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MULTIMODAL TRANSPORT STRATEGY 2023-2030

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1. Executive summary

The development of Transport Infrastructure and Services is one of Kosovo's priorities for economic development and integration to ensure better connectivity, accessibility and business opportunities for its citizens.

As Kosovo is committed and continues the accession process in the EU, there is a clear need to develop sustainable mobility and increase transport planning toward the EU Zero-Emission vision and Green Agenda.

Multi-Modal Transport Strategy 2030 aims to bring a sustainable and integrated transport system by strengthening different modes (road, rail and air), such as convenience, speed, cost, reliability, predictability, etc., and in combination, can offer more efficient transport solutions for people and goods which will help ease the pressure in our congested roads, and make the whole sector more environmentally friendly, safer, and cost-effective.

The Multi-Modal Transport Strategy 2030 is an update of the Transport strategy 2022-2027 that aims for the further development of the road, rail and air transport sector in Kosovo by laying grounds for new prosperous infrastructure projects, especially for developing the rail sector and dry port, electrification, thus creating better regional connectivity and better interconnectivity among transport modes within Kosovo.

The Multi-Modal Transport Strategy 2030 is aimed towards a Republic of Kosovo with increased mobility, decreased transport costs and reduced emissions. In short: It is a plan to build a better, smarter and greener Kosovo.

The transport system in our country is currently considered unsustainable compared to the countries of the European Union, therefore, through the Multimodal Transport Strategy 2030, problems such as; the creation of sustainable policies, the raising of capacities through management reforms, the establishment of transport safety, the cleaner environment by using vehicles with zero emission of gases and digitization in the field of transport.

The main objectives addressed by the Multimodal Transport Strategy are: - Transport connection without problems;

- Creation of a safe transport system
 - towards vision zero;
- Creation of smart and digital transport.

The objectives will focus on the modernization of the infrastructure and services of all types of transport (road, rail and air).

The strategy for multimodal transport includes actions recommended according to the national development plan, referring to activities such as; Improving transport infrastructure and services, creating barrier-free connections in international multimodal transport and Increasing transport safety.

2. Introduction

EC Kosovo Report 2021 states that Kosovo remains at an early stage/has some level of preparation in the area of transport policy and has achieved limited progress, notably on road safety. It recommends that Kosovo shall continue its efforts to prevent road accidents, strengthen the capacity of the railway regulator, continue efforts to align Kosovo's Aviation Regulation with the European Common Aviation Area agreement, adopt legislation and implementing regulations on the Intelligent Transport System (ITS) and, ensure sufficient capacity and resources for its implementation and continue efforts to transpose the EU passenger rights acquis across all modes of transport. This document represents an update of Multi Modal Transport Sectoral Strategy 2015-2025 and 5-year action plan taking into consideration the relevant sectoral documents. Compared to the MMTS2025 an increased attention has been put on digitalization, sustainability and civil aviation.

The Multi-Modal Transport Strategy 2030 (MMTS) supports the concrete foundations for the implementation of the National Development Strategy 2030 by linking to Strategic Goal 2.3, 2.4 and 2.5 of Development Goal 2 'High-quality, sustainable and integrated infrastructure in the Pillar First: Sustainable Economic Development.

The strategy also emphasizes the high priorities of the Government, being linked to the Government Program 21-25, emphasizing that the government will commit to the creation of an integrated system for road, rail and air transport, in function of economic development, point 2.13, respectively point 2.13.1 Integrated road infrastructure; 2.13.2 Railway infrastructure for economic development; 2.13.3 Civil aviation policies and 2.13.4 Road safety and maintenance. The strategy is also based on the recommendations of the EU Report 2021 and the objectives of the Green Agenda for the Western Balkans.

3. Methodology

On 25th of November 2021, the Government assigned a working group of 14 members to revise and update the Multi Modal Sectoral Strategy and Action Plan. 10 members were from MESPI, 1 member from Department of European Integration, 3 members from Office of Strategic Planning, OPM-member, 1 member from Ministry of Finances, Labour and Transfers. The Working Group is supported by three technical sub-working groups: 1) infrastructure, road management, and safety, 2) on land transport and civil aviation, 3) vehicles and driving license. The technical sub-groups were composed of relevant transport subject-matter professionals. The update process of the Multi Modal Transport Strategy started in May 2022 and finished in October 2022

In June 2022 a workshop was organized with work-group members and sub-working groups separately, to discuss the segments that MMTS needs to target. The discussion was based on Kosovo needs for further improvement and development of multimodal transport infrastructure taking into account the EU Green Agenda for Western Balkans, Strategic Operational Plan 2015-2025, 5-year Action Plan, and the structure of the updated MMT Strategy to creating a modern, integrated, sustainable, safe, smart, green, resilient, and digital transport system.

To support the MMT strategy, the working team collected data from passenger and freight department, Ministry of Finance, Infrakos, Transkos and EU databases on the turnover, cost and expenditure of all entities part of transport infrastructure.

EU TA reports, studies, Transport Community documents, and experts' recommendation supported the updating process of the Strategy.

Based on analysis and studies the Multi-Modal Transport Strategy was updated. Again, a number of targeted consultations with key stakeholders were organised to elicit the feedback. Following public

consultations, the Strategy was updated and finalised together with a package of supporting documentation.

With effective implementation of the Strategy, by 2030 Kosovo's transport system will be more modern, integrated, sustainable, resilient, safe and digital, contributing to the better living conditions of its people and sustainable development.

4. Background

4.1 Socio-economic context

Demand for transport is affected mostly by two factors – population and economic activity. The most recent demographic forecast projects in the medium scenario a slight increase of population for the next 5 years, then a decrease back to current number by 2032 and another slight decrease by 2038. These changes are relatively minor to have a significant effect on total transport demand. However, the continuing urbanization process has a more significant effect on transport demand regionally, especially in cities and their catchment areas. This will most likely create an increased demand for short distance trips and as big share of the new urban population will still visit their original home, this will also create higher demand for intercity travel on weekends. It would be optimal if this increase in demand was mostly served by public transport. This requires good multimodality between intercity and local public transport.

4.2 Economic outlook

Kosovo has witnessed a constant above average GDP growth for a decade from 2009. COVID19 had the GDP decrease in 2020 but in 2021 the economy fully recovered supported by private consumption, record growth in exports, an exceptional rebound in diaspora visits, strong credit growth, and a significant fiscal stimulus. The slow process of income convergence with EU is expected to continue albeit it's tempo might decrease unless Kosovo's economy embarks on a different development pathway.

This means that a moderate increase in transport demand is expected with a potential for high demand if economic development goals are met. Although EU has been trying to decouple transport demand from economic growth for a couple of decades, this cannot be expected in Kosovo's case considering the modest starting point. For example, currently unemployment stands at 24,6%. This means there is a huge potential for higher work-related travel demand if economy keeps growing. It is quite certain that both the increase in economic activity and personal income will put enormous pressure on further motorization, which can lead to more congestion, pollution and other negative effects. This can be tackled only with a very targeted activities promoting sustainable mobility options on both local, national and international level.

4.3 Global trends

Out of all the trends in the transport sector, noted by different think tanks and other organizations, the following were selected to be highlighted:

- **Connectivity** refers to a seamless integration of different transport modes enabling accessibility to people and places that previously had limited access to transport.
- **Technology** is a key enable of many of the new services and process that make transport and transport planning more efficient. This includes automation, software-as-a-service, tracking technologies, more efficient planning tools like 3D modelling and data.

- **Sustainability** has a key role in global transport policy. The negative effect that transport can have on climate change, health, marine habitat, biodiversity, availability of resources etc. forces global organizations and countries to adopt increasing stricter regulations to protect the environment.
- **Social aspects** reflect the need for an increased attention to making transport more equitable. Services are developed that take better into account the needs of different user groups that previously have been underserved – the young and the elderly, women, people with disabilities etc. Transport sector also faces another type of social challenge – the availability of workforce.

All these trends increase the complexity of the transport sector, leading to increased regulations and requiring advanced planning skills and tools from the public authorities.

4.4 EU policy and international commitments

EU-s transport policy is naturally aligned with the global trends presented above. It can be emphasized though that there is a special attention being made towards the uptake of zero-emission vehicles, development of rail transport and the reinforcement of a single market which is based on the user-pays principle.

