



Multimodal Freight Terminals Network in the Western Balkans region



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Overview



- Background and Context: the provisions of the Revised TEN-T Regulation 2024/1679
- Technical Assistance on Multimodality, Terminal Assessment and Digitalization:
 - Contents and methodology
 - Multimodality in the WB region
 - The Multimodal Freight Terminals Network in the region
 - Action Plan and recommendations

TEN-T Regulation (EU) 2024/1679

Definition of “Multimodal freight terminals”



- **Article 3 “Definitions” (12):**

“Multimodal freight terminal” means a structure equipped for transshipment between at least two transport modes, or between two different rail systems, and for temporary storage of freight, such as terminals in inland or maritime ports, along inland waterways and in airports, as well as Rail-Road Terminals.

*Previously: “Freight Terminal” in **Article 3 “Definitions” (s)** of the 1315/2013 Regulation*

TEN-T Regulation (EU) 2024/1679

Identification of multimodal freight terminals



- **Section 6 “Infrastructure for multimodal freight terminals” Article 36:**

(1) The TEN-T multimodal freight terminals are terminals open to all operators and users in a non-discriminatory way, located:

- in or adjacent to the **TEN-T maritime ports**
- in or adjacent to the **TEN-T inland ports**
- in the **TEN-T airports**
- classified as **Rail-Road Terminals** or **terminals along the TEN-T inland waterways**, as listed in Annex II of the Regulation

(2) Member States shall make all possible efforts **to ensure that there is sufficient multimodal freight terminal capacity serving the TEN-T**, taking into account current and future traffic flows, in particular flows serving urban nodes, industrial centres, ports and logistics hubs.

TEN-T Regulation (EU) 2024/1679

Identification of multimodal freight terminals



- **Section 6, Article 36 (3):**

By 19 July 2027, **Member States shall conduct a market and prospective analysis on multimodal freight terminals** on their territory. The analysis shall at least:

- examine the **current and the future traffic flows of freight**, per transport mode;
- identify the existing multimodal freight terminals of the TEN-T network on their territory, and **assess the need for new multimodal freight terminals or additional transshipment capacity in existing terminals**;
- analyze how to ensure adequate **distribution of multimodal freight terminals** with adequate transshipment capacity in order to meet the identified needs, taking into account the terminals located in border areas of neighboring Member States;
- take into account the results of **consultations with shippers, transport and logistics operators and other stakeholders**.

TEN-T Regulation (EU) 2024/1679

Identification of multimodal freight terminals



- **Section 6, Article 36 (4):**

Where the analysis identifies the need for new multimodal freight terminals or additional transshipment capacity in existing terminals, MSs shall elaborate **an action plan for the development of a multimodal freight terminal network**, including locations where such needs have been identified.

The action plan shall be notified to the Commission no later than 12 months after finalising the analysis.

On the basis of that action plan, **MSs shall notify to the Commission a list of Rail-Road Terminals and terminals along inland waterways which they propose to add to Annexes I and II of the Regulation.**

TEN-T Regulation conditions for inclusion of rail-road terminals and terminals along IWW



- **Section 6, Article 36 (5):**

At least one of the following conditions shall be met by a terminal:

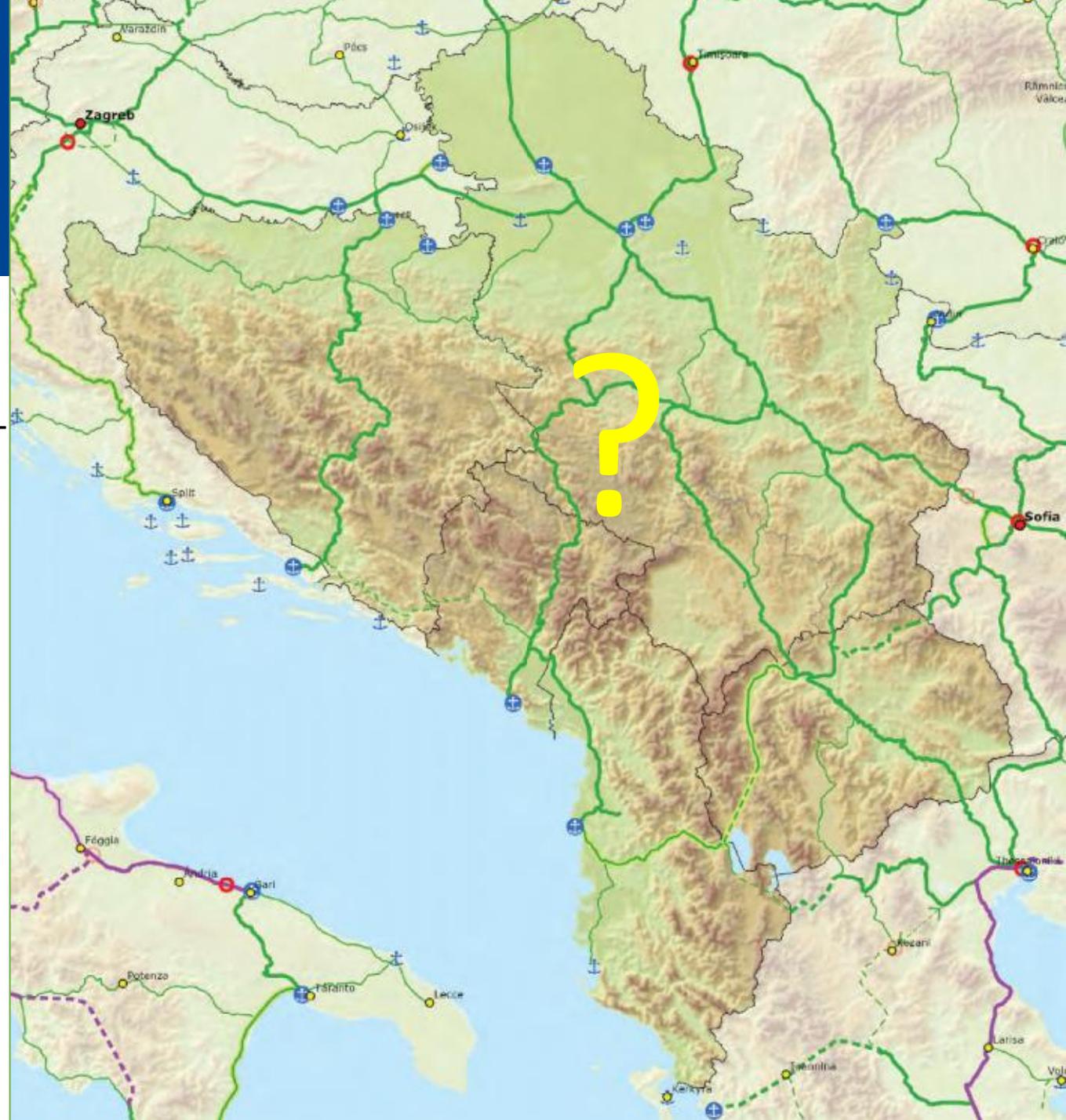
- Its annual **transshipment of freight** exceeds 800,000 tons of non-bulk cargo or for bulk cargo 0.1% of the corresponding total annual cargo volume handled in all EU maritime ports (2,100,000 tons).
- It is the main rail-road terminal designated by a MS for a **NUTS 2 region**, where there is no RRT complying with the above criterion.
- It is proposed to be added in Annexes I and II by a MS in the framework of an **Action Plan** for the development of a multimodal freight terminal network with proposed locations where needs for new terminals or additional transshipment capacity in existing terminals have been identified, based on the market and prospective analysis.

The third condition has been included alongside the two established in the previous TEN-T Regulation.

Multimodal freight terminals identification in the WB region

In the TEN-T indicative extension to the WB, the Core, Extended Core and Comprehensive Road and Railway networks and IWW and Sea-Ports in the WB region are indicated.

Multimodal Freight Terminals are not.



Terminals along the Western Balkans – Eastern Med Corridor

4 in Austria
1 in Hungary
1 in Slovenia
1 in Croatia
2 in Bulgaria
3 in Greece

12 in total, none in the WB RPs.

Need to conduct market and prospective analysis and elaborate an action plan for multimodal freight terminals network development in the region, and propose to the Commission a list of terminals for inclusion in the Annexes of the Regulation.



Technical Assistance on Multimodality, Terminal Assessment and Digitalization



- Tender procedure for TA services (PS/SRV/IMM/009/2023) – initiated in October 2023 and concluded in December 2023.
- Contract awarded to international Joint Venture (I.E.C.C.-M.M.A., MONS Consult, Devellop d.o.o., Panteia B.V.) and became effective in mid-January 2024.
- Contract implemented in the period January – December 2024.

Purpose of the TA assignment



- **General Objective:** to contribute towards the fulfilment of the obligations derived from the Transport Community Treaty signed by Regional Parties, related to Annex 1 of the Treaty, implementation of the Sustainable and Smart Mobility Strategy for Western Balkans.
- **Specific Objective:** to assist the six SEE Parties of the Transport Community to align with relevant EU acquis, by, among others:
 - examining the (e.g. infrastructure, policy, digitalization issues) **problems hindering development of multimodality**
 - conducting a **market and prospective analysis on multimodal freight terminals**
 - elaborating an **action plan for the development of a multimodal freight terminals network**

Methodology for the analysis



The following groups of activities were carried out:

