

2021

Freight border waiting times monitoring in Western Balkans



The Permanent Secretariat of the
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I. INTRODUCTION

The outbreak of COVID-19 pandemic in early 2020 had a devastating world-wide impact. Above and beyond its significant public health impact, it also caused disrupting effects on social and economic level, with international transport being among the most affected sectors. During March 2020, travel bans and restrictions were introduced all across Europe in view to contain the risk of virus spreading. Such measures were not properly coordinated between neighbouring countries which resulted in international transport and trade being severely affected across the continent (EU internal transport included).

Mirroring the European Commission Green Lanes initiative, the Transport Community Permanent Secretariat (TCPS) and the Central European Free Trade Agreement Secretariat (CEFTA) undertook similar action to secure the supply chains for essential products and uninterrupted flow of goods on the TEN-T Network in Western Balkans. Being embraced by all Regional Partners, such initiative proved instrumental for ensuring seamless freight flows on major TEN-T routes in Western Balkans, helping the region to better cope with the unprecedented challenges brought by the pandemic.

Since the adoption of the Green Lanes initiative by all Regional Partners, TCPS have been continuously monitoring the freight transport waiting times in the selected Border Crossing Points/Common Crossing Points (BCPs/CCPs). Started in a moment of deep crisis, the freight waiting times watching has further become a routine practice, performed under the TCPS legal mandate of monitoring the performance of the TEN-T Network in Western Balkans.

One year and four months from its onset, time has come for presenting consolidated data, figures and main conclusions of the borders monitoring exercise, aiming at:

- Benchmarking the operational performance of the BCPs/CCPs on the indicative TEN-T extension of the comprehensive and core networks to the Western Balkans;
- Identifying problems and main hotspots on the network;
- Pinpointing the main flaws of the monitoring and reporting mechanism currently in use and identifying potential remedial solutions.

II. METHODOLOGICAL ASPECTS

II.1 BCPs/CCPs under monitoring

Initially designed to cover only internal BCPs/CCPs on the main transit corridors in the region that were subject of the common TCPS/CEFTA Green Lanes initiative, the monitoring exercise gradually extended to include also the borders between Western Balkans and the EU. While TCPS legal mandate is covering the entire TEN-T indicative extension in the region, certain BCPs on the network were omitted because of data scarcity and/or low traffic volumes. Moreover, following the request of some Regional Partners, other key BCPs outside the TEN-T Network were included.

The full list of BCPs/CCPs currently under monitoring is provided below:

Border Crossing Point/Common Crossing Point			Type (WB6 internal/ WB6-EU)	TEN-T Network
Vatin/Stamora Moravita	Serbia	Romania	WB6-EU	Core
Gradiska/Stara Gradiska	Bosnia and Herzegovina	Croatia	WB6-EU	Core
Bosanki Samac/ Slavonski Samac	Bosnia and Herzegovina	Croatia	WB6-EU	Core
Bijaca/Nova Sela	Bosnia and Herzegovina	Croatia	WB6-EU	Core
Gradina/Kalotina	Serbia	Bulgaria	WB6-EU	Core
Horgos/Roszke	Serbia	Hungary	WB6-EU	Core
Kakavija/Ktismata	Albania	Greece	WB6-EU	Core
Batrovci/Bajakovo	Serbia	Croatia	WB6-EU	Core
Deve Bair/Gyuesevo	North Macedonia	Bulgaria	WB6-EU	Core
Bogorodica/Evzoni	North Macedonia	Greece	WB6-EU	Core
Presevo/Tabanovce	Serbia	North Macedonia	WB6 internal	Core
Dobrakovo/Gostun	Montenegro	Serbia	WB6 internal	Core
Merdare/Merdare	Kosovo*	Serbia	WB6 internal	Core
Port of Bar	Montenegro		WB6 internal	Core
Kulina/Kula	Kosovo	Montenegro	WB6 internal	N/A
Klobuk/Ilino Brdo	Bosnia and Herzegovina	Montenegro	WB6 internal	N/A
Sremska Raca/Raca	Serbia	Bosnia and Herzegovina	WB6 internal	N/A
Port of Durres	Albania		WB6 internal	Core
Morine/Vernice	Albania	Kosovo	WB6 internal	Core
Blace/Hani i Elezit	North Macedonia	Kosovo	WB6 internal	Core
Hani i Hotit/Bozaj	Albania	Montenegro	WB6 internal	Comprehensive
Kjafasan/Qafe Thane	North Macedonia	Albania	WB6 internal	Core

Table 1: List of BCPs/CCPs under TCPS monitoring

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

II.2 Data sources and reliability

All figures, graphs and charts hereinunder included are based on TCPS daily records of waiting times, starting with early April 2020.