The EU country report on Kosovo¹ calls specifically among other things for:

- securing necessary resources and improving road safety by targeting the reduction of fatalities and establishing a system for continuous road crash data collection;
- strengthening the capacity of the railway regulator and ensuring its financial and operational independence;
- adopting legislation on the Intelligent Transport System (ITS) and developing a strategic framework for the implementation of the ITS on core networks, ensuring sufficient capacity and resources for its implementation;
- pursuing efforts to comply with the requirements under the first transitional phase of the European Common Aviation Area agreement

Green Agenda for Western Balkans² is a comprehensive strategic roadmap against the climate crisis, in line with EU-s New Green Deal. One of its five pillars includes the actions in the field of mobility. It emphasizes the need for revitalization of rail network, deployment of Intelligent Transport Systems (ITS), promotion of multimodal transport solutions and modal shift, development of transport logistics, cleaner fuels and higher fuel efficiency, charging for infrastructure and innovative solutions.

Transport Community (TCT) is an international organisation in the field of mobility and transport, consisting of 33 participants – the entire EU and the six Western Balkans regional partners. TCT has adopted a strategy for a sustainable and smart mobility in the Western Balkans along with a five year rolling work plan. The strategy lays down 10 flagship themes that are in align with the general EU transport policy:

1. Boosting the uptake of zero-emission vehicles, renewable and low-carbon fuels and related infrastructure
2. Creating zero emission airports and ports

¹ [kosovo_report_2020.pdf \(europa.eu\)](#)

² Commission Staff Working Document, Guidelines for the Implementation of the Green Agenda for the Western Balkans, Accompanying the Communication from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions: An Economic and Investment Plan for the Western Balkans, SWD(2020) 223 final

3. Making interurban and urban mobility more sustainable and healthier
4. Greening freight transport
5. Pricing carbon and providing better incentives for users
6. Making connected and automated multimodal mobility a reality
7. Innovation, data and artificial intelligence for a smarter mobility
8. Working towards a single market
9. Making mobility fair and just for all
10. Enhancing transport safety and security

This international context clearly indicates that if Kosovo wants to continue the ascension process towards EU, there is a clear need to develop sustainable mobility and increase transport planning capacity to be able to align its legislation and services with that of the EU regulation and the single market.

4.5 Road transport

The road network in Kosovo is categorized into highways, national and regional and ring roads, which are under the administration of the Ministry of Infrastructure (MI) and local roads, under the administration of municipalities.

The road network in Kosovo is categorized into highways, national and regional roads, which are under the administration of the Ministry of Infrastructure (MI) and local roads, under the administration of municipalities. Thanks to major investments into the state-owned road infrastructure in the last 10+ years, the majority of indicative extension of TEN-T roads are in very good or good condition and comply with the TEN-T road condition regulations by TCT estimation. Most state-owned roads also have enough capacity to cater to the traffic demand. The biggest possibilities for improved connection to highways are of Gjilan, Mitrovica and Peja region and connection between Prizren and Tetova, North Macedonia. It should be noted though that these are expert estimations by the Department for the Road Management within the MESPI. Kosovo does not have a road asset management system, which should be implemented as soon as possible to increase the efficiency of road planning and maintenance. This includes an automated traffic counting system and comprehensive standards for road quality.

In regard to border crossings, TCT has estimated that the progress to improve border crossing and common crossing measures stood at 33% at 2021 in all three categories – infrastructure, ICT infrastructure and installation of equipment. The same progress is estimated for bilateral agreements for one stop control. The next steps for improvement should be “one-stop shop” on the border crossing with North-Macedonia (Hani i Elezit/Blace).

In 2021 a study was made about the logistics sector in Kosovo. “Assessment of Logistics Services in Kosovo”³. The findings show that only 23.5 percent of firms surveyed provide more than one logistics service. This indicates that freight transport sector in Kosovo is not yet adopting to the global trend in diversifying its services to offer more value-added to the customers. The main strengths of the sector as indicated by companies themselves were road infrastructure and speed of delivery. Quality of infrastructure is in line with the afore mentioned assumption that the investments into national road network have greatly improved its quality. The main weakness and barrier is considered to be unfair competition. This is both by domestic companies not complying with the legislation and large international companies having advantages in their respective markets. Other weaknesses include

³ Assessment of Logistics Services on Kosovo. Prepared for Trade Department, Ministry of Industry, Entrepreneurship and Trade, by Agon Nixha, External consultant, 2021 <https://cps.rks-gov.net/wp-content/uploads/2022/02/Assessment-of-Logistics-Services.pdf>

high terminal prices, lack of digital tachographs, old vehicles, late payments, and association's poor functioning.

Passenger transport is provided by intercity buses (including international coaches) and local buses. Around 300 companies are providing interurban bus transport in Kosovo. Many of them are very small with only 3 vehicles or even less. With so many small companies operating on fully commercial base with relatively low revenue, the stiff competition has not led to higher quality service but the opposite. The vehicles are generally old and in poor state even if they seem safe. The network is not connected well with other transport modes, there is no regional comprehensive network planning and both information and ticketing systems are fragmented and outdated. Modernizing bus transport can be called major challenge is establishing a well-connected (intercity, regional, local) transport system which provides seamless mobility options to all people. That requires a reform of the whole system, modern vehicles, real-time information systems and electronic ticketing systems. Also more needs to be done to make the transport services accessible and easy useable for everyone (notably to people with disabilities and reduced mobility).

Kosovo has made good progress in reducing fatalities in road traffic in last 20+ years. In 2020 where were 43 deaths per one million inhabitants which is on par with EU27 average. Still, considering Europe's "Vizion Zero" policy for 2050, with an interim target of reducing fatalities by 50% between 2020-2030, improving road safety continues to be a major challenge. This is especially true because as international experience shows, progress in improving traffic safety tends to slow the better the situation gets. Kosovo seems to follow the same trends, because the numbers for fatalities, injured and total accidents have remained on same level for the past years. It should be noted though that this is while total milage of road transport has increased, which means that in relative terms the situation has improved. There has been little progress in improving the quality of data and key performance indicators for monitoring road safety performance. In order to take the next step in road safety planning it is important to implement the actions. A specific safety concern regarding rail transport is railroad level crossings (LRC). About 90% of LRC-s are passive⁴ meaning that they are without any form of warning system or protection activated when it is unsafe for the user to traverse the crossing. EU average for that is 45%. As road safety is a multidisciplinary field, it requires the cooperation of different administrative units. Although there exists a framework for that, it is not functioning well and should be improved.

In the framework of TCT it has been agreed to make progress in adopting ITS in road sector by adopting a ITS strategy and transpose relevant EU aquis. This is very much needed as there are very few ICT tools deployed in the sector. By introducing road traffic related ITS and modern information and ticketing systems for public transport a significant leap could be made in making travel more seamless and safe.

Total CO2 emission from transport were 1337 Gg CO2 eq in 2019. Road traffic is the biggest polluter of the transport sector because besides CO2 emissions it also affect air and soil quality. Thus, the solutions are the same as everywhere else in the world – shift transport from road to rail, increase the share of sustainable mobility modes (public transport, walking, cycling, micromobility) and upgrade vehicle fleet (low-emission and alternative fuel vehicles). There is very little progress made in reducing transports impact on environment and increasing its resilience to climate change. TCT estimates that

⁴ https://www.transport-community.org/wp-content/uploads/2019/12/Railroad-Level-Crossings-Current-State_TCS.pdf

in regards to the respective measures in Road Action Plan, only an 8% progress can be noted. For example, there are only 3 electricity charging stations and no other alternative fuel stations.

4.5 Rail transport

Kosovo rail network has a length of 335 km out of which the route extending from the northern border of Kosovo in Mitrovica to Hani i Elezit in south (Route 10) is part of indicative TEN-T comprehensive network and connects Skopje with corridors VIII and X. Railway is mostly one-way standard un-electrified track with a 1435mm gauge. The average speed limit is 60 km/h. Under these conditions railway is not a competitive transport mode. The number of passengers has been constantly decreasing, falling to 60,3 thousand in 2021 and the volume of cargo transported remains at only about half a million tons. The modernization has started in last years with Route 10 reconstruction, but should continue because in order to reach it's full potential the network should function as a whole, including also multimodal terminals. As Kosovo is a relatively small country, rail freight transport is most feasible for international connections which means that special attention must be made to opening of the railway market and interoperability with neighbouring countries. First significant step in this direction has been implementing agreements for joint rail border crossing between Kosovo and North Macedonia.

