

SEETO SOUTH-EAST EUROPE TRANSPORT OBSERVATORY

## Flagship axes initiative I phase report

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## Phasing

- Due to complexity, the flagship initiative is done in two phases:
  - Phase 1 performed by SEETO Secretariat consisting of infrastructure and traffic data collection and bottleneck identification
  - Phase 2 includes technical assistance to work on elaboration of administrative bottlenecks, assessment of their impact on the corridors performance, and identification of remedial measures

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## First phase report

**Purpose**

- To identify causes for infrastructure limitation of the transport along the axes, taking into consideration infrastructure and performance factors
- To give basis for the in-debt analysis in the second phase

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## Axes presentation

- Corridor X
- Corridor Vc
- Corridor VIII + Route 7
- Route 4
- Danube river

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## Description of the Flagship road axes

- **Road**
  - Characteristics: Nr. Lanes, Speed, Estimated travel time
  - Current state: Condition, Bottlenecks (LoS), AADT
  - Future development: Secured investments, MAP projects, Development plans

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## Description of the Flagship rail axes

- **Rail**
  - Characteristics: Traction, Electrification, Number of tracks
  - Current state: Condition, Bottlenecks, Speed limits
  - Future development: Secured investments, MAP projects, Development plans

**Description of the Flagship axes**

- Inland waterways → Condition  
Capacity  
Bottlenecks
- Ports → Characteristics  
Equipment  
Connectivity  
Development plans

**Key findings**

- Condition
- Bottlenecks
- Improvement

**Flagship Axes- "tube maps"**

**Corridor Vc**

**Axes presentation: Corridor Vc**

➤ **Road:**

- Condition: Medium (only 26 km in good condition)
- Percentage of motorways: 6.75% + section from Lasva-Visoko put in operation on a level of motorway
- Speed: many restrictions to 50 km/h or below
- AADT: 7,844 veh/day
- Bottlenecks (LoS): 41 km (Karuse-Maglaj, Zenica-Lasva)
- Investments: underinvestment on the side of BiH since 2004; however, 1,245 million EUR planned in MAP 2014

➤ **Summary of limitations:**

- Sarajevo-Blazuj – urgent need (highest AADT, lowest speed, 40km/h)
- Karuse-Maglaj-Zenica-Lasva-Visoko - planned investments & ongoing works
- Blazuj-Jablanica – ongoing works

**Axes presentation: Corridor Vc**

➤ **Rail:**

- Condition: Mostly Medium (343km), one section Poor (85 km)
- Double track section and traction: 20% double track, electrified
- Speed: design speed 100km/h, current maximum allowed speed 70km/h, speed restrictions (23.3km)
- Load gauge: tunnel Ivan has a narrower gauge
- Investments: Investments needed for modernization, main design completed/ongoing for several sections

➤ **Summary of limitations:**

- Bosanski Samac- Dobo, track in poor condition with speed limits
- Southern part of Corridor Vc has several sections with speed limits which need to be addressed.
- To improve performance modernization is required



**Axes presentation: Corridor Vc**

➤ **Port of Samac**

- Characteristics: Port mainly handles bulk cargo, steel and semi-finished products.
- Ownership type: privatized
- Investments: Investment plan, formulated by the owners, exists. Further improvements depend on the owner and the Sava River navigability

➤ **Summary of limitations:**

- Rehabilitation needed to preserve and restore Samac port assets, and perform safe and efficient operations.
- Further infrastructure development should be considered.

## Axes presentation: Corridor VIII



➤ Road:

- ❑ **Condition:** Medium to Good
- ❑ **Percentage of motorways:** 38.8%
- ❑ **Speed:** 80-120km/h, with many sections where operation speed is less than the maximum allowed speed
- ❑ **AADT:** 8,916 veh/day, ranging from 1,688 (Kriva Palanka-Deve Bair) to 27,046 (Tirana-Vore)
- ❑ **Bottlenecks:** N/A
- ❑ **Investments:** the least invested Corridor; no envisaged investments on the side of FYR Macedonia

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❑ **Summary of limitations:**

- ❑ All cross-border sections: **ALB-MKD, ALB-GRE, MKD-BUL** (no investments planned so far, ideally for joint planning & eligible for WBIF, CEF)

## Axes presentation: Route 7



➤ Road:

