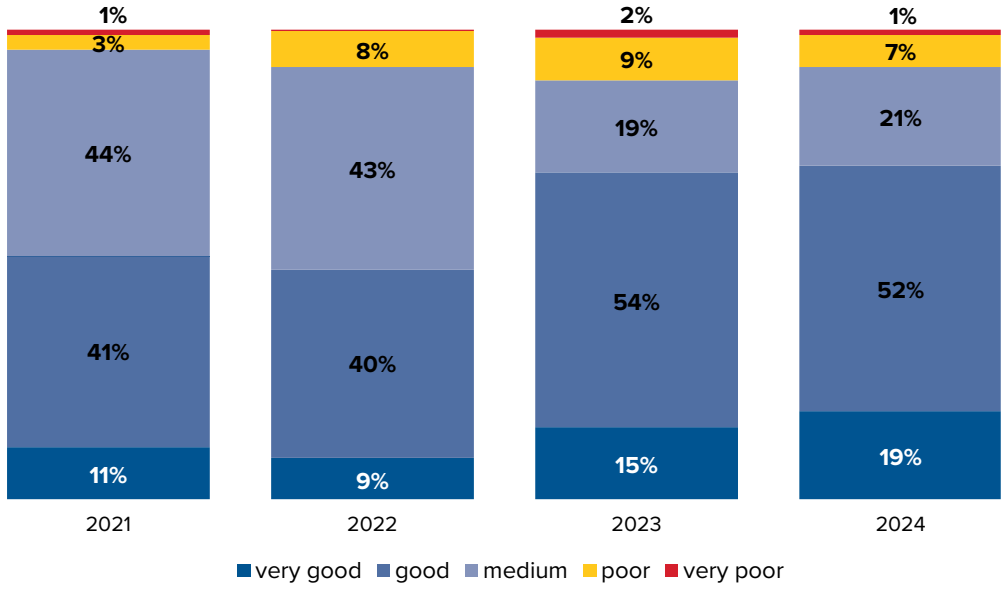


Figure 26. Comprehensive Road Network conditions per each road category 2021 - 2024

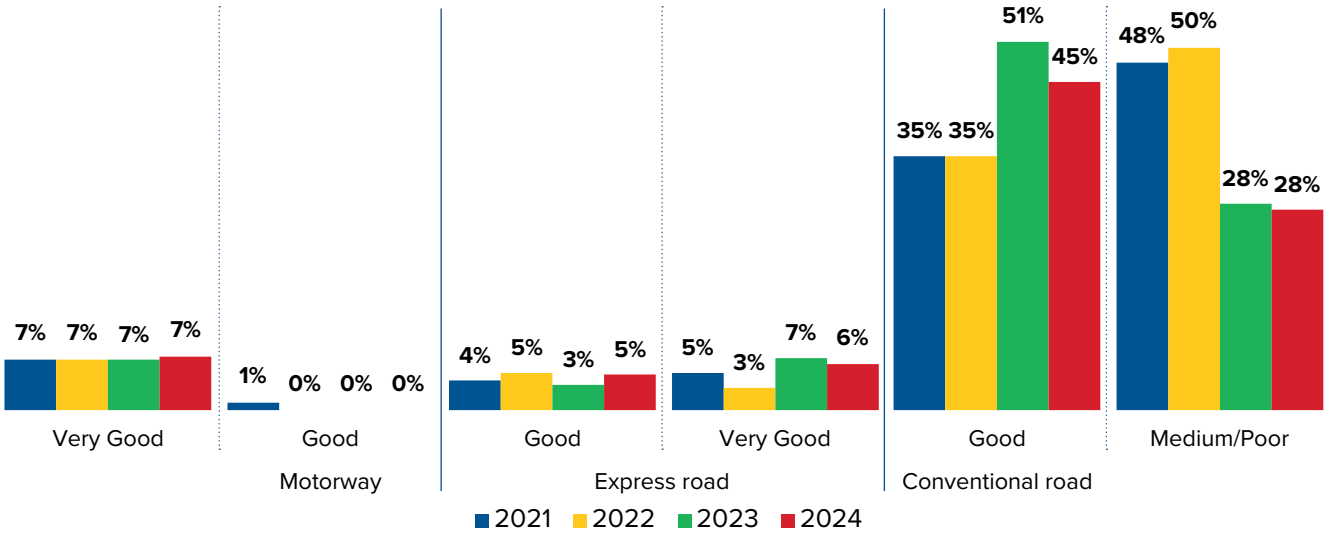
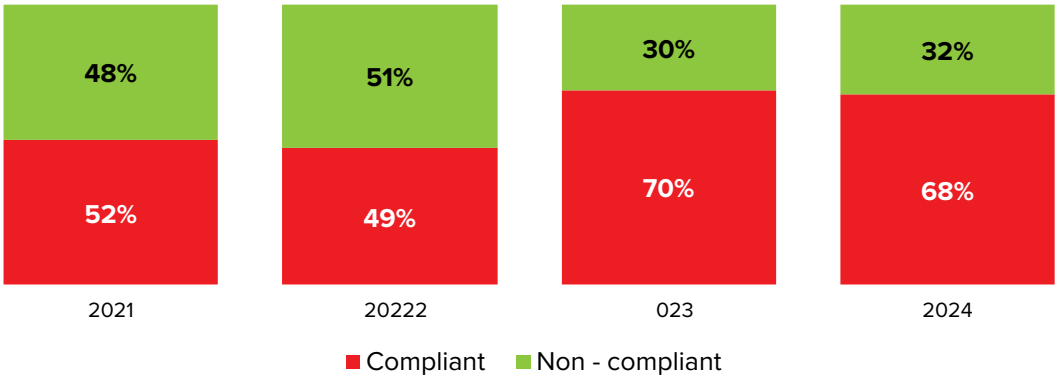


Figure 27. Comprehensive Road Network Compliance (profile and condition) 2021 - 2024



The following differences from last year's report on the progress of road network development are noteworthy:

Between 2023 and 2024, the road network shows both improvements and areas requiring further attention. The overall condition improved in the "very good" category, which increased from 15% in 2023 to 19% in 2024, highlighting an upgrade in road quality. This is primarily attributed to two sections in Serbia, Ruma – Sabac (highway opened to operation in 2023) and Sabac – Loznica, expressway to be opened fully by the end of 2024.

The "good" category slightly decreased from 54% to 52%, while the "medium" category saw a modest increase from 19% to 21%. This change is primarily because most extended sections are in medium conditions. Furthermore, during this year, the rehabilitation of two sections in Montenegro, respectively Rozaje – Spiljani and Jasenovo polje – Vidrovan, a total of 25 km was completed.

There was a slight decrease in roads rated as "poor," from 9% to 7%, and those rated as "very poor" declined from 2% to 1%, indicating improvements at the lower quality levels.

Breaking down by road type, motorways remained steady, with 7% rated as "very good" in both years, and no reported issues in lower categories, indicating consistent quality. Expressways improved significantly in the "very good" category, increasing from 1% to 4%. However, there was also an increase in the "medium/poor" segment from 2% to 5%, suggesting mixed results for this road type. Conventional roads showed a slight decrease in "very good" ratings, from 7% in 2023 to 6% in 2024, and a drop in "good" ratings from 51% to 45%. However, "medium/poor" ratings remained stable at 28%.

In summary, the 2023-2024 period highlights a trend toward better overall quality, with more roads upgraded to "very good" and fewer in "poor" or "very poor" condition. Motorways maintained high standards, while expressways saw improvements in the top category, though their "medium/poor" segment rose slightly. Conventional roads remain stable, though there is a need for targeted improvements to maintain a higher level of quality.

ITS Deployment

The rollout of the Road Action Plan has led to significant momentum in ITS-related measures, resulting in notable progress during the reporting period. Almost all Regional Partners have adopted ITS strategies, while Serbia is expected to follow by the end of 2024. Bosnia and Herzegovina, with support from CONNECTA, has already prepared a draft. Significant progress has also been made in deploying ITS and establishing Traffic Control Centres in Albania, Serbia, and Montenegro on a new road section. It is worth noting that projects financed by International Financial Institutions (IFIs) ensure compliance with the ITS Directive during the design phase.

New momentum in the advancement of ITS in the region is anticipated due to the New Growth Plan and its Reform Agenda, which prioritises the transposition and implementation of EU-related ITS legislation.

Deployment of ITS on the indicative extension of the Core and Comprehensive Road Network to the Western Balkans is as per the table below:

Table 3. Deployment of ITS in Regional Partners

Regional Partners	ITS Deployed	
	Length (km)	Traffic Control Center
Albania	200 ongoing	Yes
Bosnia and Herzegovina	224.3	Yes
North Macedonia	Tender ongoing for Corridor X	No
Kosovo	-	Design ongoing
Montenegro	40.8	Yes
Serbia	944.56	Yes

Tolling interoperability

Tolling interoperability is only relevant for regional partners that have adopted this user charging method. This is the case in Bosnia and Herzegovina, North Macedonia and Serbia, where the entire motorway network is tolled. Montenegro and Albania introduced tolling on some sections, while Kosovo is still assessing the introduction of tolling.

The toll systems already in place, whilst different, are all distance-based and potentially interoperable. As of 1 July 2023, electronic toll collection interoperability between Serbia and North Macedonia has been operational using a single tag device. Montenegro reached interoperability with Serbia in June 2024, and the same is expected with North Macedonia by the end of 2024. Additionally, since 19 June 2023, e-tolling interoperability has been successfully implemented between the two highway operators in Bosnia and Herzegovina, with testing underway with Croatia since June 2024.

Overall compliance assessment

Conclusions on each compliance criterion are given below.

Infrastructure profile and condition

Overall information on the TEN-T Road Network infrastructure profile and condition is given in the following charts:

Figure 28. TEN-T Road Network Infrastructure Condition 2021 - 2024

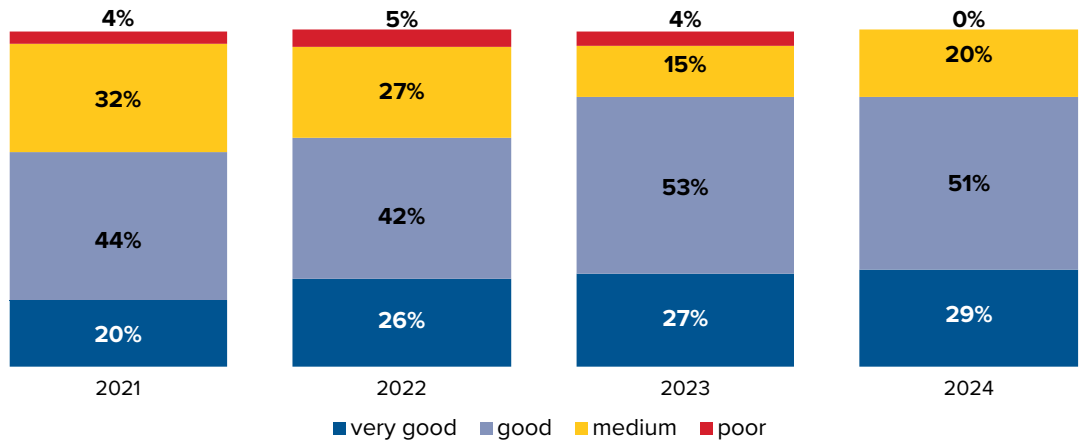


Figure 29. Road network condition map

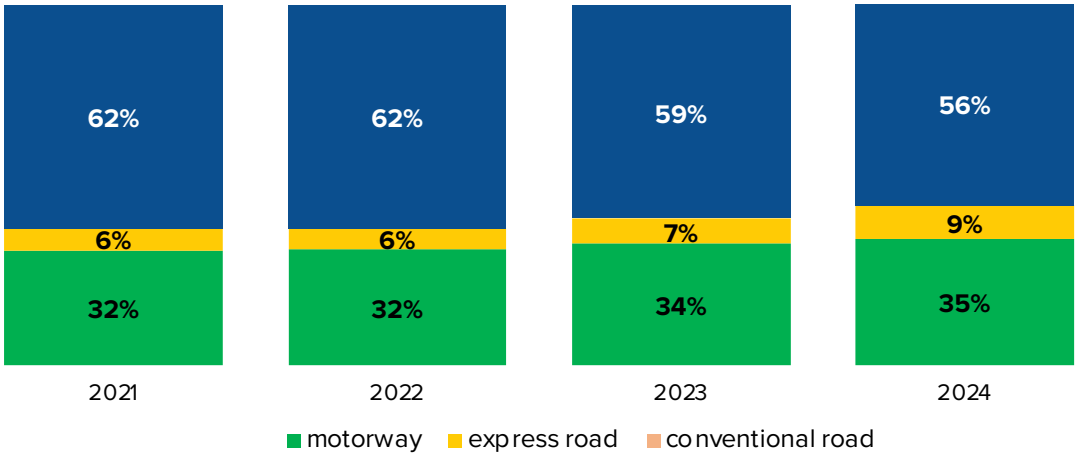


Figure 30. TEN-T Road Network Infrastructure Profile 2021 – 2024

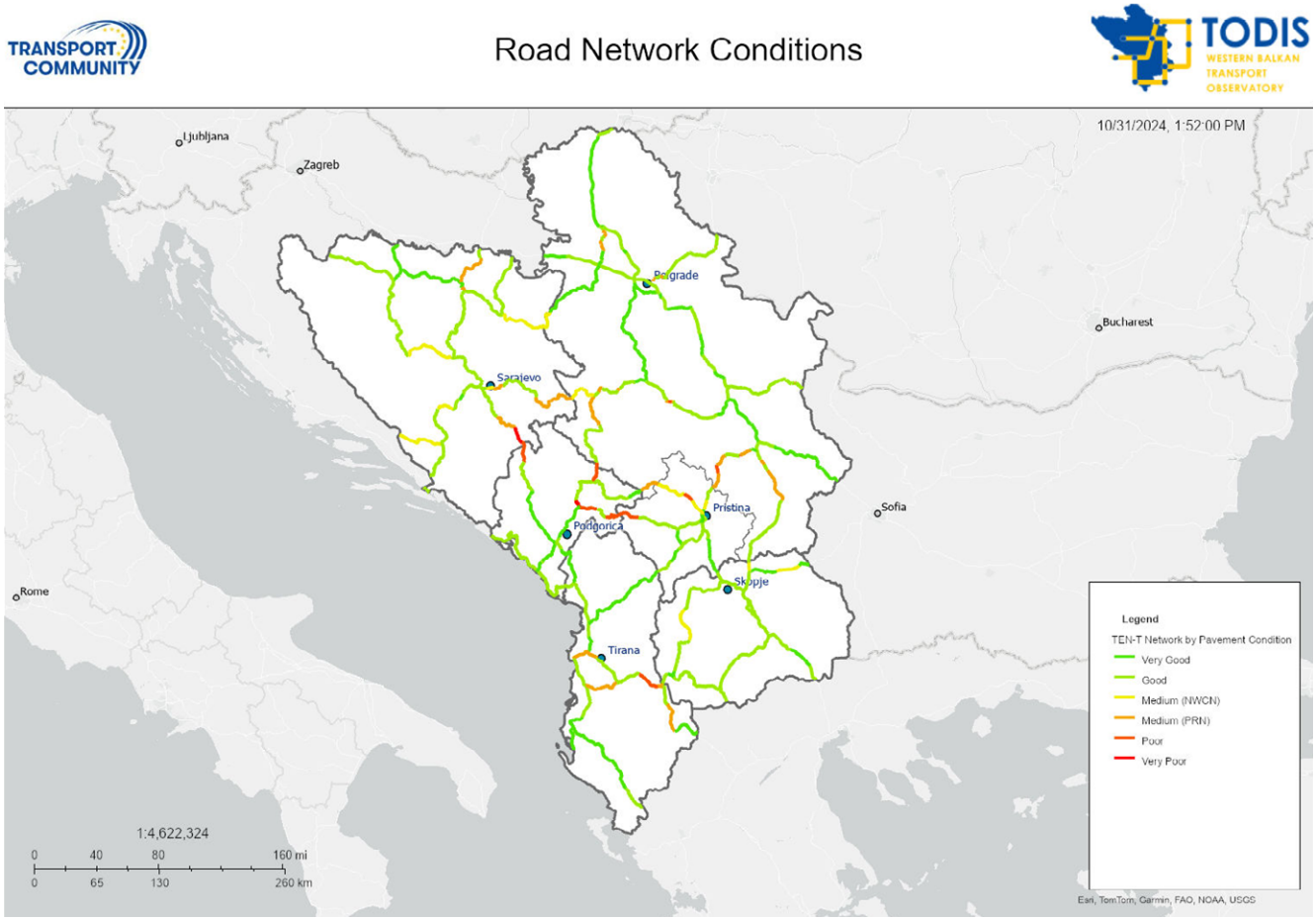


Figure 31. Road infrastructure profile map

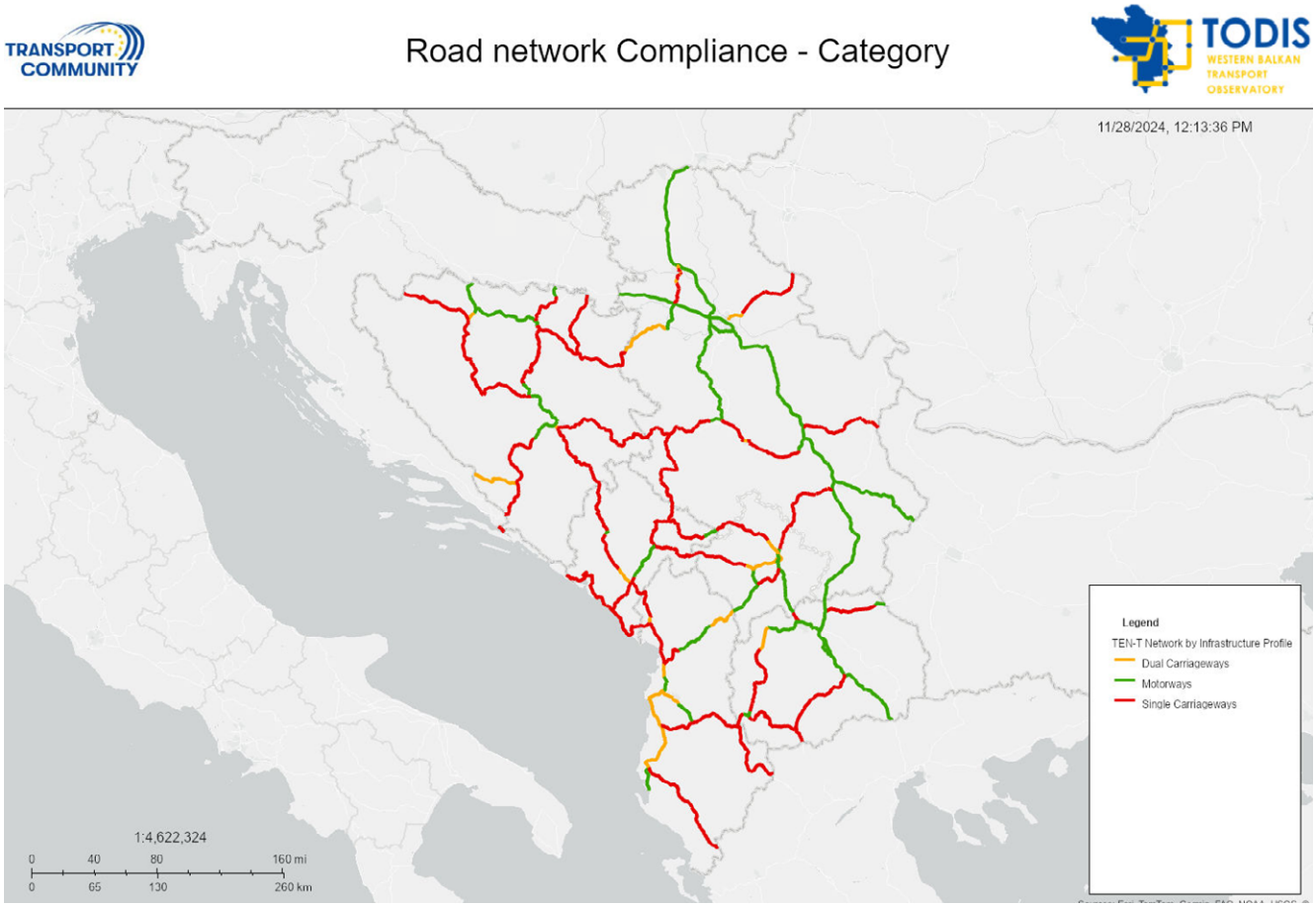


Figure 32. TEN-T Road Network conditions per each road category 2021- 2024

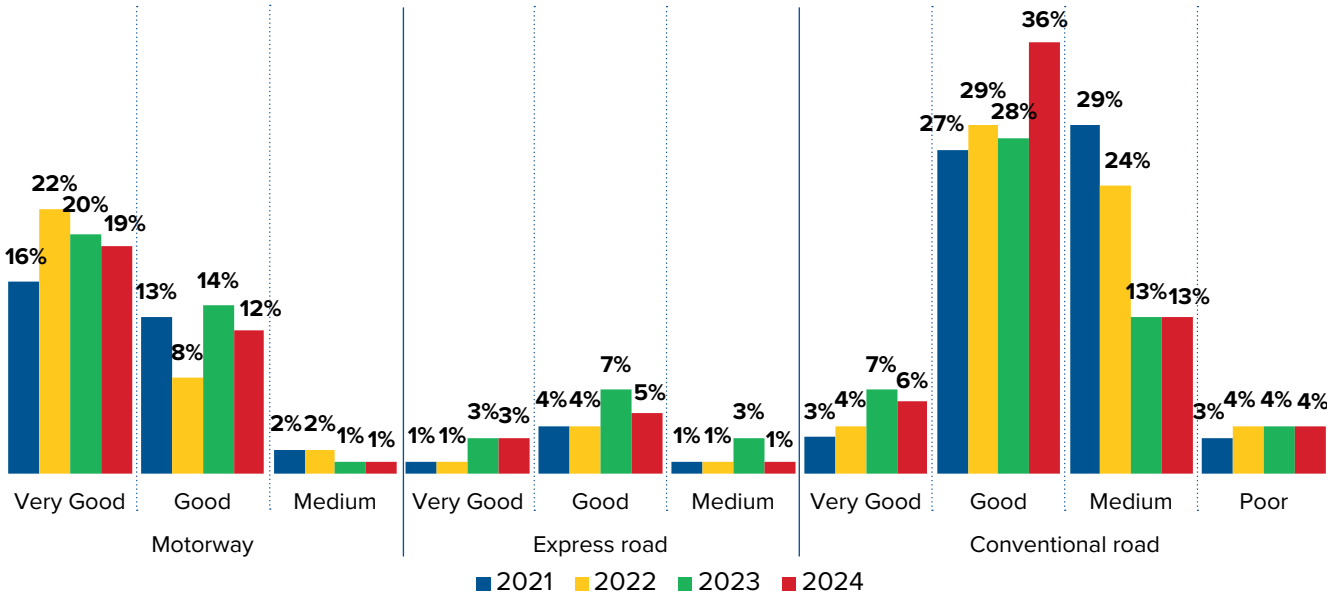


Figure 33. Core and Comprehensive Compliance Rate (infrastructure and profile) 2021 - 2024

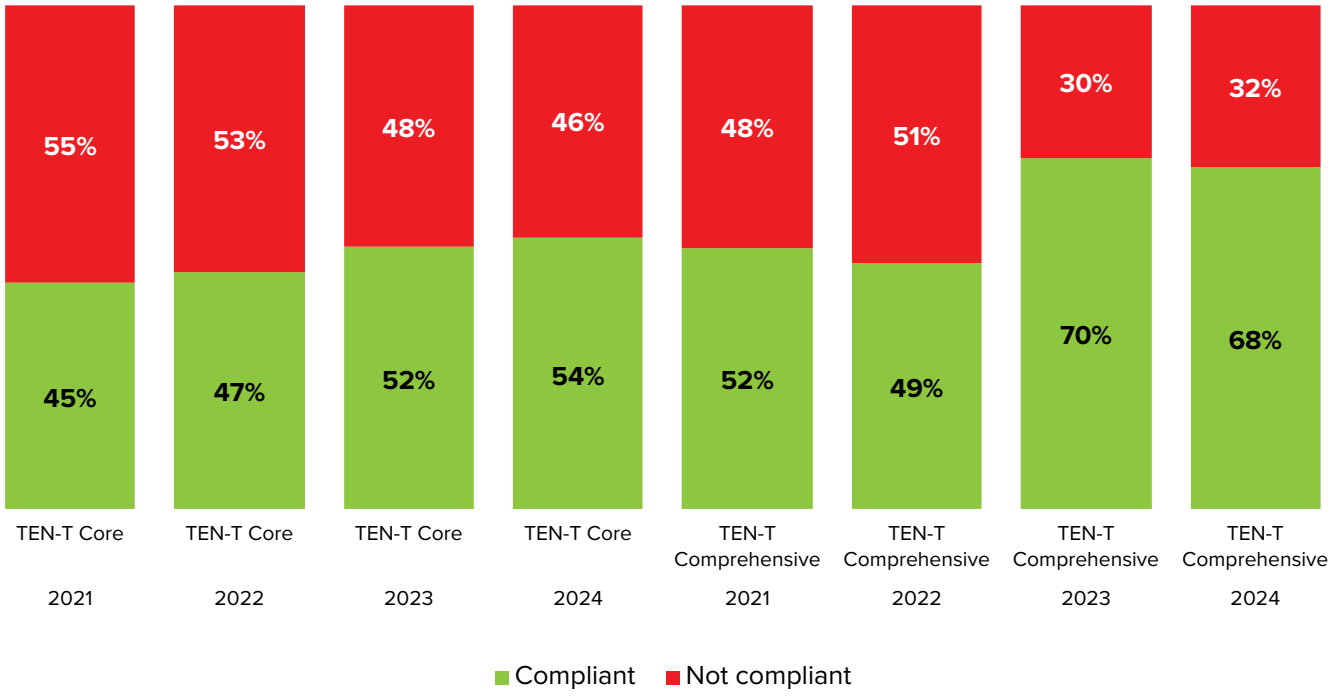
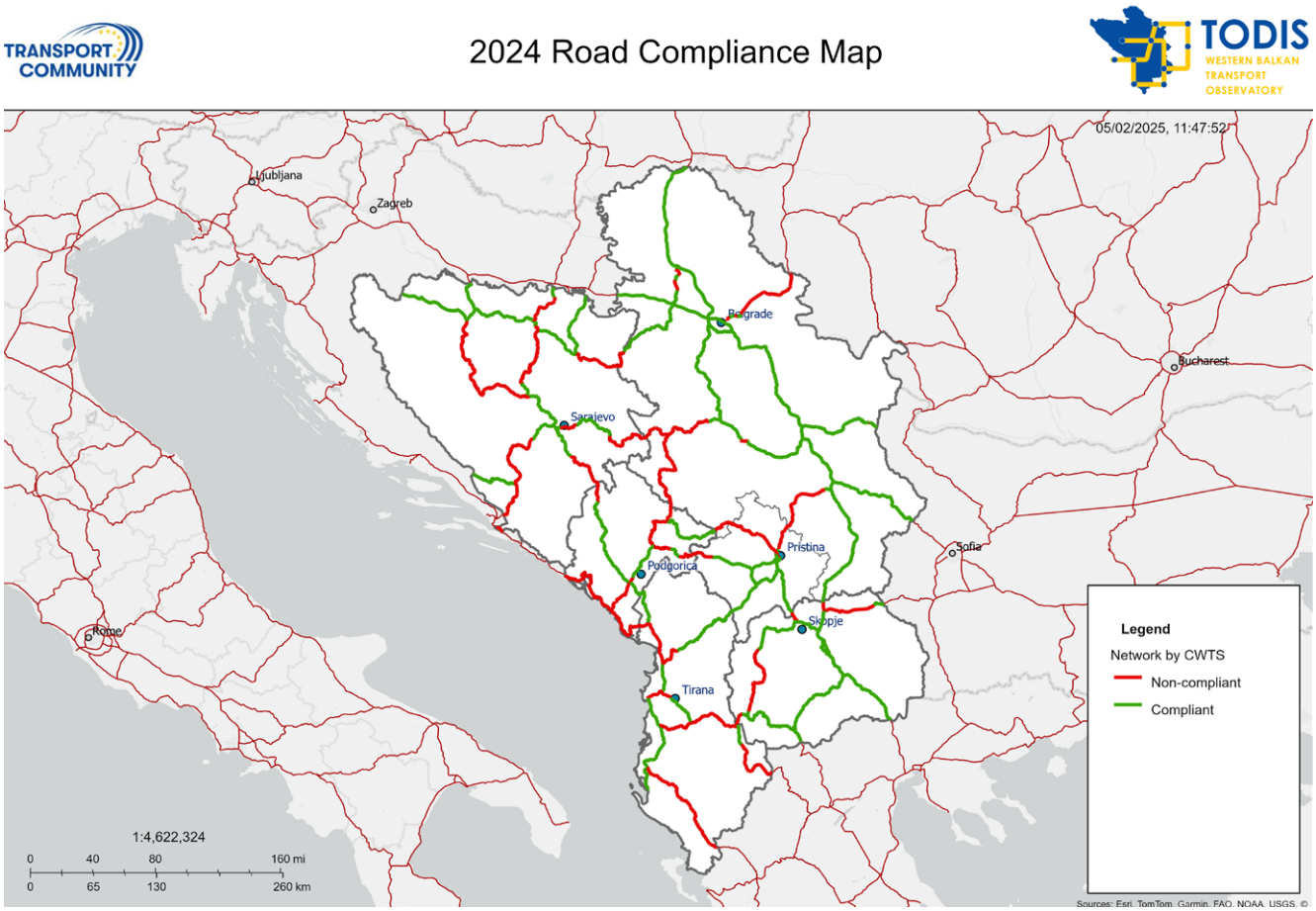


Figure 34. Road network compliance map



TEN-T compliance in the road sector has increased substantially on both the Core and the Comprehensive Network. This might reflect, to some extent the completion of ongoing projects. It should also be noted that almost none of the regional partners conduct annual road surface quality surveys, meaning that annual TEN-T Reports might not provide real-time updates on changes on the ground.