Although there are few accidents on railway (around 20 per year), this can be attributed to a very low level of traffic. As modernization should lead to significantly increased traffic volumes serious attention should be made to upgrade necessary safety systems. Besides the low quality of infrastructure, Kosovo's railway also lacks ERTMS. This is a key component of making railway traffic competitive and safe and thus all modernization projects should include deployment of ERTMS. As most accidents on railway happen on road-rail crossing deploying ERTMS will also help to reduce the number of fatalities related to railway transport. In terms of harmonization with the EU Regulation 1371/2007 on rail passengers rights TCT estimates that the regulation has been partially transposed and that more work needs to be done to make further efforts to improve the current conditions/situation to transpose and fully implement the Regulation (EC) No 1371/2007.

In terms of sustainability, the concern is the old train fleet that is used for both passenger and cargo transport. Although the first priority should be the renovation of infrastructure and deployment of ERTMS, the renewal of train fleet should be kept in mind for next steps.

4.6 Aviation

Pristina airport is part of the indicative TEN-T Core network. It is managed and operated by Limak and Aeroports de Lyon since 2010. Limak has built a new 42.000 m² terminal with adjoining buildings capable of handling 4 million passengers and will continue to manage and operate Pristina International Airport for 20 years from the date of the agreement, transferring its assets in toto to the Government of Kosovo after this period. In terms of infrastructural limitations the runway has just recently been extended 500 m and the ILS system upgraded from CAT II to CAT IIb in order to enable landing of larger aircraft with more regularity. This would enable changing the airport reference code from 4C to 4E. The number of passengers has been constantly increasing with a natural setback during the pandemic in 2020. In 2021 passenger numbers rebounded to almost pre pandemic numbers - 2,18 million passengers.

Air transport continues to face challenges arising from the fact that Kosovo does not control its upper airspace and is not a member of several international civil aviation organisations. Currently HungaroControl provides air traffic services for the upper airspace under the agreement with NATO. The lack of revenue from upper airspace management continues to constrain its ability to invest in

training and infrastructure development. Although just recently in 2021 a new south-west route was opened which allows for significantly shorter approaches to Prishtina airport, Kosovo still lacks a western direct route which would benefit air traffic as most connections from Prishtina are towards west.

However, safety situation can be considered good with a limited number of incidents happening each year.

4.7 Summary of SWOT analysis

SWOT analysis confirmed desk research analysis and feedback from stakeholders. The biggest strength is the quality of recently modernized road network and the service level on these roads. Also significant progress has been made in improving road safety with the number of fatalities falling to almost European average levels. However, there are more weaknesses. Rail traffic is not competitive due to low quality of infrastructure and lack of interoperability on international connections. Public transport system is fragmented, it lacks multimodal connections and real-time information systems and digital common ticketing system. Digitalization level in transport sector is low overall, with no ERTMS deployed on railway and few ITS on road. Logistics sector is not competitive, because the EU aquis has not been fully harmonized, Kosovo is not part of several important international organizations and is being discriminated on some occasions. Transport sectors environmental impacts is high because the vehicle fleet is old and there is a low share of alternative fuel vehicles and there is not infrastructure to support their adoption.

Biggest opportunities are integration with EU which leads to both knowledge transfer and funding and political commitment to improve the transport system. There is a dedicated economic and investment program with 9 billion EUR of grant funding allocated until 2027. In addition to that there is interest from IFI for finance of sustainable and digital transport projects.

Strengths	Weaknesses
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<ul style="list-style-type: none"> • Experience in developing highways in a short time • High quality of service on the newly built highways • Developed highway infrastructure with connections to neighboring countries; • Low debt (public debt) • Political will and strategic prioritization of transport at national level and rapid decision-making process • Favorable geographical position of the country • Low number of accidents compared to the region • High percentage of the young population, which would more easily accept innovations and digitization of transport 	<ul style="list-style-type: none"> • lack of connection between different types of transport infrastructure (intermodality, multimodality), lack of logistics centers; • underdeveloped and poorly connected public passenger transport; • underdeveloped and underutilized railways • lack of international rail connections • existing railway services in Kosovo are very limited and are not in favor of promoting bus-railway intermodality • Lack of specialized human resources in transport and logistics • Legislation not fully harmonized with the EU acquis • Time spent at border points • membership in conventions and international organizations • Lack of funds dedicated to improving road safety measures • Lack of coordinating agency for road safety • Lack of systematic public awareness campaigns for critical road safety • Limited coordination with health institutions and the police on accidents and especially the post-accident care system • Absence of professional education system • Electronic Charging and Maintenance System (RAMS) is not available • ERTMS and ITS systems are not available • Lack of digitization of transport
<p>Opportunities</p> <ul style="list-style-type: none"> • Political readiness to improve road safety • EU policies and grant funds allocated through the economic program and investments • Possibility of building sufficient logistics centers. • Existing locations of railway stations in major cities, not far from bus stations. • Focus on sustainable transport financing by IFI and EC • Development of railway connections with neighboring countries • Transposition of EU legislation under the Treaty to have mutual recognition of licenses and certificates • The government's commitment to modernize and electrify the railway network • Implementation of the ITS system • Reducing pollution from transport • green and digital transition, to renew the old vehicle fleet 	<p>Threats</p> <ul style="list-style-type: none"> • Increase in fuel prices • Threats related to the economy leading to the loss of qualified staff; • Lack of regional cooperation for the construction of cross-border sections • Increasing trend of accidents with fatality and serious injuries • The old fleet of vehicles which does not meet the technical conditions • High air pollution caused by transport

5. Vision and general objectives

5.1 Vision

Seamless, smart, safe and sustainable transport systems to improve quality of life and competitiveness on economy.