From its onset, the monitoring exercise was frustrated by lack of reliable and methodological sound data for most of the BCPs/CCPs.

Firstly, reporting daily consolidated values might be misleading by itself, as the situation in all BCPs/CCPs has proven to be fluid and likely to change significantly in a matter of hours. This makes the task of capturing daily averages rather challenging. Secondly, there is no monitoring system in place ensuring real-time measurement of border waiting times. TCPS attempted to bridge such gap by setting-up an ad-hoc monitoring system based on dedicated reporting from all Regional Partners complemented by additional information sources like official reporting of neighbouring EU Member States (where available), Sixfold (real-time shipments monitoring platform), road hauliers reporting (Milsped Group), and live BCPs/CCPs cameras tracking.

It's worth mentioning also that, despite TCPS efforts to dispatch a common methodology and approach in this regard, different understanding and interpretations of "border waiting time" meaning still persist.

The figure below presents graphically the sequencing of border idle and control times and the total waiting time that TCPS aims to capture. However, the basic sources TCPS relies upon for calculating its daily average figures are only partially relevant in this regard, most of them reflecting only certain segments of the total waiting time.

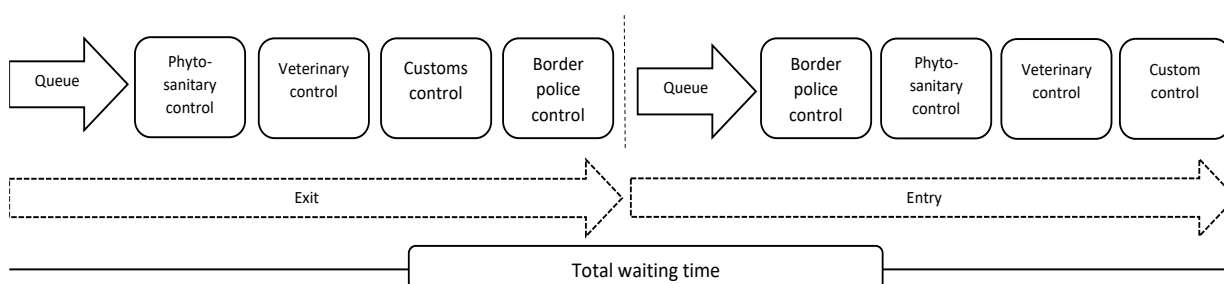


Figure 1: Border waiting time (typical sequence)

More details about each of the basic data sources TCPS is currently using are provided in table form below:

Data source	Details	Reliability	Main issues
Albania reporting	Regular reporting system set-up by TCPS	Medium	<ul style="list-style-type: none"> - Data supplied regularly; - Inbound data mostly unreliable; - Outbound data likely to exclude queuing time but include custom clearance.
Bosnia and Herzegovina reporting	Regular reporting system set-up by TCPS	Low	<ul style="list-style-type: none"> - Frequent shortages in data supply until June 2021; - Data is no longer provided to TCPS since June 2021; - Reporting is not usually capturing traffic peaks;

Kosovo reporting	Regular reporting system set-up by TCPS	Medium	<ul style="list-style-type: none"> - Data supplied regularly; - Reporting is rarely showing any traffic peaks or changes;
North Macedonia reporting	Regular reporting system set-up by TCPS	Low	<ul style="list-style-type: none"> - Data supplied regularly; - Same figures reported over and over again; - Reporting methodologies are most probably different between BCPs but none of them seems to be capturing the queuing/idle time.
Montenegro reporting	Regular reporting system set-up by TCPS	Low	<ul style="list-style-type: none"> - Data is being supplied regularly; - Data provided has not changed during the whole period of reporting;
Serbia reporting	Regular reporting system set-up by TCPS	Medium	<ul style="list-style-type: none"> - Data supplied regularly until May 2021, after that TCPS was instructed to recover data from AMSS website (https://www.amss.org.rs/); - Inbound data mostly unreliable
Croatia reporting	https://www.hak.hr/info/sanje-na-cestama?lang=en	Medium	<ul style="list-style-type: none"> - Live and constantly updated data; - Reporting is uneven, the system often fails to capture traffic peaks;
Hungary reporting	Határinfó adatok A Magyar Rendőrség hivatalos honlapja (police.hu)	High	<ul style="list-style-type: none"> - Live and constantly updated data; - Live camera check has sometimes proved reporting to be not totally reliable
Romania reporting	Trafic Online - Politia de Frontiera	Medium	<ul style="list-style-type: none"> - Live, and constantly updated data; - Traffic peaks not captured properly (waiting times are usually under-estimated)
Milšped Group reporting	Milšped (milsped.com)	Medium	<ul style="list-style-type: none"> - Only certain BCPs/CCPs are covered; - Reported figures reflect total border waiting time (driver's perspective); - Contradictory reporting for the same BCP sometimes identified;
Sixfold	https://live.sixfold.com/	Low	<ul style="list-style-type: none"> - Live data; - Poor coverage of the region (data scarce for WB6-EU borders, WB6 internal borders not covered). - Reported figures proved sometimes unreliable;
Live cameras	N/A	Low	<ul style="list-style-type: none"> - Live cameras regular monitoring is of limited use for waiting times calculation but has proven helpful for confirming/infirming delay reports from other sources.