Alternative fuels

Given that overall compliance is almost currently non-existent, significant efforts will be necessary to ensure the adequate deployment of alternative fuel infrastructure in the region. These efforts are outlined in the Road Action Plan, which sets clear deadlines and deliverables. Albania and Serbia have taken top-down initiatives to deploy EVCS on their networks, and the initial results are beginning to emerge (for the moment, in Serbia only). Additionally, action has been taken at a horizontal level through the CONNECTA Technical Assistance Programme, which aims to establish a strategic framework for deploying electric chargers in the Western Balkans.

Progress in this regard will continue to be monitored, and it is hoped that certain network sections will soon achieve compliance with alternative fuel-sufficiency requirements.

ITS, e-tolling, safety and tunnels compliance

Regulation No 1315/2013 did not set specific targets for the deployment of Intelligent Transport Systems (ITS) and tolling on the TEN-T network but requires these systems, where available, to be interoperable and compatible with each other, as outlined in Directives 2010/40/EU and 2004/52/EC. ITS in the region is rolled out on a project-by-project basis, with compliance to the specifications of Directive 2010/40/EU addressed at that level. However, adopting ITS Strategies/Action Plans and fully transposing the relevant EU Directive is expected to provide a more systematic approach and ensure long-term compliance with TEN-T standards. Furthermore, the focus on the implementation of ITS framework and standards in the Growth Plan Reform Agenda and the next generation of the Road Action Plan is expected to boost ITS deployment in the region by 2027.

Regarding road safety, overall compliance is required regarding Directive 2008/96/EC and as amended by Directive (EU) 2019/1936. This is mandated by Articles 30, 31, and 42 of the Regulation (EU) 2024/1679 (The new TEN-T Guidelines), where the transport infrastructure requirements for the core, the extended core, the comprehensive network and the urban nodes are defined. Although these targets were similarly defined under the previous TEN-T Regulation, now amended with the new regulation, the region will have to meet them by establishing an institutional framework. This ongoing, long-term process was being implemented through the Road Safety Action Plan and will also continue with the Next Generation Road Safety Action Plan overseen by the Permanent Secretariat of the Transport Community.

Compliance with Directive 2004/54/EC is mandatory for tunnels longer than 500 meters, as set down in Article 18(c) of Regulation No. 1315/2013. Compliance is addressed on a project-specific basis for tunnels at various stages of design or preparation. In cases where tunnels are already in operation, adopting risk-reduction measures has been accepted as an alternative to implementing Directive requirements when structural solutions are not cost-effective. Hazard-reduction measures should be deployed as part of an institutional framework the region has yet to adopt. Achieving full compliance with TEN-T standards in this regard will necessitate long-term legislative and institutional measures under a different framework.

4.3. **Waterborne network**

The TEN-T Regulation encompasses inland waterway and maritime transport as integral components of the **Rhine-Danube Corridor**, emphasising the development and alignment of transport infrastructure in the Western Balkans with broader European standards. This region's strategic network of inland waterways, including the Danube, Sava, and Tisa Rivers, and its key inland waterway ports, as well as the seaports such as Bar in Montenegro and Durrës in Albania, together enhance transport and multimodal connectivity in the region. Together, these inland and maritime routes serve as essential links within the extended Core and Comprehensive Network, supporting whole logistics and sustainable transport solutions in alignment with the European Union's objectives.

Primary infrastructure characteristics and physical state

Inland Waterway Network

As part of the **Indicative Extension of the TEN-T Core and Comprehensive Networks** to the Western Balkans, inland waterways and ports play a crucial role in enhancing regional connectivity and facilitating trade and transport. The strategic integration of these waterways—particularly the **Danube, Sava, and Tisa Rivers**—into the European transport network underlines their significance in fostering economic growth, ensuring smooth logistics flows, and promoting sustainable multimodal transport solutions.

The Core Network, designed to streamline major transport corridors, includes key inland waterways such as the Danube, the Sava and Tisa Rivers, a vital segment of the **Rhine-Danube Corridor**, which provide essential inland waterway connections. These rivers serve not only as regional arteries for transporting goods and passengers but also as critical links that integrate the Western Balkans with the broader European Union transport infrastructure.

Danube River

The Danube River basin covers an area of 817,000 km^2, representing nearly one-third of continental Europe and standing as the world's most international river basin, spanning 18 countries. The Danube flows through 10 countries, covering 2,857 km from its source in Germany to its delta on the Black Sea. As the only major European river flowing from west to east, it plays a crucial role in the **Rhine-Danube Core Network Corridor**. The European Commission has recognised it as the "most important non-oceanic body of water in Europe" and a "future central axis for the European Union."

In the Region, the Danube flows through Serbia, entering from Hungary at river kilometre (km) 1,433 and exiting at the border with Bulgaria near the confluence of the Timok River at km 845. There are two shared stretches along the river: a **137 km** section with Croatia (between km 1,433 and km 1,295) and a **229.5 km** stretch with Romania (between km 1,075 and km 845).

Sava River

The Sava River, a major tributary of the Danube, flows into it at Belgrade after covering a total length of 944 km from its source in western Slovenia. It passes through **Croatia**, **Bosnia and Herzegovina**, and **Serbia**, serving as a critical international waterway. The Sava forms a natural border between **Bosnia and Herzegovina** and **Serbia** for approximately 27 km and between **Bosnia and Herzegovina** and **Croatia** for around 305 km. Additionally, Serbia and Croatia manage individual stretches of the river, with Serbia responsible for 175 km and Croatia for 72 km, extending to the city of Sisak.

Within Serbia, the Sava flows from river kilometre (km) 0 to km 210.6, while in Bosnia and Herzegovina, it spans from km 175 to km 507.4.

In 2004, the **Framework Agreement on the Sava River Basin** was signed by **Slovenia**, **Croatia**, **Bosnia and Herzegovina**, and **Serbia**, becoming operational in 2006. This agreement governs the river's management, aiming to promote sustainable navigation, water use, and flood protection.

Tisa River

The Tisa River is a significant waterway in Central and Eastern Europe, forming part of the extended **TEN-T Core Network**. The river spans several borders, originating in Ukraine and passing through **Romania** and **Hungary** while briefly forming the border between **Slovakia** and **Hungary**. The Tisa stretches a total of **1,358 km**, with **532 km** fully navigable.

In Serbia, the Tisa enters from Hungary near the city of **Szeged** at river kilometre (km) 164 and flows to its confluence with the **Danube** at **Stari Slankamen** in **Vojvodina** at km 0. The 164 km stretch of the Tisa in Serbia plays a vital role in the region's inland waterway network, enhancing connectivity and supporting regional trade and transport.

Inland Waterway Ports

The **Core Indicative Extension** of the **TEN-T Network** incorporates several important inland waterway ports, including **Novi Sad**, **Belgrade**, along the **Danube River** in Serbia, as well as **Brčko** and **Bosanski Šamac** on the **Sava River** in Bosnia and Herzegovina. These ports play a crucial role in facilitating transport along the region's main river corridors, providing essential connections between the Western Balkans and the broader **European transport network**.

Maritime Ports

For maritime transport, the extended **TEN-T Network** highlights the strategic importance of the **Ports of Bar** in Montenegro and **Durrës** in Albania, located in the **Adriatic Sea** and classified as **Core Network ports**. These ports serve as crucial gateways for maritime trade, linking the **Western Balkans** to the **European** markets. Well-equipped to handle substantial volumes of cargo and passengers, they play a key role in driving the region's economic integration with Europe and beyond.

The **Comprehensive Network** extension also includes the **Port of Vlorë**, situated in southern Albania on the Adriatic Sea. Although smaller in scale compared to Bar and Durrës, Port of Vlorë is an important port in Albania's maritime sector, with significant potential for future development to further support regional maritime transport.

The new TEN-T Regulation

The new TEN-T Regulation 1679/2024 introduced updates to the TEN-T Comprehensive and Core Networks, which fall into the extension of four new inland waterway ports and new requirements and KPIs. This report will focus on describing the network changes, while the newly introduced KPIs will be applied in next year's assessment.

The new ports are in Serbia as follows:

Core Network Port

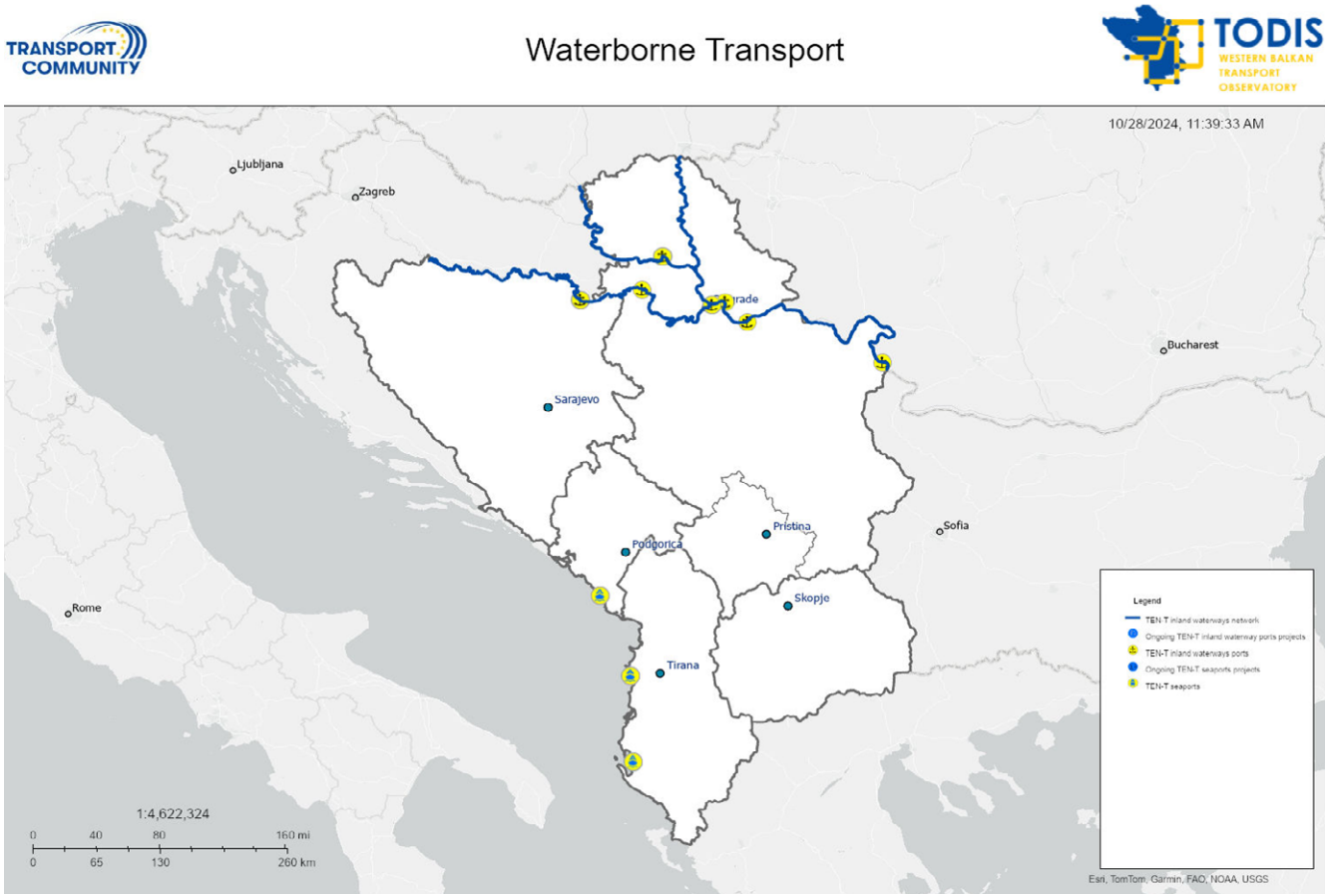
- **Port of Pančevo,** located at 1,153 km of the Danube River. It is operated by four companies: Luka Dunav Pančevo (multipurpose terminal), Granexport (grain terminal with silo), Specijalna Luka (multipurpose terminal), and NIS a.d. (oil and oil derivatives terminal). The port handles various types of cargo, including bulk, general cargo, bags, and pallets, with a capacity of 600-800 tons per day.

Comprehensive Network Ports

- **Port of Sremska Mitrovica,** located in the eastern industrial zone of Sremska Mitrovica, on the left bank of the Sava River, 133 kilometres from the mouth of the Danube River and Belgrade. **Port of Sremska Mitrovica,** located in the eastern industrial zone of Sremska Mitrovica, on the left bank of the Sava River, 133 kilometres from the mouth of the Danube River and Belgrade. The terminal is a basin-type port with a water area of 1 hectare and a depth ranging from 2.5 to 7 meters. The quay has a total length of 100 meters, and 3,100 meters of operational railway tracks are connected to the national railway network.

- **Ports of Smederevo,** located along the Danube River, from the 1,111th to the 1,116th km, beside the M-24 road and the Belgrade-Nis highway. The port operator is HBIS GROUP Serbia Iron & Steel, Tomi Trade (multipurpose terminal), NIS a.d., and Mitan Oil, which operates at two terminals for the transhipment of oil and oil derivatives.
- **Port of Prahovo,** located on the Danube River, at the border of Serbia, Romania, and Bulgaria. It is an important international logistics hub. The port has a transhipment capacity of over 1.5 million tons per year and handles various types of cargo. The port operators are Elixir Prahovo's multipurpose terminal, and there is also an oil terminal operated by NIS a.d.

Figure 35. Map of Inland Waterways Network, Ports and Seaports



Compliance indicators for Waterborne Transport

Compliance indicators for Inland Waterway Network

The compliance indicators for inland waterways networks are derived from the TEN-T Regulation, which list them as infrastructure requirements. The list of scrutinised indicators remains unchanged from the previous reports, namely:

- Transport infrastructure requirements for the core inland waterway network
  - Maintain the **Good Navigation Status** minimum Class IV:
    - Minimum draft 2.5 m
    - Minimum height under bridges 5.25 m.
- Deployment of **River Information Service** (RIS)

As part of the **Indicative Extension of the TEN-T Core and Comprehensive Network** to the **Western Balkans**, inland waterways such as the **Danube, Sava**, and **Tisa Rivers** play a critical role in the region's connectivity and

economic integration. These waterways form essential corridors within the **European inland navigation network**, providing sustainable and efficient transport routes for goods and passengers while enhancing multimodal transport solutions.

The **Danube River**, one of the world's most important non-oceanic waterways, flows through Serbia and links the region to the broader European transport system. It serves as a key segment of the **Rhine-Danube Core Network Corridor**. Similarly, the **Sava River**, a major tributary of the Danube, connects several is integral to the region's inland waterway network. The **Tisa River** offers stable navigation conditions, contributing to the growing network of interconnected waterways.

Despite these strategic advantages, challenges such as fluctuating water levels, critical sectors along these rivers, and incomplete implementation of **River Information Services (RIS)** hinder optimal navigability. Continued investment and cooperation are required to address these obstacles and further align the region's inland waterway infrastructure with **European transport standards**.

This document outlines the key characteristics of these inland waterways, their current classification, challenges, and plans for future development under the TEN-T framework.

Danube River

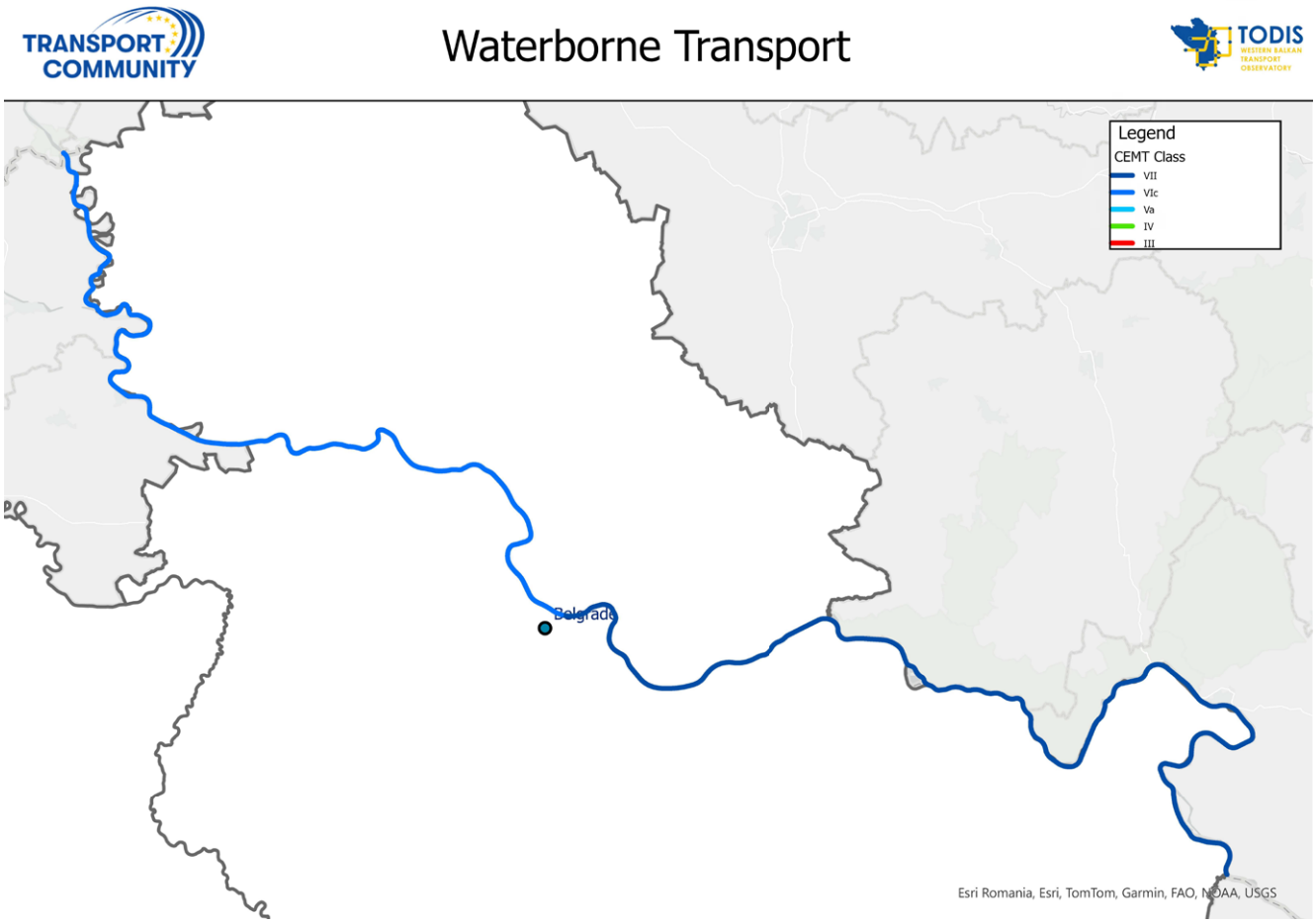
The Danube River spans 587.6 km through Serbian territory, representing 20.6% of the river's total length, entering Serbia from Hungary at km 1433 and exiting at the Bulgarian border at km 845. Notably, there are two joint segments along this route: 229.5 km shared with Romania and 137 km with Croatia. At km 863, the Iron Gate II dam is located.

According to reports from regional partners, the navigational status of the Danube River, as per the **Classification of European Inland Waterways** (a set of standards governing the interoperability of large navigable waterways within the Trans-European Inland Waterway network, established by the European Conference of Ministers of Transport), is as follows:

The segment from the Confluence of **Timok River (km 845) to Belgrade (km 1170)** meets the criteria for **CEMT Class VII**, the highest class, with a draft of up to 4.5 meters and a minimum bridge clearance of 9.1 meters.

The segment from **Belgrade (km 1170) to Bezdan (km 1433)** qualifies as **CEMT Class VIc**, offering the same draft and minimum bridge clearance as Class VII. However, the maximum length of pushed convoys is restricted to 200 meters, compared to 285 meters for Class VII.

Figure 36. Map of the Danube River and the Status of Good Navigation



It is important to note that this stretch of the Danube contains **24 critical sectors** for navigation. During the summer months, low precipitation led to water levels falling below the required depth of 2.5 meters in some sections, prompting Serbian authorities to undertake dredging operations to maintain navigability. These seasonal fluctuations highlight the ongoing vulnerability of the region's waterways to climate change, emphasising the need for continued investment in infrastructure and innovative measures to mitigate the impact of such events on navigation.

Sava River

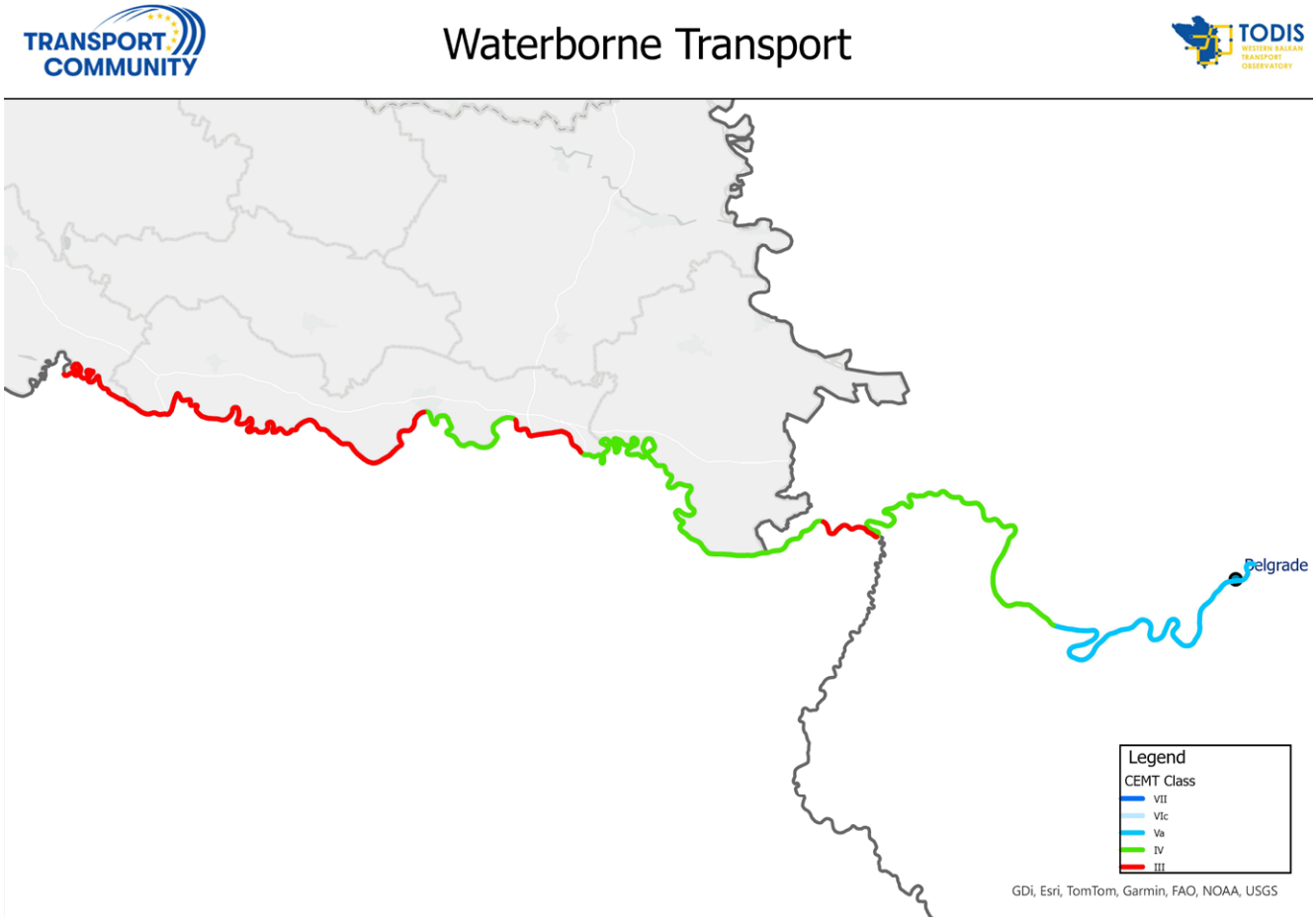
The Sava River is navigable for larger vessels along a 593.8 km stretch between its confluence with the Danube in Belgrade, Serbia, and the Galdovo Bridge in Sisak, Croatia, 2.8 km upstream from the confluence of the Sava and Kupa rivers.

- The confluence marks the westernmost point of the river designated as a **Class IV** international waterway, in line with the UNECE's European Agreement on Main Inland Waterways of International Importance (AGN). Between Sava Mouth (km 0) and Kamičak (km 81), the Sava is classified as **Class Va**, allowing navigation by vessels with a maximum length of 95-100 meters, a beam of up to 11.4 meters, a draught of 2.8 meters, and a tonnage of up to 3,000 tonnes.
- The segment between Kamičak (km 81) and Rača (km 176) qualifies as **Class IV**, suitable for vessels up to 80-85 meters in length, with a beam of 9.5 meters, a draught of 2.5 meters, a tonnage of up to 1,500 tonnes, and a minimum bridge clearance of 5.25 meters.
- The segment between Rača (km 176) and Domuskela (km 196) is classified as **Class III**, making navigation difficult along this part of the river.
- The segment from Domuskela (km 196) to Šamac (km 313.7) returns to **Class IV**.
- The stretch between Šamac (km 313.7) and Rit Kanal (km 338.2) reverts to **Class III**, posing significant challenges for year-round navigability for larger vessels and limiting the Sava River's potential as a fully functional inland waterway within the Core Network.

- The segment from Rit Kanal (km 338.2) to Brod (km 371.2) is classified as **Class IV**.
- Beyond Brod (km 371.2), the river reverts to **Class III**, making navigation almost impossible in this section.

The largest ports along the Sava River include Brčko and Šamac in Bosnia-Herzegovina, Šabac and Sremska Mitrovica in Serbia, and Sisak and Slavonski Brod in Croatia.

Figure 37. Map of Sava River and the Status of Good Navigation



However, the current situation on the Sava River is even more challenging due to low rainfall and occasional flooding. According to reports from the **International Sava Basin Commission** and the river authorities in Croatia, Serbia, and Bosnia and Herzegovina, **31 critical sections** along the river require immediate attention to restore navigability.

The current plan is to apply for funding through the **Connecting Europe Facility (CEF)** to develop the main project documentation for the entire Sava River, focusing on the joint section between Croatia and Bosnia and Herzegovina. If the CEF application is unsuccessful, an alternative approach will be pursued through other sources of financing.

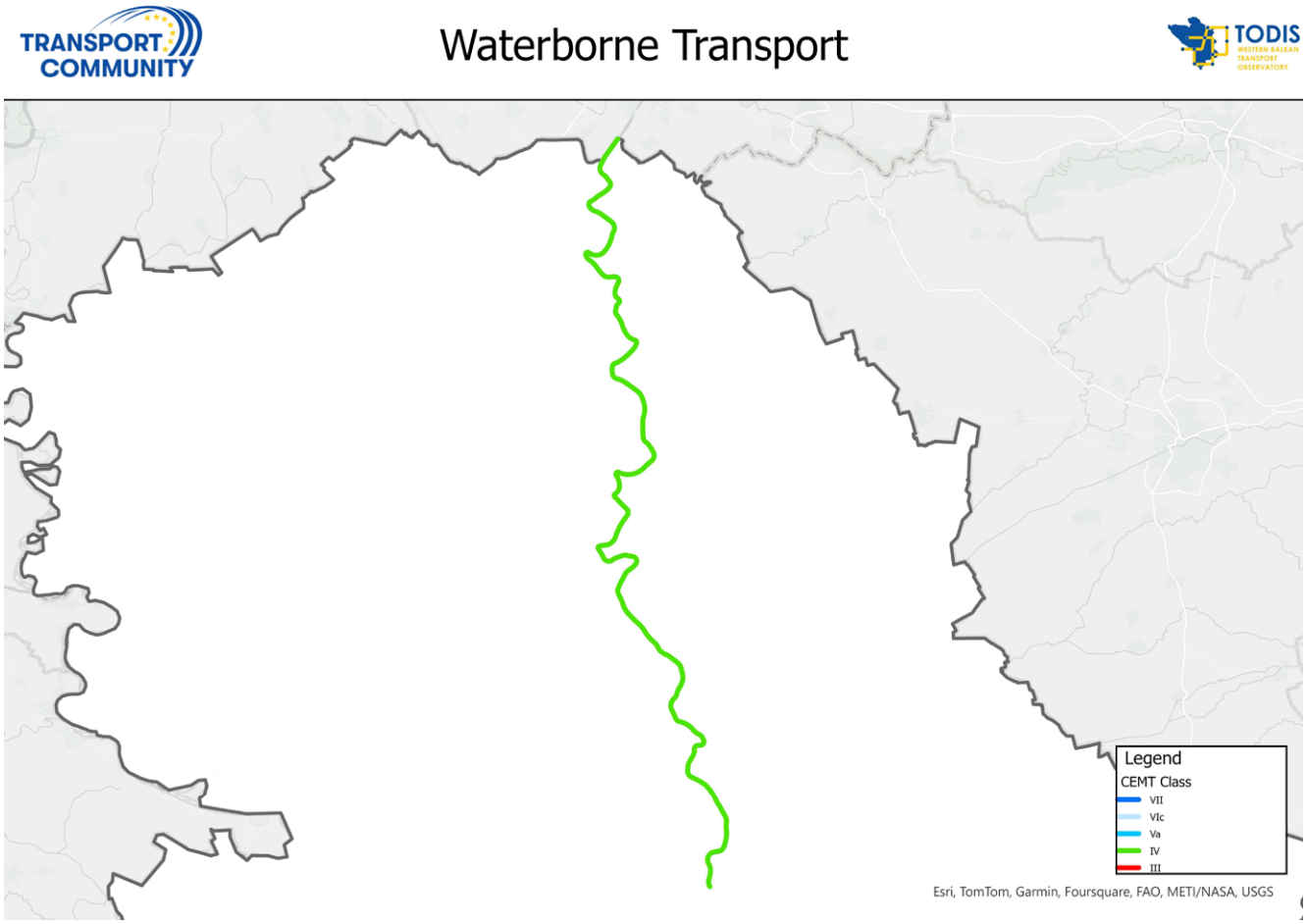
At present, the top priority is the implementation of the project for the **Jaruge – Novi Grad** and **Šamac** sectors, which will effectively divide the Sava River into two key sections for focused rehabilitation efforts.