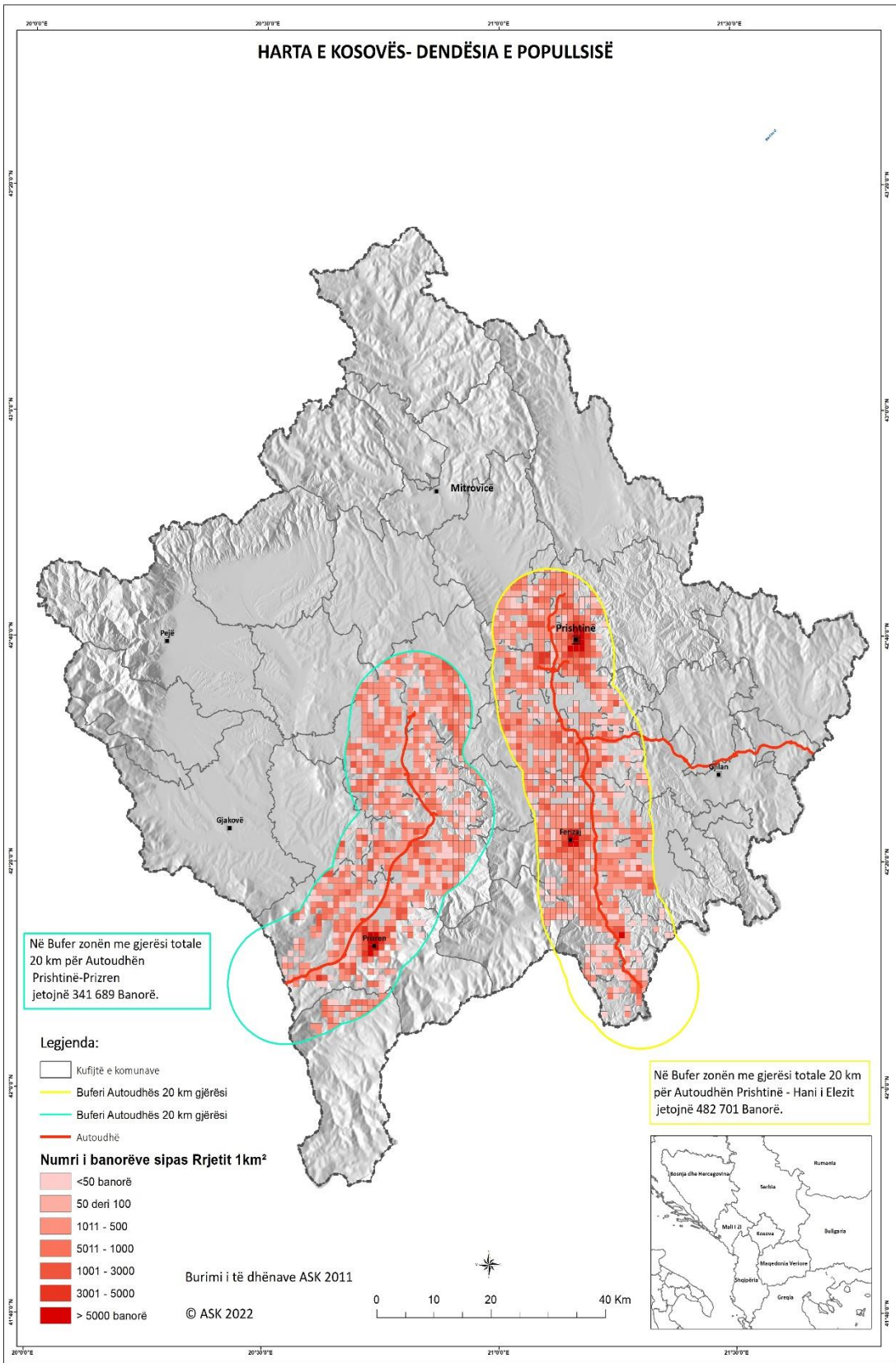
5.2 General objectives

5.2.1 General objective 1: Seamless transport connections

Transport is a fundamental service to enable our way of life. The mobility of goods and people is vital for the economy to function and for people to enjoy a high quality of life. A good transport system is a seamless system. This means that different transport modes are well integrated to provide a smooth journey from door-to-door no matter if it's a daily *commute*, international transport of heavy goods, a leisure trip or a delivery of post package. There should be available an optimal way for transport depending on the distance of the trip, volume transported and time and money being spent. These options should be easy to understand and use. The truth is we not there yet. A lot remains to be done to integrate different transport modes and make transport and traveling smoother. This objective covers two aspects of seamless connections – infrastructure and transport services.

Indicator: General objective 1	Baseline 2022	Intermediate target 2026	Final Target 2030
Share of population living in catchment area of good transport connections	46%	60%	80%

HARTA E KOSOVËS- DENDËSIA E POPULLSISË



Specific objective 1.1 Well-functioning transport infrastructure which is integrated into TEN-T network and enables the provision of multimodal transport services

Transport infrastructure functions well if it is able to cater to the traffic demand and is well maintained. Thus the capacity of the transport network is constantly improved according to the demand and developments are made to provide a service level that satisfies the users – both personal and business users and specifically also public transport providers. It should be noted that demand shall not be considered as an outside factor. It can be influenced by the provision of the transport infrastructure. For example, by increasing railway infrastructure investments, more traffic is guided to railway, thus alleviating the pressure on road infrastructure.

A specific priority of this objective is that transport network must be well integrated into the TEN-T network and connected to other transport modes to enable seamless multimodal services. The service levels and infrastructure requirement that ought to be reached are specified in TEN-T guidelines as well as numerous EU technical specifications. Every new project needs to abide to these standards to ensure interoperability between Kosovo Network and that of EU. Furthermore, having in place right maintenance plans, asset management systems and performance contract will ensure long lasting life of the expensive transport infrastructure.

The quality of the infrastructure is also one of the three pillars to achieve the second general objective – Safe transport system. It means that “well functioning” encompasses design that encourages safe traffic behaviour and decreases the severity of accidents even if they happen.

Indicator: Specific Objective 1.1	Baseline 2022	Intermediate target 2026	Final Target 2030
Length of modernized roads (km / 1000 m2).	249 km	337 km	471 km
Length of modernized railway network (km).	0 km	149,1 km	365 km

Specific objective 1.2 High quality and efficient freight and passenger transport

Ensuring better connectivity and high-quality transport requires not just hard infrastructure investments but also reform of the systems, development of services and implementation of soft measures. Transport services will continue to be provided mainly on commercial bases. Thus this objectives aims to establish a level playing field for effective service provision for transport companies. For example improvement of border crossing procedures and introduction of joint stations could significantly cut waiting times and consequently travel times. Reforming and restructuring of railways shall improve competitiveness of railways and improve their business acumen. In case of public transport public service obligations can be used, taking into account social, environmental and regional developments needs because many public passenger transport services that society needs as part of its general interest cannot be run commercially.

Social issues are a common theme for all transport modes when providing transport services. Completing transposition and implementation of relevant social policy legislation as per provisions of Transport Community Treaty Annex I would improve working conditions (working time, staff safety) and contribute to attraction new staff, managing an ageing work force and recruiting young people. . Additionally, full transposition and implementation of passenger rights regulation (Regulation (EC) No 1371/2007 on rail passenger rights and Regulation (EC) No 181/2011 on the rights of passengers in bus and coach transport) would increase the perception of transport services (rail, bus and coach). For

example, the provisions of real time passenger information and improving access for disabled persons would make the transport sector sustainable, attractive, easily accessible, and inclusive for everyone.

Indicator: Specific Objective 1.1	Baseline 2022	Intermediate target 2026	Final Target 2030
Number of passengers in railway transport.	64,000 (2021)	400,000	2 million
Cross-border transport of goods by rail (%).	1.9% (2019)	12%	35%
Exports of transport services (million euros).	67 milion EUR (2021)	>70%	>150%
The volume of international freight transport (tons per year)	5miliard ton (2019)	8 miliard ton	10 miliard ton

5.2.2 General objective 2: A safe transport system – towards vision zero

Safety is a fundamental human right. Building a safe and secure transport system is the responsibility of all participants in the transport system - from decision makers to experts, from transport network providers to planners from emergency services to transport users. In order to move towards a safer transport system society has to question established practices, examine the feasibility and applicability of international best practices and have the courage to experiment. Accidents due to human error will always happen. Transport system shall be designed to minimize both these occurrences and their consequences (fatality, serious injury, serious pollution).

Indicator:

- Traffic accidents with victims (per million inhabitants). The indicator is the number of people killed each year in transport accidents (including all modes of transport) per million inhabitants.

Baseline (2019) – 65. Intermediate target (2026) – <20%. Final target (2030) – <30%.

Indicator: General objective 2	Baseline 2022	Intermediate target 2026	Final Target 2030
Traffic accidents with victims (per million inhabitants).	65 (2019)	< 20%	< 30%

Specific objective 2.1 Safe transport environment

A safe traffic environment is one where the three pillars of traffic safety are observed. **Users** who are knowledgeable about possible hazards and take responsibility for making traffic safer. **Infrastructure** which is both safe and promotes safe user behaviour and **vehicles** which are safe and promote safe user behaviour.

Indicator: Specific Objective 2.1	Baseline 2022	Intermediate target 2026	Final Target 2030
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Average number of fatalities in road traffic in last three years.	92 (2019-2021)	< 20%	< 30%
Number of accidents/incidents in rail sector.	18 (2021)	< 20%	< 30%
Number of incidents in aviation	5 (2021)	< 20%	< 30%

Specific objective 2.2 Well functioning safety management system

As the management of traffic safety is a multidisciplinary field involving different parties, it takes special effort to make a system where the rights and responsibilities, data gathering and dissemination, surveillance etc is well coordinated and efficient. This includes efficient transposition and enforcement of safety regulations. A well working system facilitates the creation of safe traffic environment (see previous specific objective).

Indicator: Specific Objective 2.2	Baseline 2022	Intermediate target 2026	Final Target 2030
Share of actions implemented (%)	0%	30%	60%

5.2.3 General objective 3: Smart and sustainable transport

There is a massive change happening in the transport sector across globe. The enabling factor of new technologies coupled with the limits set by our planets natural resources create an environment for a new paradigm in transport. It is a paradigm of on-demand, on-time, flexible services powered by alternative energy with a lower carbon footprint. Reducing the impact of transport on climate change, and enabling digital transition is one of the key pillars of the EU and WB strategic policy. Given the high air pollution in Kosovo coupled with GHG emission, the strategy envisions to climate proof infrastructure, enable more zero emission vehicles, promote alternative fuel infrastructure (such as e-charging stations), intelligent transport systems, digital freight and mobility as a service solution. All in order to enable less pollution with better efficiency.