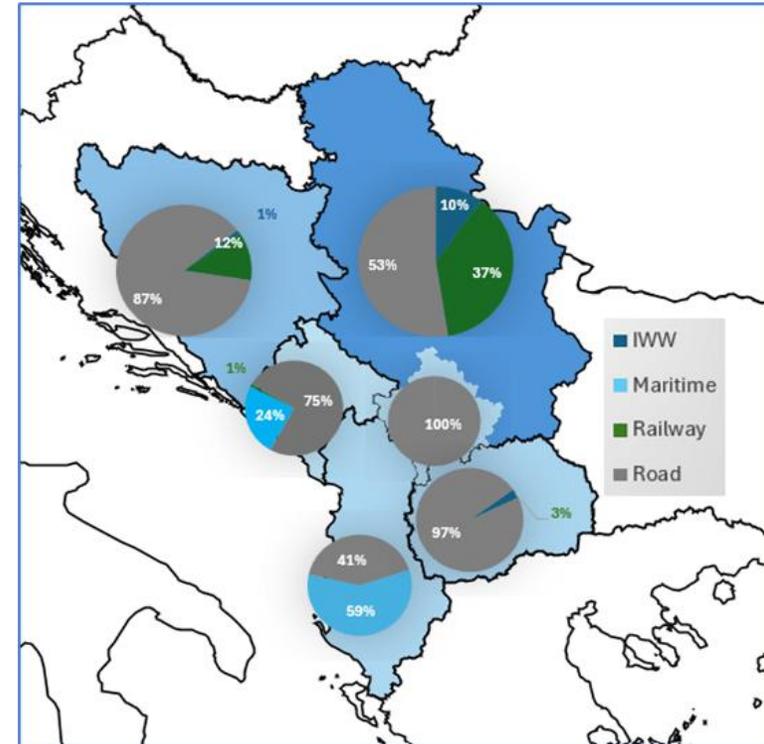
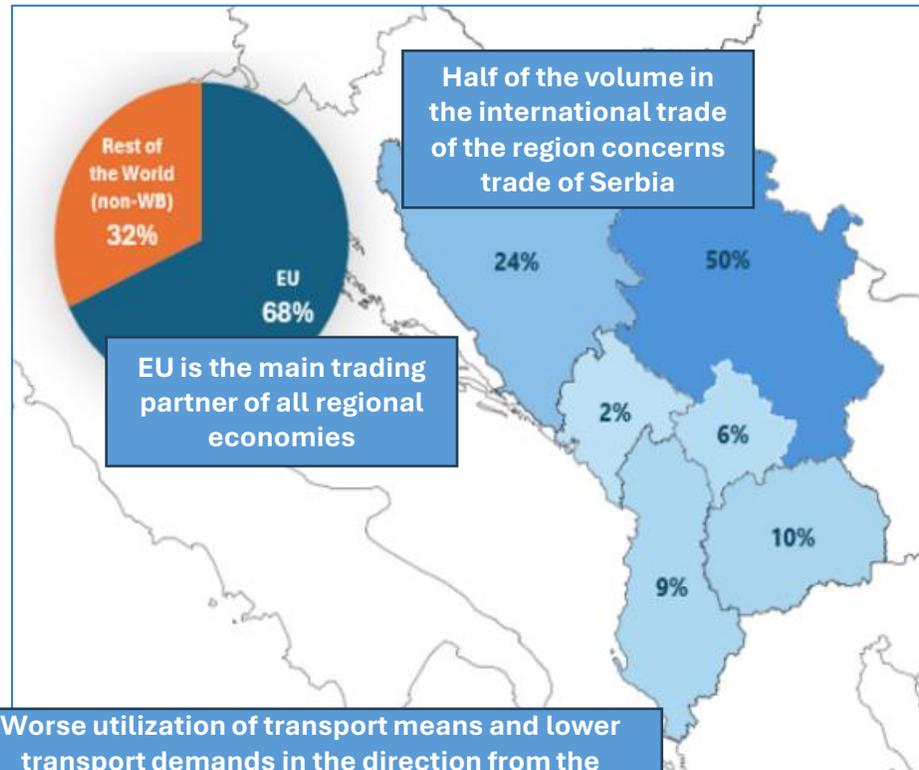
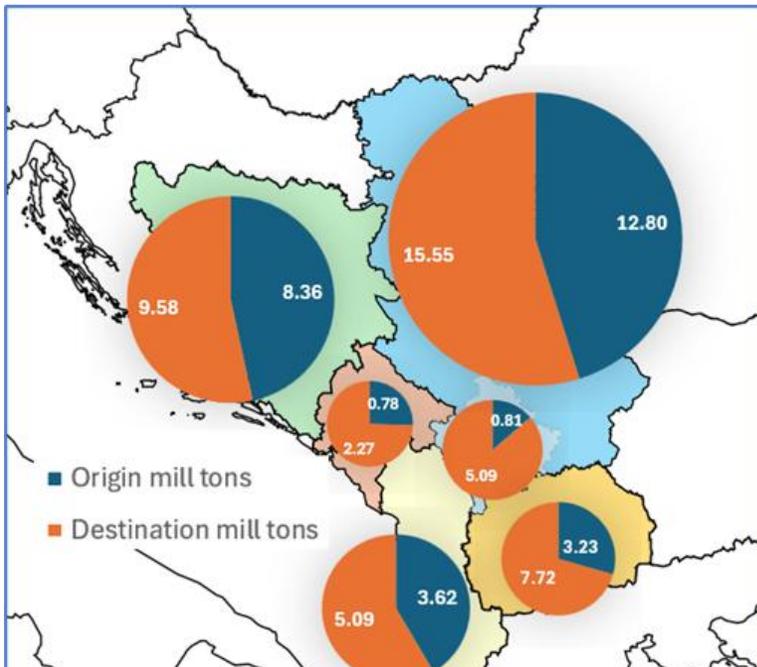
- Status of multimodality in WB region – **Current and future transport flows analysis** (per RP and at WB level)
- **Identification of existing multimodal freight terminals** (per RP and at WB level)
- **Needs for multimodal transport development and considerations for the geographical distribution of multimodal freight terminals**
 - Main industrial and urban areas per RP
 - Users' and providers' perspectives (from previous task - Task 2)
 - Identified infrastructural, regulatory and organizational needs and plans for multimodality development
 - Assessment and consultations regarding multimodal capacities and needs
 - Multi-criteria spatial analysis for potential locations for the development of a multimodal freight terminals network in the region
- **List of potential Rail-Road Terminals – proposals for TEN-T**
- **Action plan for the development of a Multimodal Freight Terminals network and last-mile connectivity in the WB region**

Current transport flows at WB level

Internationally traded goods (million tons) per regional economy, origin and destination (export and import) >70 mill tons in total

Trade share of WB economies with partners outside the WB region, share of quantities

Transport modal share per RP of trade outside the region (excluding transit and domestic flows)

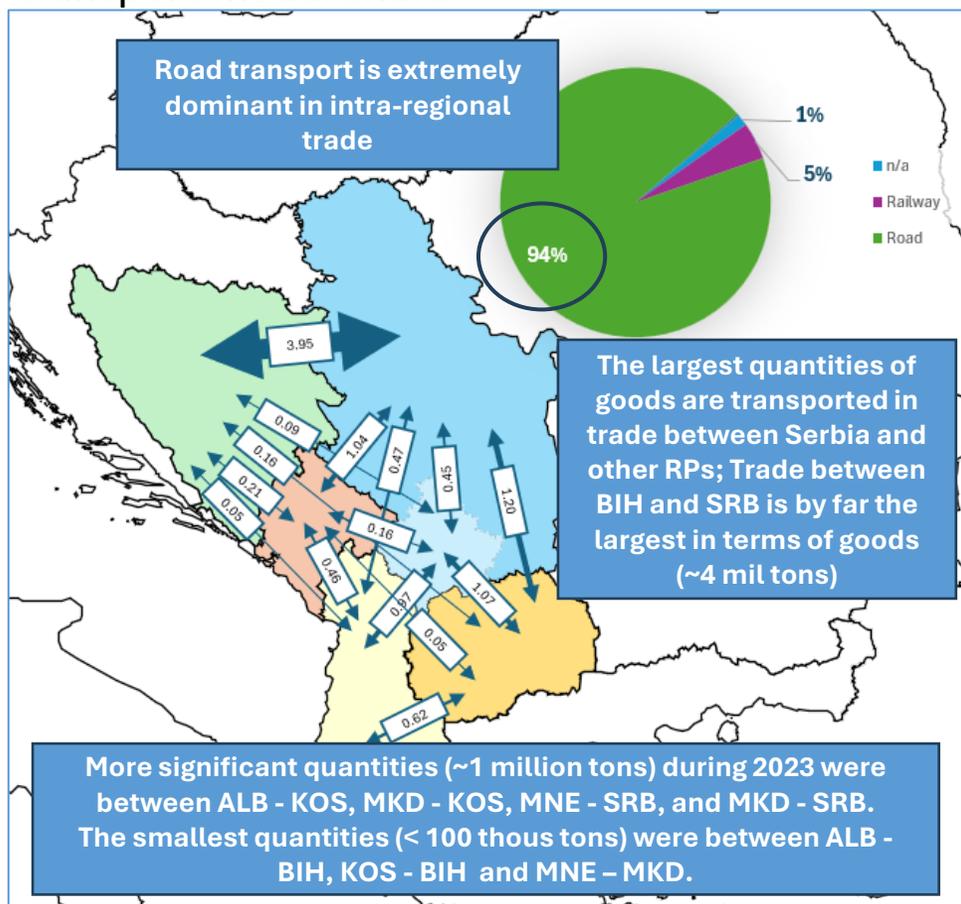


RP's import more goods than they export. BIH and SRB more balanced ratio of imports/exports

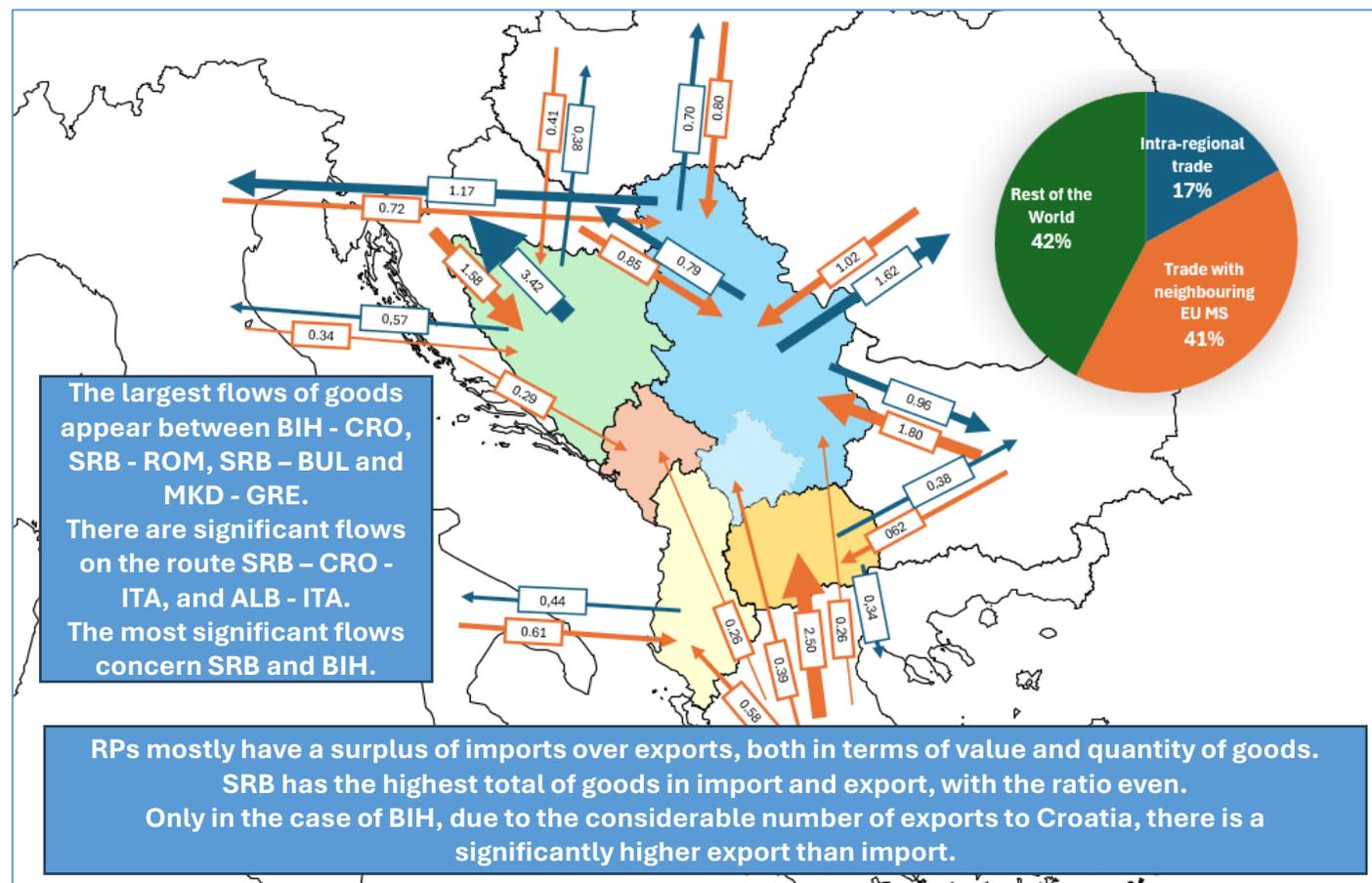
Worse utilization of transport means and lower transport demands in the direction from the region to the rest of the world