Table 2: Data sources for TCPS waiting times calculation

II.3 Conclusions

The above listed issues call for a cautious use and interpretation of the waiting times data and figures incorporated in the present report. In particular, **comparing the performance of individual BCPs/CCPs might be misleading in certain cases** (identified and discussed in more details under point III below).

However, despite all such challenges, data gathered during 14 months of continuous border waiting times monitoring is ultimately providing a realistic picture of the operational performance of BCPs/CCPs in the region and allow for certain conclusions to be drawn.

III. RELEVANT DATA AND FIGURES

III.1 General data

An overall picture of the average waiting times at the BCPs/CCPs under monitoring is provided below. Average figures were calculated based on daily records from 01.04.2020 to 31.07.2021.

Border Crossing Point	Average waiting time (minutes)	
	Outbound	Inbound
Vatin/Stamora Moravita	26.19	22.92
Gradiska/Stara Gradiska	42.88	35.71
Bosanki Samac/ Slavonski Samac	27.89	25.67
Bijaca/Nova Sela	20.05	19.95
Gradina/Kalotina	57.28	60.28
Horgos/Roszke	146.26	66.67
Kakavija/Ktismata	53.70	32.84
Batrovci/Bajakovo	122.69	98.25
Deve Bair/Gyuesevo	18.25	24.85
Bogorodica/Evzoni*	12.99	12.05
Presevo/Tabanovce	39.13	40.19
Dobrakovo/Gostun	50.38	65.50
Merdare/Merdare	8.73	34.40
Port of Bar	20.00	20.00
Kulina/Kula	25.13	29.86
Klobuk/Ilion Brdo	72.21	41.71
Sremska Raca/Raca	62.71	55.64
Port of Durres	20.00	10.00
Morine/Vernice	32.40	46.66
Blace/Hani i Elezit	58.33	30.86
Hani i Hotit/Bozaj	39.93	25.13
Kjafasan/Qafe Thane	43.60	56.67

*Queuing time not included

Table 3: Average waiting times (April 2020 – July 2021)