Indicator: General objective 3	Baseline 2022	Intermediate target 2026	Final Target 2030
Total emissions in transport sector (CO2 equivalent in Mt).	1,337 Mt	< 12%	< 20%

Specific objective 3.1 Digital solutions and innovative services in transport sector

Intelligent Transport Systems (ITS) can significantly contribute to a cleaner, safer and more efficient transport system. They can make transport safer, more efficient and more sustainable by applying various information and communication technologies to all modes of passenger and freight transport. Moreover, the integration of existing technologies can create new services. ITS systems are key to supporting jobs and growth in the transport sector. Applications to improve traffic management (such as ITS, ERTMS) could reduce congestion and increase capacity, while applications such as e-freight could make transport paperless and improve flow of goods and significantly reduce logistics time and costs. Additionally, user centric applications such as real time information, online booking, mobility as

a service could contribute to modal shift to cleaner modes of transport. Transposition of the relevant EU acquis (such as ITS directive, e-freight Regulation etc.) present a cornerstone of deployment of ITS.

Indicator: Specific Objective 3.1	Baseline 2022	Intermediate target 2026	Final Target 2030
Share of actions implemented (%)	0%	30%	60%

Specific objective 3.2 Sustainable and resilient transport system

To achieve the objectives set in the European Green Deal, Green Agenda, da and Paris Agreement, it is necessary to make transport more sustainable. The three pillar for doing this are: 1) a shift from road to rail, meaning that the share of transport on railway shall increase as compare to road transport, 2) management of mobility demand and the promotion of sustainable transport modes, to increase the share of trips made in a sustainable way and 3) promoting cleaner vehicles to reduce the emissions of the vehicle fleet. The first two pillars are already covered under specific objective 1.2 “High quality and efficient freight and passenger transport” Here the third pillar is elaborated which encompasses also three aspects: a) monitoring of emissions and introducing more stringent emission standards to be implemented over period of time, b) setting the legal basis through adoption of the alternative fuel infrastructure directive and setting up national policy frameworks for building a network of alternative fuel infrastructure⁵ (such as e -charging stations) c) boosting the uptake of zero emission vehicles

Additionally, effects of climate on transport infrastructure and consequently movement of people and business is becoming more apparent. To that point climate proofing of infrastructure according to EU Technical guidance on the climate proofing of infrastructure in the period 2021-2027 and EU benchmarks is a necessity to ensure resilient transport infrastructure and ensure minimum impact of severe weather conditions on passengers and business mobility.

Indicator: Specific Objective 3.2	Baseline 2022	Intermediate target 2026	Final Target 2030
Share of alternative fuel vehicles (hybrid, electric, hydrogen)	0,85%	5%	10%
Share of Euro 5 or higher lorries (N2 and N3) and buses (M2 and M3) of the respective fleet.	17,3%	20%	25%




⁵ Directive 2014/94/EU of the European Parliament and of the Council of 22 October 2014 on the deployment of alternative fuels infrastructure

6. Transport modes and multimodality

General objectives laid down in the strategy are overarching across all the transport modes. All transport infrastructure needs to be in good shape, the services of high quality, traveling safe and the impact on environment reduced. But the day-to-day implementation of these objectives is still carried out by different transport modes. Thus, the following chapter covers specific transport modes and how they contribute to achieving the general objectives. General objectives and transport modes form a matrix structure (see table 1) where every transport mode is elaborated in the context of the three general objectives and their corresponding specific objectives.

In addition, in order to achieve the strategic objectives all transport modes must also be looked at in connection to each other. This is called multimodality and lays down principles how to make best use of each transport modes strengths while avoiding unnecessary duplication. A special case is maritime transport. As Kosovo does not have either ports or inland waterways, maritime transport is mentioned only under multimodality in the context of access to three major ports in neighbouring countries which are important for Kosovo's exports and imports.

Table1. The relationship between general objectives and transport modes

General Objectives	Objective 1	Objective 2	Objective 3
Transport Modes	Seamless transport connections	A safe traffic system - toward vision zero	Smart and sustainable transport
Multimodality			
 Road Transport	Well - functioning road infrastructure	Safe user behavior Safe road infrastructure	Digitalization and innovative services
	High quality road transport services	Safe Vehicles Well organized traffic safety management	Sustainable road transport and resilient road infrastructure
 Rail Transport	Well - functioning rail infrastructure	Safe rail infrastructure and rolling stock	Digitalization in rail transport
	High quality rail transport services	Efficient enforcement of safety regulations (e.g transport of dang. Good	Sustainable and resilient rail transport
 Air Transport	Well - functioning airports	Safe airports	Digitalization in aviation
	Good variety of frequent air connections	Safe air traffic	Sustainable and resilient aviation

6.1 Multimodality

6.1.1 The principle of multimodality

European Commission defines "Multimodality" in the transport sector, or "multimodal transport" as the use of different modes (or means) of transport on the same journey. The concept applies to both freight and passenger transport and in both cases can now be driven on by the growing trend towards digitalisation. Multimodality takes advantage of the strengths of the different modes, such as convenience, speed, cost, reliability, predictability, etc, and in combination, can offer more efficient

transport solutions for people and goods which will help ease the pressure on our congested roads, and make the whole sector more environmentally friendly, safer, and cost efficient. In this respect multimodality will help bring about a truly sustainable and integrated transport system.⁶

Multimodality requires infrastructure e.g. physical place for the switch of transport modes to take place and unified processes e.g. freight documents, safety standards, ticketing systems in order to be possible. It also often depends on information being readily available for the client/consumer e.g. travel planners. This means that public and private sector have to work closely together to integration the different building blocks of a multimodal journey. This cooperation is something that the public sector can promote by taking an active role in facilitating knowledge sharing, setting up cooperation platforms and participating in international networks etc.

6.1.1 Multimodality in freight transport

Multimodality in freight transport is generally considered economically viable over distances exceeding 300 km. With Kosovo being a relatively small country, this means that multimodal freight transport should be considered mainly in the context of international transport as opposed to domestic transport. More precisely it's road-rail integration that would be the backbone of multimodality in Kosovo.

In terms of infrastructure Miradi is currently the main multimodal terminal while other terminal locations shall be considered in parallel to the modernization projects of railway. The most important being the dry hub at Shkabaj next to Prishtina. Additionally, access to terminals and service facilities should be enabled to all undertaking, private and state.

In terms of promoting the development of companies that provide and use multimodal services cooperation with non-governmental institutions shall be strengthened, in order to work together with relevant international entities to promote multimodality in the regional level. Transposing and implementing combined transport directive as well as Regulation (EU) 2020/1056 on electronic freight transport information will provide framework for faster development of multimodality.

Targeted actions should be considered in order to ensure that transport of dangerous goods is done at appropriate safety standards, in compliance with Directive 2008/68/EC on inland transport of dangerous goods. Cross-sectoral cooperation should be enhanced in order to ensure that the relevant services are developing procedures for their specific fields of competence. For example that firefighting departments have appropriate extinguishing agents for substances transported on each specific network and the appropriate vehicles for intervention in case of accident, in particular with regard to multimodal hubs.

In terms of maritime transport Kosovo relies mostly on three foreign ports – Durres, Thessaloniki and Bar. Thus investments into rail, road, border and terminal infrastructure shall take into consideration the need to improve multimodal connections with these ports.

6.1.2 Multimodality in passenger transport

While freight transport has very specific requirements to effectively use multimodality, passenger transport almost always uses some kind of multimodality. Even the simplest bus trip generally requires the user to walk to the bus stop, meaning that there should be attractive and safe walking environment. In general, this means that after establishing the base infrastructure and services for

⁶ https://transport.ec.europa.eu/transport-themes/logistics-and-multimodal-transport/2018-year-multimodality_en

effective public transport, multimodality is the third most important factor of public transport competitiveness. Planning should be coordinated with municipality level to ensure harmonised approach between national and railway strategies and sustainable urban mobility plans. Also a stronger emphasis shall be put on ensuring passenger rights.

6.1.2.1 Multimodality with railway transport

As the strategy aims to revitalize rail transport in Kosovo and effectiveness of rail connections relies heavily on the integration with other transport modes, it is critical to incorporate multimodality solutions into the planned railway projects (see chapter 6.3). Railway would be the backbone of fast international and intercity transport between regional centres. The location of railway stops and stations, the facilities there (short- and long-term parking for cars, bicycles, but stops, toilets etc.) and access to them with different transport modes must all be thoroughly planned.