Current transport flows at WB level

Trade of the WB regional economies inside the region (million tons) and intra-regional transport modal share



Main trade flows with neighboring EU Member States (million tons) in 2023 and share per region



Current transport flows at WB level



Total trade of regional economies with partners outside the region per commodity group (million tons) and modal share

Commodity group (NST 2007 classification)	Export	Import	Total	IWW	Maritime	Railway	Road
Metal ores, mining products	4.60	2.78	7.38	32.4%	12.0%	17.9%	37.8%
Chemicals, fibers, rubber, plastic	2.75	3.86	6.61	12.1%	2.4%	8.1%	77.4%
Coke and petroleum products	0.44	5.05	5.49	9.7%	28.0%	8.1%	53.2%
Coal, lignite, crude oil & gas	0.47	4.99	5.46	44.5%	14.7%	21.8%	19.0%
Basic metals and products, except machinery	2.44	3.00	5.43	5.3%	14.8%	11.1%	68.7%
Other non-metallic and mineral	1.50	3.72	5.22	0.4%	19.5%	4.4%	75.7%
Food, drinks, tobacco	1.94	2.62	4.56	0.6%	4.9%	4.7%	89.8%
Agriculture, animals, fish	2.46	1.67	4.12	21.5%	4.6%	10.2%	63.7%
Wood, paper, printed, recorded media	1.23	1.81	3.04	0.1%	5.0%	2.7%	92.2%
Machinery and equipment, electronics	0.72	1.04	1.77	0.8%	3.8%	0.3%	94.8%
Secondary raw mat., waste	1.05	0.42	1.47	13.7%	6.0%	20.1%	60.1%
Transport equipment	0.25	0.69	0.95	4.3%	11.0%	2.0%	82.5%
Unidentifiable goods	0.01	0.75	0.76	5.3%	0.0%	3.6%	91.0%
Textile & leather products	0.24	0.39	0.63	0.0%	11.7%	0.2%	88.0%
Furniture, manufactured goods	0.25	0.14	0.38	0.0%	3.6%	0.2%	96.2%
Other goods	0.02	0.01	0.03	0.0%	1.5%	67.8%	29.9%
Goods in removals, baggage, non-market goods	0.00	0.00	0.00	0.0%	0.0%	0.0%	99.1%

Goods that are suitable for multimodal/ intermodal transport in the trade of regional economies with countries outside the WB region make up 83% of the total.

It is important to highlight two groups that include Metal ores, mining products and Coal, lignite, crude oil & gas, where road transport is not dominant and which are mostly transported by IWW, rail and sea transport.

Intra-regional trade between regional economies per commodity group (million tons) and modal share

Commodity group (NST 2007 classification)	Total	IWW	Maritime	Railway	Road
Other non-metallic mineral	1.85	0.0%	0.0%	0.0%	99.8%
Coal, lignite, crude oil & gas	1.78	0.0%	0.0%	3.2%	96.8%
Food, drinks, tobacco	1.73	0.0%	0.0%	0.1%	97.3%
Agriculture, animals, fish	1.27	0.0%	0.0%	0.4%	98.0%
Basic metals and products, except machinery	1.23	0.0%	0.0%	3.0%	94.4%
Chemicals, fibers, rubber, plastic	0.84	0.0%	0.0%	0.3%	98.5%
Coke and petroleum products	0.71	0.6%	0.0%	46.9%	49.8%
Metal ores, mining products	0.68	0.0%	0.0%	1.9%	96.1%
Wood, paper, printed, recorded media	0.57	0.0%	0.0%	0.1%	95.2%
Secondary raw mat., waste	0.10	0.0%	0.0%	0.0%	99.3%
Machinery and equipment, electronics	0.08	0.0%	0.0%	0.2%	95.4%
Furniture, manufactured goods	0.03	0.0%	0.0%	0.0%	98.5%
Textile & leather products	0.03	0.0%	0.0%	0.0%	97.2%
Transport equipment	0.02	1.3%	0.0%	0.7%	96.1%
Unidentifiable goods	0.02	0.0%	0.0%	0.0%	100.0%
Goods in removals, baggage, non market goods	0.00	0.0%	0.0%	0.0%	100.0%

In intra-regional exchange, commodity groups suitable for multimodal/ intermodal transport make up over 82% of the total volume. Road transport is extremely dominant in all commodity groups, except in the case of Coke and petroleum products where in intra-regional trade this commodity group in 2023 was transported by road 49.8%.

Current transport flows at WB level



Modal share and quantities for top 10 trade partners of WB

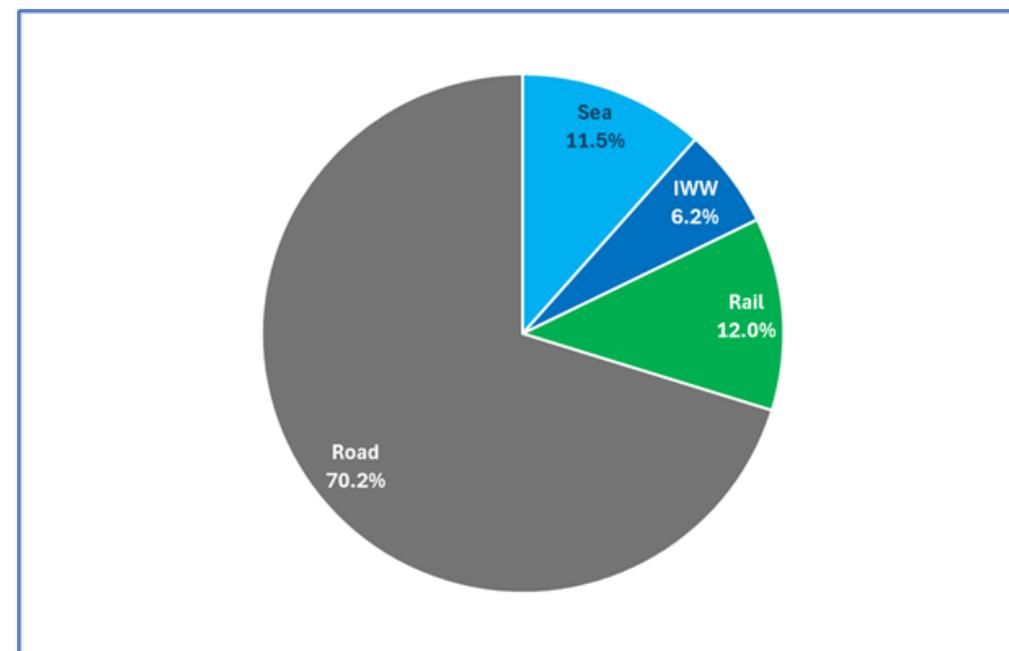
TOP 10 Partners	Air	IWW	Maritime	Railway	Road	Total Quantity (million tons)
HR	0.0%	2.4%	2.1%	1.6%	93.9%	7.28
GR	0.0%	0.2%	11.8%	2.3%	85.7%	4.95
IT	0.0%	0.0%	28.0%	13.0%	59.0%	4.24
BG	0.0%	28.0%	0.1%	16.1%	55.8%	4.08
RO	0.0%	47.8%	0.0%	5.3%	46.8%	3.08
TR*	0.2%	3.9%	31.5%	10.4%	54.0%	2.80
DE	0.3%	3.9%	1.1%	3.4%	91.2%	2.73
HU	0.8%	16.8%	0.1%	10.3%	72.1%	2.48
CN* ⁶²	0.1%	2.5%	16.8%	30.2%	50.4%	2.47
SI	0.0%	0.0%	1.4%	7.0%	91.5%	2.22

All together, the 6 RPs exchange ~66% of the total volume in international trade with these 10 largest partners (without counting mutual exchanges). Road transport is extremely dominant in the exchange of RPs with Croatia, Greece, Germany and Slovenia (>85%).

The smallest share of road transport is recorded in the exchange with Romania and Bulgaria, where the volume of exchange between Serbia and Romania in IWW transport is significant.

Concerning China, the USA, India and other distant markets, most of the transport route is by sea transport, but road transport dominates for delivery from/to seaports, even for containers (specifically, in the case of China, 50.4% of the volume is by road).