Tisa River

According to the **Regulation on Categorisation of International and Interstate Waterways**, the entire stretch of the Tisa River in Serbia, from km 0 to km 164, is classified as **Class IV**. This section benefits from stable navigation conditions along its entire length. A dam and a navigation lock located at km 63 divide the river into two segments, though there is little difference in navigational conditions between them.

However, full **compliance with the River Information Services (RIS)** on the Tisa River has not yet been achieved. Despite some progress, the incomplete deployment of RIS continues to hinder the optimal management and safety of navigation on this vital inland waterway.

Figure 38 Map of Tisa River and the Status of Good Navigation



While significant progress has been made in improving inland waterway infrastructure in the region, addressing the remaining gaps—particularly in RIS compliance and draught requirements—will be essential for ensuring seamless transport operations. These efforts are cruicial to supporting the long-term development of multimodal transport solutions, boosting connectivity and economic growth across the Western Balkans, and aligning with broader European transport goals.

Compliance indicators for Inland Waterway Ports

Compliance indicators for inland waterway ports are:

- **Connectivity:** Links with railway lines, roads, and, where feasible, inland waterways.
- **Multimodal Terminal Access:** At least one freight terminal available to all operators in a transparent, non-discriminatory manner.
- **Environmental Facilities:** Infrastructure for improving ships' environmental performance, such as waste reception facilities.
- **Alternative Fuels Infrastructure:** Availability of alternative fuelling stations.

Compliance assessment for each indicator:

Table 4. Compliance assessment for the inland waterway ports of the extended TEN-T Core Network

Regional Partner	Port name	Rail connection	Road connection	CEMT Requirements	Alternative fuels availability	Multimodal Terminal availability	Environmental Facilities
Serbia	Belgrade	No	Yes	Yes	No	Yes	No
	Novi Sad	Yes	Yes	Yes	No	Yes	No
	Pančevo	Yes	Yes	Yes	No	Yes	No
Bosnia & Herzegovina	Brcko	Yes	Yes	Yes	No	Yes	No
	Bosanski Samac	Yes	Yes	Yes	No	Yes	No

Based on data received from regional partners, as of 2024, the Core inland waterway ports within the extended TEN-T network in the Western Balkans continue to meet all requirements except for alternative fuels availability and facilities for improvement of the environmental performance of the vessels. All the ports are complying with the connection with rail, except the Port of Belgrade, which has only road connection.

Table 5. Compliance assessment for the inland waterway ports of the extended TEN-T Comprehensive Network

Port name	Rail connection	Road connection	CEMT Requirements	Clean fuels availability	Terminal availability	Port Reception Facilities
Sremska Mitrovica	Yes	Yes	Yes	No	Yes	No
Smederevo	Partialy	Yes	Yes	No	Yes	No
Prahovo	Yes	Yes	Yes	No	Yes	No

When related to the compliance indicators of the comprehensive inland waterway ports, all three ports have maintained compliance with the requirements related to road connection, terminal availability and CEMT requirements. The ports of Sremska Mitrovica and Prahovo are connected fully to rail infrastructure, while the port of Smederevo is partly connected by rail. None of the ports complies with Clean Fuel availability requirements and facilities for improvement of the environmental performance of the vessels

On 19 September 2024, the Transport Community Permanent Secretariat, in cooperation with the Danube Commission, the International Sava Basin Commission, and the European Commission, organised a regional workshop in Brčko titled **“Promoting Port of Brčko as a Logistics Gateway and its Better Integration into the Rhine-Danube TEN-T Core Corridor.”** The workshop attracted significant participation from international and regional institutions specialising in inland waterways, private industry stakeholders, and major ports along the Danube and Sava rivers. This initiative enabled a thorough assessment of the region’s inland waterway infrastructure and fostered dialogue on potential investments to improve navigation and expand the network.

Compliance indicators of Seaports

Compliance indicators for Core and Comprehensive maritime ports:

- Connection with railway lines or roads and, where possible, with inland waterways,
- Availability of at least one multimodal freight terminal open to all operators in a non-discriminatory way and application of transparent charges.
- Equipped with the necessary infrastructure to improve the environmental performance of ships in ports (PRF)
- Deployment of alternative fuels infrastructure
- Uses of telematic applications (VTMIS, SafeSeaNet and MNSW)

As outlined in the table below, the Core Maritime Ports of Bar and Durres have maintained good compliance with most indicators for 2024. Durres Port is in compliance with key indicators, including road connections, ship-generated waste reception facilities, and terminal availability. However, the primary non-compliance issue stems from limited rail connectivity where only the eastern terminal is connected to the national rail network. Another non-compliance is the absence of the Vessel Traffic Monitoring and Information System (VTMIS), where the establishment of the system is ongoing, planned to be finalised in 2025 and the last non-compliance is the absence of clean fuel facilities.

The Core Port of Bar JSC is fully compliant with several key indicators, including rail and road connectivity, reception facilities for ship-generated waste, terminal availability, and the implementation of the Vessel Traffic Monitoring and Information System (VTMIS). Finally, in 2024, Montenegro established the Maritime National Single Window (MNSW), and now Port of Bar JSC is working on integrating the newly established MNSW with the Port Community System (PCS). However, the port remains non-compliant in terms of providing alternative clean fuel.

Table 6. Compliance assessment for Core Maritime Ports

Port name	Rail connection	Road connection	Environment infrastructure	Alternative fuel infrastructure	Terminal availability	VTMIS	MNSW
Durres	Partialy	Yes	Yes	No	Yes	No	Partialy
Bar	Yes	Yes	Yes	No	Yes	Yes	Yes

The Transport Community Permanent Secretariat is actively engaged in ongoing initiatives with maritime ports of the region, including Bar and Durres. These efforts focus on introducing new technologies and innovations to promote alternative fuels, enhance energy-efficient maritime transport, and modernise and expand port infrastructure capacity. These initiatives are aligned with Regulation (EU) No 2024/1679, which sets out guidelines for developing the trans-European transport network (TEN-T).

On 13 June 2024, during the **Maritime Week** (13-15 June 2024), the Transport Community Permanent Secretariat, in collaboration with Durres Port Authority, organised a High-Level Panel on Port Infrastructure and Trade Facilitation. This event brought together high-level representatives from the Core Ports of Durres and Bar, alongside the Southern Adriatic Sea Port System and international institutions. The panel discussions focused on innovative strategies for enhancing port infrastructure, streamlining trade facilitation processes, and promoting maritime awareness initiatives.

The Port of Vlore in Albania is the only Comprehensive maritime port in the Western Balkans region. The compliance status of the Port of Vlore with the relevant indicators is provided in the table below.

Table 7. Compliance for the Comprehensive maritime port

Port name	Rail connection	Road connection	Environment infrastructure	Alternative fuel infrastructure	Terminal availability	VTMIS	MNSW
Vlore	No	Yes	Yes	No	Yes	No	Partialy

The Port of Vlore in 2024 has maintained compliance with several important indicators, including facilities for ship-generated waste, road connection, and terminal availability. However, there are also areas of non-compliance, such as Rail Connection, alternative fueling infrastructure and the VTMIS.

The Albanian government has made a strategic decision to transform the current Port of Vlore into a tourism-focused port. All commercial operations will be relocated to the new port in Triporti Vlore, situated approximately 10 kilometres north of the existing site. A concession contract has been established for the construction of the tourist port at the current location, with plans to transfer the passenger terminal once the necessary infrastructure is in place at Triporti to accommodate passenger services. Additionally, another concession agreement has been signed between the Ministry and the concessionaire for the construction and operation of the new Triporti port.

This shift in port operations highlights a proactive strategy by the Albanian government to adapt its port infrastructure to evolving market needs and enhance the region's capacity for tourism and trade.

Overall compliance assessment

Inland Waterway Network

The extension of the **TEN-T Core and Comprehensive Network** to the inland waterways of the **Western Balkans**, including the **Danube, Sava**, and **Tisa Rivers**, represents a critical opportunity to enhance the region's transport infrastructure and facilitate greater integration into the broader European transport network. These waterways are essential for supporting **sustainable multimodal transport solutions**, offering efficient, cost-effective alternatives to road and rail transport, and strengthening trade links within the region and beyond.

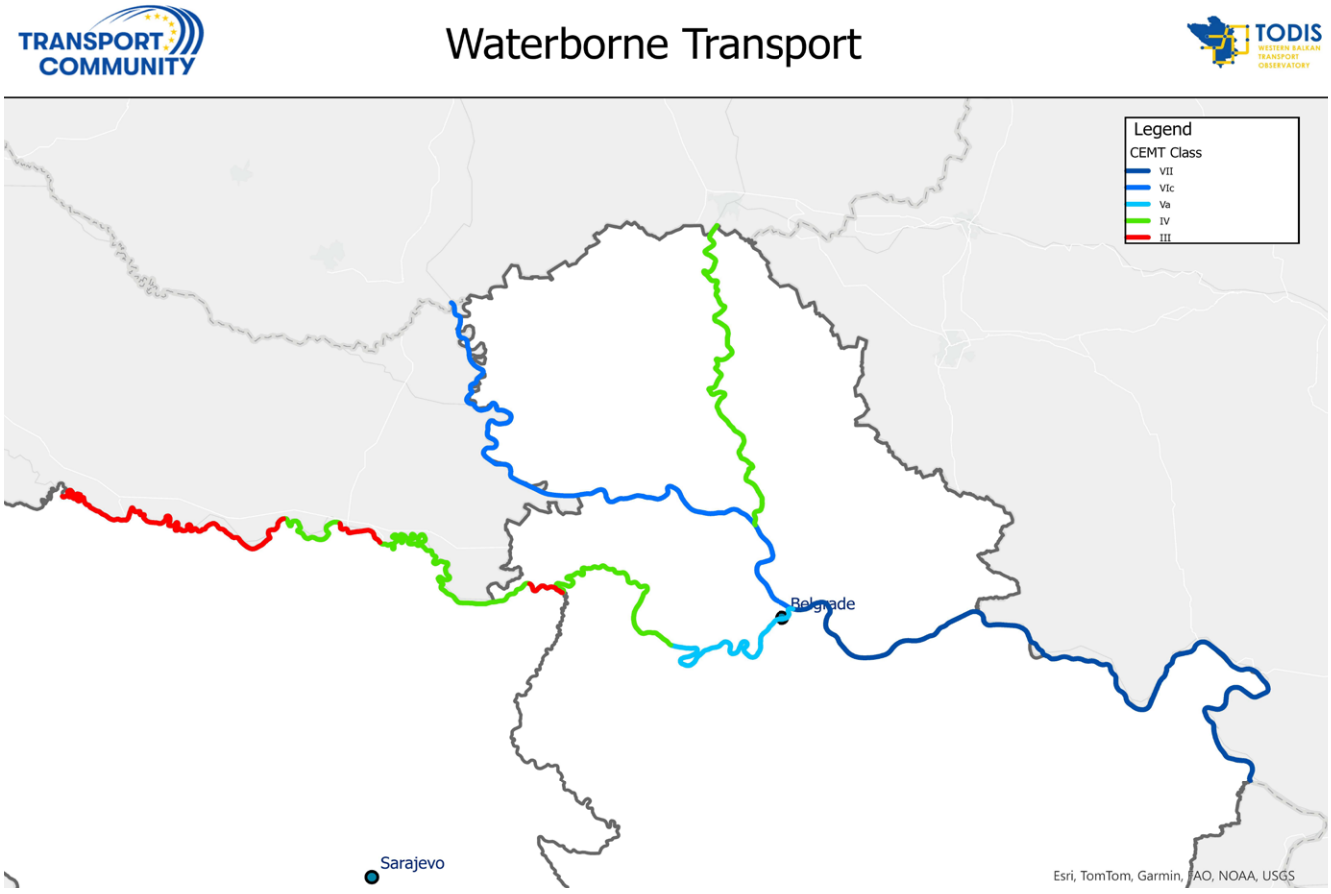
Table 8. Overall compliance assessment for the inland waterways network

River	Downstream km	Upstream km	Regional partner	Section length	CEMT Class	RIS
Danube	**845.5** Confluence of Timok River	**1170** Belgrade	Serbia	324.5	**VII**	Yes
	1170 Belgrade	**1433** Bezdan	Serbia	263	**VIc**	Yes
Sava	0.0 Sava mouth	81.0 Kamičak	Serbia	81.0	**Va**	Yes
	81.0 Kamičak	**176.0** Rača	Serbia- Bosnia & Herzegovina	95.0	**IV**	Yes
	176.0 Rača	**196.0** Domuskela	Serbia- Bosnia & Herzegovina	20.0	**III**	Yes

Sava	**196.0** Domuskela	**313.7** Šamac	Croatia – Bosnia & Herzegovina	117.7	**IV**	Yes
	313.7 Šamac	**338.2** Rit Kanal	Croatia – Bosnia & Herzegovina	24.5	**III**	Yes
	338.2 Rit Kanal	**371.2** Brod	Croatia – Bosnia & Herzegovina	33.0	**IV**	Yes
	371.2 Brod	**594** Sisak	Croatia – Bosnia & Herzegovina	222.8	**III**	Yes
Tisa	0.0	164.0	Serbia	164.0	**IV**	No

However, the challenges these rivers face, such as **seasonal fluctuations in water levels, navigational bottlenecks, and infrastructure gaps**, particularly in relation to the **River Information Services (RIS)**, require continued attention. With its strategic position in the **Rhine-Danube Corridor**, the **Danube River** presents significant potential but is disadvantaged by critical sectors that impede year-round navigability. While navigable for large vessels along much of its length, the **Sava River** faces similar constraints, with key sections needing rehabilitation to restore full navigational capacity. The **Tisa River**, although more stable, still lacks full RIS compliance, limiting its operational efficiency.

Figure 39 The map of compliance assessment of the Inland Navigation Network



Addressing these challenges will require sustained investment in infrastructure development, particularly through initiatives like the **Connecting Europe Facility (CEF)** and regional programs such as the **Sava and Drina River Corridors Integrated Development Program (SDIP)**. These efforts will not only enhance the navigability of these vital waterways but also contribute to the **Western Balkans' economic growth**, improve **connectivity** within the region, and align with the **European Union's green and sustainable transport goals**.

Ultimately, unlocking the full potential of the **inland waterway network** in the Western Balkans will be essential for promoting a more **resilient, sustainable**, and **integrated transport system** that meets the future demands of regional and international trade.

Inland Waterway Ports

All core and comprehensive inland waterway ports demonstrate similar compliance with key indicators, meeting requirements for road connections, terminal availability, and CEMT Class standards. Most of these ports are connected by rail, except for the Port of Belgrade, which is not connected to the rail network, and the Port of Smederevo, which has partial rail connectivity. None of the ports currently meet the standards for clean fuel availability or have facilities to improve vessels' environmental performance.

Table 9 Overall assessment of the Inland Waterway Ports

TEN-T Layer	Port name	Rail connection	Road connection	CEMT Requirements	Alternative fuels availability	Multimodal Terminal availability	Environmental Facilities
Core	Belgrade	No	Yes	Yes	No	Yes	No
	Novi Sad	Yes	Yes	Yes	No	Yes	No
	Pančevo	Yes	Yes	Yes	No	Yes	No
	Brcko	Yes	Yes	Yes	No	Yes	No
	B. Samac	Yes	Yes	Yes	No	Yes	No
Comprehensive	S.Mitrovica	Yes	Yes	Yes	No	Yes	No
	Smederevo	Partialy	Yes	Yes	No	Yes	No
	Prahovo	Yes	Yes	Yes	No	Yes	No

Seaports

All maritime ports have maintained good compliance levels with most indicators in 2024, meeting key standards such as road connections, ship-generated waste reception facilities, and terminal availability. However, the Port of Durres only has partial rail connectivity, with only the eastern terminal connected to the national rail network, while the Comprehensive Port of Vlora lacks rail access entirely. Additionally, Vessel Traffic Monitoring and Information Systems (VTMIS) are not yet in place in the Ports of Durres and Vlora, though Albania's plans to implement VTMIS are ongoing, with completion expected by 2025. Currently, none of the ports meet the compliance indicator for clean fuel availability.

Table 10 Overall assessment of the Seaports

TEN-T Layer	Port name	Rail connection	Road connection	Environ. Infrastruc	Altern.fuel infrastructure	Terminal availability	VTMIS	MNSW
Core	Durres	Partialy	Yes	Yes	No	Yes	No	Partialy
	Bar	Yes	Yes	Yes	No	Yes	Yes	Yes
Comprehensive	Vlore	No	Yes	Yes	No	Yes	No	Partialy

4.4. **Airports**

The legal basis for extending the TEN-T Core and Comprehensive Network to the Western Balkans was originally set in Regulation No. 1315/2013, last updated in 2019. In 2024, however, Regulation 1315/2013 was repealed and replaced by Regulation 1679/2024. This new regulation will serve as the foundation for the upcoming 2025 annual TEN-T compliance assessment.

Due to the timing of data collection, this report is still based on the requirements from the previous regulations, assessing compliance based on three indicators rather than the five introduced in Regulation 1679/2024. The two new indicators are: providing pre-conditioned air supply to stationary aircrafts and implementing an Air Traffic Management/Air Navigation System.

Airport Compliance indicators

The compliance indicators for airports are initiated in TEN-T Regulation No 1315/2013 where they are specified as infrastructure requirements. However, Regulation 1315/2013 was repealed and replaced by EU Regulation 1679/2024. This new regulation will serve as the foundation for the upcoming 2025 annual TEN-T compliance assessment.

In this report, the following compliance indicators for airports in the Western Balkans have been assessed:

- Rail connection;
- Clean fuels - applicable only to Core Network Airports;
- Terminal availability - at least one terminal is open to all operators in a non-discriminatory way and applies transparent, relevant and fair charges.

Primary infrastructure characteristics and equipment

Currently, **eleven airports** (Tirana, Sarajevo, Banja Luka, Pristina, Podgorica, Tivat Skopje, Ohrid, Belgrade, Kraljevo, and Niš) are part of the TEN-T Comprehensive in the Western Balkans, six of which are located on the Core Network (Tirana, Sarajevo, Podgorica, Skopje, Belgrade).

The airports in the Western Balkans display various ownership structures, reflecting the diversity in their management. Belgrade Airport operates under a concession agreement between the Serbian government and VINCI Airports, whereas Sarajevo International Airport is fully owned by the entity Federation of Bosnia and Herzegovina. In North Macedonia, both Skopje and Ohrid airports are operated by TAV Airports under concession agreements with the government. Podgorica and Banja Luka airports remain fully government-owned by Montenegro and the Republika Srpska, respectively. In Kosovo, Pristina Airport is government-owned but operated by Limak Kosovo International Operator J.S.C. Tirana International Airport in Albania is privately owned by the Kastrati Group, while Niš and Kraljevo airports in Serbia are under full state ownership.

Figure 40. Indicative extension of TEN-T Comprehensive and Core Airports to the Western Balkans Region

Overall compliance assessment

Conclusions for each compliance standard are provided below.

a. Connection to other modes

A key condition to ensure the interoperability of airports on the TEN-T Network is their connection to the railway network. **Currently, no airports have a direct rail connection.**

Table 11. List of airports with road and rail connections

Road and rail connection to the status of Airports		Connection to rail			Connection to Motorway/Express Road		
		2022	2023	2024	2022	2023	2024
Albania	**Tirana**	No	No	No	Yes	Yes	Yes
Bosnia and Herzegovina	**Sarajevo**	No	No	No	Yes	Yes	Yes
	Banja Luka	No	No	No	Yes	Yes	Yes
North Macedonia	**Skopje**	No	No	No	Yes	Yes	Yes
	Ohrid	No	No	No	Yes	Yes	Yes
Kosovo	**Pristina**	No	No	No	Yes	Yes	Yes
Montenegro	**Podgorica**	No	No	No	Yes	Yes	Yes
	Tivat	No	No	No	Yes	Yes	Yes
Serbia	**Belgrade**	No	No	No	Yes	Yes	Yes
	Nis	No	No	No	Yes	Yes	Yes
	Kraljevo	No	No	No	Yes	Yes	Yes

Source: Transport Community Permanent Secretaria'st own assessment

b. Availability of alternative fuels

Currently, there are no fixed storage facilities for aviation biofuel at Sarajevo, Podgorica, Belgrade, Skopje, Ohrid, Niš, Kraljevo, or Pristina airports. However, airports must be prepared to provide alternative clean fuels as market needs evolve, in line with regulatory requirements for air transport infrastructure.

Belgrade Airport has begun discussions with suppliers to expand fuel capacity, aiming for alternative fuels within five years. TAV Macedonia joined a global initiative to decarbonise aviation, committing to net zero CO2 emissions by 2050 through the "Toulouse Declaration." The Civil Aviation Agency of North Macedonia updates its State Action Plan every three years to meet ICAO requirements, with the latest plan focusing on using biodiesel blends to reduce emissions. For ground services, alternative fuels like e-mobility, hydrogen, CNG, and LPG are partially available at airports such as Belgrade, Sarajevo, Skopje, Niš, and Kraljevo, with Sarajevo International leading in electric-powered ground equipment. This aligns with the broader goal of preparing airports to offer clean fuels as market demand increases.

Table 12. List of availability of alternative fuels in airports

Regional partner	Airport	Tank facilities for aviation biofuel			Availability of alternative fuels for airport ground services		
		2022	2023	2024	2022	2023	2024
Albania	**Tirana**	No	No	No		Yes	Yes
Bosnia and Herzegovina	**Sarajevo**	No	No	No	Yes	Yes	Yes
	Banja Luka	No	No	No			
North Macedonia	**Skopje**	No	No	No	Partialy	Partialy	Partialy
	Ohrid	No	No	No	No	No	No
Kosovo	**Pristina**	No	No	No	No	No	No
Montenegro	**Podgorica**	No	No	No			
	Tivat	No	No	No			
Serbia	**Belgrade**	No	No	No	Yes	Yes	Yes
	Nis	No	No	No	Yes	Yes	Yes
	Kraljevo	No	No	No	Yes	Yes	Yes

c. Terminal availability

All airports are open to international traffic, with foreign air carriers operating in and out. Some airports such as Tirana, Podgorica, Sarajevo, and Niš reached or came close to reaching their capacity limit. With its ongoing modernisation project, Sarajevo Airport has expanded its capacity from 1 million to 1.8 million passengers.

Tirana is Europe's fastest-growing airport. Having served a remarkable 7,257,634 [3] passengers throughout the year 2023. This achievement marks a substantial increase of 40% compared to the previous year.

Table 13. List of terminal availability

Regional partner	Airport	Open to international traffic	Adequate terminal capacity
Albania	**Tirana**	Yes	No
Bosnia and Herzegovina	**Sarajevo**	Yes	Yes
	Banja Luka	Yes	Yes
North Macedonia	**Skopje**	Yes	Yes
	Ohrid	Yes	Yes
Kosovo	**Pristina**	Yes	Yes
Montenegro	**Podgorica**	Yes	No
	Tivat	Yes	
Serbia	**Belgrade**	Yes	Yes
	Nis	Yes	Yes
	Kraljevo	Yes	Yes

3 Data from the webpage of the International Airport of Tirana. https://www.tirana-airport.com/en/article/997/Tirana-International-Airport-%28TIA%29-Reports-Record-Breaking-7.25-Million-Passengers-in-2025.

5. TEN-T Projects

5.1. Methodological aspects

The TCT Secretariat tracks the development of the TEN-T network in the region, collecting and processing relevant information on all ongoing and finance-secured projects. The scope of this exercise is mainly to:

- provide an outline of overall efforts currently undertaken by the regional partners to upgrade the TEN-T network and
- estimate TEN-T future compliance rates based on scheduled project completion dates and their anticipated network impact.

The methodology and criteria for project definition and selection have remained unaltered, making the results of this exercise fully comparable between yearly data series.

5.2. Infrastructure projects

5.2.1. Railway projects

In terms of overall investment, the rail has been overshadowed by the road sector for the past 20 years. While approximately 80% went on roads, the railway sector only received around 15% of total investment.

The landscape has evolved, with a notable shift towards prioritising railway transport. Presently, the enhancement of rail systems stands as an integral component of recently published strategic documents by the European Commission. These documents emphasise the importance of greener and more efficient transportation methods, with a distinct focus on railways. The expectation is for the Transport Community to mirror this approach in its forthcoming strategies and concepts.

The EU has played an important role in financing the construction and enhancement of transport corridors within its member states and neighbouring countries. The primary objectives have been to eliminate bottlenecks and facilitate the development of sustainable and interconnected transportation systems. This attempt aligns with the primary Trans-European Transport Network (TEN-T) policy, where the projects play a vital role in realising the Core Network, shaping essential connections between the EU and the broader region. The EU directly supported the implementation of rail projects through the Economic and Investment Plan adopted in 2020 and the New Growth Plan for the Western Balkans in 2023. Comprehensive information about ongoing rail projects can be found in Annex II of the current document.

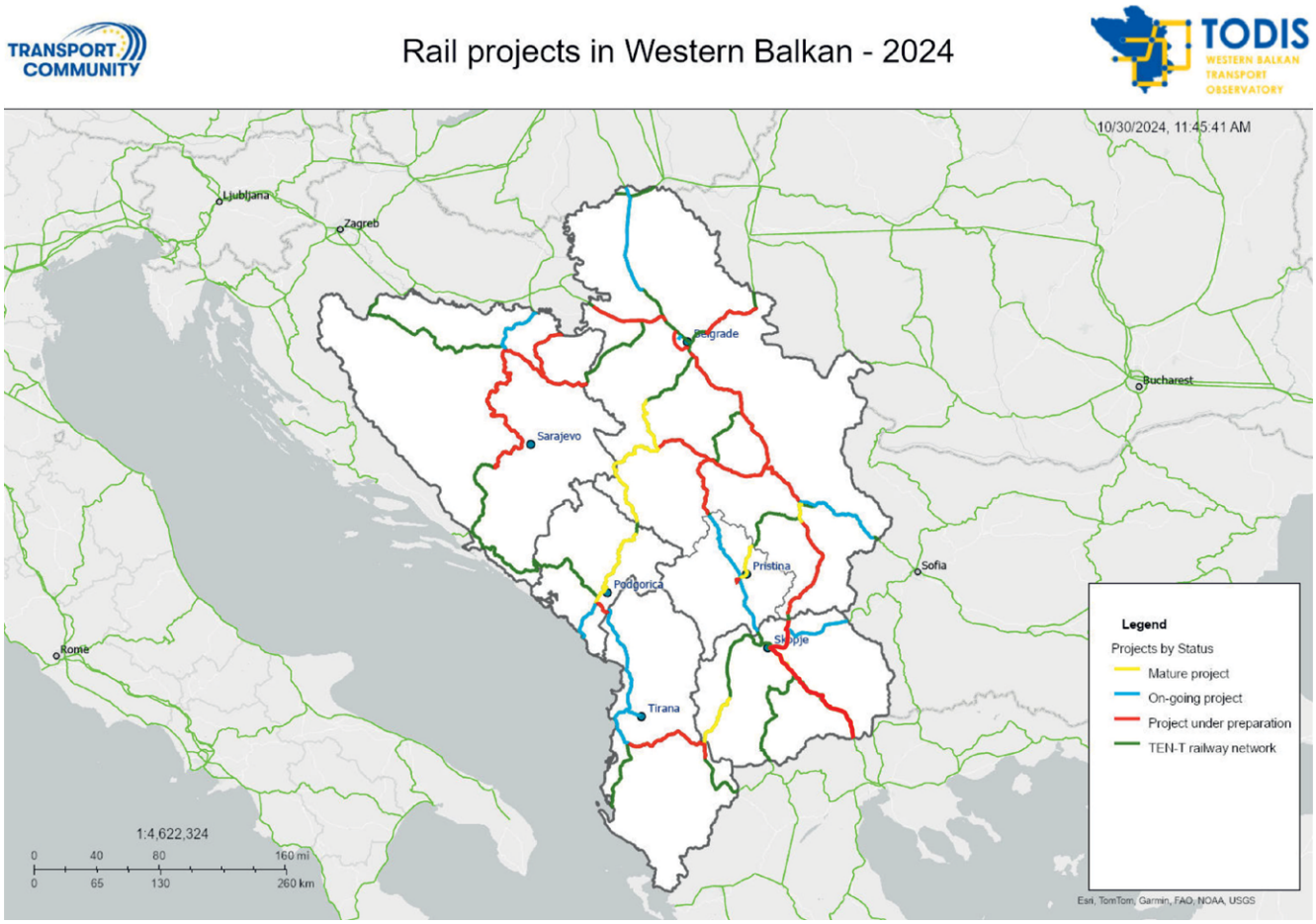
Overall, the Transport Community Permanent Secretariat has identified eighteen finance-secured or ongoing rail projects. The length of rail sections currently undergoing various upgrades is **965 km,** which is a significant increase compared to the **691 km in the last year**. Priority has been given to the Core Network. The overall value of the projects is **EUR 3.612 billion**.

Eighteen rail transport projects have been identified in the region, with completion scheduled between 2027 and 2030. Once finished, these projects will enhance the quality of railway infrastructure and services, leading to significant improvements in both passenger and freight operations.

Since the last report, four railway projects have been completed and are now operational.

The list of TEN-T railway projects currently ongoing in the region is given in the table. In addition, Annex II of this document provides a detailed overview of railway projects in all regional partners.