6.1.2.2 Integration of intercity bus connections and urban mobility

As railway would connect only regional centres with each other, and its development will take time, intercity buses would remain an important service for national and regional transport. Although their stops and station are generally smaller compared to railways, they still need similar access with other transport modes. For example, in more rural areas, the emphasize could be on park and ride facilities to allow users access to the bus network from remote locations by car. In urban areas safe bicycle parking might be needed. The locations of bus stops are also important to minimize the distance users have to travers to switch from one bus the other. The development of micromobility and new mobility solutions shall also be kept in mind when planning the integrations of different public transport modes. For example, short-term car rental which uses electric vehicles and might need charging stations.

6.1.2.3 Integration of information and ticketing systems

As mentioned in the introduction to multimodality, the availability of (real-time) information can be a key factor determining the success of multimodality. From static “poster-style” information to electronic journey planning tools and real-time information in vehicles – it all enables to pick the best combination of transport and eases the anxiety related to changing transport. Different options for purchasing tickets widen the possible user base and make the experience of using public transport more attractive. New technologies such as Mobility as a Service can play key role in the future for providing daily mobility options.

6.1 Road transport

6.1.1 Seamless road transport

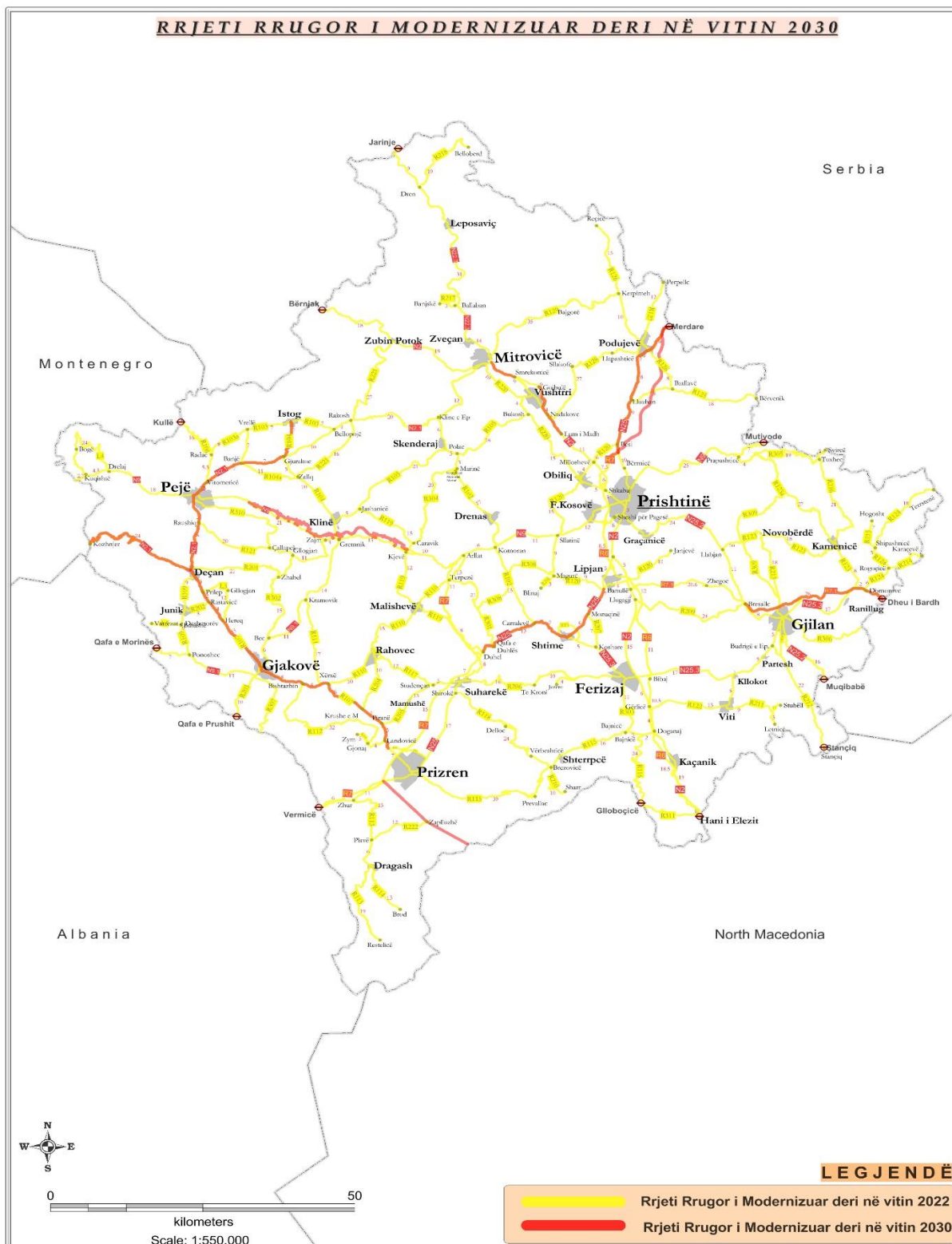
Road transport remains by far the most important mode of transport domestically. It is also a very important mode for regional cargo and passenger transport. Thus, although the strategy foresees a shift from road to rail, the improvements to road transport still constitute major benefits for transport users in Kosovo.

6.1.1.1 Well-functioning road infrastructure

Development of road infrastructure

The capacity of road infrastructure should be able to safely service transport demand. The highest capacity roads – motorways – shall be developed to service an average annual daily traffic exceeding 17 000 vehicles. The priority is the completion of TEN-T core and comprehensive networks according to the TCT.

The development of the roads that will connect Pristina with the other main centers of Kosovo, should be done by expanding the existing roads by providing services to spatial developments along the road and by providing development of the maximum speed of at least 80 km/h for road users.



Maintenance of road infrastructure

Currently the requirements for road repairs that are included in the three year road maintenance contracts are defined by visual inspection by regional managers. In the future road asset management system (RAMS) would be introduced to harmonize the criteria for road condition and repair works tendered in the maintenance contracts. This will enable to better compare the feasibility of different repair works and thus improve the cost effectiveness of tendered works.

As for routine maintenance (winter and summer maintenance) new technologies should be introduced to reduce the negative effects of maintenance on environment and long-term road condition.

Capacity of planning, engineering and supervision

Improved planning, engineering and supervision in road development should increase the effectiveness of funds used for both development and maintenance of road. This means increased road user satisfaction for the same amount of funds. The priorities are as following:

- The establishment of a separate structure in the state administration, responsible for roads, which will include and will not be limited to the planning, management, safety and development of road infrastructure, vehicles, SIT, etc.
- Establishing and developing a comprehensive database for the road network that is easily usable by the state road administration and road users and meets the requirements of the highest road database standards, including and not limited to in RAMS, HDM-4 and other data systems.
- Approval of rules, standards, manuals for preparation, execution, supervision of projects/contracts for maintenance, construction, rehabilitation, signaling, etc.
- Permanent raising and training of capacities in the management and supervision of projects/contracts for maintenance, construction, rehabilitation, signaling, etc.

6.1.1.1 High quality road transport services

Freight transport

Public sectors actions in the field of freight transport shall create a level playing field for transport companies both domestically and abroad while enabling a timely, reliable and safe service which promotes the competitiveness of Kosovo's economy. This includes improving periodic checks of operators, their permits, cargo and vehicles, working towards membership in international organizations and fair bilateral agreements and permits, streamlining border, customs, licencing and permits procedures especially by providing digital service, helping digitalize the sector improving access to terminals.

Public transport

Public transport has a key role to play in providing equitable mobility options to all people. It is also relevant in achieving the sustainability objectives of transport sector as it has a considerably lower environmental footprint than car travel. In urban areas it helps to create a safe and human centric urban environment. In order to achieve all of the above, public transport has to be accessible, reliable and comfortable. With railway access being limited to major cities and settlements along the railway connecting to Prishtina, a large portion of travel demand would still be covered by bus connections. As the regulation and provision of public transport is divided between national and local governments it is critical that they cooperate to increase the attractiveness of public transport because the latter is very much dependent on an integrated seamless system.

- *Intercity and regional public transport*

Public transport management and provision needs a major reform in order to consolidate the currently fragmented and unprofitable sector while at the same finding ways to provide better connections to under-served areas. However this can not be done haphazardly. Thus a thorough public discussions will be held with all relevant stakeholders to come to a comprehensive plan – a public transport development program. Together with intercity connections this shall include a concept for improving public transport connections for daily commute in the seven Kosovo regions.