Estimated transport modal share of the WB regional economies (international transport)



Current transport flows along Corridors

Provisional assignment of international traffic flows along the main transport network based on the trade and traffic flows analysis:

Main flows with neighbors:

- Between BIH and SRB with Croatia
- Between SRB and Hungary, MKD and Greece and SRB and Bulgaria

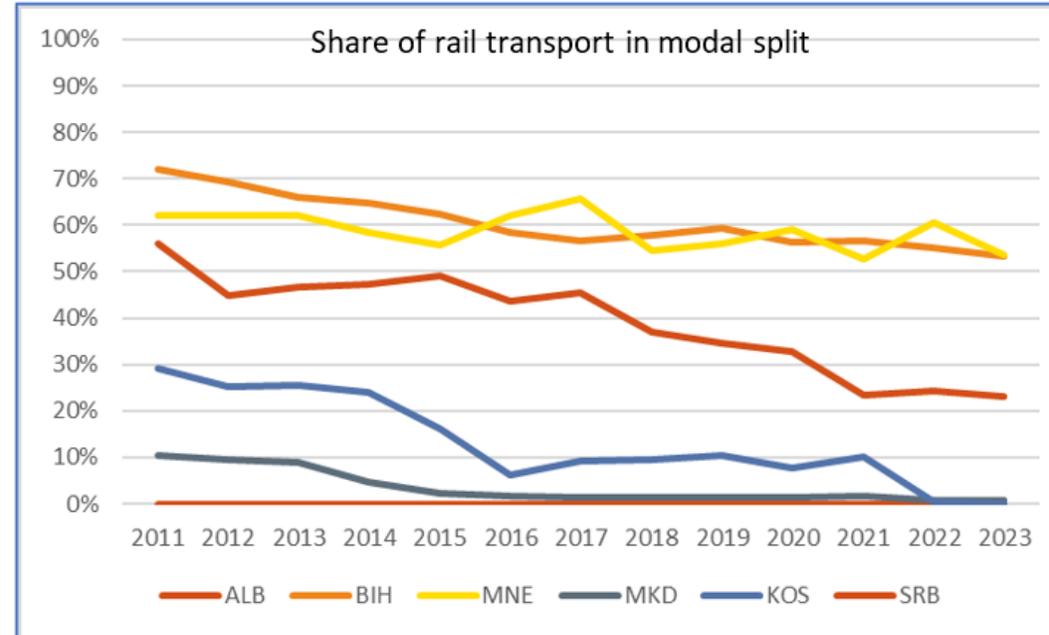
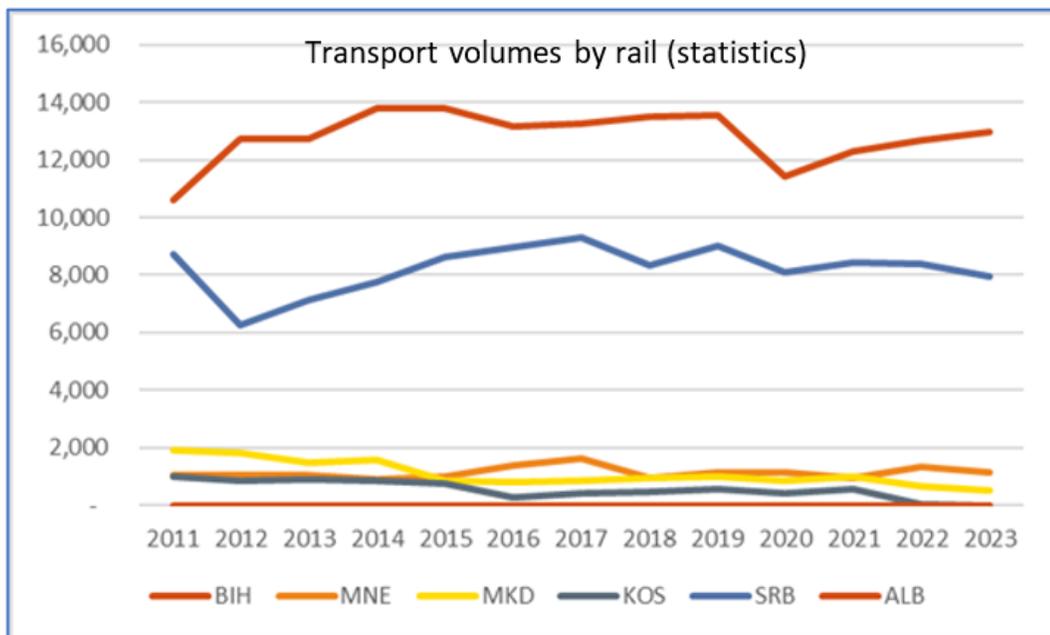
Main flows inside the region:

- BIH – SRB
- MKD – SRB
- ALB – KOS
- MNE – SRB

Main waterborne transport flows: Port of Durres, Danube (SRB - Romania), Port of Bar



Forecast of multimodal freight volumes



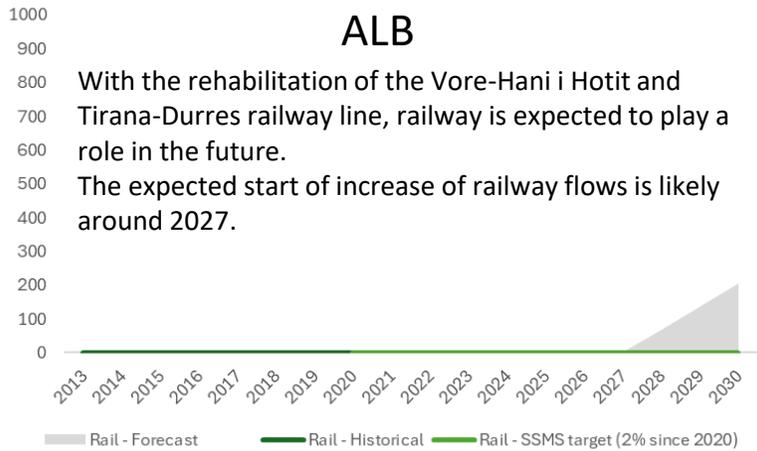
Regional partner	Rail modal share in 2023	Estimated modal share market potential	Year in which market potential was reached	Annual GDP growth (SSMS)
ALB	0%	>1%	2019	3.2%
BIH	53%	72%	2011	2.5%
MNE	54%	66%	2017	3.3%
MKD	1%	5%	2014	3.1%
KOS	>1%	59%	2011	4.7%
SRB	23%	56%	2011	2.9%

Forecast of multimodal freight volumes



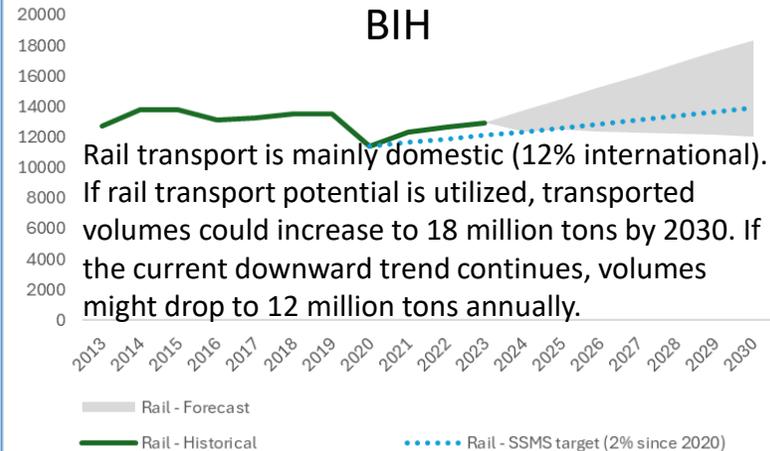
ALB

With the rehabilitation of the Vore-Hani i Hotit and Tirana-Durres railway line, railway is expected to play a role in the future. The expected start of increase of railway flows is likely around 2027.



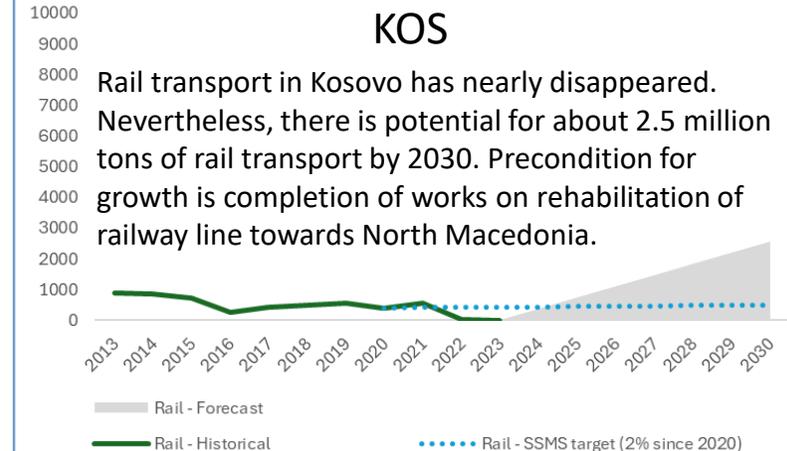
BIH

Rail transport is mainly domestic (12% international). If rail transport potential is utilized, transported volumes could increase to 18 million tons by 2030. If the current downward trend continues, volumes might drop to 12 million tons annually.



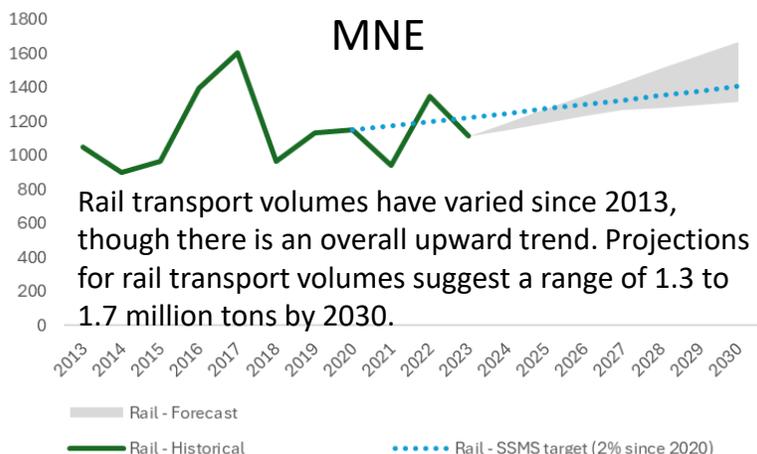
KOS

Rail transport in Kosovo has nearly disappeared. Nevertheless, there is potential for about 2.5 million tons of rail transport by 2030. Precondition for growth is completion of works on rehabilitation of railway line towards North Macedonia.



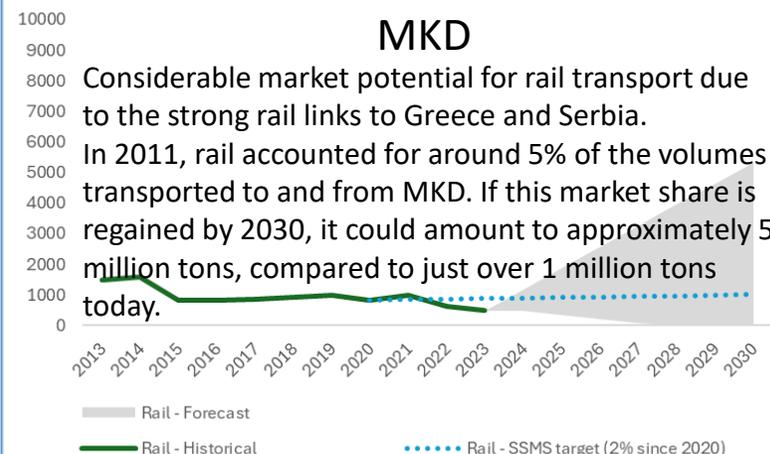
MNE

Rail transport volumes have varied since 2013, though there is an overall upward trend. Projections for rail transport volumes suggest a range of 1.3 to 1.7 million tons by 2030.