Figure 41. Rail Projects Map



5.2.2. **Road projects**

The region's inventory of ongoing road projects has undergone adjustments based on the latest information and data from regional partners. Compared with last year's report, the following types of modifications occurred:

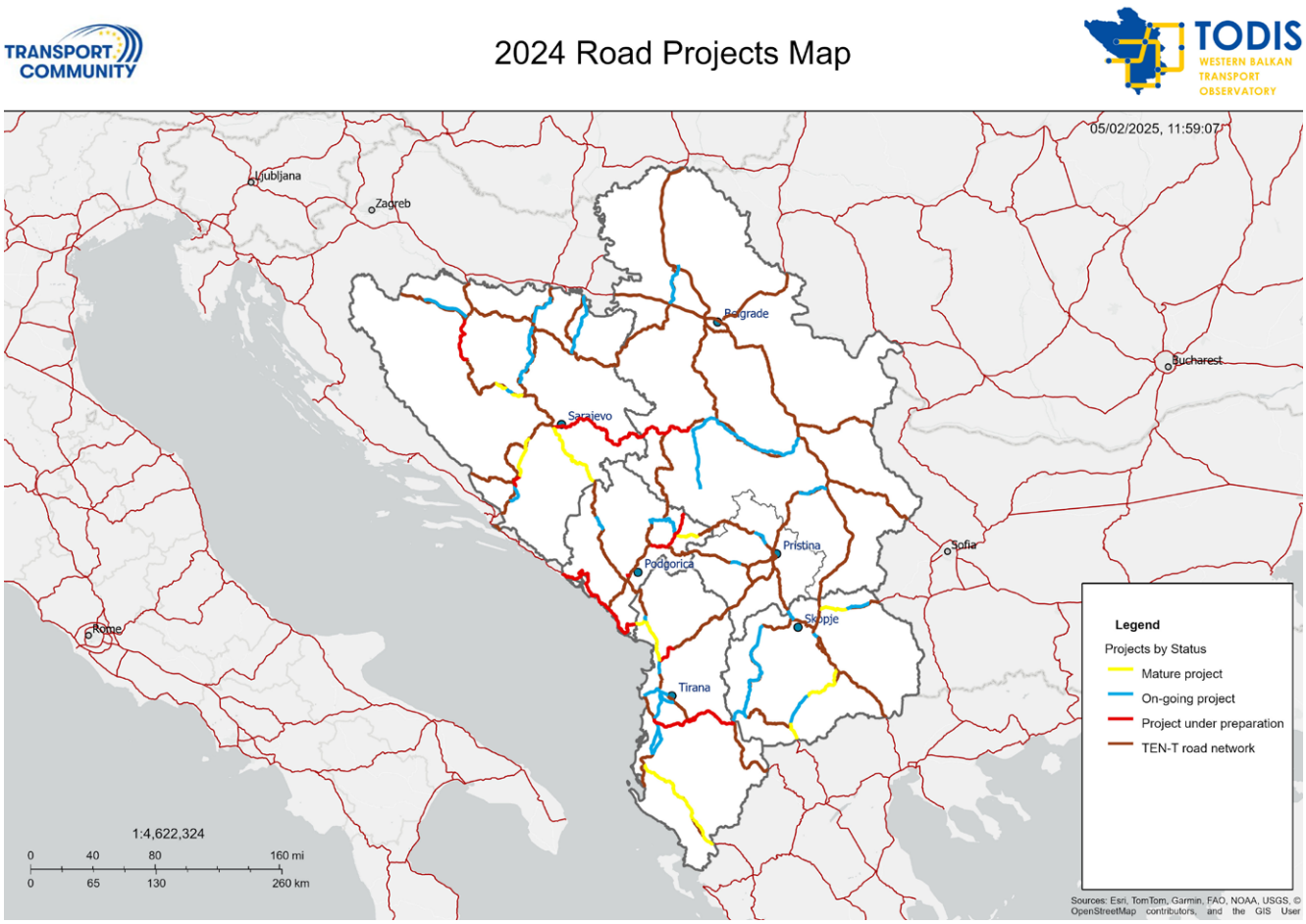
- Projects that have naturally exited the list upon successful completion and operationalisation;
- Projects de-listed having been downgraded in terms of priority and/or no longer meeting the "secured funding" criterion;
- New projects entered on the list by progressing in terms of maturity and having secured funding since the date of the latest report;
- New relevant interventions identified during the comprehensive data collection exercise performed under the framework of TODIS.

Besides the abovementioned changes, data updating also resulted in cost adjustments and/or changes to the completion deadline. For many projects, the estimated completion date was again postponed, which reflects both unrealistic planning and delays in implementation. Although this was not entirely surprising considering the region's track record, the ongoing postponement of completion deadlines from one year to the next remains a cause for concern.

As of 2024, the Transport Community Permanent Secretariat has identified 40 road projects ongoing and financing secured in the region (32 on the Core Network and 8 on the Comprehensive Network). The combined length of road sections currently undergoing various upgrades and financing secured is 997 km (622 km on the Core and 374 km on the Comprehensive Network). The priority given to the Core Network is also reflected in the overall value of projects (EUR 11,5 billion for the entire network, of which EUR 8,5 billion for the Core and EUR 3,03 billion for the Comprehensive Network).

The list of individual interventions is provided in Table 12 below, while a more detailed overview of road projects can be found in Annex II of this document.

Figure 42. Road Projects in the Western Balkans



5.2.3. **Waterborne projects**

Inland waterway projects

Several finance-secured or ongoing projects in the field of inland waterway transport have been identified, particularly in Serbia, and Bosnia and Herzegovina. Some of these projects are not directly targeting the identified TEN-T key compliance indicators, but they are worth mentioning in this report as:

- they play a significant role in advancing the region's waterway infrastructure.
- they are expected to contribute significantly to maintaining good navigation status.

Below is a broad description of all identified interventions in the region's TEN-T inland waterway and maritime infrastructure.

The **"Reconstruction and Modernisation of the River Port of Brčko,** Phase 1" part of the **Flagship 1 "Connecting East to West"** waterways project commenced in 2021 and for the reporting period was completed the second component for the purchase of the port crane. The third component for the upgrade of the rail and 'last mile connection', the part of the road and rail within the port, is completed, while the modernisation of the railway connection between the port and the central station is ongoing and planned to be finished by the 1st quarter of 2025.

In Serbia, the projects for the **'Upgrade of the Iron Gate II Lock'** and **'Implementation of Aids to Navigation (AtoNs)** on the Sava River is completed in 2024. While the project for 'Preparing FAIRway 2 Works in the Rhine-Danube Corridor (07/2020–12/2024)', a collaboration between Austria, Croatia, and Serbia, aimed at upgrading the Danube waterway infrastructure to ensure sustainability and user-friendliness, is progressing as planned.

Efforts to address bottlenecks on the River Tisa and raise the navigation classification to CEMT Class V are in the early stages of planning in the document preparation phase.

The **Flagship 1 "Connecting East to West"** Waterways Project, focusing on the **removal of German sunken vessels from the Danube's Prahovo Sector**, the contract was signed in June 2023, and work has already commenced. In 2024, the first four vessels are scheduled to be removed from the river. The project is expected to be completed within a five-year timeframe.

Maritime projects

In terms of the prospects for the Core **Port of Durres** and the Comprehensive **Port of Vlora**, particularly regarding their alignment with the TEN-T extension networks, it is essential to consider the Albanian strategy to relocate these existing commercial ports to other sites to the Port of Romano in Durres and Triporti in Vlora. The impact of this relocation on TEN-T compliance will be subject to close monitoring in the coming years.

Furthermore, Albania is in the final stages of the process of implementing the **Vessel Traffic Monitoring and Information System (VTMIS)**, which is planned to be implemented in 2025. In parallel, Albania began rolling out its **Maritime Single Window (MSW)** in 2022, a system designed to digitise and streamline the reporting obligations for vessels arriving at and departing from Albanian ports.

In Montenegro, following the successful implementation of the VTMIS during the reporting period, the National Maritime Single Window (MNSW) entered the testing phase. The second phase of the VTMIS, which aims to expand coverage to the Bay of Kotor and Skadar Lake, is finalised in the end of 2024, further enhancing the country's maritime traffic monitoring capabilities.

5.2.4. **Airport projects**

Currently, there are several ongoing projects addressing the TEN-T compliance indicators for airports, such as: Sarajevo Airport Modernisation, Modernisation and Connection of the Airport to the Railway Network in Tirana, Albania, Terminal Building Expansion in Niš, and Modernisation of Belgrade Airport.

Numerous projects aimed at modernising **Sarajevo Airport** are underway, focusing on expanding its capacity. The Business Administration Building was completed in December 2022 with a budget of €3 million, and the Terminal B Extension and Modernisation was finalised in May 2024, totalling €26.5 million in investment. Currently, the Runway Reconstruction, valued at €29.45 million, is in the permit-obtaining phase, with completion projected for December 2024. The Apron Extension - East was executed in July 2024 at a cost of €3.4 million, while the New Rapid Exitway project, budgeted at €3.69 million, is obtaining a building permit. Additionally, the New Fuel Depot, estimated at €2.62 million, is targeted for completion by December 2026, and the Airport Rescue and Firefighting Center, with a budget of €5.1 million, is securing urban permits. These projects collectively underscore Sarajevo Airport's commitment to modernising its infrastructure to meet future demands.

In Albania, the rehabilitation and construction of the 40.7 km Durres - Tirana railway line, part of the Core Network, will connect **Tirana Airport** to the rail system. This project is estimated at EUR 129 million, excluding planned electrification. Additionally, with an investment of EUR 3.25 million, the North and South Terminal Project aims to enhance passenger terminal infrastructure, with completion targeted for 2026. The expansion of Tirana International Airport, budgeted at EUR 8.7 million, is also underway to boost operational capacity and meet rising demand, scheduled for completion in 2026. A separate rehabilitation project, valued at EUR 9.5 million, is modernising the runway, connecting roads, and parking facilities to accommodate E-code aircraft, expected to finish by 2024. These projects demonstrate Albania's commitment to improving airport facilities for increased air traffic and a better passenger experience.

Niš airport's existing terminal building cannot meet future airport needs. It is planned to reconstruct the existing area of 2,115 m2 and build new facilities of 3,600 m2 with a total project value of EUR 11.1 million. A permit has been obtained, and public procurement for construction work closed on January 20, 2022. Phase I is completed and put into operational work.

Commercial contract for the phased construction and reconstruction of internal traffic infrastructure and associated hydrotechnical, electrical and telecommunications installations within the "Niš Constantine the Great Airport" complex, dated March 19, 2024. Due to additional and unpredicted but necessary works, Annex 1 of the contract was signed on September 27, 2024 to implement the commercial contract fully.

The contract amount for the works that are the subject of the Contract is EUR 16,855,647.77, and after the conclusion of Annex 1 to the Contract, the total value of the Contract is EUR 18,539,567.08 So far, 98% of the works predicted by the Contract have been completed.

At Morava airport (Kraljevo), a project to extend the apron and construct a technical service and firefighting facility is in the design phase. As the project is still under development, the exact value has not yet been determined and it will be known upon the finalisation of the designs.

Work on modernising and expanding Belgrade's Nikola Tesla Airport began in early 2020. Most of this will be completed in 2024. A newly inserted runway (BCIR), de/anti-icing pad, landside access and car parking in front of the Terminal have been completed. Currently, work is proceeding at several locations: existing runway reconstruction, terminal reconstruction, and extension (phases 1.3, 1.4, 2.). At the same time, a tender for selecting a contractor is being prepared for the Airport Rescue and Firefighting Centre. Additionally, new technical planning documentation regarding the Railway Network is being prepared to address the railway connection compliance criteria.

The Landside Access and Car Parks project at Beograd Airport involves the reconstruction and rehabilitation of access roads and parking facilities in front of the terminal. The design, which aims to enhance capacity and accessibility, has secured funding and is currently ongoing. The process of obtaining the usage permit is underway, and key design phases, including the concept, preliminary, and detailed designs, have been completed.

The operator of **Prishtina International Airport** has requested permission from the PPP Committee and CAA to extend the north and south side remote gates to increase the boarding gate capacity of the terminal building from 8 to 12. The project's total value was approximately EUR 3 million and it has now been completed.

Figure 43. Airport Projects in the Western Balkans

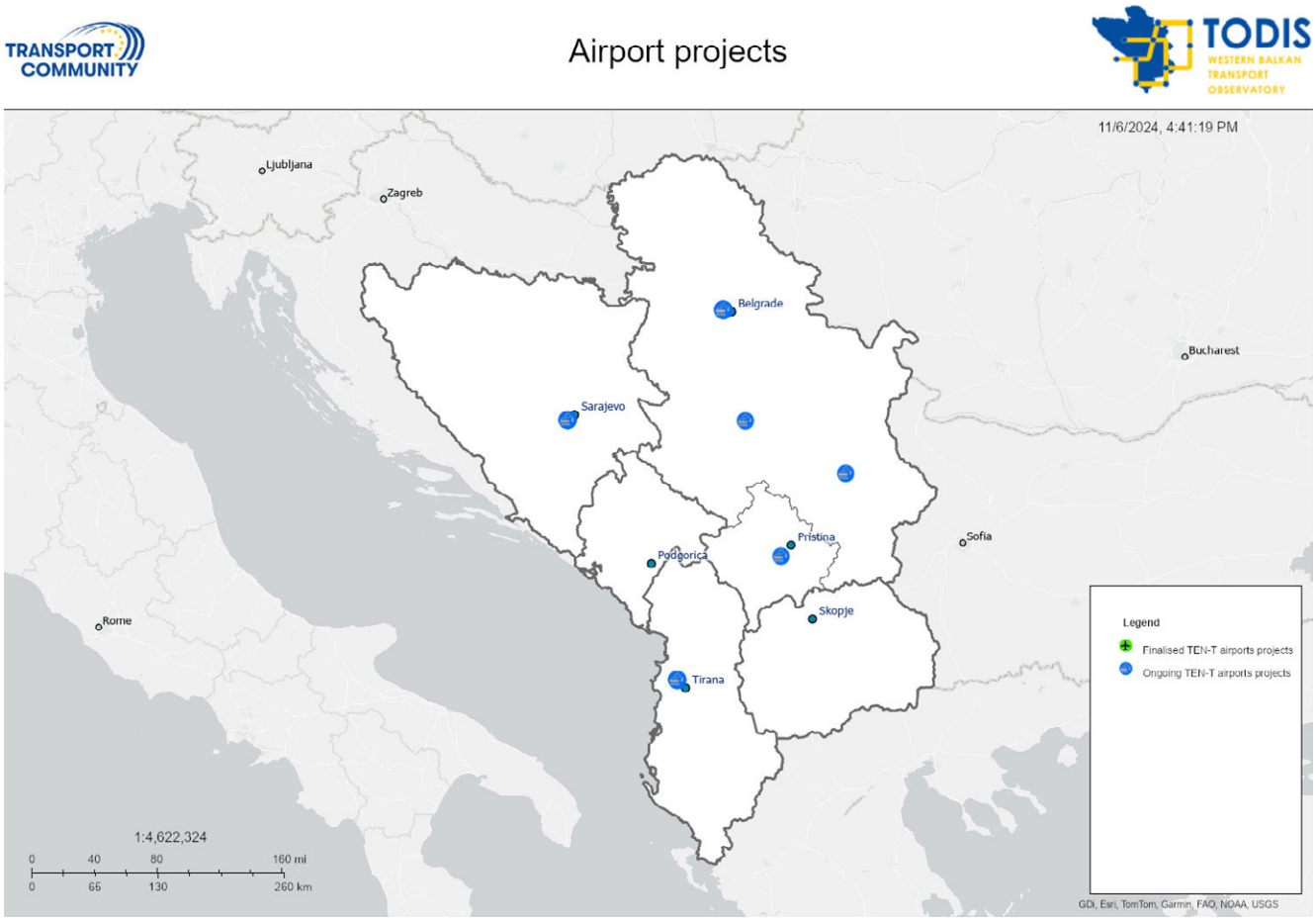


Table 14. Ongoing Projects overview

Corridor/ Route/Node	Regional Participant	Project name	EIP Flagship (Yes/No)	Core/ Comprehensive Network	Planned intervention	Total length (km)	CAPEX (M€)	Estimated completion deadline
Road projects								
Corridor VIII	**Albania**	Construction of Tirana bypass (Kashar - Vaqarr - Mullet)	Yes	Core	New infrastructure	21.5	223	2027
Corridor VIII	**Albania**	Widening of Tirana- Durres highway	No	Core	Reconstruction/ Rehabilitation	35	35	2026
Route 2b	**Albania**	AIC Section 3: Milot-Thumane	Yes	Core	Reconstruction/ Rehabilitation	14	44.62	2028
Route 2b	**Albania**	AIC Section 5B: Kashar - Lekaj	Yes	Core	New infrastructure	34	569.85	2028
Corridor VIII	**Albania**	AIC Section 5C: Lekaj - Konjat-Fier	Yes	Core	Reconstruction/ Rehabilitation	14	381.12	2030
Route 2b	**Albania**	AIC Section 6+7: Konjat - Fier bypass	Yes	Core	Reconstruction/ Rehabilitation	28		20 months after contract signing
Corridor Vc	**Bosnia and Herzegovina**	Vukoslavije - Johovac	Yes	Core	New infrastructure	5.2	470.3	2028
Corridor Vc	**Bosnia and Herzegovina**	Rudanka - Putnikovo Brdo	Yes	Core	New infrastructure	5,2	164,9	2024
Corridor Vc	**Bosnia and Herzegovina**	Putnikovo Brdo - Medakovo	Yes	Core	New infrastructure	8.5	142,7	2025
Corridor Vc	**Bosnia and Herzegovina**	Medakovo - Ozimica	Yes	Core	New infrastructure	21.3	361,7	2026
Corridor Vc	**Bosnia and Herzegovina**	Ozimica - Poprikuse	Yes	Core	New infrastructure	12	306	2027
Corridor Vc	**Bosnia and Herzegovina**	Poprikuse - Nemila	Yes	Core	New infrastructure	5.5	251	2025
Corridor Vc	**Bosnia and Herzegovina**	Nemila - Vranduk	Yes	Core	New infrastructure	5.7	110.94	2026
Corridor Vc	**Bosnia and Herzegovina**	Vranduk - Ponirak	Yes	Core	New infrastructure	5.3	153.45	2026
Corridor Vc	**Bosnia and Herzegovina**	Ponirak - Vraca	Yes	Core	New infrastructure	3.4	70.8	2025
Corridor Vc	**Bosnia and Herzegovina**	Vraca (Tunnel Zenica) - Donja Gračanica	Yes	Core	New infrastructure	3.9	57.6	2025
Corridor Vc	**Bosnia and Herzegovina**	Mostar South - Tunnel Kvanj	Yes	Core	New infrastructure	9.2	93.5	2026
Corridor Vc	**Bosnia and Herzegovina**	Tunnel Kvanj - Buna	Yes	Core	New infrastructure	5.2	106.9	2025
Route 9a	**Bosnia and Herzegovina**	Buna - Počitelj	Yes	Core	New infrastructure	7.2	37.2	2025
Route 2a	**Bosnia and Herzegovina**	Počitelj - Zvirovići	Yes	Core	New infrastructure	11.1	91	Completed
Route 9a	**Bosnia and Herzegovina**	Banja Luka - Prijedor	No	Comprehensive	New Infrastructure	40.7	297	2027

Corridor/ Route/Node	Regional Participant	Project name	EIP Flagship (Yes/No)	Core/ Comprehensive Network	Planned intervention	Total length (km)	CAPEX (M€)	Estimated completion deadline
Corridor Vc	**Bosnia and Herzegovina**	Nević polje - Vitez section (part of Jajce - Lašva Express Road)	No	Core	New infrastructure	4.9	42.5	N/A
Corridor Vc	**Bosnia and Herzegovina**	Construction of the motorway Orašje - Tuzla	No	Core	New infrastructure	67.68	N/A	N/A
Route 6	**Kosovo**	Construction of Pristina – Mitrovica motorway	Yes	Core	New infrastructure	19.4	42	2025
Route 6b	**Kosovo**	Widening of Kjeve-Dollac road section	No	Comprehensive	Reconstruction/ Rehabilitation	13.4	32	2025
Route 6	**Montenegro**	Berane - Bijelo Polje - Mojkovac	No	Comprehensive	Reconstruction/ Rehabilitation	43	36	2026
Route 2b	**Montenegro**	Zaborje - Jasenovo polje	Yes	Comprehensive	Reconstruction/ Rehabilitation	14	15	2026
Corridor VIII	**North Macedonia**	Construction of Kriva Palanka – Stracin Expressway	No	Core	New infrastructure	25.5	93.7	2024
Corridor VIII	**North Macedonia**	Construction of the Bukojcani – Kicevo Motorway section	No	Core	New infrastructure	12.7	129	2027
Route 6	**North Macedonia**	Construction of the Kicevo - Ohrid Motorway	No	Core	New infrastructure	57.7	598	2026
Corridor VIII	**North Macedonia**	Construction of Blace – Skopje (Stenkovec Interchange) Motorway Section	No	Core	New infrastructure	12.5	230.41	2027
Corridor Xd	**North Macedonia**	Rehabilitation with the widening of Motorway A1, section Petrovec - Katlanovo (right carriageway)	No	Core	Reconstruction/ rehabilitation	11.66	11.05	2024
Corridor VIII	**North Macedonia**	Construction of the Prilep - Bitola motorway	No	Core	New infrastructure	39.3	130	2028
Corridor VIII	**North Macedonia**	Construction of the Tetovo – Gostivar – Bukojcani Motorway	No	Core	New infrastructure	47.8	1300	2028

Corridor/ Route/Node	Regional Participant	Project name	EIP Flagship (Yes/No)	Core/ Comprehensive Network	Planned intervention	Total length (km)	CAPEX (M€)	Estimated completion deadline
Corridor VIII	**North Macedonia**	Construction of road section Tre-beniste-Struga - Kjafasan	No	Core	New infrastructure	21.7	80	2028
Route 7	**Serbia**	Nis - Plocni	Yes	Core	New Infrastructure	32.7	416.2	2029
Route 9a	**Serbia**	Novi Sad - Rum	No	Comprehensive	New infrastructure	44.41	650	2026
Route 5	**Serbia**	Pojate - Preljina	No	Comprehensive	New infrastructure	112.39	1858	2025
Route 4	**Serbia**	Preljina - Pozega	No	Core	New infrastructure	31	450	2025
Route 4	**Serbia**	Pozega – Duga Poljana	No	Core	New infrastructure	74.9	1700	2027
Railway projects								
Corridor Vc	**Bosnia and Herzegovina**	Corridor Vc-Overhaul and modernisation of the railway section Šamac – Doboj – Rječica	Yes	Core	Reconstruction/ rehabilitation	85	162.5	2025
Corridor VIII	**Albania**	Rehabilitation of the railway Durres-Tirana Public Transport Terminal PTTand construction of the new Tirana-Rinas branch line	Yes	Core	New infrastructure, Reconstruction/ rehabilitation	46	135	2026
Corridor VIII	**Albania**	Rehabilitation of the railway Durres-Rogozhine Railway line	No	Extended Core	Reconstruction/ rehabilitation	35	120	2028
Corridor VIII	**North Macedonia**	Rehabilitation of Eastern Part of RailCorridor VIII-PHASE I-Section Kumanovo-Bel-jakovce	Yes	Core	Reconstruction/ rehabilitation	30.8	44	2024
Corridor VIII	**North Macedonia**	Rail Corridor VIII-PHASE 2-Section Beljakovce-Kri-va Palanka	Yes	Core	New infrastructure	34	155	2026

Corridor/ Route/Node	Regional Participant	Project name	EIP Flagship (Yes/No)	Core/ Comprehensive Network	Planned intervention	Total length (km)	CAPEX (M€)	Estimated completion deadline
Corridor VIII	**North Macedonia**	Rail Corridor VIII-PHASE 3-SectionKriva Palanka -Deve Bair, border with RB	Yes	Core	New infrastructure	23.4	560[4]	2032
Route 2b	**Albania**	Rehabilitation of Vore - Han i Hotit Railway Line	Yes	Core	Reconstruction/ rehabilitation	120	340	2029
Corridor Xb	**Serbia**	Reconstruction and modernisation of rail line Novi Sad - Subotica – Kelebija - state border with Hungary	No	Core	New infrastructure, Reconstruction/ rehabilitation	108	1068	2024
Corridor Xc	**Serbia**	Reconstruction and modernisation of Nis-Dimitrovgrad railway line	Yes	Core	New infrastructure, Reconstruction/ rehabilitation	108	426	2027
Route 4	**Montenegro**	Track overhaul of the railway sections Railway line Lutovo – Bratonozici – Bioci	Yes	Core	Reconstruction/ rehabilitation	20	30	2027
Route 4	**Montenegro**	Golubovci – Bar section, including Ratac landslide and Sozina tunnel	Yes	Core	Reconstruction/ rehabilitation	39	218.4	2027
Route 4	**Montenegro**	Railway line Vrbnica – Bar: Rehabilitation of 12 tunnels;	Yes	Core	Reconstruction/ rehabilitation	4	20	2027
Route 4	**Montenegro**	Bar-Vrbnica section, tunnels and bridges in the north of Montenegro - Reconstruction of 10 steel bridges and 8 tunnels	Yes	Core	Reconstruction/ rehabilitation	140	45.5	2027
Route 10	**Kosovo**	General Rehabilitation of Railway Route 10 -Phase 1	Yes	Core	Reconstruction/ rehabilitation	65.36	114.7	2024

4 The CAPEX is updated as per the gap analysis performed by Connecta 1 in the first half of 2023 and it refers to the following components: construction works of the section Kriva Palanka – border with RB and ETCS-level 1 on the same section, as well as electrification of the Eastern part of the Railway Corridor VIII from Kumanovo to the border with RB.

Corridor/ Route/Node	Regional Participant	Project name	EIP Flagship (Yes/No)	Core/ Comprehensive Network	Planned intervention	Total length (km)	CAPEX (M€)	Estimated completion deadline
Route 10	**Kosovo**	General Rehabilitation of Railway Route 10 -Phase2	Yes	Core	Reconstruction/ rehabilitation	34.44	64	2024
Route 10	**Kosovo**	General Rehabilitation of Railway Route 10 -Phase 3	Yes	Core	Reconstruction/ rehabilitation	50	118.7	2027
Route 13	**Serbia**	Construction of a new line Zemun polje - Nikola Tesla Airport - National Stadium	No	Core	New infrastructure	18	188	2026
Corridor X	**Serbia**	Construction of a single opera-tional centre for railway traffic management on the railway network of the Republic of Serbia	No	Core	Construction of a single operational centre	/	115	2026
Airport projects								
Tirana	**Albania**	Rail connection to the airport (construction of new Tirana-Rinas branch line and rehabilitation of Durres-Tirana)	No	Core	Reconstruction/ rehabilitation	40.7	129	2025
Belgrade	**Serbia**	Modernisation and expanding Belgrade's Nikola Tesla Airport	No	Core	Construction/ reconstruction	/	Na	2025
Sarajevo	**Bosnia and Herzegovina**	Modernisation of Sarajevo International Airport	No	Core	Construction/ reconstruction	/	Na	2026
Niš	**Serbia**	Reconstruction of existing area and construction of new facilities	No	Comprehensive	Construction/ reconstruction	/	Na	2025
Inland waterway projects								
Rhine Danube Corridor	**Serbia**	Removal of the German sunken vessels from the Danube, Prahovo Sector	Yes	Core	Rehabilitation/ maintenance	N/A	29.1	2028

Corridor/ Route/Node	Regional Participant	Project name	EIP Flagship (Yes/No)	Core/ Comprehensive Network	Planned intervention	Total length (km)	CAPEX (M€)	Estimated completion deadline
Rhine Danube Corridor	**Bosnia and Herzegovina**	Demining the Right Bank of the River Sava in Bosnia and Herzegovina	Yes	Core Network	Rehabilitation/ maintenance	40	38.9	2028
Rhine Danube Corridor	**Bosnia and Herzegovina**	Reconstruction and Modernisation of the River Port of Brčko Phase 1	Yes	Core Network	Rehabilitation/ maintenance	/	9,7	2025
Rhine Danube Corridor	**Serbia**	Expansion and Construction of the Port of Sremska Mitrovica	Yes	Comprehensive Port	Rehabilitation/ maintenance		52	2026
Rhine Danube Corridor	**Serbia**	Expansion of capacities of the Port of Prahovo	No	Comprehensive Port	Rehabilitation/ maintenance		36	2025
Rhine Danube Corridor	**Serbia**	Implementation of a network of hydro-me-teorological stations along the Danube and Sava rivers in Serbia	Yes	Core Network	Rehabilitation/ maintenance		4.4	2026
Rhine Danube Corridor	**Serbia**	Supply of Marking and Hydrographic Vessels for the Danube, Sava, and Tisa Rivers	Yes	Core Network	Rehabilitation/ maintenance		60	2028
Maritime projects								
	Albania	“Provision, Installation and Commissioning of Equipment for VTMIS Implementation and ITS”	Yes	Core	New infrastructure		5.6	2025
	Albania	The Construction of the New Integrated Port in Porto Romano and the Transfer of Services Phase I	No	Core Port	New infrastructure		390	2030
	Albania	Construction of the New Integrated Port in Triporti, Vlore and Transfer of Services	No	Comprehensive Port	New infrastructure		60	2028

6. TEN-T Key Performance Indicators Progress Forecast

6.1. Railway indicators

With the ongoing and financially supported projects scheduled for completion by 2027, the upcoming projections for each TEN-T performance metric will focus on this period. Importantly, sections of the rail network that are not planned for upgrades are expected to, at minimum, retain their current standards. Additionally, the expansion of the TEN-T Network in 2024 influenced the forecasted results, with a negative impact on some performance indicators.

Electrification

Network electrification is one of the most significant performance indicators for railways within the TEN-T framework, as it enhances efficiency, reduces greenhouse gas emissions, and lowers operational and maintenance costs, all contributing to its environmentally sustainable profile.

Projections indicate modest growth in electrification, with the Core Network expected to increase by about 6%, reaching a total of 71%. This highlights the need to accelerate efforts to electrify the Core Network across the region fully.

Higher electrification rates are expected based on ongoing projects scheduled for completion by 2027:

- Tirana – Durres with link to the airport – 46 km
- Kumanovo-Beljakovce-Kriva Palanka – 64 km
- Leshak – Hani i Elezit – 58 km
- Nis – Dimitrovgrad – 90 km
- Zemun Polje – Airport Belgrade – 15 km

All sections mentioned above are diesel or missing links, and electrification is predicted in the design.