- ❑ **Condition:** Very Good (all Albanian & 50% from the Kosovo sections); 25 km Good; 57 km Medium, 61 km Poor (all Serbian)
- ❑ **Percentage of motorways:** 54.6%
- ❑ **Speed:** 80-130 km/h
- ❑ **AADT:** 9,515 veh/day
- ❑ **Bottlenecks (LoS):** 59 km (Pristina-Merdare, Milot-Rresen)
- ❑ **Investments:** leading place in total completed investments (more than €1.6 billion & additional planned investments €750 million)

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❑ **Summary of limitations:**

- ❑ Pristina-Merdare- planned construction
- ❑ Merdare-Prokuplje-Doljevac- not planned interventions
- ❑ Milot-Rreshen – capacity restraints

## Axes presentation: Corridor VIII



➤ Rail:

- ❑ **Condition:** substandard level (medium to very poor) 97% of Corridor
- ❑ **Nr. of track and traction:** single track corridor with diesel traction
- ❑ **Speed:** design speed 100 km/h, speed under 60km/h on more than 265 km
- ❑ **Missing links:** approximately 215km
- ❑ **Investments:** least invested corridor. Currently works ongoing on section Kumanovo – Beljakovce (towards Bulgaria).

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❑ **Summary of limitations:**

- ❑ Durres – Tirana – planned investments
- ❑ Tirana – border with the former Yugoslav Republic of Macedonia- not planned interventions
- ❑ Missing links:
  - ❑ MAC: Towards Bulgaria works ongoing, main design underway towards Albania
  - ❑ ALB: not planned interventions



## Axes presentation: Corridor VIII

➤ Port of Durres:

- busiest SEETO Comprehensive Network seaport in cargo traffic (3.52 million tonnes), 14% TEU traffic increase comparing to 2011
- container terminal awarded under concession
- **Summary of limitations:**
  - ❑ berths, administrative buildings, workshops and utilities
  - ❑ Expansion of container yard side terminal to accommodate larger transport flows
  - ❑ Longer quays for bulk and general cargo could potentially increase the maximum capacity

➤ Port of Vlora:

- **Summary of limitations:**
  - ❑ expansion waiting area for trucks for Ro-pax terminal and construction of public storage area.
  - ❑ seaside capacity for liquid terminal

## Axes presentation: Corridor X



➤ Road:

- ❑ **Condition:** Good (60%)
- ❑ **Percentage of motorways:** 80.6%, few remaining two-lane sections going through construction
- ❑ **Speed:** 80-120km/h
- ❑ **AADT:** 12,878 veh/day, sections with highest AADT recorded on the SEETO flagship axes and SEETO CN
- ❑ **Bottlenecks (LoS):** 45 km (all located on the ring around Belgrade)
- ❑ **Investments:** ongoing works-by 2016, entire Corridor X is expected to be on a level of motorway

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❑ **Summary of limitations:**

- ❑ Inter-urban ring road around Belgrade
- ❑ southern Serbian & Macedonia stretch, under construction
- ❑ for rehabilitation: Miladinovci-Kumanovo (prioritized), Batocina-Paracin (not prioritized)

## Axes presentation: Corridor X

➤ Rail:

- ❑ **Condition:** Medium condition
- ❑ **Double track section and traction:** 49% double track, electrified
- ❑ **Speed:** design speed 120km/h- not reachable, speed restrictions on approximately 240km
- ❑ **Traffic:** the highest traffic on SEETO CN (41 % freight, 67% pax )
- ❑ **Investments:** € 500 million secured (€ 1.2 billion including Croatia) to be implemented until 2020

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❑ **Summary of limitations:**

- ❑ Large part of the infrastructure limitations will be addressed through finance secured investments
- ❑ Further attention required:
  - ❑ Ruma- Sid (Belgrade - Croatian border )
  - ❑ Lapovo- Nis
  - ❑ Further rehabilitation on several sections from Skopje to Greek border




## Axes presentation: Route 4



➤ **Road:**

- ❑ **Condition:** ranges from Poor to Very Good; half of the Route in Good condition
- ❑ **Percentage of motorways:** 2,16%
- ❑ **Speed:** 70-80 km/h
- ❑ **AADT:** 6,865veh/day, Belgrade-Orlovaca- 23,515 veh/day; the lowest is on the two border sections SER-ROM & SER-MON
- ❑ **Bottlenecks (LoS):** 176 km (all in Serbia)
- ❑ **Investments:** one of the most high-intensive axes on the SEETO CN in terms of investment needs and priority projects costs