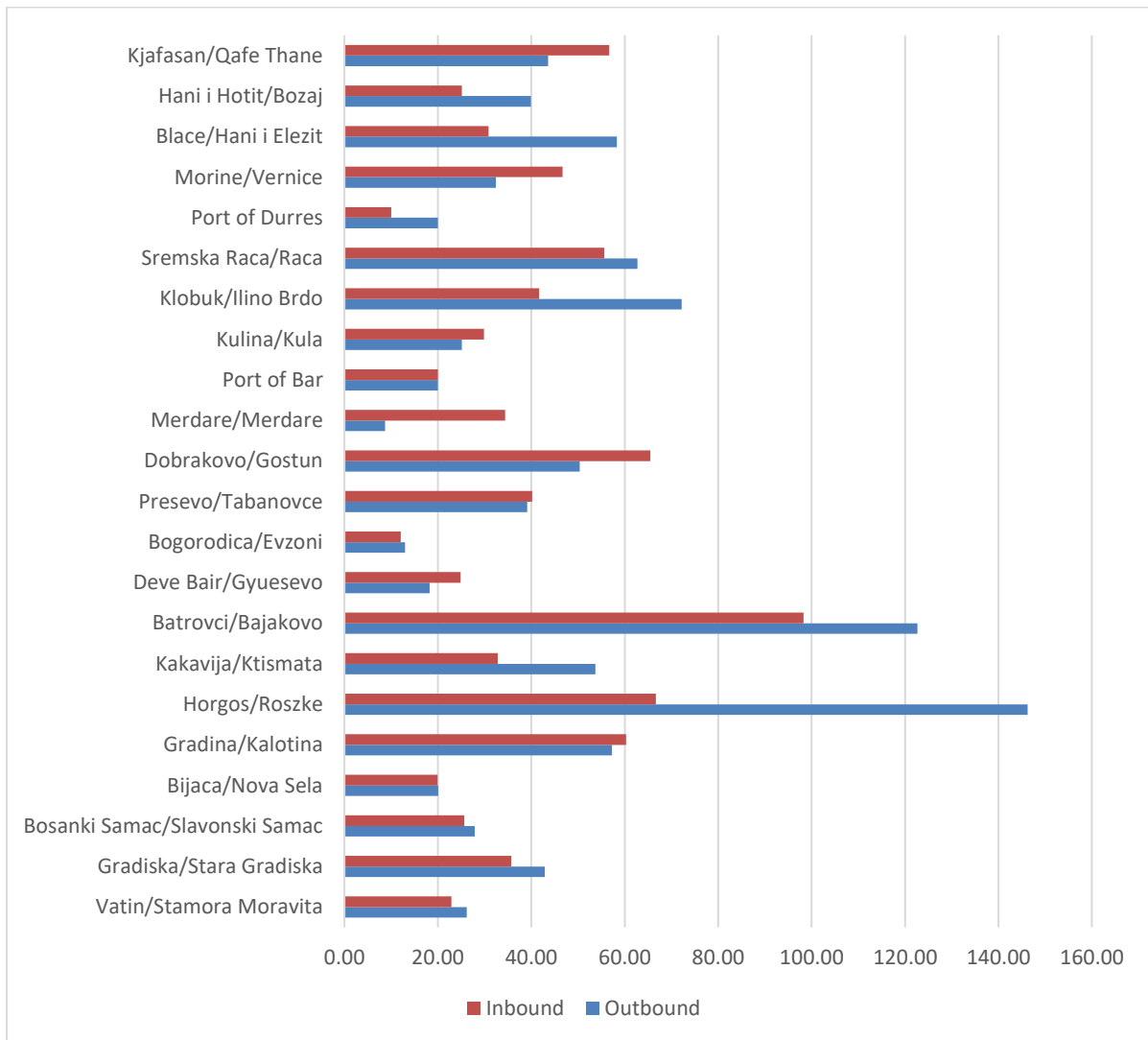


Figure 2: Average waiting times (April 2020 – July 2021)

III.2 Operational performance of individual BCPs/CCPs

Additional information and figures on certain BCPs are provided below. Selection was made based on the following criteria:

- Risk of prolonged waiting times (the most crowded BCPs were selected);
- Overall data reliability (selection includes only BCPs for which multiple data sources and a similar reporting methodology was used making them comparable against each other).

III.2.1 Horgos/Roszke

a) Data sources

- *SRB reporting;*
- *HUN reporting;*
- *Milsped Group reporting;*
- *Sixfold;*

- *Live cameras tracking;*

b) Waiting times data and figures

Month/Year	SRB – HUN	HUN – SRB
April 2020	74.35	26.09
May 2020	115.00	46.43
June 2020	125.00	58.13
July 2020	142.17	58.70
August 2020	136.50	48.75
September 2020	150.00	66.67
October 2020	137.73	83.18
November 2020	134.29	64.29
December 2020	169.57	90.00
January 2021	150.71	54.29
February 2021	104.25	57.75
March 2021	161.09	94.57
April 2021	189.55	90.00
May 2021	178.57	79.29
June 2021	197.73	77.73
July 2021	173.64	70.91