- *Local public transport*

National government shall provide advisory services to municipalities concerning the scope, format, preparation and monitoring of local transport plans, including the implementation of cooperation in accordance with national transport objectives and obligation of municipalities to draft these plans in accordance with the national transport strategy. This shall be done in consultation with the Association of Municipalities and the Ministry of Local Government. A formal liaison shall be established with municipalities in order to support them in developing urban transport plans. The support to develop urban mobility shall not be limited only to public transport but encompass all modes of mobility in urban environment and integration services like real-time info and ticketing (see section 6.1.3.1).

6.1.2 Safe road transport

Road transport is the biggest contributor to casualties in transport. Thus, it is road transport that has to make the biggest improvement in improving safety. Kosovo should become one of the best performers in the West Balkan Countries regarding traffic safety and should be at least on average level compared to EU countries. In order to achieve that, all participants in traffic and traffic planning have to cooperate and take responsibility for the creation of a safe traffic environment. As traffic safety is a complex interdisciplinary field with extensive details that must be observed, a new traffic safety program shall be adopted that covers in more detail the following topics presented below.

6.1.2.1 Safe traffic behaviour

Safe traffic starts with traffic users understanding the hazards of traffic and taking responsibility in creating a safe traffic environment. This applies both to professional drivers and non-professional drivers. To facilitate this the following priority areas will be addressed in the traffic safety program: traffic education and campaigns, driver education, training and licensing, children and young road users, elderly road users, pedestrians, bicycles, mopeds and motorbikes, lorries and buses, post-accident care.

6.1.2.2 Safe road infrastructure

Traffic users need safe infrastructure to fully be able to take a share in responsibility in traffic safety. The following topics shall be addressed in traffic safety program: infrastructure safety management, speed reduction at dangerous spots and villages, dual carriageways with at grade crossings, safety barriers and road marking, road works safety.

6.1.2.3 Safe vehicles

Improvements in the passive safety of vehicles played the greatest role in reducing the number of road fatalities in the last decade. It is evident that newer vehicles provide higher safety and reduce casualties and severe injuries when accidents do happen. In the last years technical vehicle inspection improved considerably, but improvement can still be made. Traffic safety program shall address at

least the following topics: technical vehicle inspection, control-system for vehicles on the road by the Police and the Inspectorate of the Ministry of Infrastructure, control of overloading and cargo safety.

6.1.2.4 Well organized traffic safety management

The multidisciplinary aspect of traffic safety management requires good cooperation between different institutions and advanced tools, data and skills. Traffic safety program shall address the following topics to facilitate that: gathering and dissemination of traffic safety data based on CADAS⁷, efficient transposition and enforcement of safety regulations (including EU Acquis applicable for tachographs, transport of dangerous goods, weights and dimensions, competence of professional drivers etc.), an efficient framework for cooperation between different authorities.

6.1.3 Smart and sustainable road transport

The change in the transport paradigm mentioned under general objective 3, influences road transport the most. As was the case with transport safety, road transport is the biggest contributor to negative environmental effects and thus has the biggest potential for improvement. This improvement comes in many forms. A shift to more sustainable transport modes (rail transport, public transport) as covered in other chapters of the strategy is an important step. This chapter covers the implementation of intelligent transport systems, innovative services, alternative fuels and the resilience of the roads to climate change.

6.1.3.1 Digitalization and innovative services

Digitalization in road transport takes many forms. Directive 2010/40/EU⁸ covers many intelligent transport systems (ITS) that need to be implemented in Kosovo as well. In order to do that an ITS program shall be adopted. The first priorities in this field will be the implementation of road related ITS systems (variable road signs, road cameras, road weather, traffic counting etc.) Besides actions listed in the directive, a concept shall be drawn for the establishment of a nation-wide electronic ticketing system in Kosovo, which will be part of the public transport development program.

Digitalisation of freight transport and logistics is encouraged through Regulation (EU) 2020/1056 on electronic freight transport information to reduce administrative costs, improve enforcement capabilities of competent authorities, and enhance the efficiency and sustainability of all transport modes. The regulation needs to be transposed and certification system put in place to enable an interoperable electronic freight information exchange, reducing administrative burden for logistics operators, and facilitating multimodal transport.

In terms of innovative services legislation will be amended to enable safe uptake of new technologies and services depending on the maturity and deployment of these services.

6.1.3.2 Sustainable road transport and resilient road infrastructure

Besides increasing the competitiveness of sustainable travel modes and thus limiting the number of trips made by cars, the key to reducing negative environmental effects of road transport lies in cleaner vehicles, especially alternative fuel vehicles. With more electric vehicles entering the market and decreasing prices it can be expected that early adoption of electric vehicles will increase. This requires

⁷ A common road accident data framework in Europe. <https://www.itf-oecd.org/sites/default/files/docs/3-yannis.pdf>

⁸ DIRECTIVE 2010/40/EU OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 7 July 2010 on the framework for the deployment of Intelligent Transport Systems in the field of road transport and for interfaces with other modes of transport. <https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32010L0040&rid=9>

a charging network both for regular and fast charging options. Together with private companies and local municipalities, best options shall be discussed for establishing the network. Additional incentives for the introduction of zero-emission vehicles shall also be considered. For conventional vehicles emission testing shall be improved and EURO 6 standard shall be established where applicable.

Climate change is expected to increase the severity and frequency of extreme weather events and thereby lower the reliability of the transport system. A TCT led project will elaborate road network vulnerability assessment for the whole region and will be adopted by Kosovo including Resilience Action Plan for Road on Core/Comprehensive Network.

In addition, better understanding of the effectiveness of different measures towards reducing transports environmental effect is needed along with higher awareness of possible solutions. Thus the system for collecting data, making impact and cost-benefit analyses and monitoring shall be improved and awareness raising projects initiated.

6.2 Rail transport

6.2.1 A competitive alternative to road transport

Development of railway and shift from road to rail is key to making transport more sustainable and providing safe and fast connections both internationally and between Kosovo's different regions and industrial areas. In conjunction with multimodal terminal developments freight transport on railway will increase significantly. The main share of it will be export and import, due to improved interoperability and better connections to foreign ports. But also domestic freight transport shall benefit, especially industrial sectors. After the modernization of infrastructure, it will be possible improve also passenger transport, which could become the backbone of intercity connections.

6.2.1.1 Well-functioning railway infrastructure

Modernization of the infrastructure is the first step to modernize railway service. Modernized railway should mostly allow speeds of at least 120 km/h, will be mainly single track and not electrified. Rehabilitation of existing railway has started with the reconstruction of Route 10 which will be finished mostly by 2025 with some sections being finished by 2027 and will continue with east-west links. New links shall also be planned connecting Kosovo with Albania (including a link with Gjakova city), connecting Prishtina airport, building a new central station in Prishtina and a dry port terminal in Shkabaj. All modernized and new stations and stops shall have adequate infrastructure to improve multimodality with other transport modes.



6.2.1.2 High-quality rail transport services

Together with the modernization of infrastructure a modernization of service provision on railways will be carried out. This covers both freight and passenger transport.

Freight transport on railways

In order to make rail freight transport more competitive relevant EU legislation will be transposed and implemented for technical specifications and interoperability. As mentioned previously, with Kosovo being a small country, rail freight transport is most feasible for international transport. Thus the success of railway modernization depends on integrating the whole Western-Balkan region into the TEN-T and also fostering Europe Asia connections. Mutual recognition of documents on the regional

levels (such as operating licenses, train driver licenses, safety certificates, vehicle authorisation), rail market opening on the regional level and interoperability would help railways attract more transport volumes and help them become reliable alternative to road transport. For this to happen Kosovo will actively participate in regional cooperation according to the transport community treaty article 11. The first step to implement the treaty this has been a protocol with Macedonia allowing access to infrastructure in both countries. The process to sign protocols with other partners shall continue. In addition Kosovo shall apply to relevant international organizations (UIC, RNE, ERA, CIM, RID)/.

Kosovo shall apply together with WB countries to be included in Rail Freight Corridor mechanism. This provides opportunity for establishing concrete cooperation framework between infrastructure managers and railway undertaking to improve infrastructure planning, agree on maintenance closures and better track access along whole corridors. Once the new proposal of the TEN-T guidelines is adopted, which specifies setting up RFC in Western Balkans, Kosovo shall actively participate in the building of the RFC framework.