MKD

Considerable market potential for rail transport due to the strong rail links to Greece and Serbia. In 2011, rail accounted for around 5% of the volumes transported to and from MKD. If this market share is regained by 2030, it could amount to approximately 5 million tons, compared to just over 1 million tons today.

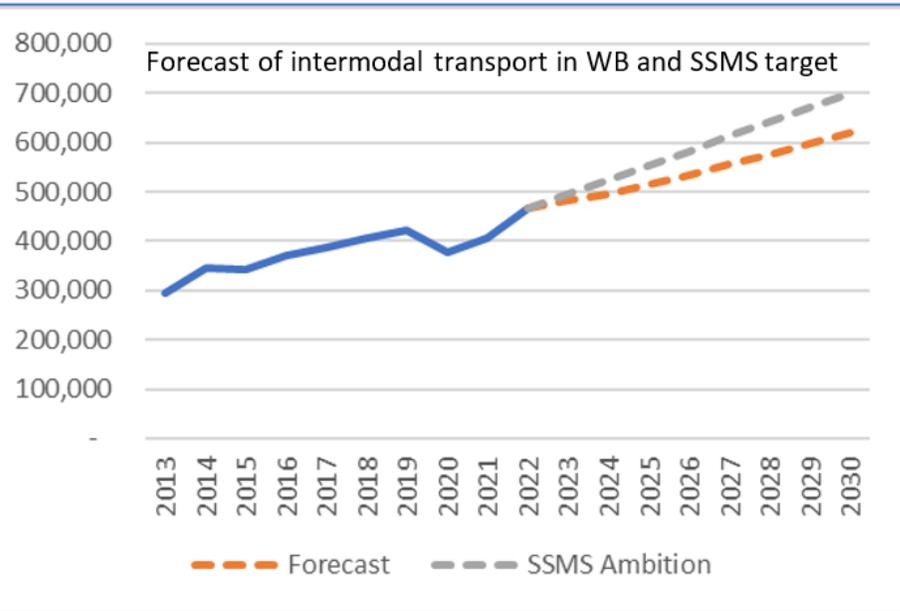


SRB

Overall rail volumes have remained stable until last year, when strong decline is recorded. This is largely due to the ongoing railway projects (Belgrade – Budapest and Nis – Dimitrovgrad). Belgrade – Nis is underway too. Rail volumes could reach up to 19 million tons by 2030.

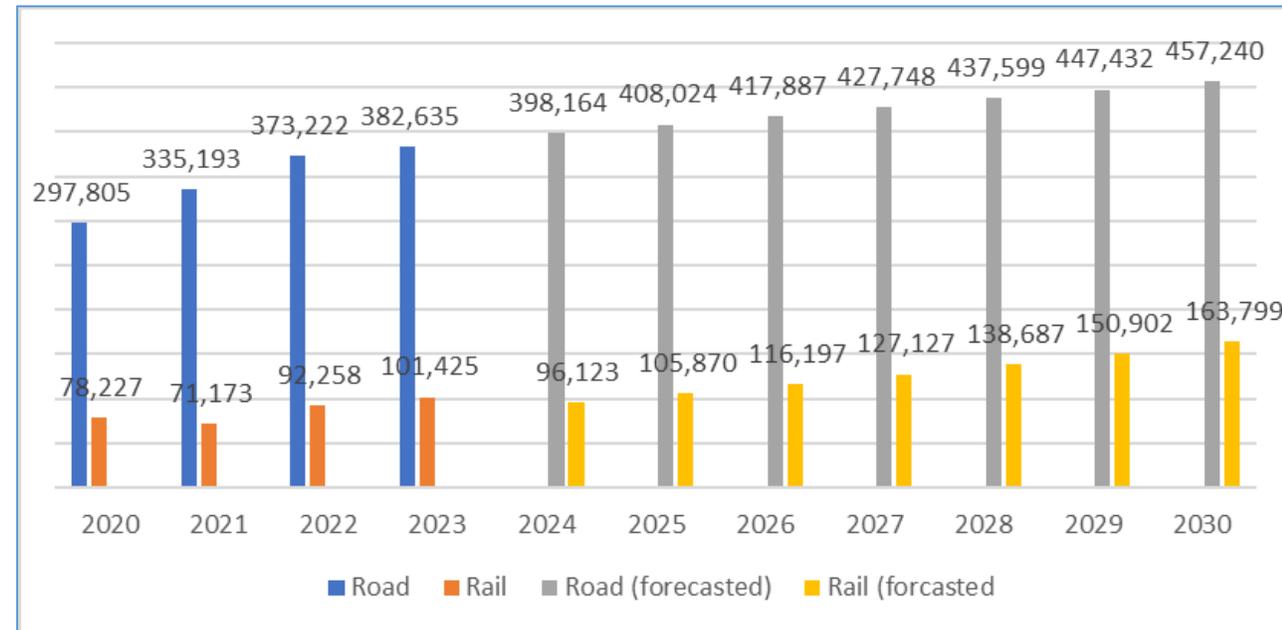


Forecast of multimodal/ intermodal freight volumes



It is expected that by 2030, the total volume of intermodal transport in the WB region may reach about 620,000 TEU. This means an average annual growth rate of 3.7%. However, this expected growth falls short of the ambition outlined in the SSMS for the Western Balkans - a doubling of the intermodal transport in the region by 2035 compared to 2020.

While the share of rail transport is decreasing in the WB region (from 24% in 2013 to 13% in 2021), the opposite applies to the transport of containers by rail: the share of containers transported by railway in 2023 reached 21% (same level as in 2020 reduced to 17% in 2021).



Forecast of multimodal/ intermodal freight volumes



- Yet, despite the increase of the share of rail transport in intermodal transport, we observe that the volume of containerized road transport is also increasing.
- This gap of the forecast based on the trends and the SSM Strategy ambition requires a further increase of railway share, by:
 - Improvement of railway infrastructure
 - Improvement of railway services
 - Application of soft measures and introduction of incentives to support intermodal transport
 - **Development of new terminals where they do not exist or improvement of existing terminals where capacity is insufficient to provide new services and attract clients not using intermodal transport**

Main existing multimodal freight terminals in the WB region



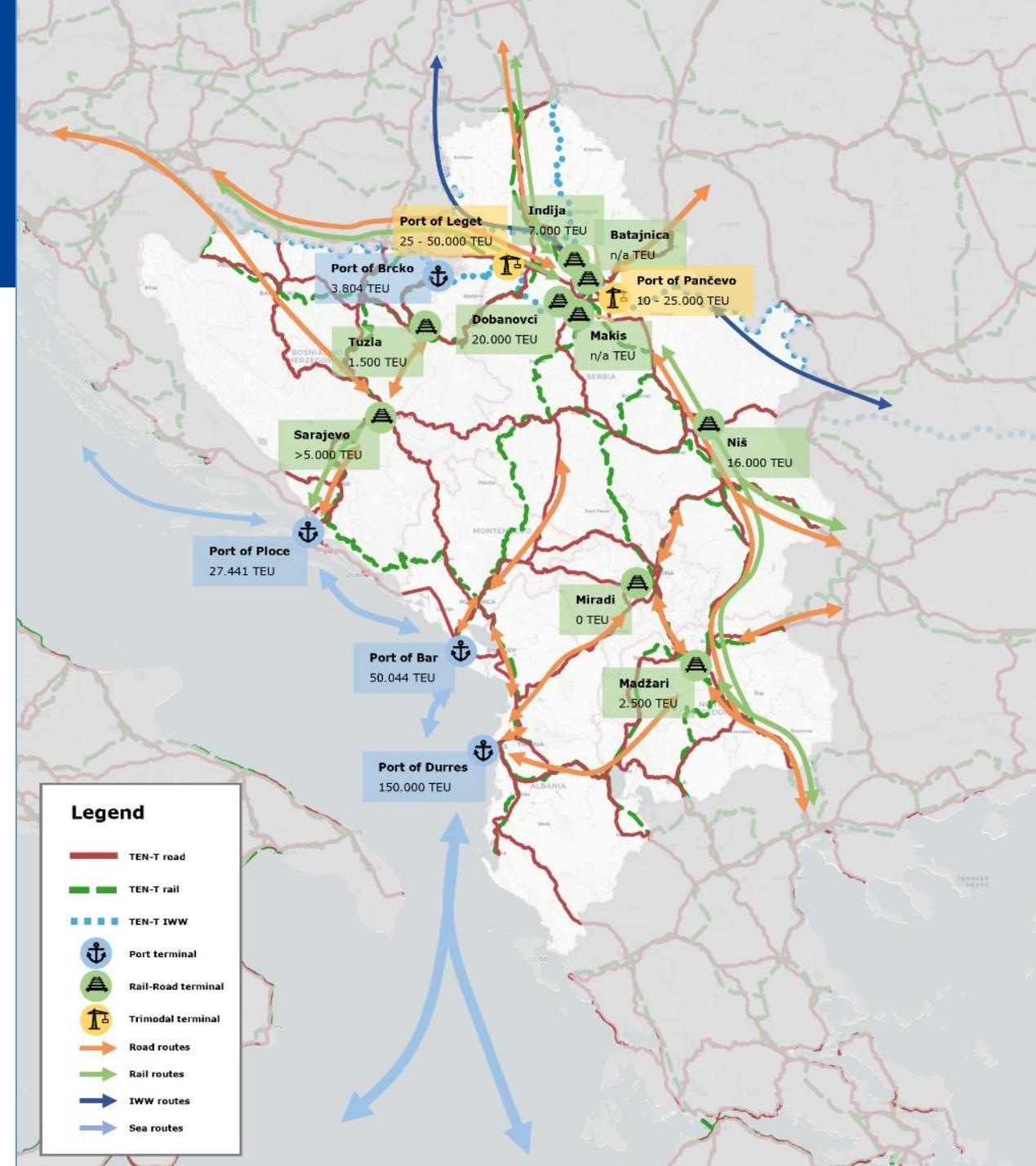
Identification of main multimodal freight terminals conducted based on reported transshipment volumes, their position, significance in national plans, documents and previous studies, and nodes recognized by users.