Figure 44. Western Balkans rail network electrification progress forecast for 2027

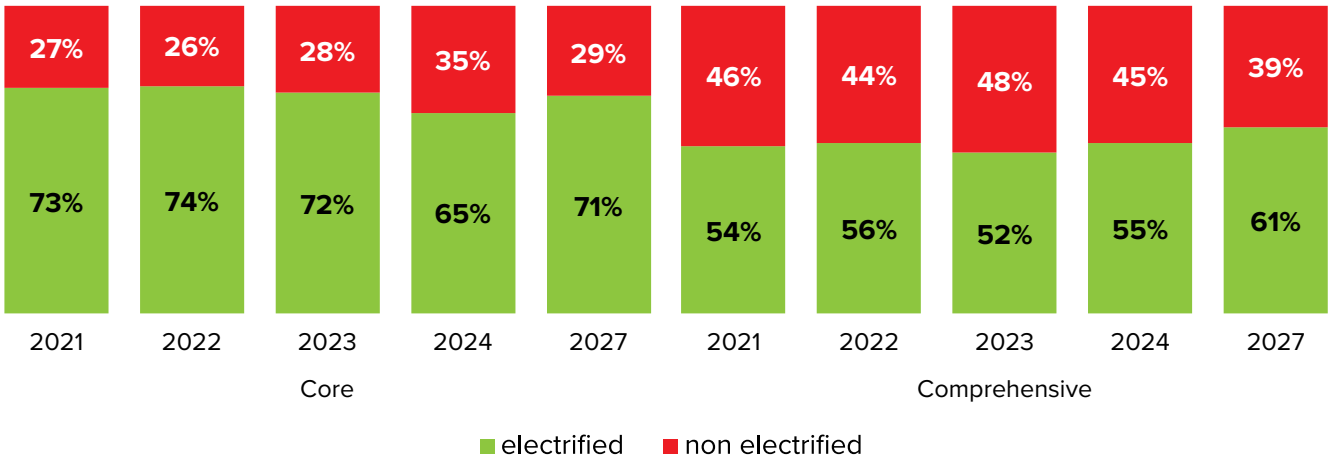
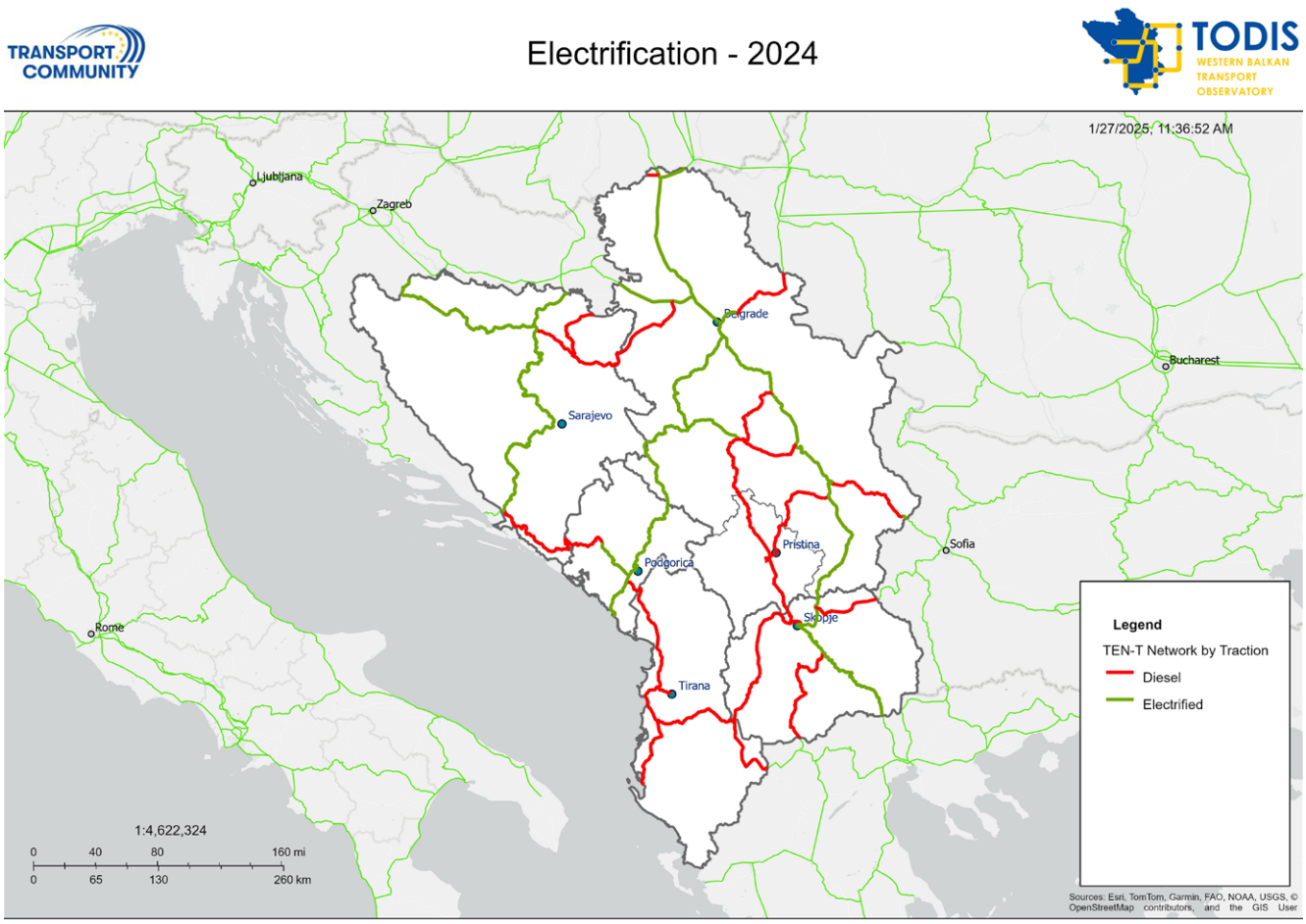


Figure 45. Electrification Forecast 2027



Axle Load

By 2027, the axle load indicator on the rail network is projected to meet TEN-T criteria across 84% of the Core Network and 74% of the Comprehensive Network, reflecting a modest improvement in track performance. However, the ideal benefit of this criterion will only occur with 100% compliance across both the Core and Comprehensive network.

Figure 46. Western Balkans Rail network axle load progress forecast for 2027

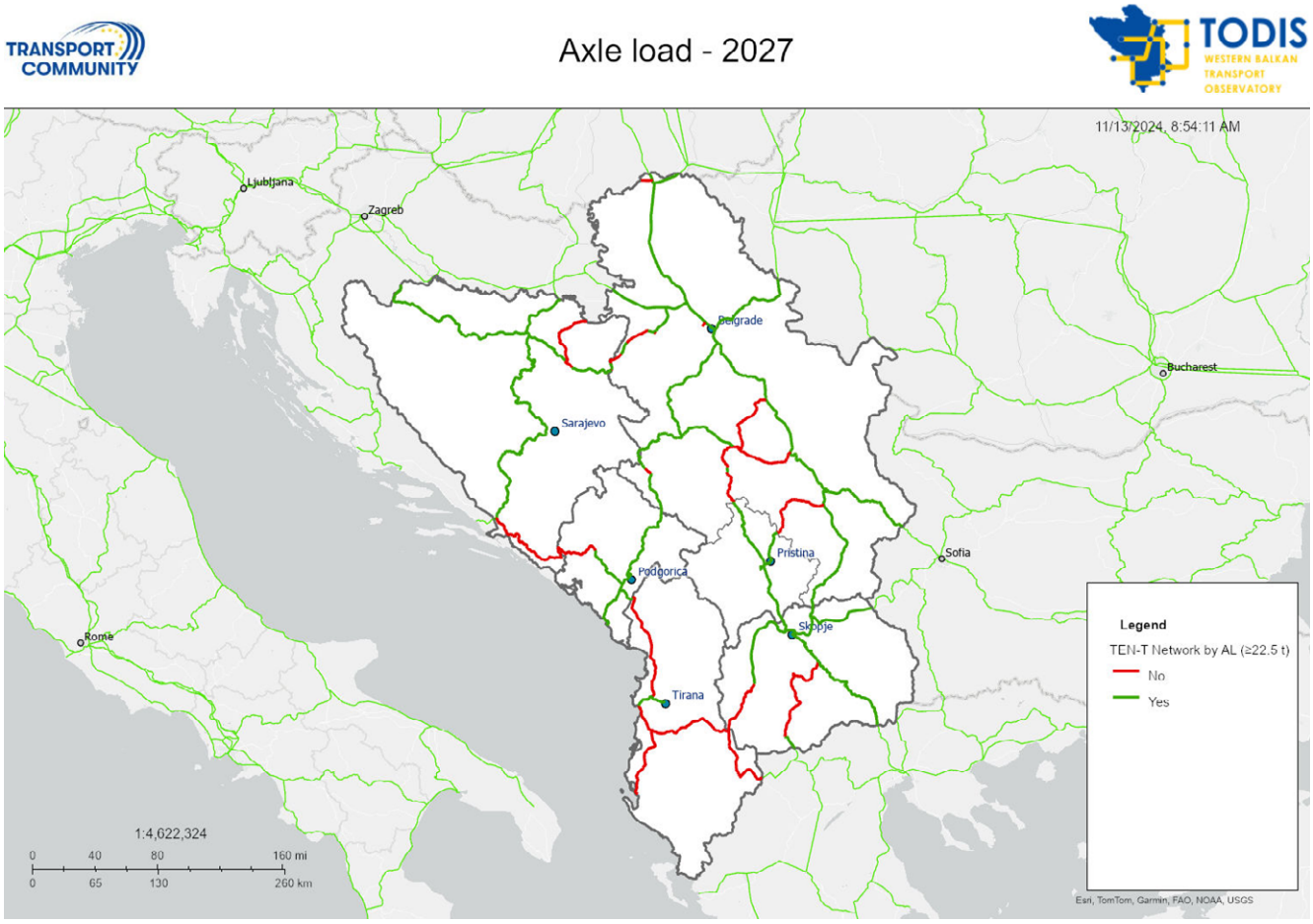
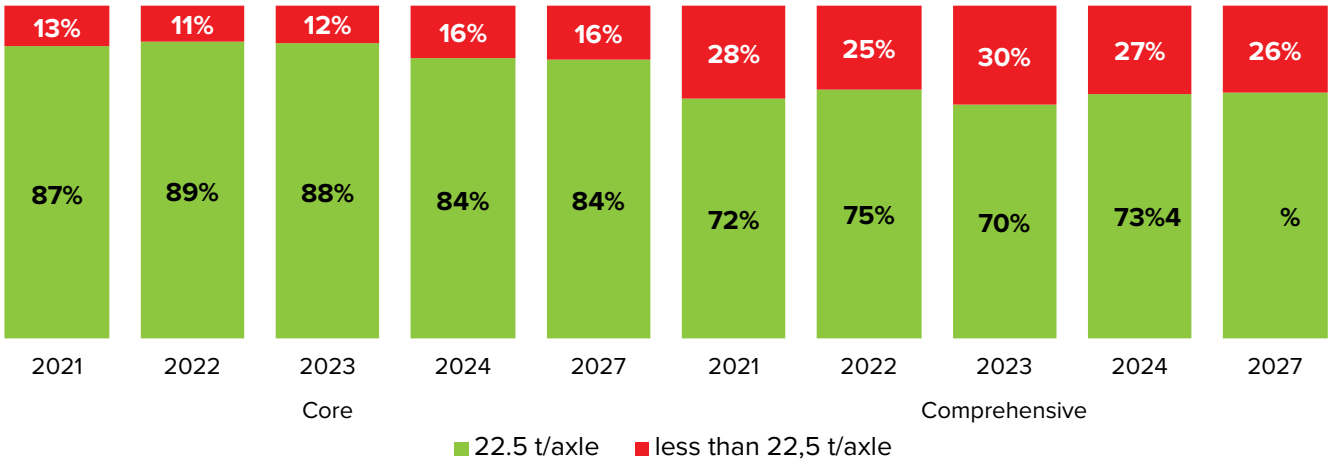


Figure 47. Axle Load Forecast 2027



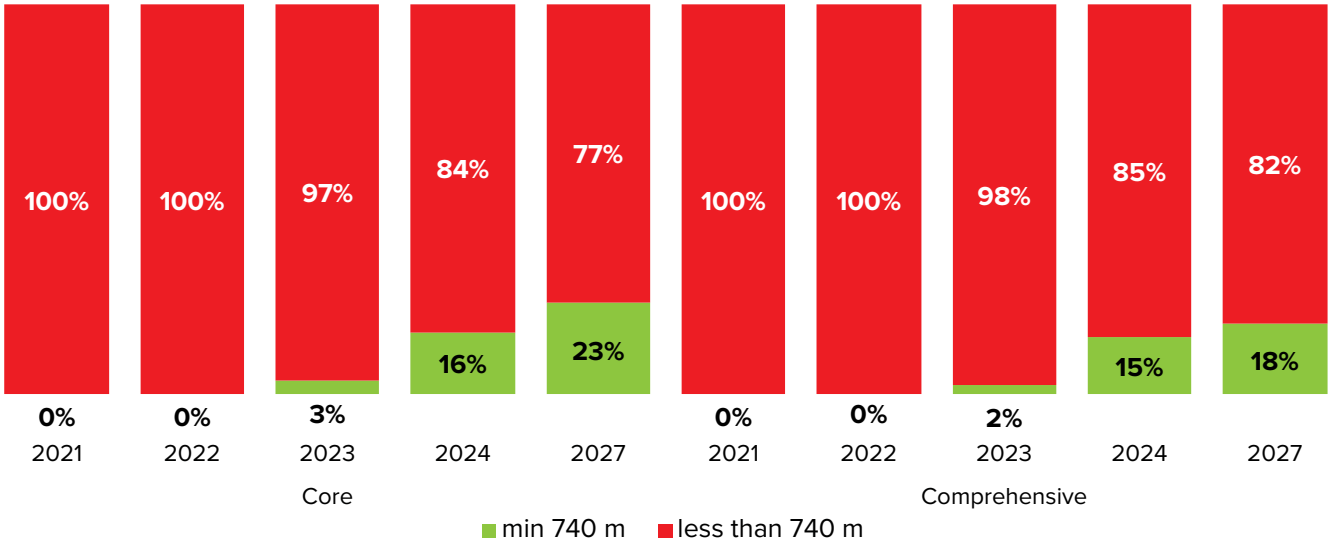
Train length

Train length, a critical performance indicator within the TEN-T framework, is among the newest requirements for alignment across European and Western Balkans rail networks. Currently, the Western Balkans region does not fully meet this criterion.

Although certain projects are underway to address this, most are scheduled for completion post-2027, beyond the timeframe of this forecast. Consequently, infrastructure managers in the region must recognise and prioritise this challenge as an important TEN-T requirement. The need for longer trains is further emphasised in the freight transport sector, as they offer greater efficiency and cost-effectiveness compared to shorter trains.

Over the following years, operational adjustments could enhance longer trains on 23% of the Core Network and 18% of the Comprehensive Network. While some stations can accommodate longer trains, their numbers remain insufficient to meet demand.

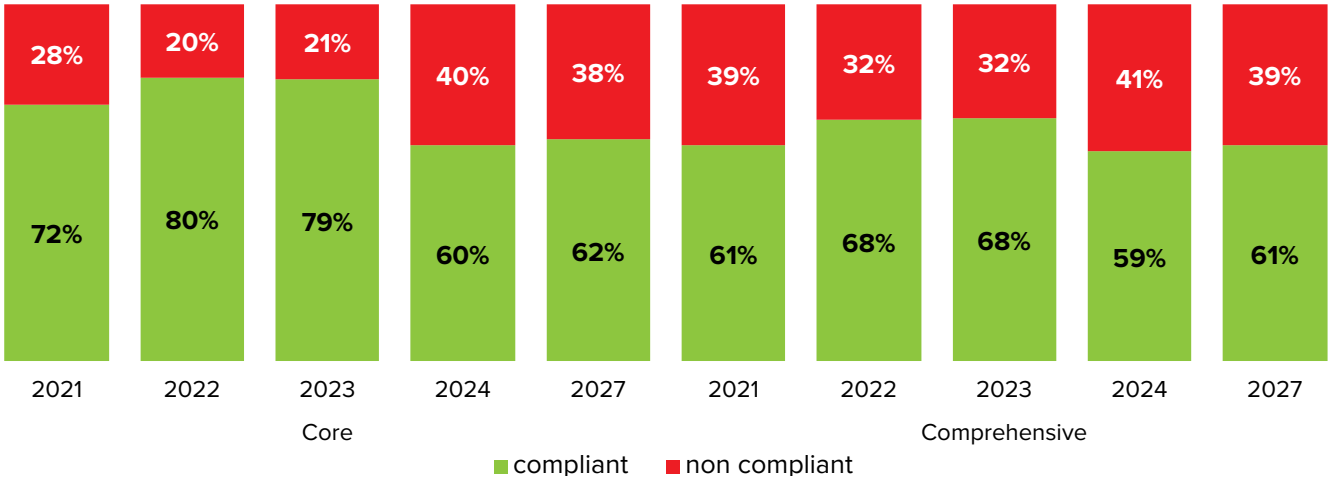
Figure 48. Western Balkans Rail Network train length progress forecast for 2027



Design Speed

The figures show enhancements in both design and operational speeds. It is evident that with the full execution of the projects, anticipated by 2027, there will be a limited 2% improvement in design speed, marking a limited accomplishment. Nevertheless, achieving a consistent design speed of 100 km/h across the entire network is the ultimate goal.

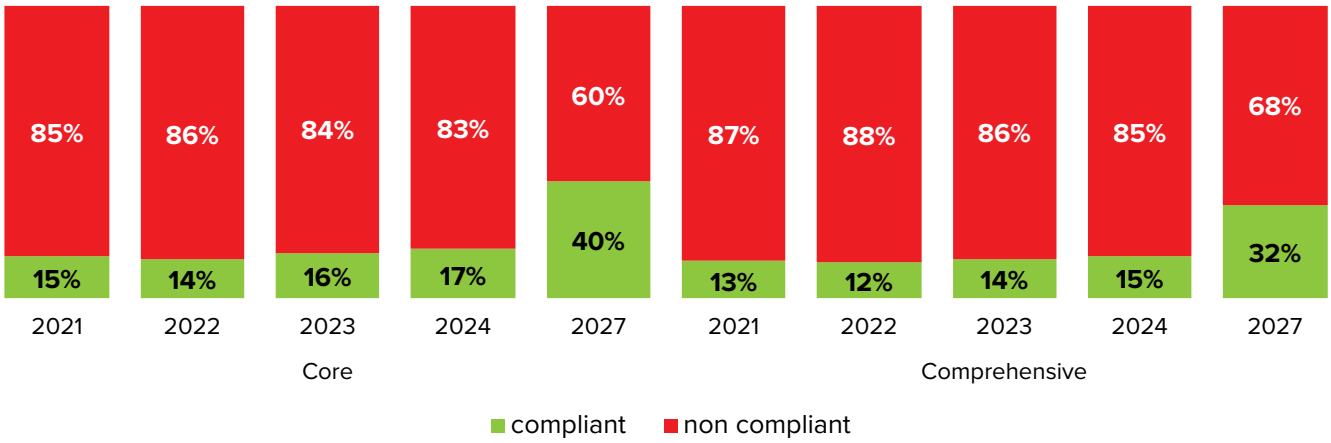
Figure 49. Western Balkans Rail network – Minimum design speed compliance progress forecast for 2027



Operational Speed

Similarly, important improvements are anticipated in the operational speed compliance indicator. Currently, at 17% for the Core Network and 15% for the Comprehensive Network, projections for 2027 show a significant increase to 40% and 32%, respectively. This highlights both the challenges facing railways in the Western Balkans and the adverse impact of maintenance shortfalls on rail competitiveness. However, it also reflects a strong commitment within the region to make substantial efforts toward improving railway infrastructure conditions.

Figure 50. Western Balkans Rail network – Minimum operating speed compliance progress forecast for 2027



ERTMS

While ERTMS track-side deployment is integrated into several ongoing projects, the progress expected by 2027 will be limited to 19% of the Core Network. It is notable that in 2024, operational ERTMS covers 2% of the Core Network owing to the recently reconstructed Belgrade – Novi Sad line. Nonetheless, substantial efforts are currently being made to ensure that, at a minimum, the Core Network will be equipped with ERTMS in the future.

Figure 51. Western Balkans Rail Network ERTMS compliance progress forecast for 2027

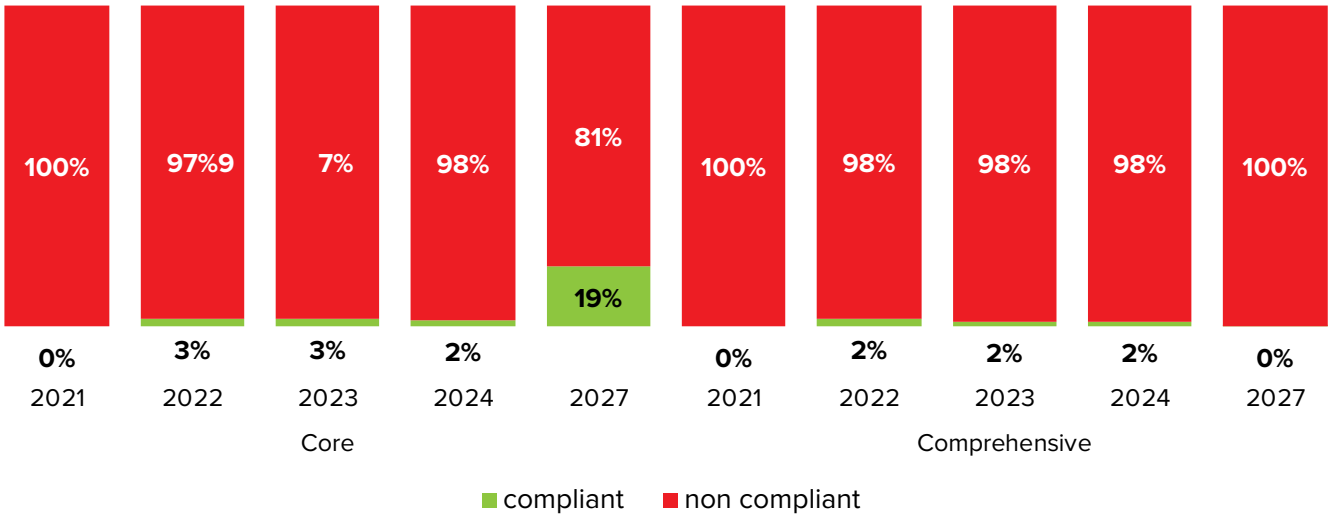
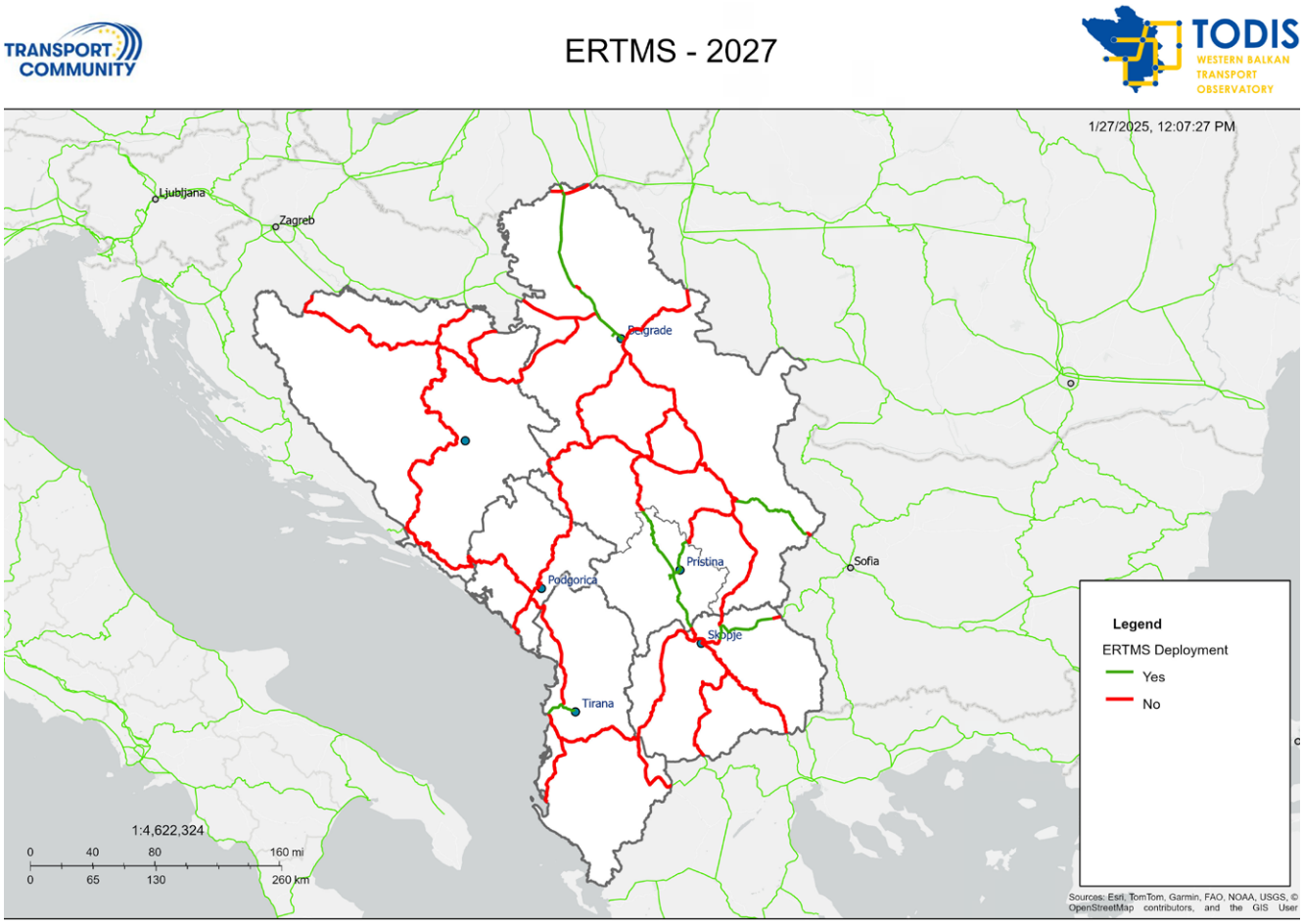


Figure 52. ERTMS Forecast 2027



Infrastructure conditions – forecast

The infrastructure condition forecast below provides a strong indicator of the future state of the rail network in the Western Balkans. Financially secured and ongoing projects are expected to significantly improve infrastructure conditions, with the proportion of the Core Network rated as ‘good’ or ‘very good’ projected to increase from the current 38% to 60%.

However, it is crucial that regional partners remain vigilant. Maintaining the network is an ongoing responsibility. Neglect in this area would risk reversing all improvement investments, leading to exponentially higher costs over time due to delayed maintenance.

Figure 53. Western Balkans Rail Network Infrastructure condition forecast for 2027

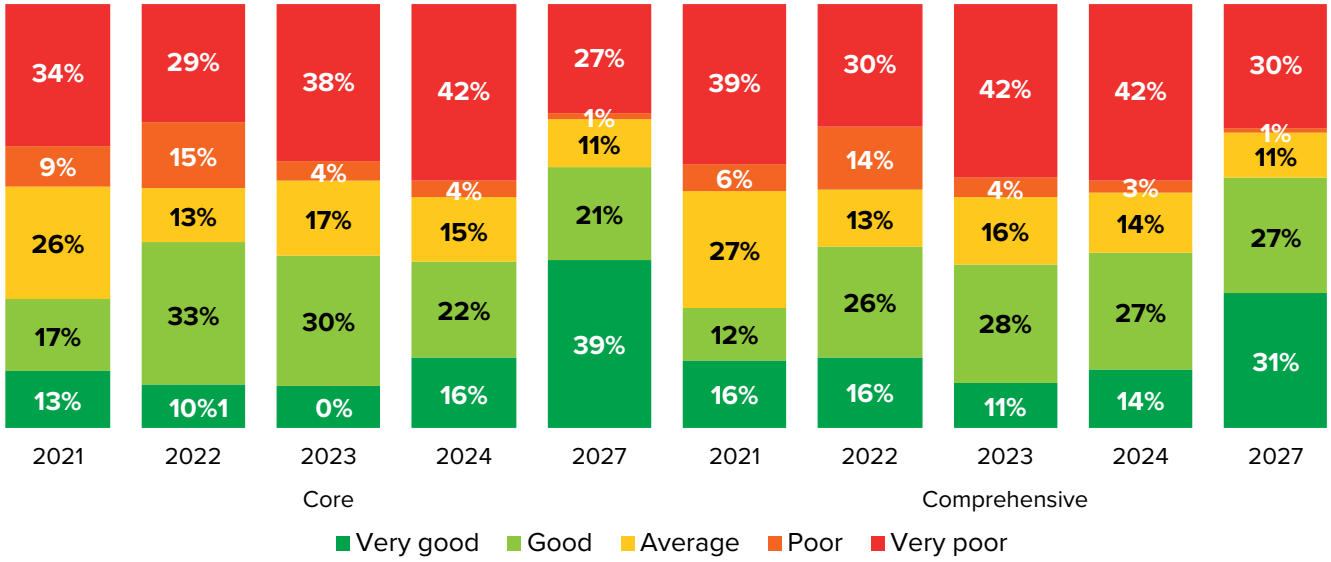
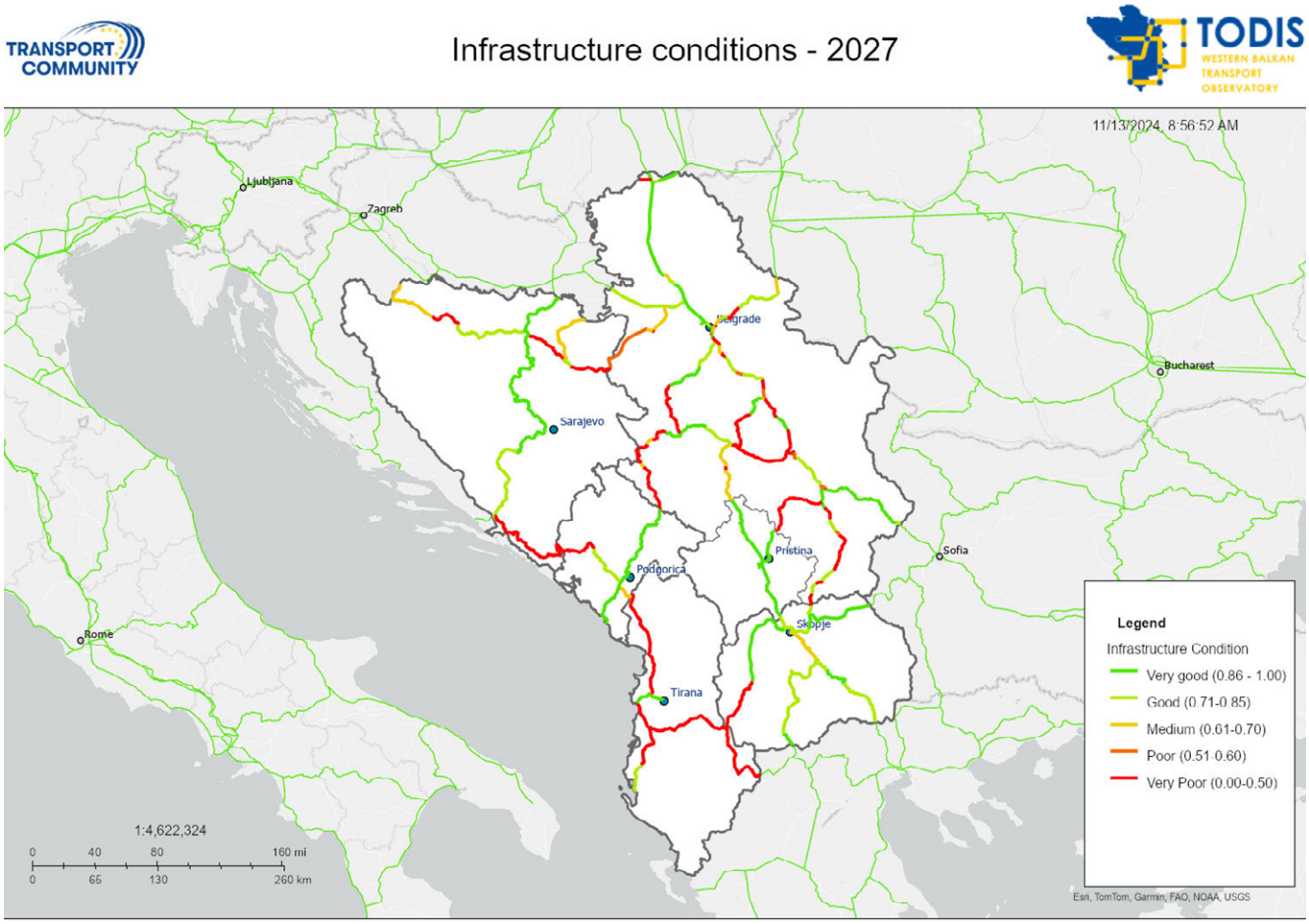


Figure 54. Rail infrastructure conditions forecast 2027



6.2. **Road indicators**

The TEN-T compliance forecast is based on the estimated completion date for the ongoing TEN-T projects listed under Section V above.