Table 4: Horgos/Roszke average monthly waiting times

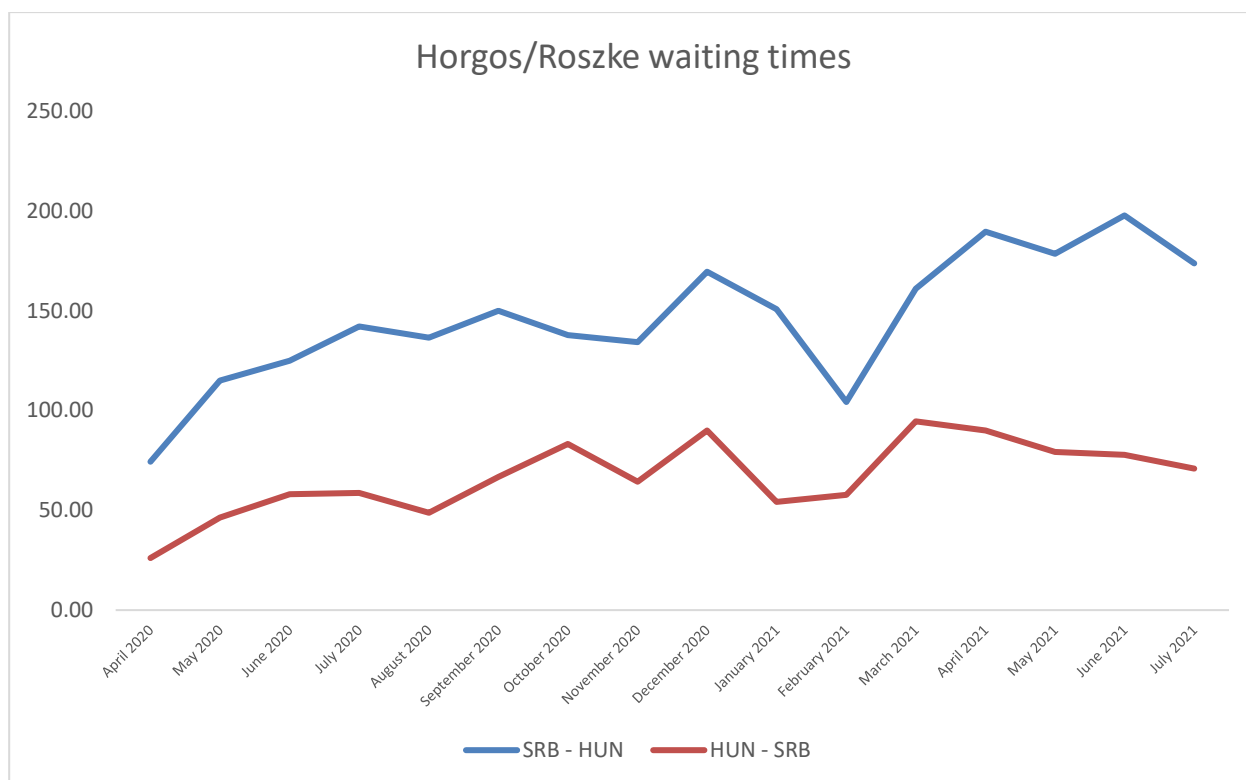


Figure 3: Horgos/Roszke average waiting times evolution

c) Main features and conclusions

- Horgos/Roszke is among the two busiest BCPs in Western Balkans, average waiting times on SRB-HUN direction being the longest recorded in the region.
- Reported figures are based on multiple sources (see point a above), which rank them high in term of overall reliability.
- High discrepancy between waiting times on the outbound (SRB-HUN) and the inbound (HUN-SRB) directions is a key feature of this BCP.
- Peak values on HUN-SRB direction are usually recorded before weekends; on SRB-HUN, waiting times are usually longer in the first half of the week.
- Unlike other BCPs/CCPs under monitoring, waiting times in Horgos/Roszke were not affected by the Covid19 restrictions. On the contrary, the lowest values were recorded in April 2020 at a time of severe travel bans all across Europe.
- The overall trendline is on an increasing pace on both directions but in particular on SRB-HUN, where the last 4 months experienced the longest recorded waiting times.

Horgos/Roszke peak values

Most crowded month:

- ✓ SRB-HUN direction: **June 2021 (197.73 minutes)**
- ✓ HUN-SRB direction: **March 2021 (94.57 minutes)**

Longest recorded daily waiting time:

- ✓ SRB-HUN direction: **600 minutes**
- ✓ HUN-SRB direction: **240 minutes**

III.2.2 Batrovci/Bajakovo

a) Data sources

- *SRB reporting;*
- *HR reporting;*
- *Milsped Group reporting;*
- *Sixfold;*
- *Live cameras watching;*

b) Waiting times data and figures

Month/Year	SRB – HR	HR – SRB
April 2020	108.95	74.21
May 2020	147.00	82.50
June 2020	75.65	106.30
July 2020	85.91	98.18
August 2020	69.00	90.75
September 2020	129.67	110.17
October 2020	115.91	105.68
November 2020	104.29	100.00
December 2020	127.83	105.65
January 2021	147.14	70.00
February 2021	151.50	120.00

March 2021	144.78	103.70
April 2021	180.00	102.95
May 2021	130.71	95.71
June 2021	142.50	105.91
July 2021	102.27	100.23