Since the focus is set on intermodality, the order of identification and presentation of existing multimodal terminals applied is:

1. Existing intermodal terminals and Container terminals in IWW and seaports
2. Railway freight stations
3. IWW ports

Main intermodal freight terminals

- ALB: Port of Durres Container terminal – 150,000 TEU
- BIH:
 - Port of Brčko – 3,800 TEU
 - Sarajevo Container terminal – 5-10,000 TEU
 - Robni Terminal Tuzla (Bosanska Poljana) – ~ 2,000 TEU
- KOS: Miradi terminal – no transshipment
- MNE: Port of Bar Container terminal – n/a (~ 50,000 TEU)
- MKD: Skopje – Madžari (Blue Bell Warehouse) – 5-10,000 TEU
- SRB:
 - Batajnica (LCS) – recently constructed
 - ŽIT (Belgrade marshaling yard) – recently reconstructed
 - Sremska Mitrovica (RTC Port of Leget) – 25-50,000 TEU
 - Niš (M-Box) – 16,000 TEU
 - Dobanovci (Nelt) – 30,000 TEU
 - Pančevo (Dry Port Terminals – Port of Pancevo) – 10-25,000 TEU
 - Indjija (Metrans) – 7,000 TEU
 - Kruševac (Nelt) – recently opened



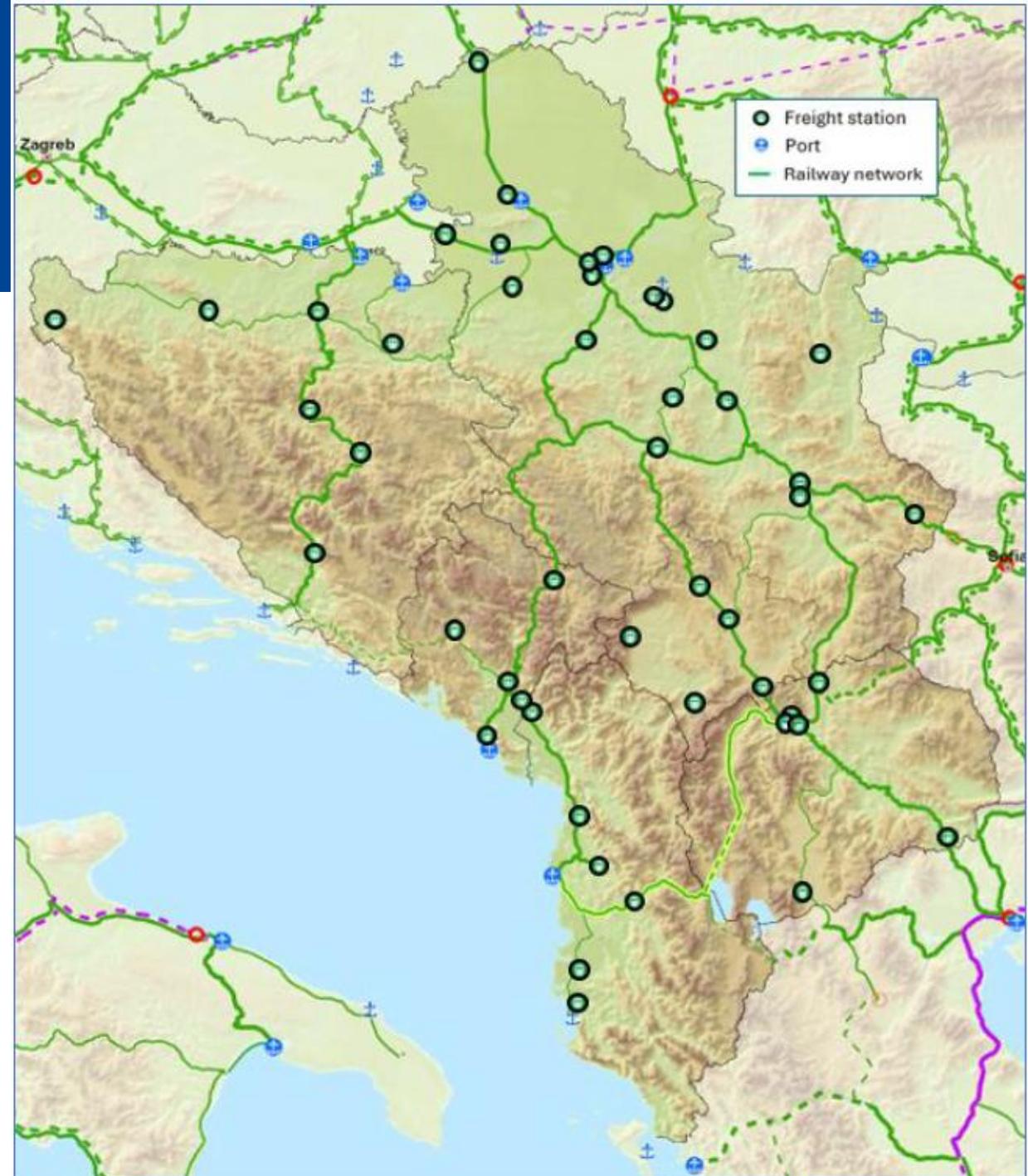
Main intermodal freight terminals

Intermodal terminal	Port of Durres	Port of Brčko Intermodal terminal	Container terminal Sarajevo	Tuzla intermodal terminal	Mirad ^{PH}	Container terminal Port of Bar	Madžari Terminal (Blue Bell)	Intermodal terminal Batajnica	Container terminal Makiš	Intermodal Terminal Dobanovci	Indija Intermodal Terminal	Intermodal terminal Niš (MBox)	Dry port terminal Port of Danube	Sremska Mitrovica - Port of Leget
Terminal operator	Mariner Adriatic	Port of Brčko	ŽFBH	Robni Terminal Tuzla	INFRAKOS	Port of Adria	Blue Bell Warehouse	Logistics Centers of Serbia	ŽIT (Railway Integral Transport)	Nelt Co.	Adria Rail (Metrans)	MBOX Terminals	Dry port terminals	RTC Luka Leget
Regional Partner	ALB	BIH	BIH	BIH	KOS	MNE	MKD	SRB	SRB	SRB	SRB	SRB	SRB	SRB
Location	Durres	Brčko	Sarajevo (freight station)	Bosanska Poljana (Tuzla)	Pristina	Bar	Skopje	Batajnica - Belgrade	Makiš - Belgrade	Dobanovci – Belgrade	Indija	Popovac district (Niš)	Port of Pančevo	Port of Leget, Sr. Mitrovica
Owner	State owned	State owned	State owned	Private	State owned		Private	State owned	State owned	Nelt Co.	Private	Private	Private	Private
Starting year	n/a	2019		2022	2004	2013		2024	2016	2016	2023	2022	2020	2010
Terminal area (ha)	6.5	0.5			0.5	8	3	1.6	1.5	3	3.5	2.5	3.5	50
Link to Corridors	Corridor VIII	Sava River	Corridor Vc	Corridor Vc		Route 4	Corridor X	Corridor X	Corridor X, Route 4	Corridor X	Corridor X	Corridor X, Xc	Corridor X, VII Route 4	Corridor X
Distance from road Corridor	1 km from SH2	6 km from city bypass	10 km from A1	1 km from M4	5 km from R6	10 km from E-80	15 km from E-75 highway (3 km from A4)	6 km from Corridor X;	5 km from highway A1 – Corridor X	6 km from the E75 and E70 highways	5 km from the E75 highway	2 km from the E-75	At E-70, 30km from Corridor X	4 km from E-70 highway
Number of tracks	No railway connection	2 (4)	2	3-5 ⁹⁵	4	2	3	3 ⁹⁶	2	2	2	4	2	4+2
Length of tracks (m)	n/a	2,586 (total in port)	n/a	500		880 (2x440)		2,295		1,100	500	1,000	1,000	2,500
Link with station	n/a	Brčko	Sarajevo freight	Bosanska Poljana	Miradi	Bar	Madžari	Batajnica	Belgrade marsh. yard	Surčin	Indija	Niš marsh. yard	Pančevo	Sr. Mitrovica
Container handling Equipment	3 mobile cranes 6 reach stackers	3 mobile cranes 1 reach stacker	n/a	2 reach stackers	1 reach stacker	Gantry crane, reach stackers	2 reach stackers	2 reach stackers	3 reach stackers	3 reach stackers	2 reach stackers	3 reach stackers	2 reach stackers	Mobile crane, 6 reach stackers
Type	Port terminal	Port terminal	Rail-Road	Rail-Road	Rail-Road	Port terminal	Rail-Road	Rail-Road	Rail-Road	Rail-Road	Rail-Road	Rail-Road	3-modal	3-modal
DG handling	Yes	n/a	No	No	n/a	n/a	n/a	Yes	n/a	n/a	n/a	Yes	n/a	n/a
Plug-ins for frigo containers	Yes	n/a	n/a	No	No	Yes	n/a	Yes	n/a	Yes	n/a	Yes	Yes	Yes
Swap bodies, semi-trailers handling	n/a	n/a	n/a	No	n/a	n/a	n/a	Yes	n/a	n/a	n/a	Yes	Yes	Yes
Realized annual transshipment volume (TEU)	138,477 ⁹⁷	3,804		1,500	n/a	50,044 ⁹⁸	2,500	n/a ⁹⁹	n/a ¹⁰⁰	30,000	7,000	16,000	10-25,000	25-50,000
Annual transshipment capacity (TEU)	180,000	n/a		10,000	25,000	50,000	50,000 ¹⁰¹	80,000	24,000	50,000 ¹⁰²	40,000 ¹⁰³	50,000	50,000	100,000
Open storage area (m ²)	65,000	61,000		30,000	5,250	80,000	30,000	6,050	10,000	30,000	35,000	23,500	30,000	20,000
Storage space capacity (TEU)	7,000 ¹⁰⁴	n/a		1,300	690	2,500	915	906	n/a	2,000	4,000	2,700	3,300	5,000
Quay length (m)	330	180		n/a	300	330	800	500	200	300	250	250	500	100
Max. permitted train length (m)	n/a	n/a	500	500	700	500	740	905		600	500	600	750+	750+
Max. permitted train gross weight (t)	n/a	n/a		2,000	1,500		2,000+	2,000+		2,000+	2,000	2,000+	2,000+	2,000
Shunting operations	n/a	n/a	Diesel (by ŽFBH)	Diesel (by ŽFBH)	Diesel locomotive		Diesel locomotive	Diesel locomotive	2 diesel locomotives		Diesel locomotive	Road-Rail vehicle dual mode	Diesel locomotive	3 diesel locomotives
Road's length inside the terminal (m)	3,000	n/a		n/a	n/a		1,000	n/a		n/a	n/a	1,200	n/a	1,000
Warehouse capacities	n/a	11,000 m ²		3,000 m ²	120 m ²	~30,000 m ²	6,500 m ²	n/a	n/a	75,000 m ²	n/a	planned	Port capacities available	20,000 m ²
Specialized software (Terminal operating system)	NAVIS N4 Saas	n/a		DEPOT Master	Under development	n/a	In-house	Yes	In-house	In-house	by Metrans	NAVIS Octopy	In-house	Under develop.
Main lines and services	Gioia Tauro, Piraeus, Malta		Port of Ploče	In cooperation with shipping companies	North Macedonia, Thessaloniki		Port of Thessaloniki, Serbia, Kosovo	Planned – Budapest and seaports	Port of Rijeka	Ljubljana and Ports of Piraeus, Rijeka, Bar	Port of Rijeka, Budapest	Wels (Austria), Rijeka, Bar, Thessaloniki	Trieste	Port of Rijeka