The compliance indicators previously assessed in Chapter 3.2.2 were updated under the following assumptions:

- projects shall be completed as per the currently estimated implementation deadline.
- compliance with TEN-T indicators shall be achieved as planned;
- there will be no compliance downgrading on any of the existing network sections (adequate maintenance of assets shall be ensured).

The results of this exercise are given below. As information on future alternative fuel-related projects that would ensure full compliance with the sufficiency requirements under the directive is still scarce, the compliance forecasting exercise refers solely to the infrastructure profile and condition criterion.

Figure 55. TEN-T Compliance progress forecast (infrastructure profile and condition)

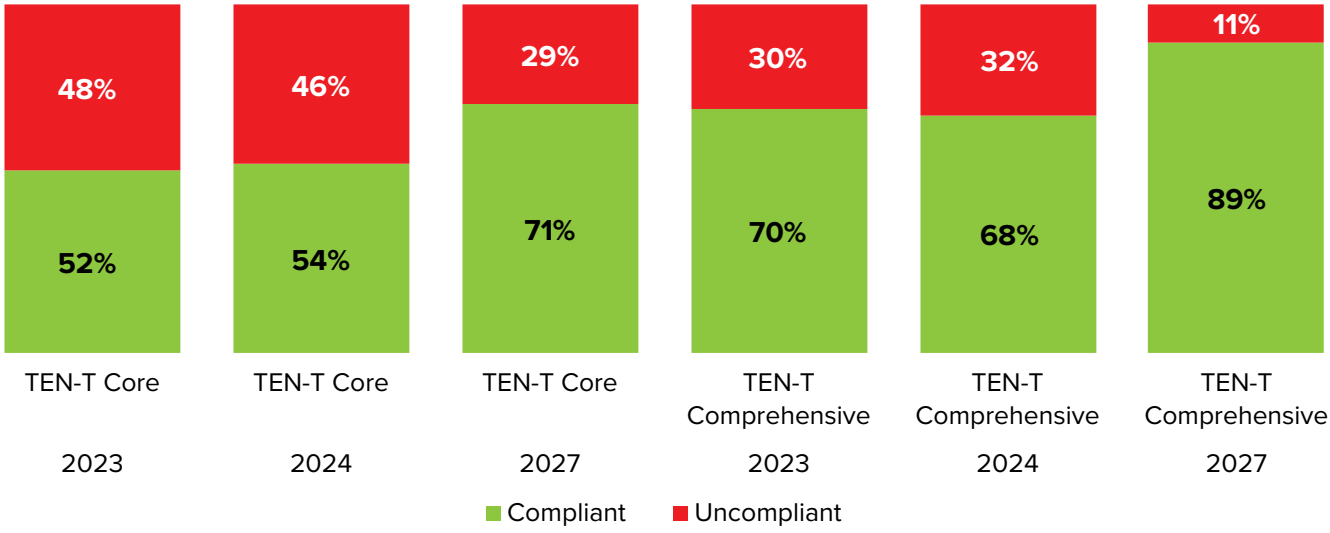
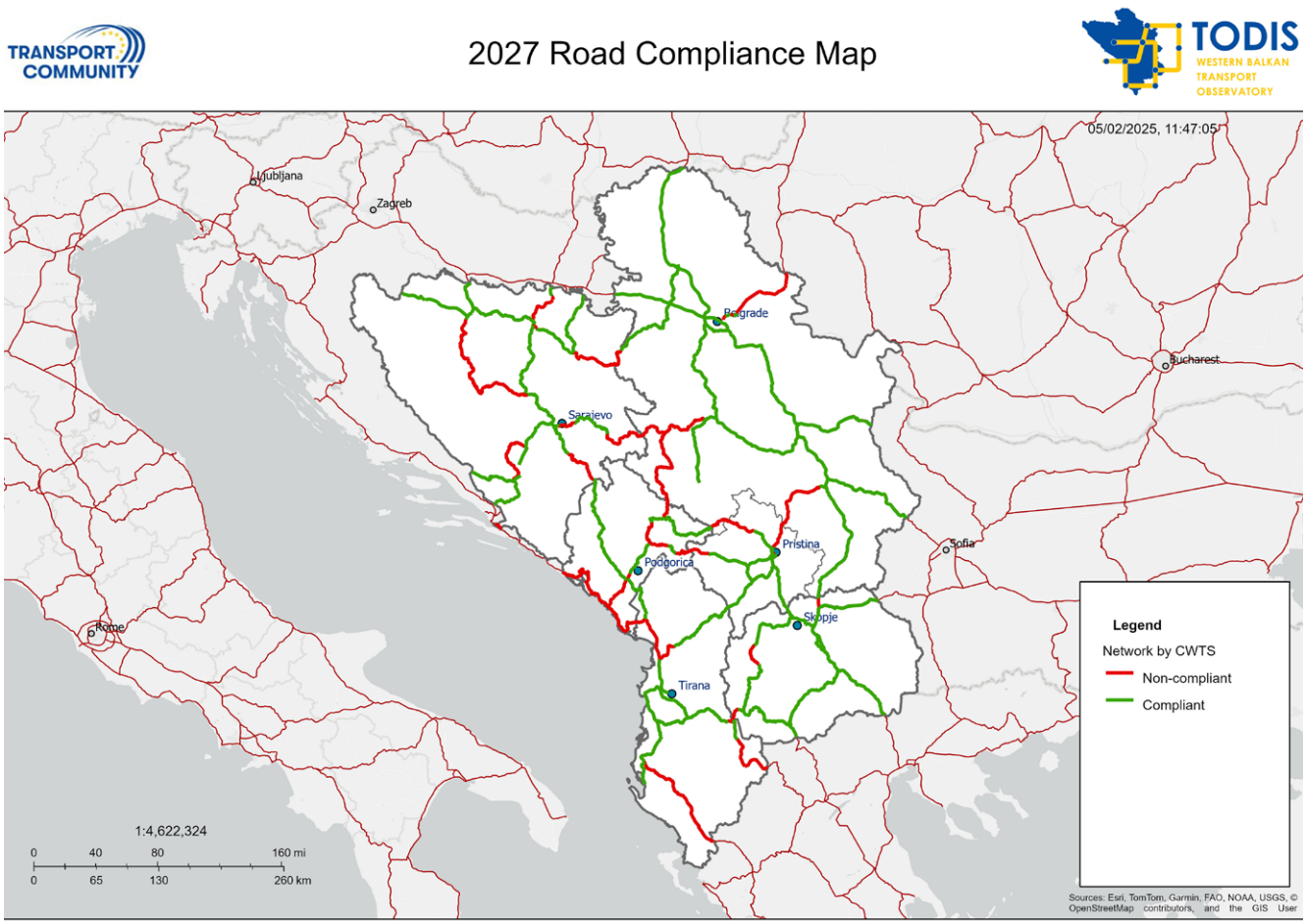


Figure 56. TEN-T road network – 2027 compliance forecast (infrastructure profile and condition)



The compliance figures for the TEN-T Core and Comprehensive networks indicate progress from 2023 to 2027, with notable improvements anticipated as delayed projects reach completion. Compliance for the TEN-T Core network is expected to increase from 52% in 2023 to 71% by 2027 due to ongoing infrastructure improvements. Similarly, the TEN-T Comprehensive network shows a projected rise in compliance from 70% in 2023 to 89% in 2027, despite a slight dip in 2024 due to the revision of the network. These improvements reflect a strategic push to address project delays, ultimately moving closer to full compliance across both networks.

Nevertheless, the reliability of such predictions is doubtful, considering the delays accumulated in projects.

6.3. **Waterborne transport indicators**

The 2024 expansion of the TEN-T Network under the new Regulation for waterborne transport has had a limited impact on overall projections, as only four new ports were added, with performance indicators (KPIs) that closely mirror those of existing network ports.

Currently, the main areas of non-compliance for inland waterway ports are the availability of alternative fuels and facilities that support improved environmental performance for vessels. Through the **Next Generation Action Plan**, the Transport Community Permanent Secretariat will continue to support regional partners in developing targeted studies and strategies to address these gaps. However, full compliance with these KPIs for maritime and inland ports is not anticipated until 2026.

The recent extension of the TEN-T Network to include four Serbian inland waterway ports highlights the increasing importance of investments in port and river infrastructure to meet TEN-T standards within Serbia.

For stretches of the River Sava where permissible draught standards remain non-compliant, this is being managed through ongoing dredging and infrastructure upgrade projects, providing an interim solution to enhance navigability.

In Albania, full **VTMIS (Vessel Traffic Monitoring and Information System)** compliance is expected by 2025, which is a high priority for the coming period. A second phase will soon be necessary to extend comprehensive coverage across the entire maritime area. Concurrently, the construction of the new ports at Porto Romano, Durres, and Triporti, Vlora is a strategic priority for Albania, with project completion and service transfers targeted by 2030.

In Montenegro, the successful implementation of the **Maritime National Single Window (MNSW)** and the completion of the second VTMIS phase in 2024 have ensured compliance with key performance indicators for telematic applications.

Regarding **clean fuel availability**, the Transport Community Permanent Secretariat will work closely with the Maritime Ports of Bar (Montenegro) and Durres (Albania) to support the development of detailed concepts and feasibility studies to address this critical issue. With a comprehensive analysis and strategic approach, targeted investments can help ensure the availability of alternative fuels for vessels, supporting environmental sustainability and alignment with international standards.

6.4. **Airport indicators**

With ongoing developments, several airports in the Western Balkans are addressing key TEN-T compliance indicators. Modernisation projects at airports such as Sarajevo, Niš, and Belgrade aim to increase capacity and ensure adequate terminal availability for future demand. These projects will also enhance overall operational efficiency. Although none of the regional airports currently meet the rail connection requirement, strategic plans to introduce rail links at certain sites, such as Tirana, represent steps toward improved multimodal connectivity. For clean fuel infrastructure, only partial availability exists at certain airports, with further investments planned in alignment with market needs. These advancements reflect the regional partners' commitment to meeting TEN-T standards and fostering a more integrated, sustainable aviation network in the region.

7. Overall Conclusions and Recommendations

Compliance with TEN-T standards, as outlined by Regulation 1315/2013 and updated by Regulation 1679/2024, remains a demanding objective for the Western Balkans, requiring a coordinated and systematic approach from all Regional Partners, coupled with significant financial investment.

Achieving the necessary alignment with these standards will demand continuous collaboration and the mobilisation of substantial resources. A significant portion of funding has already been dedicated to critical infrastructure projects that are projected to improve the TEN-T Network by 2027 substantially. This Report highlights that nearly €15 billion has been committed to ongoing projects aimed at advancing both the Core and Comprehensive Network.

Roads have attracted the largest share of this investment, with €11.5 billion allocated, while railways have received €3.61 billion, reflecting a prioritised commitment to enhancing connectivity and infrastructure across the region.

- **Progress towards achieving TEN-T compliance continues to be uneven between modes.** Compliance across the TEN-T networks shows varying progress by transport mode, with road networks leading due to substantial investments and improved compliance rates. The Core network now meets 54% compliance, mainly due to improvements in road quality. However, rail infrastructure lags, showing only incremental gains in speed and train length capabilities, with 46% rated as “poor” or “very poor” and low electrification rates (65.09%) and minimal ERTMS deployment. Waterborne transport on the Danube and Sava rivers faces seasonal and infra-structural challenges that limit navigational standards, while ports lack alternative fuel infrastructure, delaying environmental compliance. Air transport compliance is hindered by gaps in rail connectivity at key airports and limited green infrastructure, impacting full TEN-T alignment. Strengthening compliance in rail, waterborne, and air modes with focused investments and cross-border collaboration is crucial to achieving balanced TEN-T integration by 2030.

- **Despite the substantial resources available for infrastructure improvements, they fall short of covering the identified needs**. This shortfall underscores the need for a targeted investment policy that carefully prioritises projects with the greatest potential impact. Given the growing complexity and scale of required upgrades to meet the demanding TEN-T Core Network standards by the 2030 deadline, the focus should be on high-priority corridors. The allocation of funds is to be streamlined on projects that meet compliance requirements and, at the same time, deliver substantial benefits in terms of connectivity, safety, and sustainability.

- **The implementation pace of large projects remains sub-optimal**. Delays keep accumulating at each project stage and progressing from the “under preparation” to the “ongoing” status remains challenging, primarily due to funding uncertainties.

- While the overall quality of the road network seems to have improved, rail infrastructure remains in similar condition, and **maintenance remains paramount**. It is essential that long-term planning includes sufficient resources for the upkeep of infrastructure, ensuring that both road and rail systems remain functional, safe, and capable of supporting future transport needs.

- **Investment in rail and alternative fuels needs to be accelerated**. Increased funding for rail infrastructure to bridge the gaps in axle load (currently at 73.49% compliance for the Comprehensive Network) and electrification (65.09% for the Core Network). Expand alternative fuel infrastructure, particularly for electric vehicles, which is currently limited on the TEN-T network.

- **Environmental performance for vessels and clean fuel availability in ports remain insufficient.** Increased investment in alternative clean fuel facilities and green infrastructure in ports is essential to improve compliance with TEN-T standards and support the region's environmental goals.

- **Maintaining Good Navigation Status on TEN-T Core Inland Waterways remains a critical requirement.** Regular dredging, channel maintenance, and updated navigational aids are essential to ensure reliable and safe transport on inland waterways, supporting network functionality and connectivity.

As the identified problems are very much alike to those identified before, last year's recommendations remain, therefore, fully valid. Additionally, greater emphasis should be placed on the deployment of Intelligent Transport Systems (ITS) and alternative fuels infrastructure across all modes of transport:

- Enhance mid- to long-term project planning and prioritisation quality and reliability.

- Set up a stable list of priorities, aligning Single Project Pipeline with transport strategies, Economic and Investment Plan, and Growth Plan Agenda, allowing efforts to focus on implementation and delivery.

- Prioritise maintenance improvements, encompassing policy planning and tools, in alignment with the Transport Community's Road and Rail Action Plans. This should be accompanied by political commitment and the allocation of funds, working alongside large infrastructure investments to secure their intended benefits.

- Prioritise investment in alternative fuel infrastructure and intelligent transport systems across all modes of transport and the maintenance of Good Navigation Status for inland waterways. Supported by regulatory incentives and regional cooperation, these efforts will accelerate TEN-T compliance and foster environmental sustainability in transport.

To continue supporting small-scale initiatives under the Safe and Sustainable Transport Programme focusing on projects that maximise impact while using limited resources effectively is essential. This approach allows for impactful outcomes by efficiently utilising resources, aligning with the "more with less" philosophy.

ANNEX I **Road projects overview**

Albania

Albania is currently implementing a total of 7 TEN-T projects on Core Network.

The combined length of road sections currently subject to upgrading is 177.5 km.

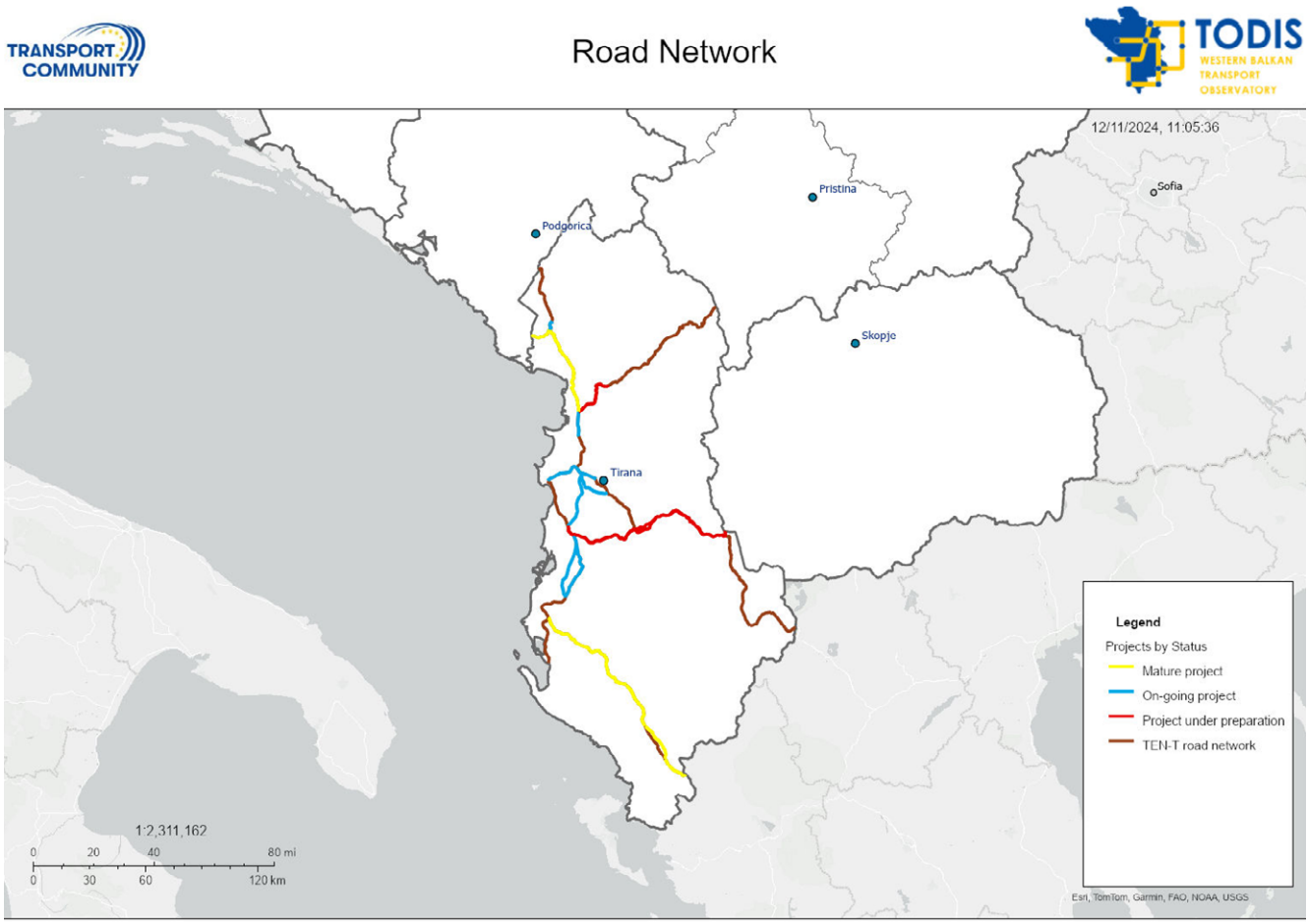
The value of the currently ongoing projects is EUR 1,75 billion on the Core Network.

An overview of the TEN-T projects currently under implementation in Albania is presented in thetable below:

Table 15. List of TEN-T projects in Albania

Project name	Core/ Comprehensive Network	Foreseen intervention	Length (km)	Cost (M€)	Estimated completion deadline	EIP
Construction of Tirana bypass (Kashar - Vaqarr - Mullet)	Core	New infrastructure	21.5	223	2027	Yes
Widening of Tirane - Durres Motorway	Core	Reconstruction/ Rehabilitation	35	298.86	2026	No
Upgrade of the Elbasan -Parrenjas road	Core	Reconstruction/ Rehabilitation	31	240	2027	No
Construction of AIC Section 3: Milot – Thumane	Core	Reconstruction/ Rehabilitation	14	44.62	2028	Yes
Construction of AIC Section 5B: Kashar – Lekaj	Core	New Infrastructure	34	569.85	2028	Yes
AIC Section 5C: Lekaj - Konjat-Fier	Core	Reconstruction/ Rehabilitation	14	381.12	2030	Yes
AIC Section 6+7: Konjat - Fier bypass	Core	Reconstruction/ Rehabilitation	28	N/A	20 months after contract signing	Yes

Figure 57. Map of TEN-T Projects in Albania



Since last year's reporting, the Widening of the Tirane - Durres Motorway advanced to ongoing, while the Shkodra bypass and the section Thumane-Kashar have been completed. The progress on the key road axis in Albania (Adriatic Ionian Corridor and Corridor 8) emphasises the Albanian government's commitment to upgrading and enhancing the Core TEN-T Road Network. Completion deadlines for basically all projects in the list have been updated.

Bosnia and Herzegovina

Bosnia and Herzegovina is currently implementing 16 TEN-T projects in total, with a combined value of EUR 2,666 million (EUR 2,369 million on the Core Network).

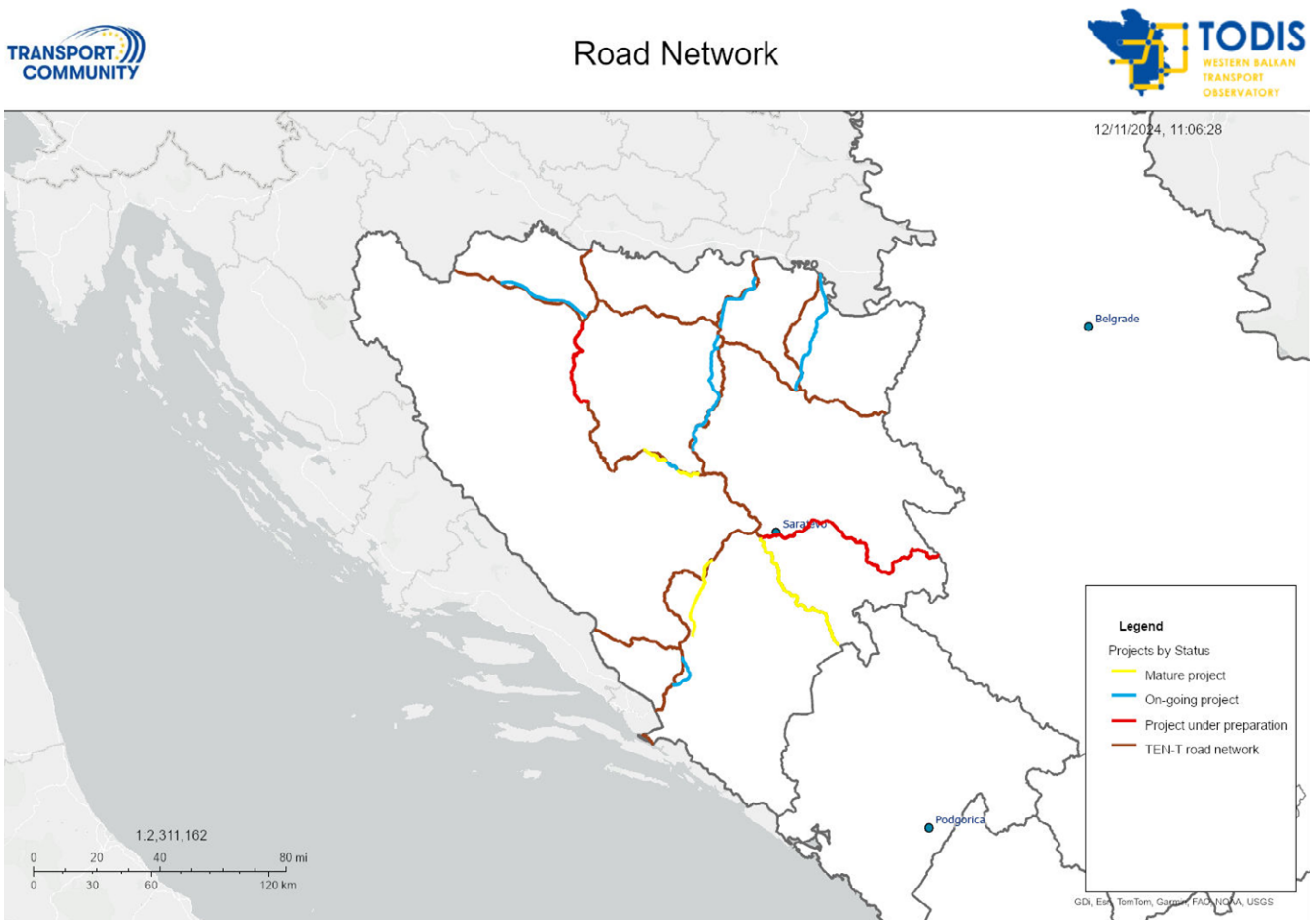
The combined length of road sections currently undergoing various upgrades is 241,68 km, of which 133,3 km is on the Core Network and 108.38 km is on the Comprehensive Network.

An overview of the TEN-T projects currently under implementation in Bosnia and Herzegovina is presented in the table below:

Table 16. List of TEN-T projects in Bosnia and Herzegovina

Project name	Core/ Comprehensive Network	Foreseen intervention	Length (km)	Cost (M€)	Estimated completion deadline	EIP
Construction of Vukoslavije – Johovac motorway	Core	New infrastructure	36	470.3	2028	Yes
Construction of Rudanka - Putnikovo Brdo motorway	Core	New infrastructure	5.2	164.9	2024	Yes
Construction of Putnikovo Brdo – Medakovo motorway	Core	New infrastructure	8.5	142.7	2025	Yes
Construction of Medakovo – Ozimica motorway	Core	New infrastructure	21.3	361.7	2026	Yes
Construction of Ozimica – Poprikuse motorway	Core	New infrastructure	12	306	2027	Yes
Construction of Poprikuse – Nemila motorway	Core	New infrastructure	5.5	251	2025	Yes
Construction of Nemila – Vranduk motorway	Core	New infrastructure	5.7	110.94	2026	Yes
Construction of Vranduk – Ponirak motorway	Core	New infrastructure	5.3	153.45	2026	Yes
Construction of Ponirak – Vraca motorway	Core	New infrastructure	3.4	70.8	2025	Yes
Construction of Vraca (Tunnel Zenica) - Donja Gračanica motorway	Core	New infrastructure	3.9	57.6	2025	Yes
Construction of Mostar South - Tunnel Kvanj motorway	Core	New infrastructure	9.2	93.5	2026	Yes
Construction of Tunnel Kvanj – Buna motorway	Core	New infrastructure	5.2	106.9	2025	Yes
Construction of Buna – Počitelj motorway	Core	New infrastructure	7.2	37.2	2025	Yes
Construction of Banja Luka – Prijedor motorway	Comprehensive	New infrastructure	40.7	297	2027	No
Construction of Nević polje - Vitez express road	Core	New infrastructure	4.9	42.5	N/A	No
Construction of the Orašje – Tuzla motorway	Comprehensive	New infrastructure	67.68	N/A	N/A	No

Figure 58. Map of TEN-T Projects in Bosnia



Compared to last year's report, the section Pocitelj-Zvirovici of the Corridor Vc has been completed. Bosnia and Herzegovina upholds its unwavering commitment to complete Corridor Vc at motorway standards. However, the funding gap for the remaining sections has yet to be closed. Completion deadlines for basically all projects in the list have been updated.