Modernization of rolling stock is also needed to make use of the interoperable railway system. For this to happen restriction on non-compliant rolling stock will be applied and enforced to motivate the operators to renew their rolling stock.

Passenger transport on railways

Besides increasing the speeds on railways through before mentioned investments, success of passenger transport depends on new rolling stock and increased frequencies. Public service agreements for the provision of passenger transport shall be updated to provide for increased quality in passenger transport. The upgrade of information and ticketing systems shall be included in the concept of the nation-wide electronic ticketing system mentioned in paragraph 6.1.3.1.

6.2.2 Safety on railways

The modernized railway will allow higher speeds compared to that of today, leading to potentially more serious consequences of accidents. In order to mitigate that, all rehabilitation projects shall take special consideration to improve the safety on railways and the vehicles fleet shall be upgraded.

6.2.2.1 Safe rail infrastructure and rolling stock

New reconstructions will be done in accordance with the requirements of Technical Standards of Interoperability and European standards including deployment of ERTMS. Level crossing safety is evaluated and high risk crossing will be upgraded. As most accidents on railways incur on crossing, this topic will be detailed in the Road Safety Program and action plan.

Modernization of rolling stock mentioned in 6.2.1.2 shall also improve safety and security by complying with the requirements set for transport of dangerous goods. In particular the park which is used for substances which are most frequently carried, such as fuels. Where maintenance is not feasible, replacement of items non-compliant with the legal requirements – Directive 2008/68/EC on inland transport of dangerous goods and the Regulations concerning the International Carriage of Dangerous Goods by Rail (RID) - should be planned by the relevant economic operators in cooperation with the relevant international financial institutions who could aid.

6.2.2.2 Efficient enforcement of safety regulations

Although railway safety regulation is in line with EU acquis, the enforcement of these regulations can be improved. In order to better facilitate the recommendations of accident investigation unit regulation regarding the investigation of railway and aviation accidents will be separated from the Law of Kosovo Railways and Law of Civil Aviation and joined into one regulation.

6.2.3 Smart and sustainable rail transport

6.2.3.1 Digitalization in rail transport

The backbone of digitalization on the railway is the introduction of ERTMS. All new and modernized sections will include ERTMS and as mentioned previously new rolling stock compatible with ERTMS will be required. As mentioned previously the upgrade of information and ticketing systems shall be included in the concept of the nation-wide electronic ticketing system.

6.2.3.2 Sustainable and resilient rail transport

The modernization of railway transport to promote a shift from road to rail is in itself a major facilitator of sustainable transport. In addition to that, new rolling stock shall be more environmentally friendly and increased safety shall minimize hazardous accidents. A TCT led project will elaborate rail network vulnerability assessment for the whole region and will be adopted by Kosovo including Resilience Action Plan for Rail on Core/Comprehensive Network.

6.3 Air transport

With the transition of the economy to more service based and digital economy with high value-added companies, there is an increased need for fast international connections to major business hubs and important trade partners. Development of air transport provides these connections to support the growing business sector. At the same time it is paramount to guarantee highest levels of safety and security in aviation and reduce its high environmental impact.

6.3.1 Connecting Kosovo globally

6.3.1.1 Well-functioning airports

The concession agreement with LIMAK Kosovo International Airport J.S.C. has enabled to bring Prishtina airport to good international standards. Upgraded terminal, apron and ILS system make it possible to adequately serve the current and near-future traffic demand which is expected to increase to 4.5 million passengers by 2025. Thus no major upgrades are currently planned. Smaller upgrades shall include the enlargement of the boarding gate area (from 8 to 12), aircraft serving equipment and in terms of operation the increase of peak operation time. LIMAK is preparing for the Customer Terminal to be connected with the dry port.

6.3.1.2 Good variety of frequent air connections

Expansion of route network from Prishtina is mainly promoted by Prishtina airport through their incentives program. This shall be supported by the activities of the government in the field of tourism promotion according to NDS.

6.3.2 Safety in aviation

Safety in aviation is a combination of modern technology, well-established processes and high-level knowledge and personnel skills. As opposed to road traffic where some accidents are bound to happen and it is important to mitigate their consequences, the strict process in aviation shall detect all unintentional defects to prevent any accidents.

6.3.2.1 Safe airports

LIMAK Kosovo International Airport J.S.C. is applying International Safety standards (ISAF) and upgrading regularly as required. Most of the standards are already completed.

6.3.2.2 Safe air traffic

Civil Aviation Agency will continue to develop and implement effective strategies, regulatory frameworks and processes to ensure that aviation activities achieve the highest practicable level of safety. The normalisation of the Kosovo's airspace, membership and cooperation with international

aviation organisations, implementation of ECAA agreement as well as implementation of State Safety are the priorities for this sector. Kosovo will continue to build up competence and structures of the Air Navigation Service Agency to take over the management of upper airspace in the future. Work will also continue towards establishing new direct routes in the framework of Balkans Aviation Normalizations Meetings.

6.3.3 Smart and sustainable aviation

6.3.3.1 Digitalization in aviation

Taking over the management of upper airspace requires the development of technical systems of air navigation systems. These include among others mobile tower for Gjakova Airport and Contingency mobile tower for Prishtina Airport, integrated and dynamic air traffic and airspace management system (air traffic services, airspace management and air traffic flight management), UTM, which is an advanced drone management system (enabling drone registration, submission of requests to fly a drone, approval, monitoring of drones, etc) and advanced systems for runway, manoeuvring and movement area (A-SMGCS, RIMCAS, Advanced ATC TWR⁹).

6.3.3.2 Sustainable and resilient aviation

In order to reduce the relatively big negative environmental effects of aviation it is important to make use of the aforementioned digital innovation and work together internationally to optimize flightpaths, make them more straight and thus reduce the overall fuel consumption in aviation.

7. Implementation, monitoring and reporting arrangements

A Planning and Monitoring unit shall be established that would monitor and report regularly on implementing activities and results achieved by responsible sectors/departments as set by Multi Modal Transport Strategy 2030.

After the approval of the Multimodal Transport Strategy 2030 and its action plan, implementation begins. Effective implementation includes appropriate institutional arrangements and quality and timely monitoring and reporting.

The main institutions that will be involved in the monitoring and reporting of strategic documents and the action plan are as follows:

- Ministry of Environment, Spatial Planning and Infrastructure;
- Responsible departments
- Office for Strategic Planning
- Committee for Strategic Planning
- Government of Kosovo.

The responsibilities of the Ministry of Environment, Spatial Planning and Infrastructure in the monitoring and reporting process are as follows:

- Create an effective monitoring and reporting mechanism in accordance with monitoring and reporting requirements and ensure its implementation.
- To collect information from the participating ministries for the implementation of the strategic document and its action plan.

⁹ • A-SMGCS (Advanced Surface Movement Guidance and Control Systems) Radar for ground movements of aircraft in manoeuvring area

• RIMCAS (Runway Incursion Monitoring and Collision Avoidance System) System that serves to monitor and avoid aircraft collisions on the runway.

• Advanced ATC TWR – System that optimizes processes and resources through efficient communication and integration between airport services and air navigation services.

- To prepare regular annual reports on the implementation of the strategic document and the six-monthly report on the implementation of the action plan.
- To organize the work of the interministerial coordination body, for which they provide secretariat functions.
- To initiate discussions on problematic issues, if necessary.
- To publish regular reports on the website of the ministry after their approval by the relevant body

The Ministry of Environment, Spatial Planning and Infrastructure through the relevant departments will prepare 2 reports:

- The six-monthly report on the implementation of the action plan
- The annual report on the implementation of the strategic document.

8. Budgetary impact of strategy implementation

After the approval of the STMM 2030 (narrative), the Action Plan will be drawn up with three-year budget plans based on the Medium-Term Expenditure Framework. each action will have its cost. Then it will be assessed whether it is possible that the total amount will be taken from the budget, what are the alternative sources of financing./

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The general cost estimate according to the strategic objectives and the specific objectives of the strategy is;

Year	Central budget	Municipalities budget	IPA Found	Other grants	Loans	Total
2023	169,168,869				33,000,000	202,168,869
2024	130,341,077				16,257,227	146,598,304
2025	134,201,402				5,700,000	139,901,402
2026	201,302,103					201,302,103
2027	202,308,614					202,308,614
2028	203,320,016					203,320,016
2029	204,336,617					204,336,617
2030	205,358,300					205,358,300
Totali	1,450,336,998				54,957,227	1,505,294,225