Main railway stations and ports

Ports without intermodal operations

- ALB:
 - Port of Vlore
- BIH:
 - Port of Šamac
- SRB:
 - Port of Belgrade
 - Port of Pancevo
 - Port of Novi Sad
 - Port of Smederevo
 - Port of Sremska Mitrovica
 - Port of Prahovo



Perspectives of users and providers



- Most important ports to which intermodal transport lines are operated from land terminals or reached directly by road are Rijeka, Durres, Bar, Koper, Thessaloniki, Ploce and Piraeus.
- The majority of the users consider that the offer of intermodal transport services is not sufficient.
- The majority of the users and providers (terminals operators) consider that development of terminals in border areas are not necessary. Those who consider so, highlighted the locations of Gevgelija (MKD) and Subotica (SRB).
- Concerning causes and obstacles for development of multimodality/ intermodality, all stakeholders stated the lack of railway infrastructure as the main cause of the problem and as one of the obstacles, together with border crossings and complicated procedures or missing regulations, affecting transit times and the level of services.
- Lack of infrastructure consequences are reflected in non-competitive prices, long transit times, lower level of reliability and this results in the fact that for similar level of cost compared to road transport, multimodal/ intermodal transport offers lower quality of service. This has been stated as one of the main reasons for the decreasing or stagnating trend of railway transport in most of the RPs.

Identification of the main needs and consideration of plans of the RPs



RP	Main needs and plans
ALB	Railway Infrastructure: Tirana - Durres, ongoing construction works, expected to be completed in 2025; Vorë - Hani i Hotit Railway Line Modernization, expected to be completed in 2027; Durres - Rogozhinë Railway Reconstruction, currently in preparation stage; Railway connection to Pristina; Corridor VIII. Terminals: Porto Romano. Bottlenecks and last mile connections: Ishem river railway bridge. Regulatory: Combined transport Directive, eFTI regulation. Digitalization.
BIH	Railway Infrastructure: Corridor Vc (Šamac - Doboj - Maglaj - Sarajevo - Mostar towards Ploče and Route 9 (Banja Luka - Doboj - Tuzla - Zvornik). Terminals: Rajlovac, Doboj, Banja Luka, Tuzla. Rolling stock. Bottlenecks and last mile connections: Sarajevo-Bradina (Ivan tunnel), Jablanica, Port of Brčko, Sarajevo terminal (road). Regulatory: Combined transport Directive, eFTI regulation, Customs regulations on Containers. Digitalization.
KOS	Railway Infrastructure: Route 10, Pristina - North Macedonia, Route 10 phases 2 and 3 (towards Mitrovice and further), Railway connection to Durres. Terminals: Shkabaj (dry port), Peje, Prizren. Regulatory: Combined transport Directive, eFTI regulation, Agreement on the Hani i Hotit joint railway border crossing. Digitalization.
MNE	Railway Infrastructure: Route 4 Bar-Podgorica, Route 4 Lutovo - Bratonožici - Bioce. Terminals: Port of Bar. Rolling stock. Bottlenecks and last mile connections: Route 4, Lutovo - Bratonožici – Bioce, Port of Bar tracks rehabilitation. Regulatory: Combined transport Directive (partially implemented), eFTI regulation. Digitalization.
MKD	Railway Infrastructure: Corridor X rehabilitation, Corridor VIII completion. Terminals: Skopje (Trubarevo). Rolling stock. Bottlenecks and last mile connections: Further implementation of Tabanovce railway joint border crossing point – reconstruction. Regulatory: Combined transport Directive, eFTI regulation. Digitalization.
SRB	Railway Infrastructure: Corridor X (Belgrade – Subotica, Nis – Dimitrovgrad, Nis – Brestovac, Belgrade – Nis, Belgrade – Sid, Brestovac – Presevo); Route 4 Belgrade to Montenegro, Route 9 Ruma – Sabac to Bosnia and Herzegovina. Terminals: Batajnica, Novi Sad, Nis, new Port of Belgrade. Rolling stock. Bottlenecks and last mile connections: Belgrade railway node – 3 rd phase of bypass from Corridor X – bridge on Danube – to Pancevo; connection of Port of Prahovo, Border Crossing Sid. Regulatory: Combined transport Directive (partially implemented), eFTI regulation. Digitalization.

Multimodal capacities and needs



1. The volume of rail transport in all RPs in the region is decreasing, especially in terms of modal share.
2. The highest volumes of quantities in rail transport were reached 7-15 years ago, which is an indication that the capacities of the existing multimodal terminals (i.e. railway freight stations) are currently underutilized.
3. Capacities of existing intermodal/ container terminals are underutilized (except Port of Durrës).
4. Data analysis on commodity types and modal split in international trade flows, shows that significant quantities of goods, especially bulk cargoes, are actually transported by road.
5. Comparing data from different sources, it is evident that significant volumes of goods are transported by rail in domestic transport, on short distances.

If the analysis of capacity needs was based only on comparing the capacity of freight railway stations and the actual transshipment volumes, excluding the nodes that primarily serve closed systems, it would be concluded that additional capacities are generally not needed. However, considering the need to slow down the growth of road transport, i.e. to increase the participation of multimodal transport in the total modal share and thereby achieve economic, ecological and social benefits, it is extremely important to combine the investments in railway network improvements with creation of new multimodal terminals and improve the capacities of existing ones, by forming a core network of multimodal terminals which will attract commodity flows and provide competitive alternative to road freight transport.

MCA – Spatial analysis

The multi-criteria spatial analysis includes three components with the following criteria:

- **Component of identified current status**
 - Significance from the aspect of national strategic documents and identified user needs
 - Significance of the location in relation to the market, i.e. international transport flows
- **Flows generation and attraction component**
 - Size of the urban area
 - Proximity to the most important industrial zones
 - Position in relation to the Core and Comprehensive network
- **Modal shift potential component**
 - Intensity of road freight traffic



Conditions to be met for a terminal to be part of the TEN-T



Conditions set by the Regulation for the definition of the RRTs are the following:

- Annual transshipment of freight above the predefined thresholds
- Designated by a MS for a NUTS 2 region, where there is no RRT complying with the above criterion
- It is proposed by a MS in the framework of an Action Plan for the development of a multimodal freight terminal network, based on the market and prospective analysis.

At least one of these should be met

Applying the 2nd condition for terminals identification in the WB region (NUTS 2 criterion)



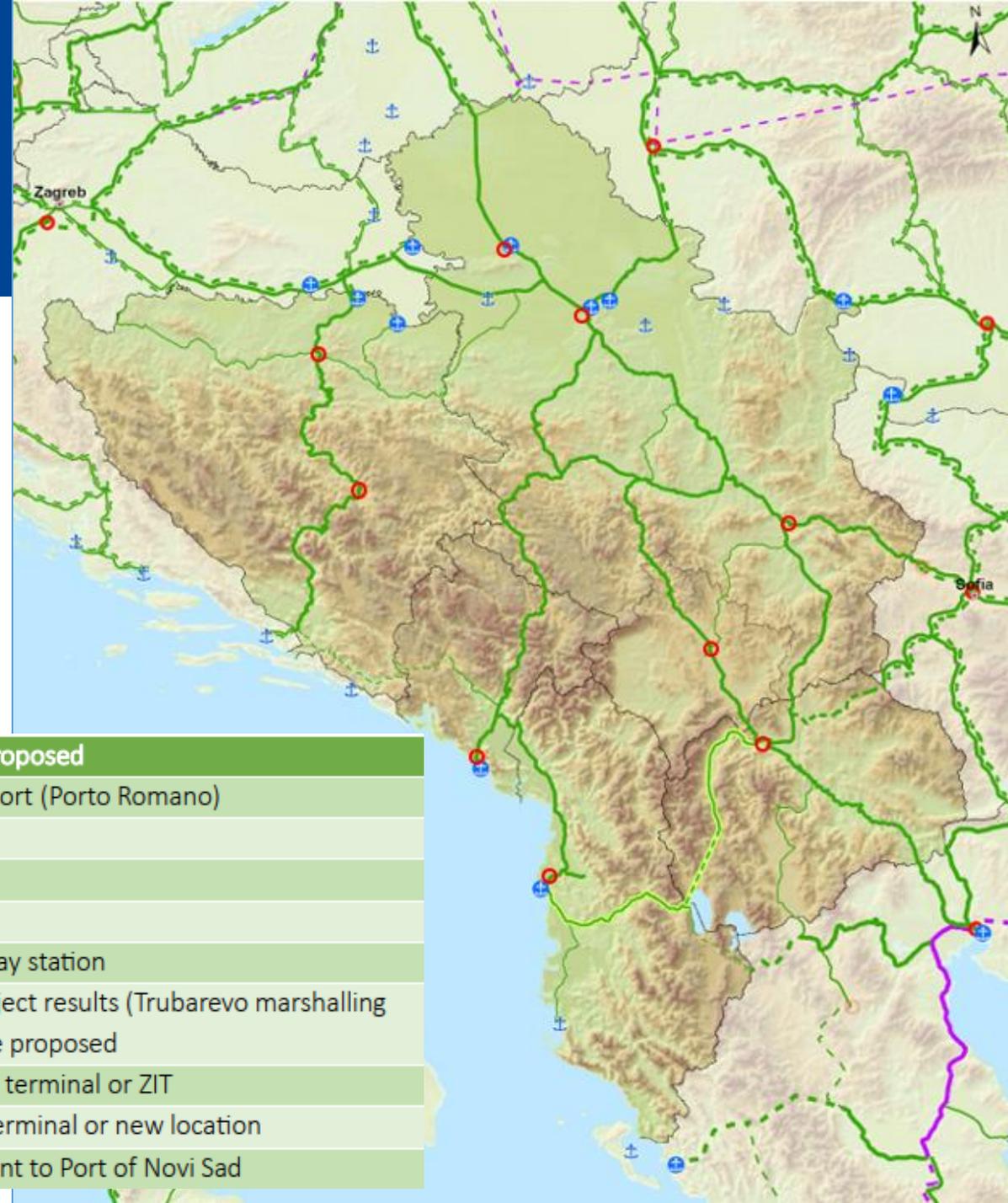
- 1 to 3 RRTs in Albania, maximum one in each NUTS 2 region:
 - North Albania (consisting of the NUTS 3 regions of Diber, Durres, Kukes, Lezhe, Shkoder)
 - Central Albania (consisting of the NUTS 3 regions of Elbasan, Tirana)
 - Southern Albania (consisting of the NUTS 3 regions of Berat, Fier, Gjirokaster, Korce, Vlore)
- Maximum 2 to 3 RRTs in Bosnia and Herzegovina (for which NUTS regions have not been defined yet, but it is assumed to be maximum three NUTS 2 level regions, due to the size of Bosnia and Herzegovina as well as considering the geography, population and the entities of BIH).
- Most likely 1 RRT in Kosovo (for which NUTS regions have not been defined yet, but it is assumed to be one at RP level due to Kosovo's size)
- 1 RRT in Montenegro
- 1 RRT in North Macedonia
- 1 to 4 RRTs in Serbia, maximum one in each NUTS 2 region:
 - City of Belgrade NUTS 2 region
 - Autonomous Province of Vojvodina* NUTS 2 region
 - Region Sumadja* and Western Serbia NUTS 2 region
 - Region Southern and Eastern Serbia NUTS 2 region