Kosovo

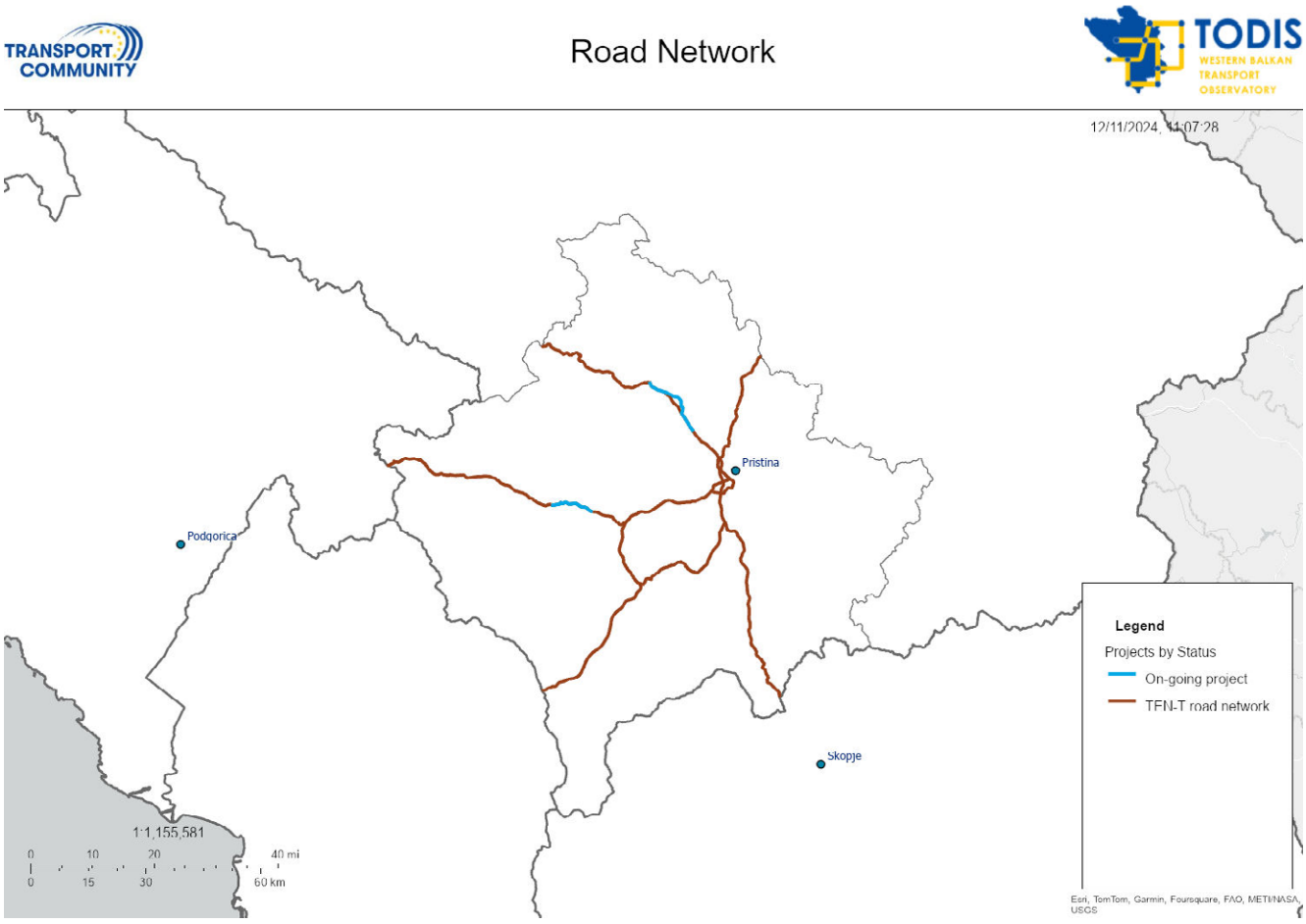
Kosovo is currently implementing 2 TEN-T projects in total, with a combined value of EUR 74 million, one on the Core Network (EUR 42 million) and one on the Comprehensive Network (EUR 32 million). The combined project length is 32.8 km.

An overview of TEN-T projects currently under implementation in Kosovo is presented in the table below:

Table 17. List of TEN-T projects in Kosovo

Project name	Core/ Comprehensive Network	Foreseen intervention	Length (km)	Cost (M€)	Estimated completion deadline	EIP
Construction of Pristina - Mitrovica motorway	Core	New infrastructure	19.4	42	2025	No
Widening of Kjeve-Dollc road section	Comprehensive	Reconstruction/ Rehabilitation	13.4	32	2025	No

Figure 59. Map of TEN-T Projects in Kosovo



While Kosovo has already upgraded most of its Core Network to the required standards, the missing link between Pristina and Merdare (also one of the EIP Flagships) continues to fall short of the desired pace of progress. Completion deadlines for basically all projects in the list have been updated.

Montenegro

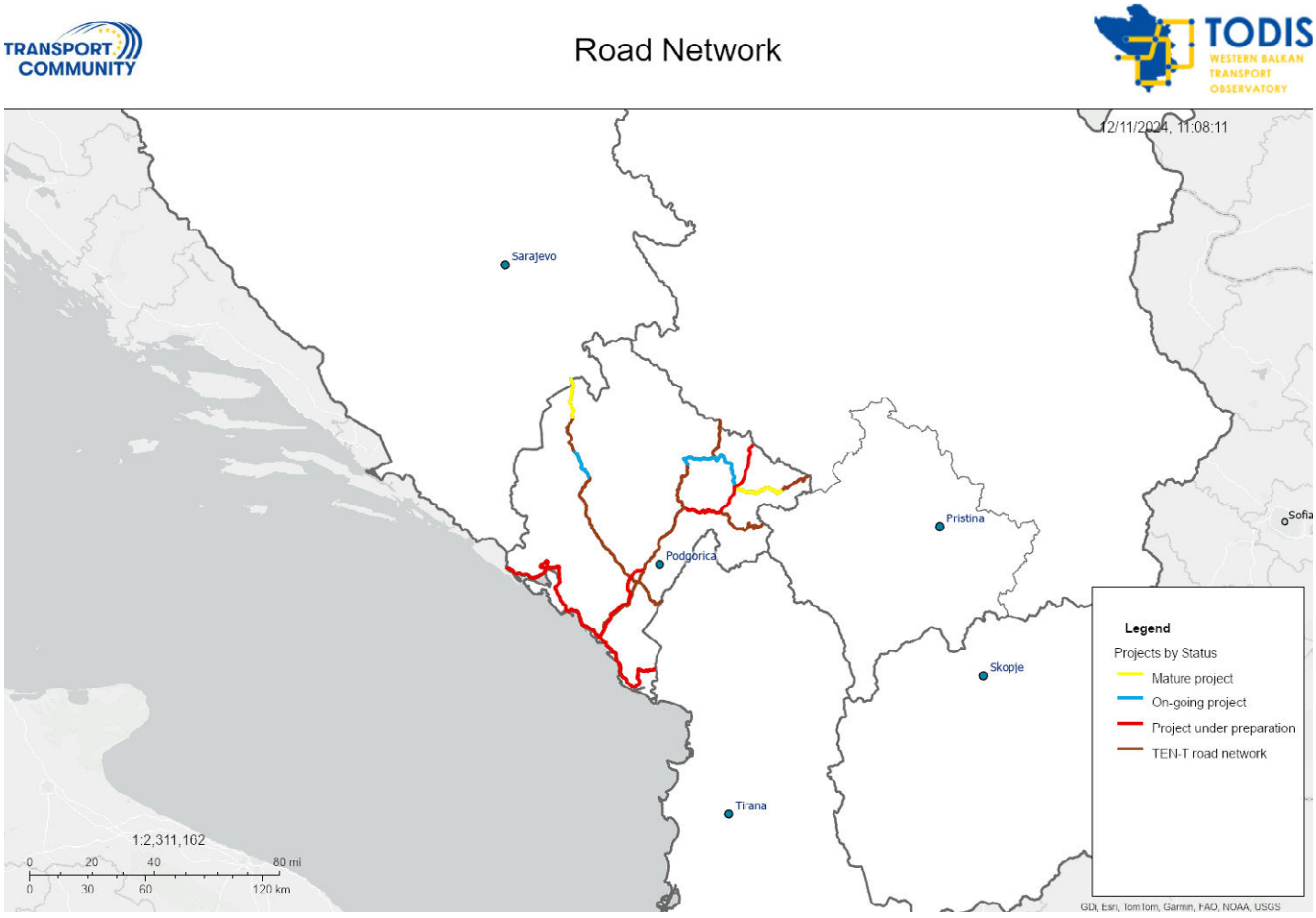
Montenegro is currently implementing 2 TEN-T projects, with a combined value of EUR 91 million.

The combined length of road sections undergoing various upgrades is 76 km, mainly on the Comprehensive Network, as shown in the table below:

Table 18. List of TEN-T projects in Montenegro

Project name	Core/ Comprehensive Network	Foreseen intervention	Length (km)	Cost (M€)	Estimated completion deadline	EIP
Reconstruction of road section Berane - Bijelo Polje - Mojkovac	Comprehensive	Reconstruction/ rehabilitation	43	36	2026	Yes
Reconstruction of road section Zaborje-Jasenovo polje	Comprehensive	Reconstruction/ rehabilitation	33	55	2028	Yes

Figure 60. Map of TEN-T Projects in Montenegro



Compared with last year's report, the Rozaje-Spiljani road rehabilitation project has been finalised and opened to traffic. In contrast, the reconstruction of the Zaborje-Jasenovo polje road section, as a part of the SPP and EIP, as a part of the road connection between Podgorica-Sarajevo, has advanced to ongoing.

Following the completion of the initial segment of the Bar – Boljare motorway, Montenegro is trying to secure the funds for the second section of the Bar-Boljare highway, being a part of the Western-Balkan – Eastern Mediterranean Corridor, while for the Blue highway through Montenegro, the final alignment of the project must be finally defined. As the list of ongoing projects in Montenegro shrinks each year, it is crucial to expedite the progress of projects currently under preparation to re-align with the evolving pace of TEN-T Network development in the region. Completion deadlines for basically all projects in the list have been updated.

North Macedonia

North Macedonia is currently implementing 8 TEN-T projects in total, with a combined value of EUR 2,572 million, seven on the Core Network (EUR 2,442 million) and one on the Comprehensive Network (EUR 130 million).

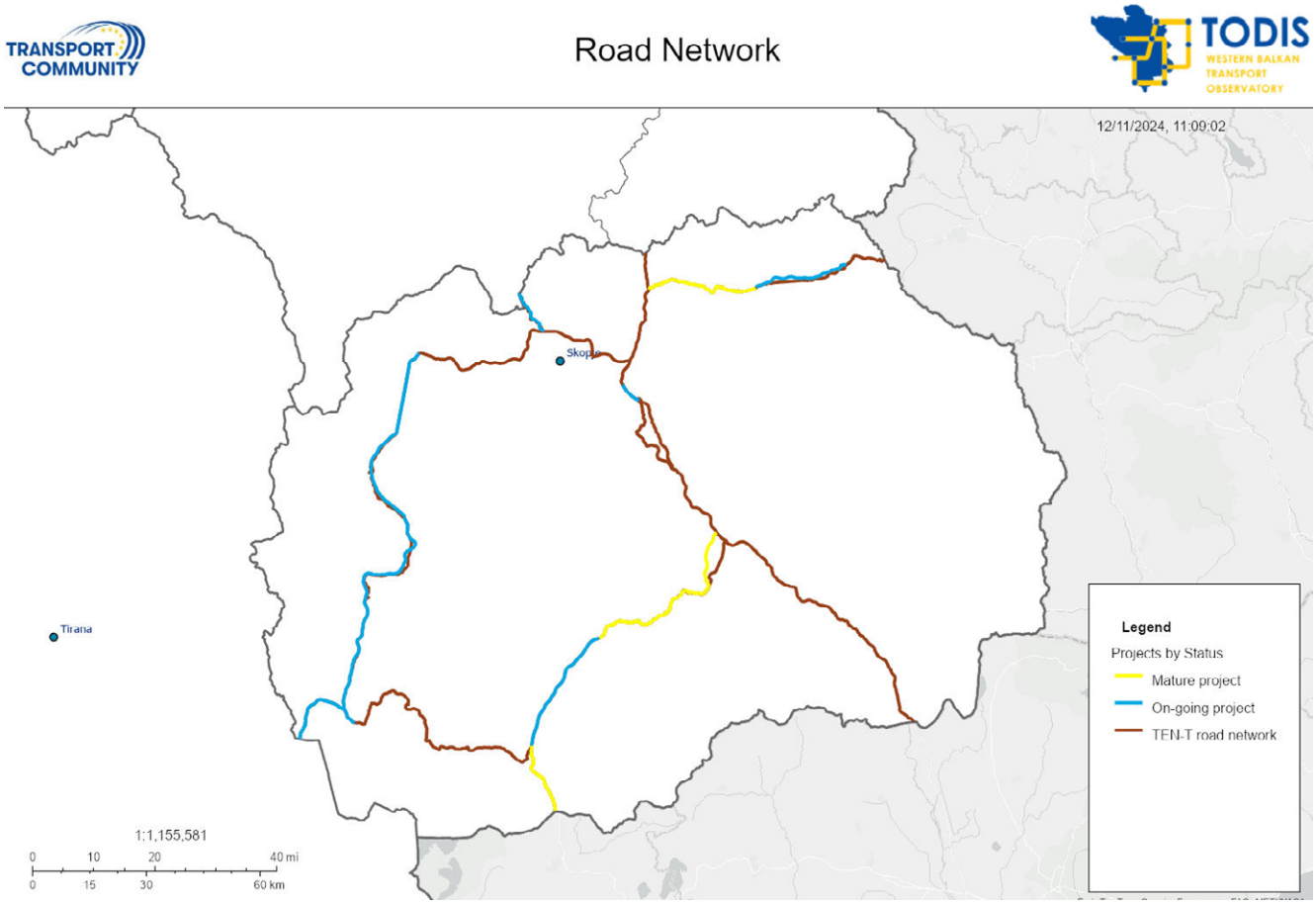
The combined length of road sections currently undergoing various upgrades is 228,9 km (189,6 km on the Core Network and 39,3 km on the Comprehensive Network).

An overview of the TEN-T projects currently under implementation in North Macedonia is presented in the table below:

Table 19. List of TEN-T projects in North Macedonia

Project name	Core/ Comprehensive Network	Foreseen intervention	Length (km)	Cost (M€)	Estimated completion deadline	EIP
Construction of Kriva Palanka – Stracin express road	Core	New infrastructure	25.5	93.7	2024	No
Construction of the Bukojcani–Kicevo motorway section	Core	New infrastructure	12.7	129	2027	No
Construction of the Kicevo - Ohrid motorway	Core	New infrastructure	57.7	598	2026	No
Construction of Blace – Skopje (Stenkovec Interchange) motorway Section	Core	New infrastructure	12.5	230.41	2027	No
Rehabilitation with the widening of motorway A1, section Petrovec - Katlanovo (right carriageway)	Core	Reconstruction/ rehabilitation	11.66	11.05	2024	No
Construction of the Prilep-Bitola motorway	Comprehensive	New infrastructure	39.3	130	2028	No
Construction of the Tetovo – Gostivar – Bukojcani motorway	Core	New infrastructure	47.8	1300	2028	No
Construction of the Trebenista – Struga – Kjafasan motorway section	Core	New infrastructure	21.7	80	2028	No

Figure 61. Map of TEN-T Projects in North Macedonia



Compared with last year's report, two projects have been successfully completed: rehabilitation and upgrade of the Kriva Palanka – Deve Bair road section and Rehabilitation of Podmolje – Struga - Kjafasan, while the construction of the Kicevo - Ohrid motorway is facing significant delay. Completion deadlines for basically all projects in the list have been updated.

Serbia

Serbia is currently implementing 5 TEN-T projects in total, with a combined value of EUR 5,074 million (EUR 2,508 million on the Core Network and EUR 2,566 million on the Comprehensive Network).

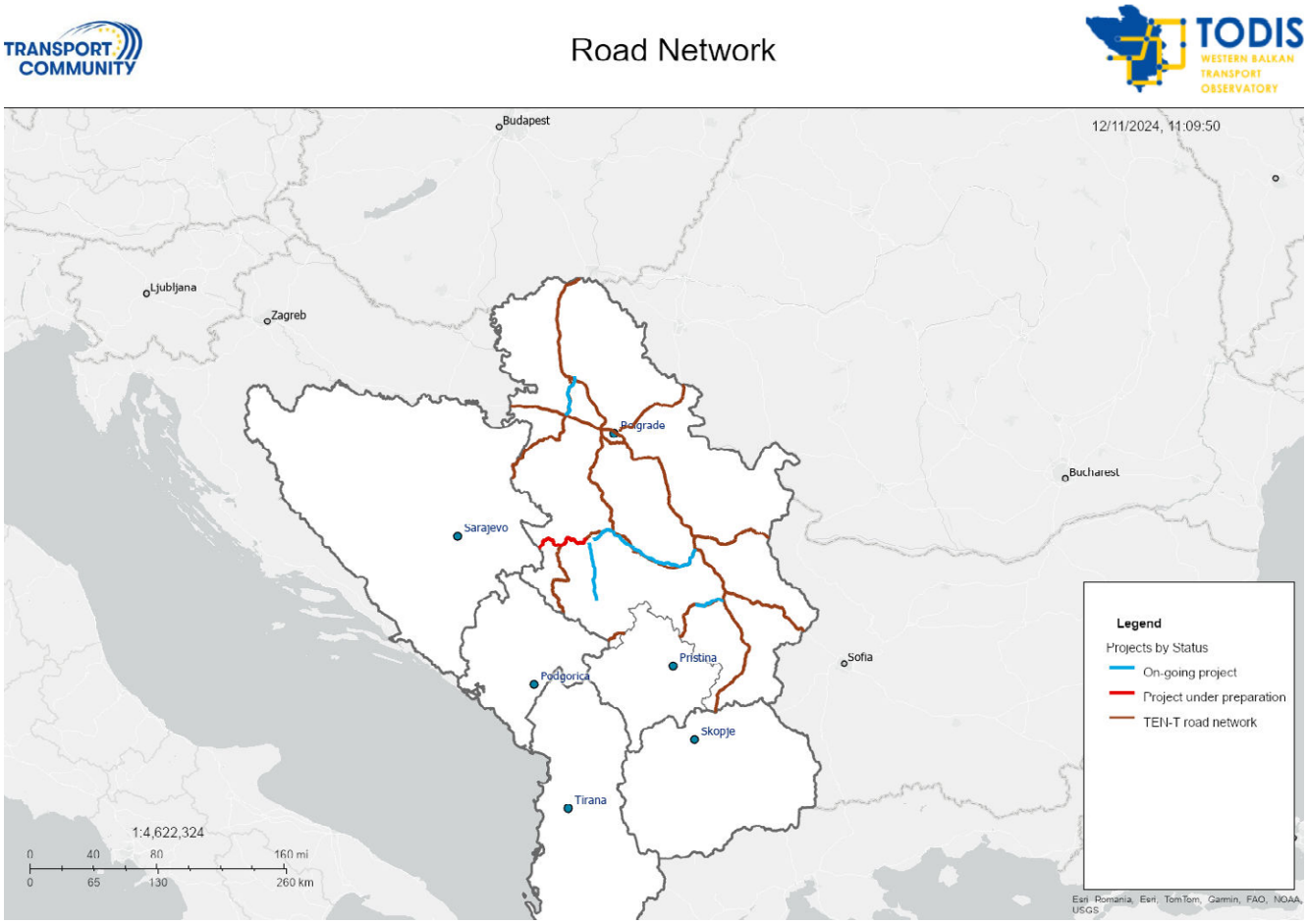
The combined length of road sections currently undergoing various upgrades is 295 km (156,4 km on the Core Network and 138,6 km on the Comprehensive Network).

An overview of the TEN-T projects currently under implementation in Serbia is presented in the table below:

Table 20. List of TEN-T projects in Serbia

Project name	Core/ Comprehensive Network	Foreseen intervention	Length (km)	Cost (M€)	Estimated completion deadline	EIP
Construction of the Nis-Plocnik section	Core	New infrastructure	32.7	416.2	2029	Yes
Construction of the Novi Sad-Ruma section	Comprehensive	New infrastructure	44.41	650	2026	No
Construction of the Po-jate-Preljina section	Comprehensive	New infrastructure	112.39	1858	2025	No
Construction of the Prelji-na-Pozega section	Core	New infrastructure	31	450	2025	No
Construction of the Pozega-Duga Poljana section	Core	New infrastructure	74.9	1700	2027	No

Figure 62. Map of TEN-T Projects in Serbia



Compared with last year's report, the construction of the Nis - Plocnik and the Pojate-Preljina sections advanced to ongoing and added to the list. Completion deadlines for basically all projects in the list have been updated. Serbia is constantly upgrading its TEN-T Road Network, investing considerable amounts in this regard.

ANNEX II **Rail projects overview**

Albania

The reconstruction and modernisation of the Durres–Tirana section, along with the construction of a new branch line to Tirana International Airport, are underway. The project is on schedule, with approximately 80% of the civil works physically completed. The Design & Build Contract began in March 2021, and construction officially started in November 2021.

This project is supported by the European Union, which has provided a grant of €35.5 million under the Connectivity Agenda for the Western Balkans, and the European Bank for Reconstruction and Development (EBRD), which is offering a loan of €36.9 million. In the fourth quarter of 2023, the Albanian Government is requesting additional funds from the EBRD loan to cover four extra components: (1) €29 million for price adjustments to the works contract due to market price increases; (2) €25 million for the construction of new railway station buildings along the existing segment; (3) €16.1 million for a 4 km extension project of the railway infrastructure from Tirana PTT to the Tirana City Centre Stop; and (4) €10.5 million for electrification. With these additions, the the project's total value is expected to reach €134 million.

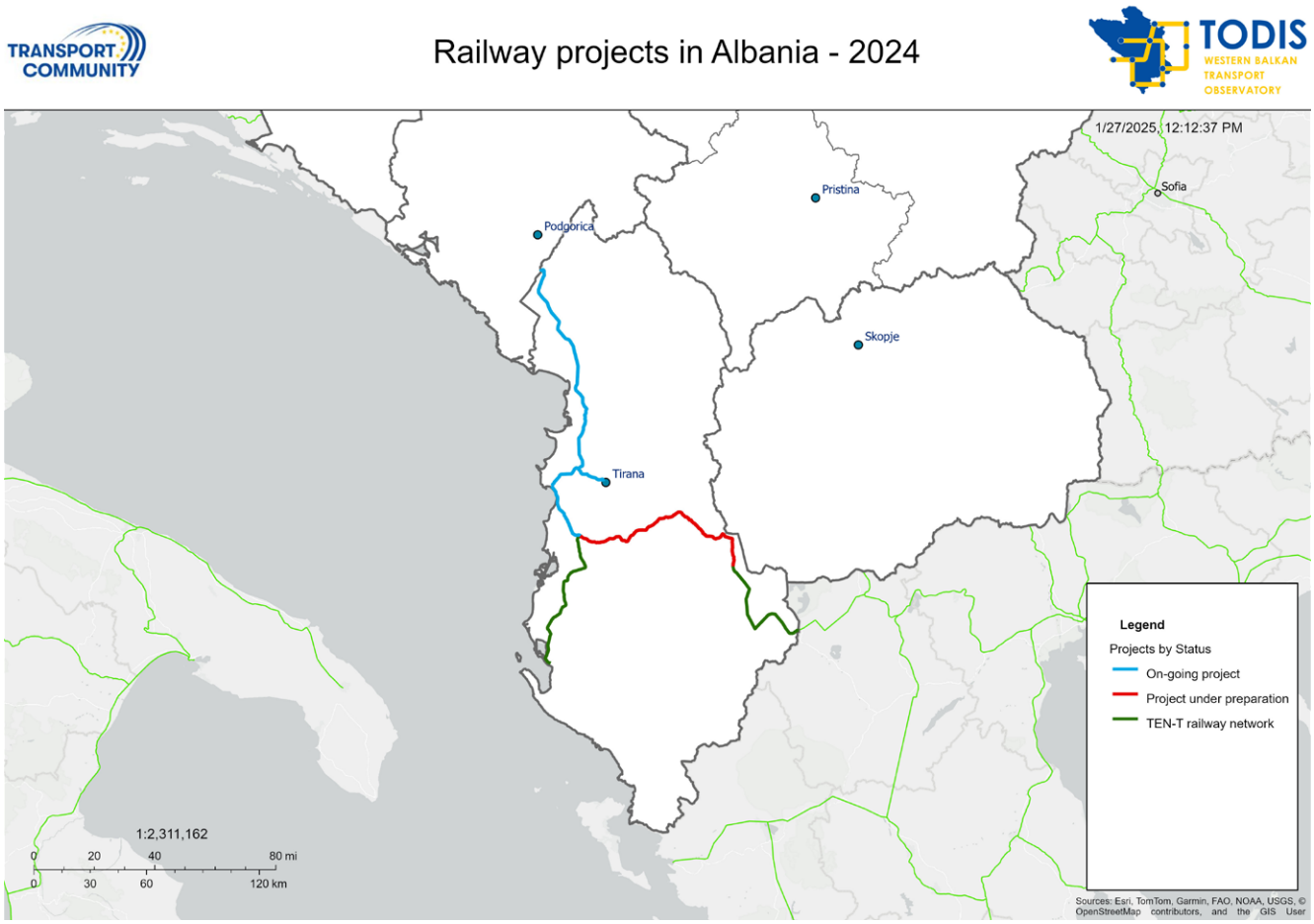
As part of this contract, over 34.3 km of the existing railway track between Tirana PTT and the Port of Durres is being rehabilitated. A new 6.4 km track is also being constructed to connect Tirana with Tirana International Airport. This initiative has been recognised as a flagship project within the Economic and Investment Plan for the Western Balkans, published by the European Commission in October 2020.

Another ongoing project involves the reconstruction of the Vore – Han i Hotit section. Funding has been secured, and the tender documentation preparations are in progress. The procurement of works is expected to begin no earlier than the first quarter of 2025. This project will span a total length of 120 km, with estimated costs reaching €340 million, excluding the final component for electrification.

Table 21. List of TEN-T projects in Albania

Project name	Core/ Comprehensive Network	Foreseen intervention	Length (km)	Cost (M€)	Estimated completion deadline	EIP
Rehabilitation of the railway Durres - Tirana Public Transport Terminal PTT and construction of the new Tirana- Rinas branch line	Core Network	Rehabilitation/new infrastructure	46	134	2027	Yes
Rehabilitation of Vore - Han i Hotit Railway Line	Core Network	Rehabilitation/ Reconstruction	120	340	2029	Yes

Figure 63. Railway projects in Albania



Bosnia and Herzegovina

Overhaul and modernisation of the Samac – Doboj – Rjecica railway section

This project is part of a broader initiative to complete the railway connection between the southern and northern borders of Croatia and Bosnia and Herzegovina. This section is essential for linking the Port of Ploče on the Croatian Adriatic coast with Budapest, with over 325 km of the entire distance crossing Bosnia and Herzegovina.

Upon completion, the railway line will be upgraded to a standard reflecting this corridor's importance. This enhancement in connectivity will benefit Bosnia and Herzegovina and its neighbouring countries, while also strengthening ties between Southeast Europe and the European Union. The project has been designated as a Flagship 2 project under the Economic and Investment Plan for the Western Balkans.

The 85 km section from Šamac to Doboj to Rijeka is still pending approval under the Western Balkans Investment Framework (WBIF). The estimated cost of this project is €162.5 million, with an €82 million grant allocated for its development. The initial construction deadline was set for 2025, and the project meets all TEN-T compliance indicators except those related to ERTMS and train length.

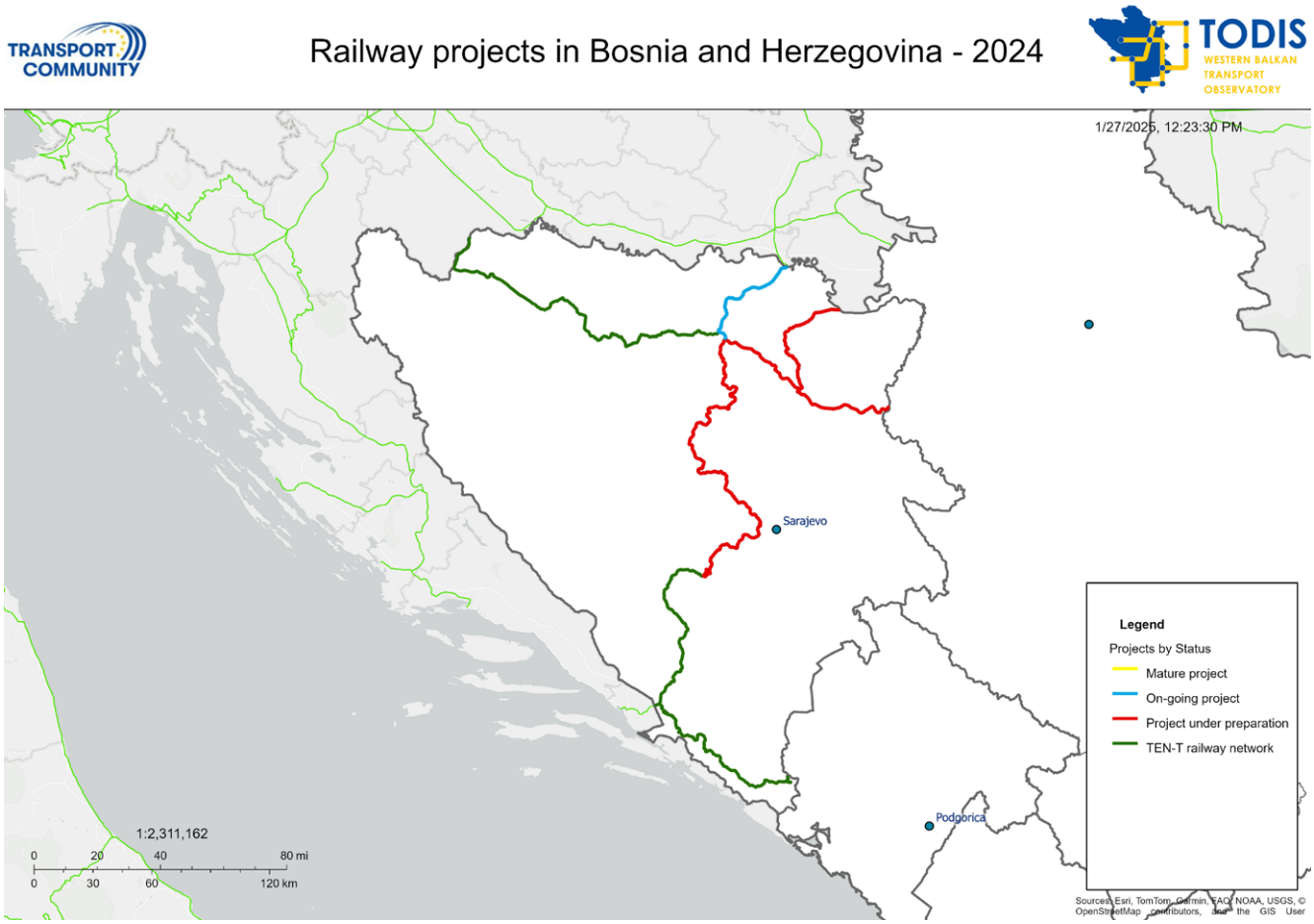
However, progress on this project has stalled since December 2021 due to difficulties securing financing. Bosnia and Herzegovina must resolve all outstanding issues with international financial institutions (IFIs) and initiate the tender procedure.

Additionally, there are plans for a track overhaul on the railway section between Podlugovi and Sarajevo (Vc), and similar upgrades on the Doboj-Maglaj and Jelina-Zenica sections. While the necessary documentation for these projects is complete, financing has not yet been secured. These projects are well-developed but lack the funding required to proceed.