Table 5: Batrovci/Bajakovo average monthly waiting times

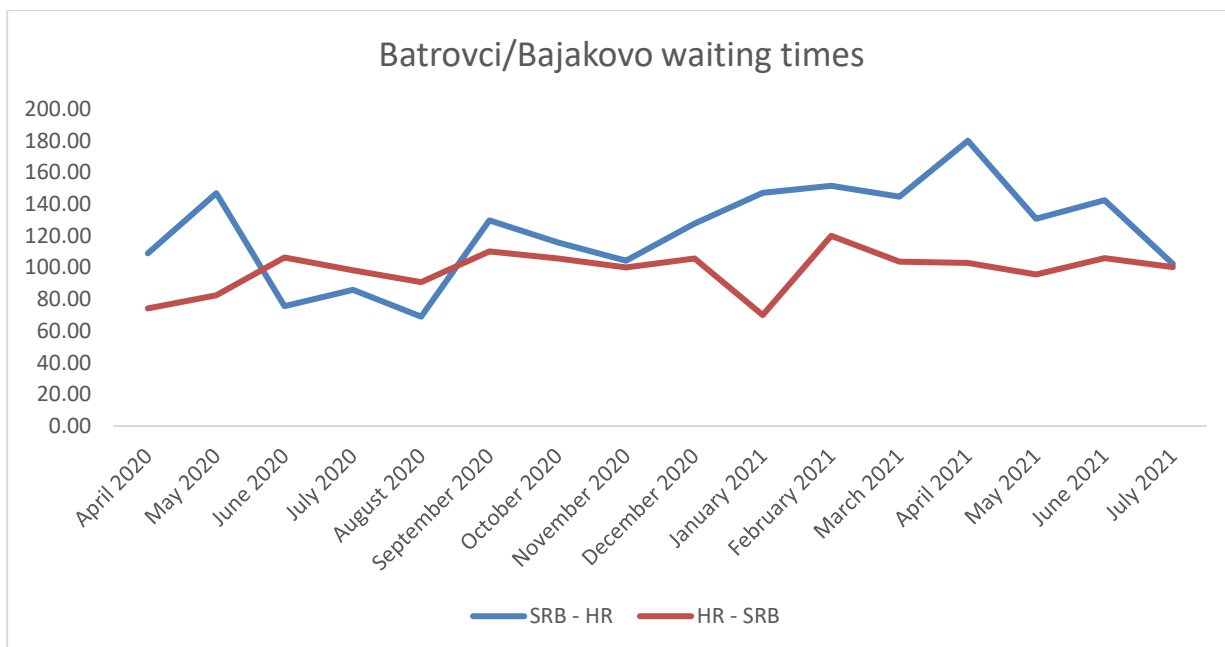


Figure 4: Batrovci/Bajakovo average waiting times evolution

c) Main features and conclusions

- Together with Horgos/Roszke, Batrovci/Bajakovo is the busiest BCP in Western Balkans region.
- Reported figures are based on multiple sources (see point a above), which rank them high in term of overall reliability.
- As a general rule, waiting times tend to be higher on SRB-HR direction, though the difference is not as striking as in Horgos/Roszke.
- Waiting times on HR-SRB are the highest from the region on the EU-WB6 direction.
- Peak values on HR-SRB direction are usually recorded before weekends; on SRB-HR, waiting times are usually longer in the first half of the week.
- Monthly fluctuations are rather high, especially on SRB-HR direction.

Batrovci/Bajakovo peak values

Most crowded month:

- ✓ SRB-HR direction: **June 2021(180 minutes)**
- ✓ HR-SRB direction: **February 2021 (120 minutes)**

Longest recorded daily waiting time:

- ✓ SRB-HR direction: **600 minutes**
- ✓ HR-SRB direction: **300 minutes**

- The overall trendline is on an increasing pace on both directions. However, the last 3 months seem to be reversing such trend, especially on the SRB-HR direction.

III.2.3 Gradina/Kalotina

a) Data sources

- *SRB reporting;*
- *Milsped Group reporting;*
- *Sixfold;*
- *Live cameras watching;*

b) Waiting times data and figures

Month/Year	SRB – BG	BG – SRB
April 2020	33.64	43.18
May 2020	49.52	32.38
June 2020	73.64	64.09
July 2020	60.00	60.68
August 2020	35.25	49.50
September 2020	41.50	46.83
October 2020	42.95	40.68
November 2020	77.86	77.14
December 2020	93.26	79.57
January 2021	47.14	50.71
February 2021	89.25	76.50
March 2021	51.52	78.26
April 2021	53.64	83.64
May 2021	52.14	57.86
June 2021	57.95	68.18
July 2021	57.27	55.23