*Official name of the NUTS2 region

Proposed multimodal freight terminals network

9 terminals proposed and included in an Action Plan for the development of a Multimodal Freight Terminals network and last-mile connectivity in the WB region

Total cost estimate: 135 million (excluding costs of already ongoing projects)



	Location	RP	Terminal proposed
1	Durres-Tirana area	ALB	New terminal in or adjacent to the new port (Porto Romano)
2	Sarajevo	BIH	New terminal in Rajlovac
3	Doboj	BIH	Exact location TBD - New terminal
4	Pristina	KOS	New terminal in Shkabaj
5	Bar	MNE	Exact location TBD - Port of Bar/Bar railway station
6	Skopje	MKD	Exact location TBD based on ongoing project results (Trubarevo marshalling yard) or new location in Skopje area to be proposed
7	Belgrade	SRB	Exact location TBD - Batajnica intermodal terminal or ZIT
8	Niš	SRB	Exact location TBD- Existing intermodal terminal or new location
9	Novi Sad	SRB	Exact location TBD - New terminal adjacent to Port of Novi Sad

Action Plan – Group 1

Terminals Network development



Action	Regional Party/ies	Cost estimate (million €)	Details
Construction of new terminal in or adjacent to the new Porto Romano in Durres – Tirana area	ALB	The investment cost for the new terminal is included in the total investment cost for the port development.	The ongoing project “Development of the new port of Durres in Porto Romano, relocating the operations of the existing terminal and building in the 1st phase of development the new Container Terminal and the new rail track into the new port” foresees that the capacity of the Container Terminal will be not less than 500,000 TEU. Provision of facilities and equipment and road-rail connectivity within and out of the terminal for full compliance with the TEN-T Regulation provisions.
Construction of Intermodal terminal Sarajevo in Rajlovac	BIH	20	Preparation of the necessary studies and reconstruction of the station for multimodal/ intermodal terminal operations and improvement of capacities, facilities and equipment and road and rail connectivity within and out of the terminal according to the TEN-T Regulation provisions. Estimated annual capacity: 80,000 TEU.
Construction of Intermodal terminal in Doboj	BIH	15	Preparation of the necessary studies for decision on exact location of the terminal and construction of the new terminal for multimodal/ intermodal operations, construction of facilities and road and rail connectivity within and out of the terminal, and procurement of equipment, for full compliance with the TEN-T Regulation provisions. Estimated annual capacity: 50,000 TEU.
Construction of Intermodal terminal Pristina in Shkabaj	KOS	20	Preparation of the necessary studies and construction of a new planned hub for multimodal/ intermodal terminal (dry port), construction of facilities and procurement of equipment and road and rail connectivity within and out of the terminal for full compliance with the TEN-T Regulation provisions. Estimated annual capacity: 80,000 TEU.

Action Plan – Group 1

Terminals Network development



Action	Regional Party/ies	Cost estimate (million €)	Details
Construction of new rail-road terminal in or adjacent to the Port of Bar	MNE	15	Preparation of the necessary studies for decision on exact location of the terminal (within the port or railway freight station Bar) and construction of the multimodal/ intermodal terminal, ensuring improvement of capacities, facilities, equipment and road and rail connectivity within and out of the terminal for full compliance with the provisions of the TEN-T Regulation for multimodal freight terminals. Estimated annual capacity: 50,000 TEU.
Construction of Intermodal terminal in Skopje area	MKD	20	Construction of a new terminal for multimodal/ intermodal operations and ensuring capacities, facilities, equipment and road and rail connectivity within and out of the terminal for full compliance with the provisions of the TEN-T Regulation for multimodal freight terminals. Based on the results of the ongoing project for preparation of the necessary studies and design for new intermodal terminal at Trubarevo marshalling yard location, it is to be decided if the location of the Trubarevo marshalling yard is suitable or new location in Skopje area will be defined. Estimated annual capacity: 80,000 TEU.
TBD: Development of the Batajnica terminal, or Development of terminal ŽIT in Belgrade	SRB	10	The Serbian Ministry is to decide on the future actions (whether to proceed with phase 2 of Batajnica terminal or with development of ŽIT terminal at Belgrade marshalling yard). Batajnica phase 2 will mean an increase of the capacity of the terminal from 80,000 to 150,000 TEU, procurement of equipment and development of a logistics area on about 67 ha. ŽIT project will include extension to the 5th shunting group of the Belgrade marshaling yard. This would create the conditions to process about 120,000 TEU per year (compared to 24,000 TEU currently).

Action Plan – Group 1

Terminals Network development



Action	Regional Party/ies	Cost estimate (million €)	Details
Construction of Intermodal terminal in Novi Sad area	SRB	15	Preparation of the necessary studies for exact location decision, feasibility and design, and construction of the intermodal terminal, last mile road and railway connections and facilities/equipment to ensure full compliance with the TEN-T Regulation provisions. Estimated annual capacity: 50,000 TEU.
Improvement and integration of the existing intermodal terminal Nis, Nis marshalling yard and the Niš airport or, Construction of new terminal	SRB	15	<p>Bearing in mind the plans and current activities for the construction of a railway bypass around Niš, which passes through the Niš marshalling yard and connects the Niš airport with the Corridor X branch to Bulgaria, and that the existing private intermodal terminal is located in the same zone, connected to the Niš marshalling yard, it is recommended to consider public-private partnership modalities, concessions or blended investments, for the establishment of an integrated logistics center, in which the existing private intermodal terminal would have an interest in expanding and meeting the infrastructure requirements to be included into the TEN-T terminals network.</p> <p>By this, annual capacity of Niš marshaling yard and intermodal terminal would be increased, and volumes of goods and services would increase, enabling the introduction of the cargo terminal at the airport.</p> <p>It is necessary to examine public-private partnership or other blended investments modalities, in order to ensure compliance with point 62 of the Regulation that this should not create obligation to private sector to invest in terminals. In case that such proposal is not acceptable for private terminal and government, a new location for new terminal is to be defined.</p>

Action Plan – Group 2

Network improvements for last mile connectivity



Action	Regional Party/ies	Cost estimate (million €)	Details
Reconstruction of railway bridge over the Ishem river	ALB	Part of the secured Vore - Hani i Hotit railway line rehabilitation project	Reconstruction of the bridge damaged in 2019 earthquake, to reconnect the northern part to the central and southern parts of Albania, enabling rail freight flows between Montenegro and Durres-Tirana and Elbasan areas.
Reconstruction of the railway tunnel “Ivan” at Sarajevo-Bradina	BIH	Part of the secured Visoko - Mostar railway line rehabilitation project	Reconstruction of the 3.2 km long tunnel on Corridor Vc, to enable safe and efficient transport of large intermodal units such as containers, swap-bodies and semitrailers by railway.
Reconstruction of damaged railway section in Jablanica area (Donja Jablanica-Grabovica section)	BIH	2.5	Urgent reconstruction of damaged railway section caused by floods and landslides in 2024, causing stop of railway traffic between central BIH and the Port of Ploce. Completed recently.
Improvement of road last mile connection of existing container terminal at Sarajevo freight station	BIH	3	Sarajevo freight station is currently the only intermodal terminal in central BIH, facing very difficult access for trucks, as well as movement within the terminal.
Construction of last mile railway connection of Port of Brčko	BIH	Part of the ongoing project of port revitalization, funded through EBRD loan and EU grant.	Connecting the Port of Brčko to the railway network with a new industrial track represents one of the important phases of the modernization of the port.

Action Plan – Group 3

Introduction of ICT and digital solutions to improve multimodality



Action	Regional Party/ies	Cost estimate (million €)	Details
Deployment of solutions for eFTI implementation	All RPs	17.5	Deployment of e-freight in the WB region according to the Action Plan developed in the study “Deployment of e-freight in the Western Balkans and implementation of the Regulation (EU) 2020/1056 on electronic freight transport Information”.
Deployment of selected IT applications along main Corridors and Routes in the region (Multimodal Digitalization Project)	All RPs	8.1	<p>Deployment of</p> <ul style="list-style-type: none"> - Solution for match making and ordering for rail cargo (Rail-Flow or similar), - IT platform for stakeholders networking (IMSLOT or similar) - Multimodal Transportation Management Systems (Transport Management System for terminals) <p>on selected Corridors and Routes in each RP (ALB: Corridor VIII, BIH: Corridor Vc, KOS: Route 10 - Corridor X link from Pristina to Hani i Elezit, MNE: Route 4, MKD: Corridor X and Corridor VIII, SRB: Corridor X and Route 4)</p> <p>Deployment should start from already functional Corridors and Routes (Corridors Vc, X and Routes 4, 6) and continue with Corridor VIII once missing links are constructed.</p>

Action Plan – Horizontal and other measures



- Harmonization of national legislation with provisions of Combined Transport Directive 92/106/EEC (common rules and standards, incentives...)
- Harmonization of the standards and rules on Customs treatment of intermodal units in international transport
- Defining the activity of intermodal transport as an economic activity of special interest
- Improvement and procurement of railway rolling stock and maintenance (locomotives, container flatcars, wagons...)
- Facilitation of railway crossing points, their improvement and introduction of joint border crossing points and operations
- Education – qualification of personnel in business activities - Capacity building at the level of administration and decision making. Improvement of cooperation with universities, professional schools and associations.

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