Table 22. List of TEN-T projects in Bosnia and Herzegovina

Project name	Core/ Comprehensive Network	Foreseen intervention	Length (km)	Cost (M€)	Estimated completion deadline	EIP
Overhaul and modernisation of the railway section Šamac – Doboj – Rječica	Core Network	Rehabilitation /reconstruction	85	162	2027	Yes

Figure 64. Railway projects in Bosnia and Herzegovina



Kosovo

Rehabilitation and modernisation of section Hani Elezit and Leshak

The railway section from Hani Elezit to Leshak in Kosovo spans 149 km, extending from the common crossing point with Serbia in northern Kosovo (near Leshak rail station) to the border with North Macedonia at Hani i Elezit station. This section branches off from Lapovo in Serbia and provides an alternative route to Skopje, connecting Belgrade – Lapovo – Kraljevo – Fushe Kosovo – Skopje.

This project is of regional significance and focuses on comprehensive rehabilitation and modernisation to align with EU standards, specifically the technical specifications for interoperability. However, it is important to note that this phase does not include electrification. Additionally, it is a key component of the Flagship 2 projects outlined in the Economic and Investment Plan for the Western Balkans.

The implementation of this project will enhance regional connectivity, facilitating trade and passenger travel. It promotes regional cohesion and helps develop seamless connections for passengers and freight across the Western Balkans. Notably, this railway is the primary direct connection between Serbia, Kosovo, and North Macedonia.

The progress schedule for the general rehabilitation of the railway line is as follows:

- Phase one, encompassing general rehabilitation and modernisation, commenced in August 2019 and concluded in 2022 for civil engineering works. Works related to signalling and telecommunications are to be finalised by the end of 2024.
- Construction on the Mitrovica-Fushe Kosovo section (phase two) is underway, with an expected completion date in 2024.
- Preliminary design work for the Mitrovica - Lesak section is ongoing under IPF 9.

The estimated project cost is EUR 298 million in total, with a projected deadline of 2027. However, there is a delay in completing the project's first phase due to a shortfall in funds for the signalling system and telecommunications. Nonetheless, addressing this issue is of the utmost priority and should be resolved as soon as possible.

Table 23. List of TEN-T projects in Kosovo

Project name	Core/ Comprehensive Network	Foreseen intervention	Length (km)	Cost (M€)	Estimated completion deadline	EIP
General Rehabilitation of section Hani Elezit – Fushe Kosovo -Phase 1	Core Network	Rehabilitation/ Reconstruction	65	114.7	2024	Yes
General Rehabilitation of section Fushe Kosovo - Mitrovica -Phase 2	Core Network	Rehabilitation/ Reconstruction	34	64	2024	Yes
General Rehabilitation of section Mitrovica - Leshak -Phase 3	Core Network	Rehabilitation/ Reconstruction	50	118.7	2027	Yes

Figure 65. Railway projects in Kosovo

Montenegro

Montenegro is implementing 4 TEN-T projects, totalling EUR 264 million (all on the Core Network).

The length of sections currently undergoing various upgrades is 63 km, and ten steel bridges and eight tunnels are rehabilitated along the 140 km between Bijelo Polje and Podgorica.

An overview of the TEN-T projects currently under implementation in Montenegro is presented in the table below.

Table 24. Overview of rail TEN-T projects in Montenegro

Project name	Core/ Comprehensive Network	Foreseen intervention	Length (km)	Cost (M€)	Estimated completion deadline	EIP
Track overhaul of the railway sections Railway line Lutovo – Bratonozici – Bioce	Core Network	Rehabilitation/ reconstruction	20	30	2027	Yes
Railway line Vrbnica - Bar: Rehabilitation of 10 steel bridges and 8 tunnels	Core Network	Rehabilitation	140	45.5	2027	Yes
Railway line Vrbnica – Bar: Rehabilitation of 12 tunnels;	Core Network	Rehabilitation	4	20	2027	Yes
Railway line Golubovci – Bar	Core Network	Rehabilitation/ reconstruction	39	218.4	2027	Yes

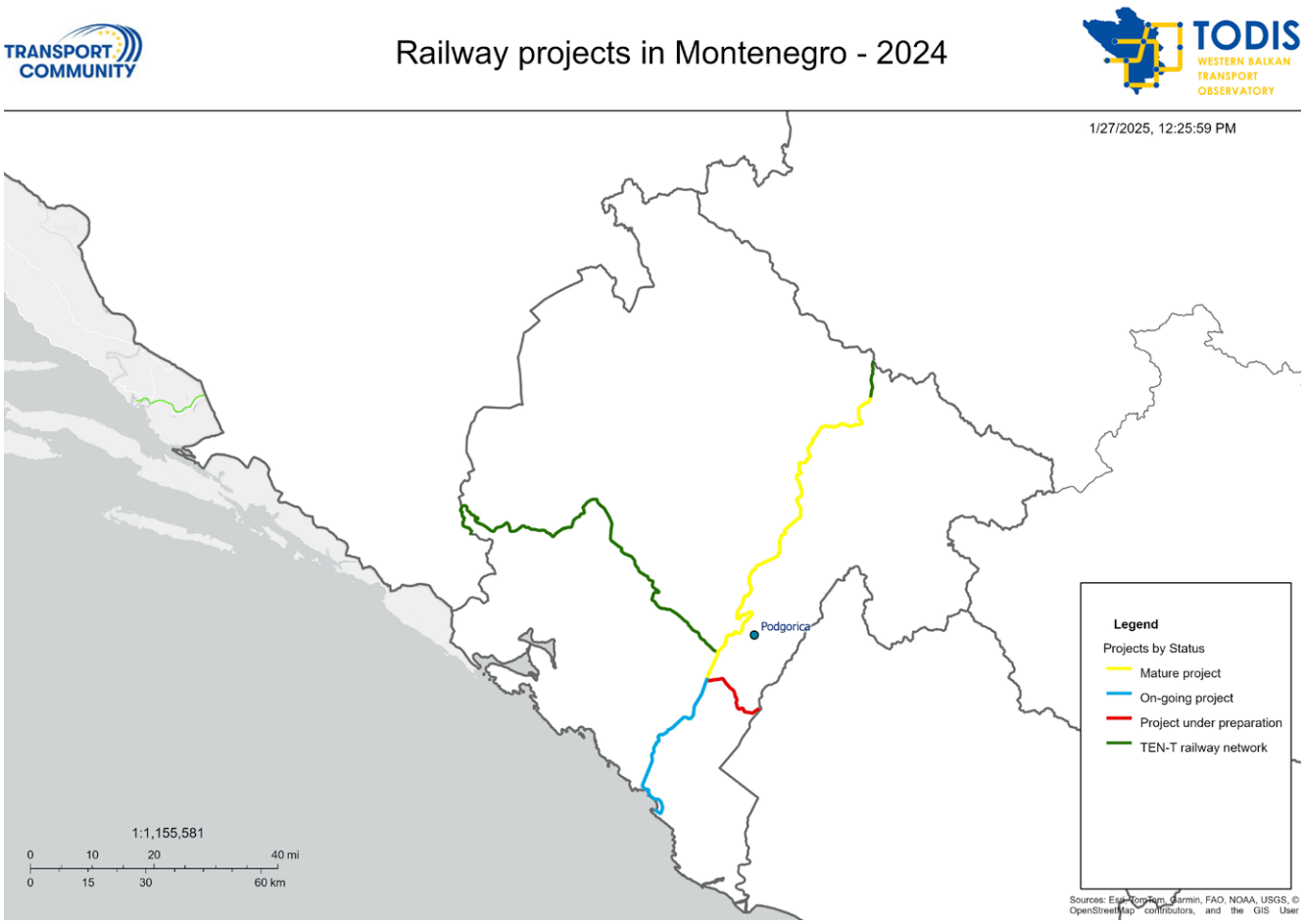
Montenegro has completed construction work at the Bijelo Polje railway station, which has now become a joint station for all border procedures in railway transport. In June 2024, Montenegro and Serbia began common operations at the Bijelo Polje station, bringing together all relevant authorities, including customs, border police, inspection services, and railway operators. This joint effort has resulted in a significant time savings of 50% for both passenger and freight traffic at the border.

Additionally, Montenegro has rehabilitated 13 concrete bridges and 4 tunnels along the Vrbnica–Bar railway line. The bridges and tunnels selected for reconstruction had not been refurbished in nearly four decades. Once the project is completed, trains up to 500 meters in length will be able to operate on these lines at a design speed of 100 km/h, a substantial improvement over the previous maximum speed of 50 km/h.

While the Route 4 railway line will remain electrified, there are currently no plans to implement the European Train Control System (ETCS), Global System for Mobile Communications – Railway (GSM-R), or to construct dry port terminals. This indicates that further improvements are still needed on this primary Montenegrin railway route to achieve full compliance with TEN-T standards.

Furthermore, reconstruction efforts for thirteen critical steel bridges and twenty tunnels are planned, with anticipated completion dates for 2027.

Figure 66. Railway projects in Montenegro



North Macedonia

The Macedonian railway network is set to undergo significant improvements on the back of projects for new railway infrastructure in the eastern part of Corridor VIII and a rehabilitation project on Corridor X.

North Macedonia is currently implementing three TEN-T projects, with a total value of EUR 619 million (all on the Core Network)

The length of rail sections undergoing various upgrades is 130 km (all on the Core Network).

An overview of the TEN-T projects is presented in the table below:

Table 25. Overview of rail TEN-T projects in North Macedonia

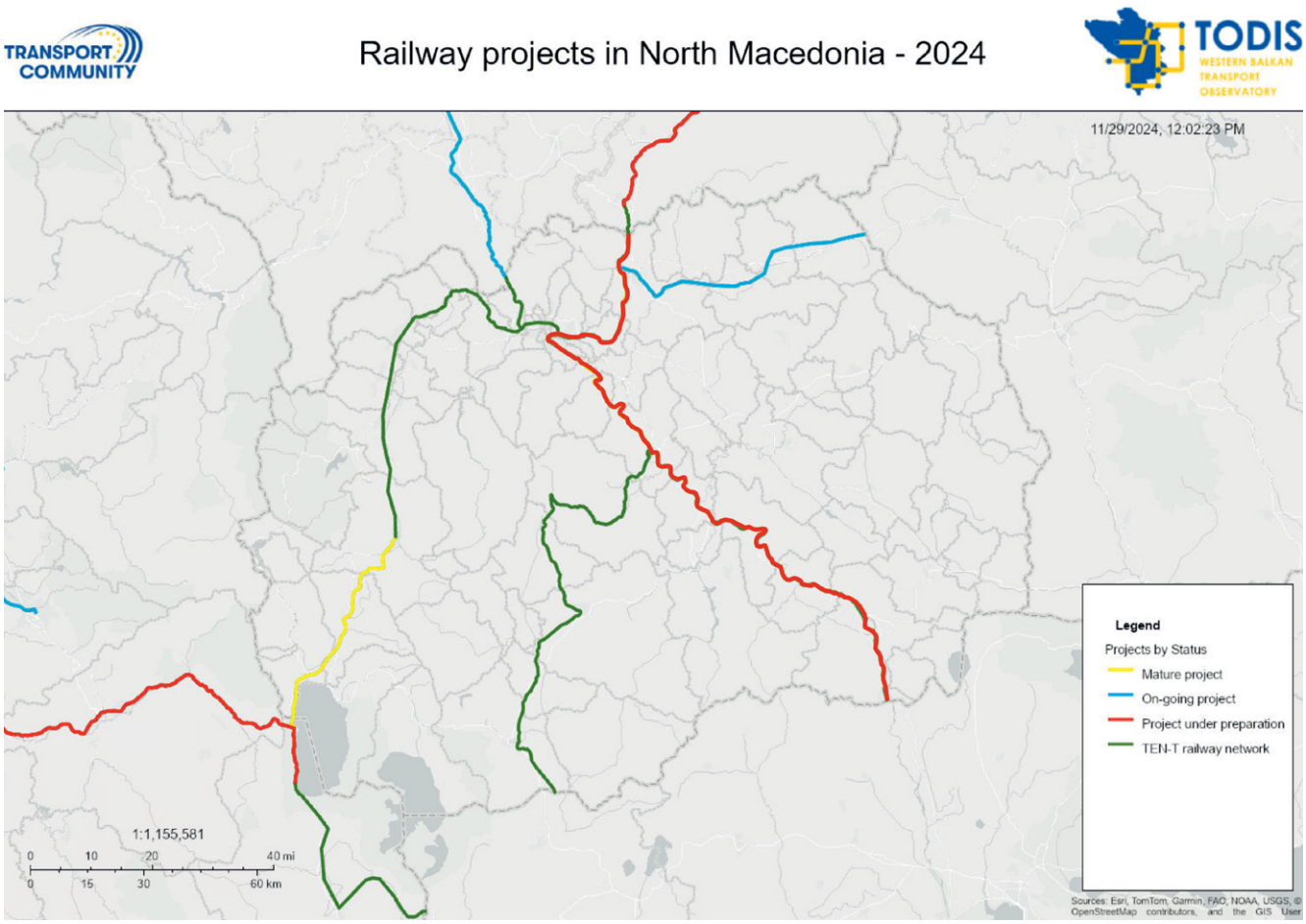
Project name	Core/ Comprehensive Network	Foreseen interventionv	Length (km)	Cost (M€)	Estimated completion deadline	EIP
Rehabilitation of Eastern Part of Rail Corridor VIII-PHASE I-Section Kumanovo-Beljakovce	Core Network	New infrastructure	30.8	44	2024	Yes
Rail Corridor VIII-PHASE 2-Section Beljakovce-Kriva Palanka	Core Network	New infrastructure	34	155	2026	Yes
Rail Corridor VIII-PHASE 3-Section Kriva Palanka -Deve Bair, the border with the Republic of Bulgaria	Core Network	New infrastructure	23.4	560	2032	Yes

Renewal works on the Nogaevci - Negotino rail section were completed by 2023. This €9.6 million project primarily involved essential maintenance activities in 2022 and 2023 without any additional improvements toward TEN-T compliance. The main objective was to maintain the operating speed at the design speed of 100 km/h on this 31 km electrified rail section, which has an allowable axle load of 22.5 t.

On October 19, 2022, North Macedonia began construction on phases 1 and 2 of a critical rail project along Corridor VIII, connecting Kumanovo to the Bulgarian border. These works are proceeding on schedule. However, the tender for the third phase, which covers the section from Kriva Palanka to the Bulgarian border, was launched at the end of 2023 but was cancelled in September 2024. The tender documentation will be revised, and the tender procedure will be repeated.

Construction on the first two sections is ongoing, with a completion deadline of 2024 for the first section and 2026 for the second section. The implementation of the eastern part of Rail Corridor VIII aims to ensure compliance with Directive 2008/57/EC on the interoperability of the rail system. The project includes electrification, a line speed of 100 km/h for freight, an axle load of 22.5 t, a track gauge of 1435 mm, and the implementation of the European Train Control System (ETCS). The only aspect of the project that does not meet TEN-T standards is the maximum train length of 740 m. Additionally, the Macedonian government plans to implement GSM-R as a separate project.

Figure 67. Railway projects in North Macedonia



Serbia

Serbia is implementing 6 TEN-T projects, with a total value of EUR 1.409 billion.

The length of sections currently undergoing various upgrades is 269 km.

An overview of the TEN-T projects currently under implementation in Serbia is presented in the table below:

Table 26. Overview of TEN-T projects rail in Serbia

Project name	Core/ Comprehensive Network	Foreseen interventionv	Length (km)	Cost (M€)	Estimated completion deadline	EIP
Reconstruction and modernisation of rail line Novi Sad - Subotica – Kelebija - state border with Hungary	Core Network	New infrastructure	108	1068	2024	No
Reconstruction and modernisation of Niš- Dimitrovgrad railway line	Core Network	Reconstruction/ rehabilitation	108	426	2027	Yes
Construction of a new line Zemun polje - Nikola Tesla Airport - National Stadium	Core Network	New infrastructure	18	188	2026	No
Construction of a single operational centre for railway traffic management on the railway network of the Republic of Serbia	Core Network	New infrastructure	/	115	2026	No
Construction works on the Main Railway station - phase 2	Core Network	New infrastructure	/	27	2026	No
Construction of tunnel no. 4 on the Stalać-Đunis section within the Belgrade-Niš project	Core Network	New infrastructure	3.3	41.4	2027	Yes

From April 2022 to October 2024, the refurbished railway line was used by approximately 9 million passengers. Construction on the Novi Sad – Subotica section began in April 2022 and was completed by 2024, meeting all TEN-T requirements. The entire line between Belgrade and Novi Sad is now interoperable, with a maximum speed of 200 km/h and coverage by ETCS Level 2.

Serbia also completed works on the regional railway line between Subotica and Horgoš, which runs to the Hungarian border. This electrified line has an operational speed of 120 km/h.

Additionally, the tender for the Niš – Dimitrovgrad section has been finalised, and construction commenced in November 2023. By 2027, improvements will be made to 108 km of railway on the Core network, ensuring compliance with all TEN-T indicators except for ETCS and GSM-R. The estimated cost for these enhancements is €426 million, with funding sourced from a WBIF grant, an EIB loan, and the Serbian budget.

In 2023 and 2024, Serbia secured financing and began implementing three additional projects:

- Construction of a single operational centre for railway traffic management on the national railway network of Serbia.

The project consists of constructing a unique dispatching centre for monitoring, managing and regulating traffic on the whole public infrastructure in Serbia. The contract with the selected contractor was signed in December 2022.

The work started in February 2024, and the deadline for completion is the end of 2026.

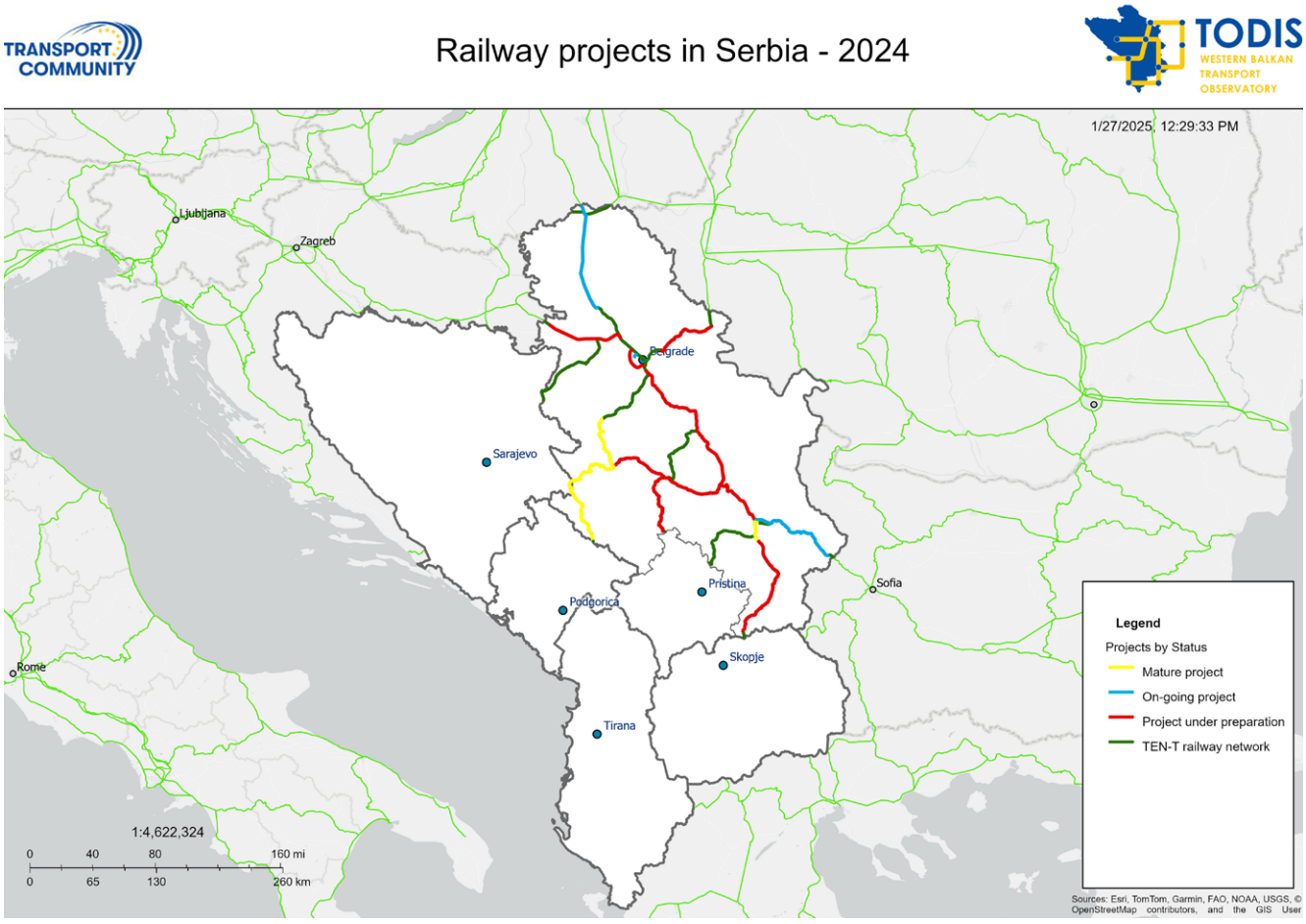
- Construction works on the Main Railway station - phase 2.

Phase 2 consists of works on the construction of two tracks in a station with a platform and catenary, as well as other installations under the central concrete roof. Construction works will be part of the “Modernisation of the rail sector in Serbia” project managed by the World Bank. In the previous period, the revision of the technical documentation was completed and the project for the building permit was prepared, and later adopted by the technical control. In the following period, a tender is expected to be announced for the selection of the contractor and the announcement of the call for the selection of supervision.

- Construction of tunnel no. 4 on the Stalać-Đunis section as part of the Belgrade-Niš project.

Furthermore, in February 2022, Serbia signed a grant agreement with the European Commission for a major infrastructure project connecting Belgrade to Niš. The grant is expected to be worth approximately EUR 600 million, with an estimated total investment of EUR 2.7 billion. Technical documentation should be completed by the end of 2024 and the tender procedure to be published in the first half of 2025.

Figure 68. Railway projects in Serbia



ANNEX III **Waterborne projects overview**

Albania

Table 27 List of Waterborne TEN-T projects in Albania

Project name	Core/ Comprehensive Network	Foreseen intervention	Total Cost (M€)	Starting deadline	Estimated completion deadline	EIP
The Construction of the New Integrated Port in Porto Romano and the Transfer of Services Phase I	Core Port	New infrastructure	390	2025	2030	No
Construction of the New Integrated Port in Triporti, Vlore and Transfer of Services	Comprehensive Port	New infrastructure	60	2025	2028	No
Establishment of the VTMIS	Core Network	New infrastructure	6	2022	2025	No

Project for the **Construction of the New Integrated Port in Porto Romano and Transfer of Services**. With Government Decision No. 282 dated 08 May 2024, the new statute of the Durres Port Authority has been approved. This decision allows the Durres Port Authority to transition into a landlord and logistics port authority equipped to manage multi-site operations at Durres and Porto Romano.

The project's international tender for Phase 1 was officially launched in 2024, with a budget limit of €390 million from the national budget. This phase will focus on essential infrastructure development and container terminal facilities. The contract for this phase is expected to be signed in 2025, following the evaluation of bids and finalisation of the selection process. After the signature of the contract, it is expected that the period for the construction of Phase I will be 40 months.

Project for the **Construction of the New Integrated Port in Triporti, Vlore and Transfer of Services**. The contract for constructing and operating the new integrated port at Triporti, Vlore has been signed between the contracting authority and the concessionaire. The concessionaire is currently in the process of securing the necessary licenses and permits to begin construction work. The contract provides that the budget for building the new infrastructure will be around €60 million from the national budget, and the construction period will be 36 months.

Project for **Establishment of Vessel Traffic Monitoring and Information System (VTMIS)**. The VTMIS project is ongoing, with completion scheduled for 2025. As of the reporting period, the installation of radars and antennas has been completed, while the construction of the operating room is underway. Additionally, the training of 25 VTS operators, in collaboration with the University of Rijeka, has been completed. These operators are fully prepared to manage the system as soon as it becomes operational.

Bosnia and Herzegovina

Table 28 List of Waterborne TEN-T projects in Bosnia and Herzegovina

Project name	Core/ Comprehensive Network	Foreseen intervention	Total Cost (M€)	Starting deadline	Estimated completion deadline	EIP
Reconstruction and Modernisation of the River Port of Brčko, Phase 1	Core IWW Port	Reconstruction/ rehabilitation	390	2020	2025	Yes
Demining the Right Bank of the Sava River in Bosnia and Herzegovina	Core Network	Reconstruction/ rehabilitation	60	2025	2027	Yes
Rehabilitation of the Sava River waterway	Core Network	Reconstruction/ rehabilitation	23.8	2025	2027	Yes

The **"Reconstruction and Modernisation of the River Port of Brčko, Phase 1,"** part of the Flagship 1 initiative "Connecting East to West," is in its final phase. The initial components—construction of the port plateau and installation of a new crane—are complete, along with the reconstruction of internal port access roads and rail infrastructure. Currently, work is underway on the road connecting the port to Bijeljinska Cesta, as well as the industrial railway linking the port to Brčko Novo railway station. Both are scheduled for completion in the first quarter of 2025.

The **demining project for the Sava River in Bosnia and Herzegovina**, funded through Flagship 1 - Connecting East to West - under the Economic and Investment Plan for the Western Balkans via the Western Balkans Investment Framework (WBIF), has not yet commenced. This project will clear 40 km along the right bank of the River Sava to meet safety and navigability standards, paving the way for additional projects to achieve Good Navigation Status along the Sava River. Documentation for the project is in its final phase, with demining set to begin in 2026.

Montenegro

With the establishment of the National Maritime Single Window (NMSW) in September 2024, Montenegro has achieved full compliance with telematic application requirements.

In early July 2024, the TEN-T Core Port of Bar JSC was severely impacted by a hurricane, which destroyed three gantry cranes and a ship loader for cereals at the Dry Bulk Cargo Terminal. To address this loss, the Board of Directors of "Luka Bar" JSC has decided to initiate the procurement process for **a new mobile port crane**. This investment will be financed through a €5 million loan from the Investment and Development Fund.

Serbia

Table 29 List of Waterborne TEN-T projects in Serbia

Project name	Core/ Comprehensive Network	Foreseen intervention	Total Cost (M€)	Starting deadline	Estimated completion deadline	EIP
Removal of the sunken WWII German fleet in the Danube River	Core Network	Reconstruction/ rehabilitation	29.2	2023	2028	Yes
Expansion and Construction of the Port of Sremska Mitrovica	Comprehensive Port	Reconstruction/ rehabilitation	52	2021	2026	Yes
New Port of Belgrade and Free Trade Zone	Core Network	Reconstruction/ rehabilitation	180	2026	2030	Yes
Expansion of capacities of the Port of Prahovo	Comprehensive Port	Reconstruction/ rehabilitation	36	2022	2025	No
Implementation of a network of hydro-meteorological stations along the Danube and Sava rivers in Serbia	Core Network	Reconstruction/ rehabilitation	4.4	2024	2026	Yes
River training works on critical sectors on the SRB-CRO joint stretch of the Danube River (including supervision and environmental monitoring)	Core Network	Reconstruction/ rehabilitation	40	2025	2027	No
Supply of Marking and Hydrographic Vessels for the Danube, Sava, and Tisa Rivers	Core Network	Reconstruction/ rehabilitation		2024		Yes

The project “Green Ports”, aimed at enhancing the accident monitoring system, promoting the use of solar energy in ports, and implementing On-Shore Power Supply (OPS) for ships at inland waterway ports in Serbia, will be launched soon.

The project for the **Supply of Marking and Hydrographic Vessels for the Danube, Sava, and Tisa Rivers** is part of the “FAIRway works in the R-D Corridor.” This project focuses on procuring a marking vessel and a hydrographic vessel equipped with multibeam and ADCP capabilities. Finance Contract for Serbian Inland waterway infrastructure (50%) between the Republic of Serbia and the European Investment Bank (“Official Gazette of RS” No. 2/19) and co-financing from CEF (40%) and the budget of the Republic of Serbia (10%) The tender process has been completed, bids have been evaluated, and the construction of the marking vessel is already underway.

The project for **Implementation of a network of hydro-meteorological stations along the Danube and Sava rivers in Serbia** aims to implement a network of 38 hydro-meteorological stations along the Danube and Sava rivers. These stations will be equipped with sensors to monitor various parameters, including pressure, temperature, wind, waves, and fog. The project began in March 2024 and is currently in its inception phase, with an expected duration of 30 months.

River training works on critical sectors on the SRB-CRO joint stretch of the Danube River (including supervision and environmental monitoring)

The removal of the sunken German fleet from World War II is also underway, with plans to extract four sunken vessels in 2024. Removal of German sunken vessels from World War II from km 857 to km 862 in the Danube River to provide a prescribed fairway width of 180 m and to improve conditions for safe navigation on the Danube, during the low water level periods. During this operation, the fairway will be temporarily shifted to the Romanian side in the Gogoș channel.

The **Port of Sremska Mitrovica** is undergoing capacity expansion, supported by the World Bank and EIB, as part of the Integrated Development Program of the Sava and Drina River Corridors. The project consists of construction of a bulk cargo terminal, an agriculture products terminal, including silos with 18,900 m^3 of capacity, and a smaller capacity oil terminal. The value of the project is 52 million euros, 33 million of which is the value of works on the construction of port infrastructure. This encompasses both coastal and water surface areas along the left bank of the Sava River, downstream from the town's centre, constructing a 200-meter embankment on the left bank, as well as a vertical wharf structure measuring 177 meters adjacent to the bulk cargo terminal.

The expansion of the port of Prahovo on the Danube River is projected to cost €36 million ($39.3 million), funded through the state budget. This upgrade will increase the port's throughput capacity from 1.5 million to approximately 3.5 million tonnes per year. The reconstruction will involve closing the winter facility and constructing new facilities, including a head office building that will house the customs office, harbour master's office, and other essential state bodies and the green terminal for the environmental performance of vessels, particularly for ship-generated waste. Construction is expected to take around three years, during which the port will remain operational.

TRANSPORT COMMUNITY