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❑ **Summary of limitations:**

- ❑ Belgrade- Pozega- huge investment for motorway construction planned
- ❑ Dobrakovo-Virpazar(166 km), investment planned for Podgorica-Matasevo
- ❑ Pozega-Uzice-Nova Varos- poor condition

## Axes presentation: Route 4



➤ **Rail:**

- ❑ **Condition:** In Montenegro – Good; Serbia - Medium
- ❑ **Double track section and traction:** 1% double track, 86% electrified
- ❑ **Speed:** speed restrictions on app. 236 km, mostly in Serbia
- ❑ **Investments:** higher investment intensity in Montenegro (€ 100 million from 2005) , overhaul to Belgrade planned (Russian loan)

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❑ **Summary of limitations:**

- ❑ In Montenegro remaining sections with speed restrictions need to be addressed and tunnels and slopes rehabilitated
- ❑ Vrbnica – Resnik- finance secured
- ❑ Pancevo – Belgrade – not planned interventions

## Axes presentation: Route 4



➤ **Port of Bar**

- ❑ **Characteristics:** Consists of 6 terminals: Dry bulk cargo, grains, liquids, ferry terminal, container and general cargo terminal
- ❑ **Ownership type:** Share holding company (54% Government) Container terminal privatized

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➤ **Summary of limitations:**

- Investments in the mechanical units, modernization of gantry cranes, reconstruction of cold storage plant, building silos for bulk cement and development of environmental protection system
- Widening of the dry bulk terminal area could positively affect capacity.



## Axes presentation: Danube

➤ Together with Rhine, Danube form a major trans-European shipping artery

➤ Potential not used: less than 50.000 million tons/km/year

➤ **Summary of infrastructure bottlenecks:**

- ❑ majority occur on the stretch between km 1430 and 1250- sharp bends or narrow cross-sectional profiles
- ❑ sunken warships at Prahovo
- ❑ joint part between Croatia and Serbia (navigation carried out under difficult conditions and significant regulation works are necessary to provide safe navigation)

## Axes presentation: Danube

➤ **Port of Novi Sad**

➤ **Characteristics:**



- situated at intersection of two corridors (C Xb and C VII)
- universal type, with no specialized terminals

➤ **Summary of limitations:**

- Expansion of the river side capacity for general cargo and bulk terminal would potentially increase the current port capacities
- For establishment of the port as a multimodal centre the following is needed:
  - Container terminal and Ro-Ro terminal for mobile machines; System for grain storage and handling, capacity of 20 000 tons; Modernization and construction of storage systems; Subsystem of logistic support and additional logistics services; Transport infrastructure.

➤ **Port of Belgrade**

- ❑ **Characteristics:**
  - ❑ intersection of the two pan-European transport corridors (C X and C VII)
  - ❑ Comprises of handling and storage terminals for: general cargo, bulk cargo and containers.
- ❑ **Ownership type:** privatized

## Data collection challenges

- Railways
  - Operating speeds, designed speeds
  - Capacity and Signaling
  - BC waiting times
- Roads
  - Capacity
  - BC waiting times
- Inland waterways
  - Limited data within SEETIS III
- Ports
  - Limited data within SEETIS III
- **Inland Terminals**
  - ?



## Phase 2

EC Technical Assistance for:

- Reinforced implementation of the Railway reforms → **Flagship axes initiative**
- Transport and border-crossing facilitation → **Flagship axes initiative**
- In phase 2, the EC TA which commenced in February 2014 is expected to deliver in depth analysis on the three remaining pillars:
  - Market access assessment
  - Performance indicator analysis
  - Border-crossings analysis
- TA projects should deliver the results through 2014 and beginning of 2015.



## Conclusions

- The report identified physical bottlenecks together with the midterm development plans
- Regional harmonization and corridor planning is extremely important for creating common technical standards and market conditions
- Corridor approach gives an added value to the infrastructure investments and higher political weight
- A first step towards broader comprehensive Study



Thank you for your attention !

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