Table 6: Gradina/Kalotina average monthly waiting times

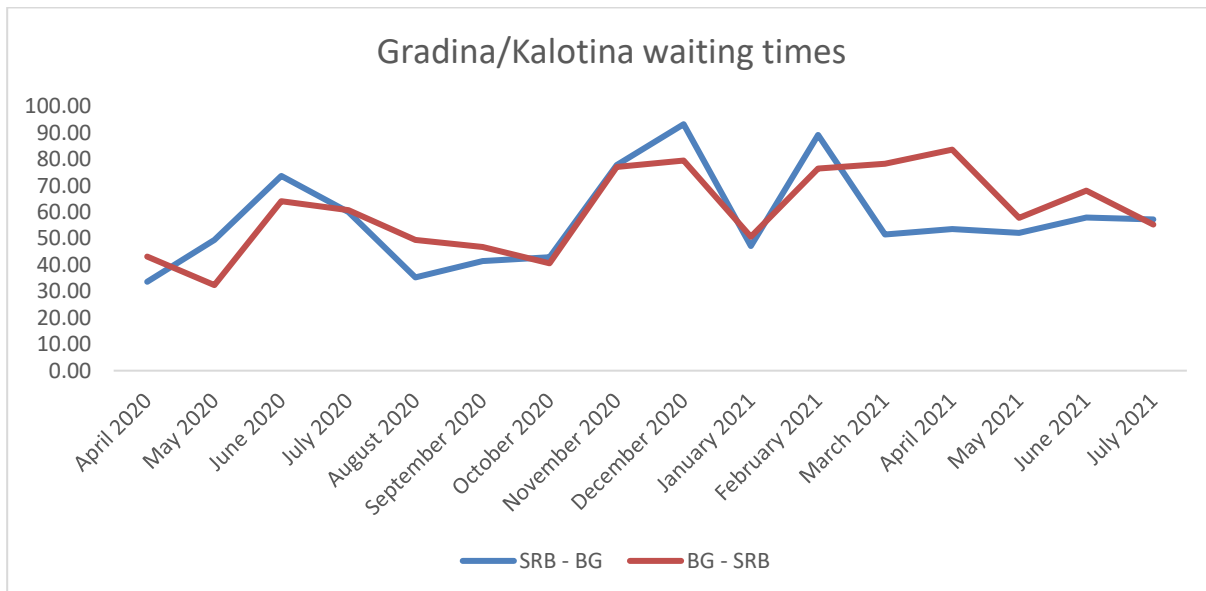


Figure 5: Gradina/Kalotina average waiting times evolution

c) Main features and conclusions

- Reporting based on multiple sources. However, BG-SRB direction is poorly covered (neither data, nor live cameras from BG are available) which affect overall reporting reliability.
- Waiting times on both directions keep close to each other (both the overall average values and variations over time);
- Gradina/Kalotina is the only external BCP in the region where waiting time from the EU towards Western Balkans is higher than the one in the opposite direction (though marginally).
- Monthly, weekly and daily fluctuations are usually high. Unlike the cases of other BCPs under monitoring, there is no observable trend in waiting times weekly distribution.

Gradina/Kalotina peak values

Most crowded month:

- ✓ SRB-BG direction: **December 2020 (93.26 minutes)**
- ✓ BG-SRB direction: **April 2021 (83.64 minutes)**

Longest recorded daily waiting time:

- ✓ SRB-BG direction: **300 minutes**
- ✓ BG-SRB direction: **180 minutes**

III.2.4 Gradiska/Stara Gradiska

a) Data sources

- *HR reporting;*
- *BiH reporting (partially);*
- *Milsped Group reporting;*
- *Sixfold;*
- *Live cameras watching;*

b) Waiting times data and figures

Month/Year	BiH – HR	HR - BiH
April 2020	72.04	72.50
May 2020	63.26	34.57
June 2020	28.86	25.68
July 2020	23.91	31.96
August 2020	29.50	31.15
September 2020	27.71	29.71
October 2020	33.23	32.00
November 2020	36.48	35.14
December 2020	27.87	29.65
January 2021	28.90	29.33
February 2021	28.35	38.70
March 2021	39.13	32.43
April 2021	48.68	33.68
May 2021	66.33	34.19
June 2021	69.09	37.95
July 2021	62.73	42.73

Table 7: Gradiska/Stara Gradiska average monthly waiting times

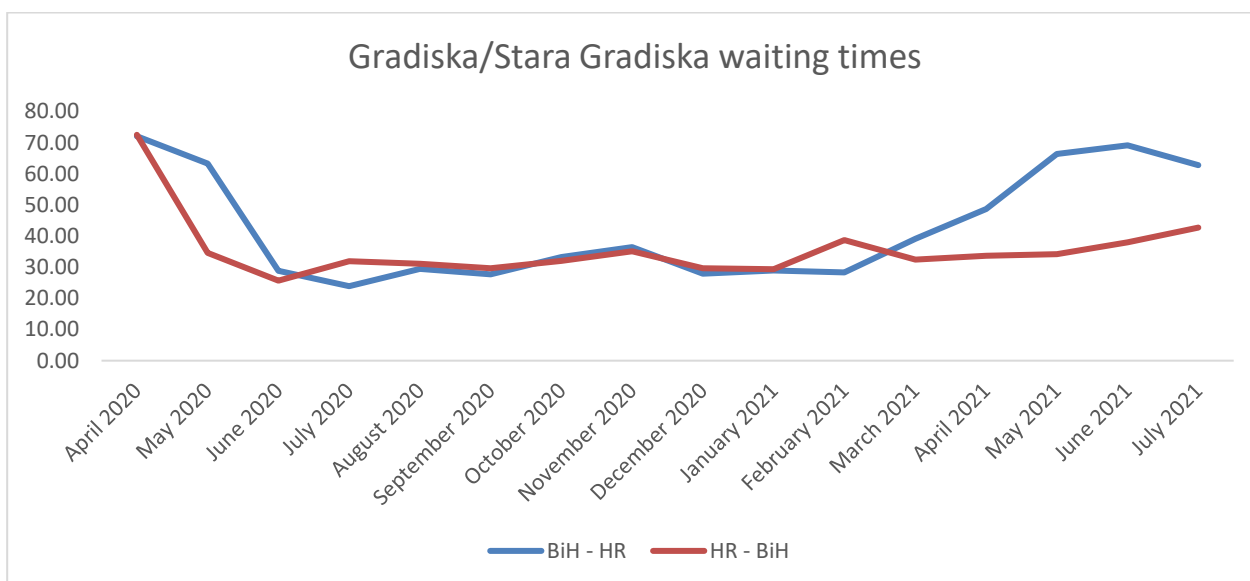


Figure 6: Gradiska/Stara Gradiska average waiting times evolution

c) Main features and conclusions

- Reporting based on multiple sources. However, official reporting from BiH has recently stopped while HR reporting is rather uneven which affects the overall data reliability.
- Waiting times on both directions have kept close to each other over time; during the last couple of months, however, idle times on BiH-HR direction have grown significantly higher.
- Peak values on HR-BiH direction are usually recorded before weekends; on BiH-HR, waiting times are usually longer in the first half of the week.
- Gradiska/Stara Gradiska was the BCP where the Covid19 related restrictions in 2020 produced the most striking effects.
- Freight waiting times in Gradiska/Stara Gradiska are strongly influenced by proper infrastructure shortage (the existing 2-lanes bridge makes separation of cars and cargo flows impossible); the new bridge currently under construction is expected to bring significant improvements in this regard.

Gradiska/Stara Gradiska peak values

Most crowded month:

- ✓ BiH-HR direction: **April 2020 (72.04 minutes)**
- ✓ HR-BiH direction: **April 2020 (72.50 minutes)**

Longest recorded daily waiting time:

- ✓ BiH-HR direction: **240 minutes**
- ✓ HR-BiH direction: **360 minutes**

IV. OVERALL CONCLUSIONS

The main conclusions of the borders monitoring exercise are hereby provided as following:

- Border waiting time is the result of various factors combination, whose particular weight is strongly influenced by local conditions in each BCP/CCP. Such factors include:
 - Overall traffic volumes and adjoining roads capacity;
 - BCPs/CCPs capacity and physical configuration (lane management);
 - BCPs/CCPs traffic management technology and ITS;
 - Border agencies control procedures and coordination;
 - Overall and local cooperation levels between neighbouring countries and border agencies.
- Horgos/Roszke and Batrovci/Bajakovo are the most crowded BCPs/CCPs in the region, with waiting times commonly exceeding 120 minutes. SRB-HUN direction in Horgos/Roszke experiences the longest waiting times in the region, while Batrovci/Bajakovo is the busiest route from the EU towards Western Balkans.
- The outcomes of the borders monitoring exercise are feeding a comprehensive database that might be used for different purposes (like delivering key inputs for problems identification or feasibility assessment of intervention schemes); this is a strong argument that the borders watching exercise should continue on long-term (considering also the legal mandate of the TCPS).
- However, **border waiting time monitoring definitely needs to be founded on a more systematic basis**. In particular, the data reliability issues underlined under section II.2 above demands firm commitment and targeted actions from all relevant stakeholders.
- Full operationalisation of the Transport Observatory and its underlying data collection procedures during 2022 and implementation of dedicated tools for tracking border waiting times (Galileo initiative) are expected to address such challenges in the near future.