Bishkek's sustainable urban mobility development

A review of current policies and investments with recommendations for enhanced transformative impact









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Table of contents

1. State of urban mobility in Bishkek in recent years	2
2. Impact of transport in Bishkek on air quality	3
3. Existing policies for the development of urban mobility	5
4. Review of recent international investments and technical assistance	7
Projects of the European Bank for Reconstruction and Development (EBRD)	7
Projects of the Asian Development Bank (ADB)	8
Projects of the World Bank and the United Nations Economic Commission for Europe (UNECE)	9
Project information disclosure and transparency issues	9
5. Are there opportunities for civil society participation in urban politics?	10
6. Shrinking civic space in Kyrgyzstan	11
7. Recommendations	12
Sustainable urban mobility	12
Spatial planning	12
Active mobility	13
Public transport and walkability	13
Multimodal streets	14
Road safety	14
Organisation of parking spaces and car-free zones	15
Electric buses versus trolleybuses	16
Public participation	16



1. State of urban mobility in Bishkek in recent years

Over the past 24 years, Bishkek's population has increased one and a half fold. Its territory has expanded similarly, due to residential neighbourhoods of individual low-rise buildings that often lack essential social infrastructure. Officially, the city's boundaries include 57 such residential neighbourhoods, which occupy nearly 30 per cent of the capital's area. More than 200,000 people live in these areas.

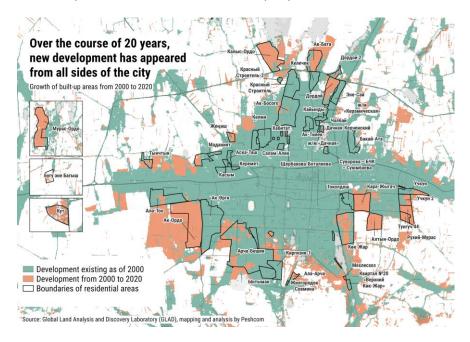


Figure 1. Expansion of urban areas in Bishkek between 2000 and 2020. Source: Peshcom

Most of these neighbourhoods are not served by municipal buses and trolleybuses, so marshrutkas (minibuses) have taken on this role. Private cars account for a significant share of transportation, with over 99 per cent of trips in the capital made by private vehicle and less than 1 per cent by public transport. Minibuses handle 75 per cent of public transport passenger traffic.²

The development of public transport in Bishkek significantly lags behind demand. In recent years, the number of buses and trolleybuses in operation has regularly decreased due to the wear and tear on the fleet. In 2022, deterioration of the transport fleet affected from 40 to 70 per cent of vehicles.³ The implementation of electronic ticketing only began in 2020, and until 2023, online transactions remained at a low level due to inefficient management.

¹Peshcom, "Be patient". How residential areas are incorporated into Bishkek but left with the same problems, Peshcom, 12 August 2023.

² Bishkek City Council, <u>Концепция развития общественного пассажирского транспорта и дорожной инфраструктуры города Бишкек на 2023 - 2026 годы, Bishkek City Council</u>, 2023.

³ Department of Transport and Road Transport Infrastructure Development of Bishkek City Hall, <u>Анализ регулятивного воздействия на проект постановления Бишкекского городского кенеша 'О внесении изменений в некоторые постановления Бишкекского городского кенеша в сфере транспорта', Bishkek City Hall, 9 September 2022.</u>





The municipality has not given enough attention to developing infrastructure for personal mobility vehicles. There have been some attempts to create bike lanes, but they are uncomfortable, unsafe, and do not form⁴ a coherent network. The municipal bike-sharing project launched⁵ in 2022 was unsuccessful. However, there is significant demand for cycling infrastructure, partly due to bike delivery services and kick scooter sharing.

Since 2014, Bishkek has seen extensive road construction and road expansion funded by Chinese grants. This has led⁶ to significant tree felling and an increase in induced demand for private car use. Often, the roadworks have been of poor quality⁷ and marred by numerous instances of corruption.⁸





Figure 2. Toktonalieva Street before and after road widening in 2018 under a Chinese grant. Photos: Kaktus.media

The unchecked increase in private cars, along with inadequate public transport and personal mobility infrastructure, has led to the paralysis of many of the city's main roads, especially during peak hours, and has worsened the capital's environmental situation.

2. Impact of transport in Bishkek on air quality

Bishkek experiences poor air quality year-round, with extreme levels of air pollution occurring during the winter heating season, which lasts from approximately October to March. One of the main sources of air pollution in Bishkek is transportation, which is the largest emitter of nitrogen oxides (NO_x) and a significant source of fine particulate matter (PM). Bishkek's annual average concentrations of PM2.5 are significantly higher than national and international standards and recommendations, including those of the European Union, the US Environmental Protection Agency, and the World Health Organization.

⁴ Gulmira Makanbai Kyzy, <u>Жалкая пародия. Велосипедисты Бишкека оценили качество построенных дорожек</u>, *24.kg News Agency*, 26 September 2020.

⁵City Administration of Bishkek, <u>В Бишкеке запустили велошеринг</u>, City Administration of Bishkek, accessed 12 June 2024.

⁶ Maria Orlova, <u>Лысый Бишкек. Как и почему столица продолжает терять зеленые зоны,</u> 24.kg News Agency, 20 September 2022.

⁷ Aidai Zulumova, <u>Не прошло и года. В Бишкеке ремонтируют все дороги, построенные за счет Китая,</u> *Radio Free Europe/Radio Liberty*, 25 July 2019

⁸ Ernist Nurmatov, <u>При проверке кредитов, выданных на строительство дорог, недосчитались сотен миллионов долларов, Radio Free Europe/Radio Liberty, 27 February 2020.</u>





Between 2010 and 2019, approximately 12 to 13 per cent (4,100 to 5,000) of annual deaths in the Kyrgyz Republic were attributed to air pollution. The healthcare costs associated with air pollution amounted to an estimated USD 388 million, equivalent to 6 per cent of the country's gross national income in 2015.

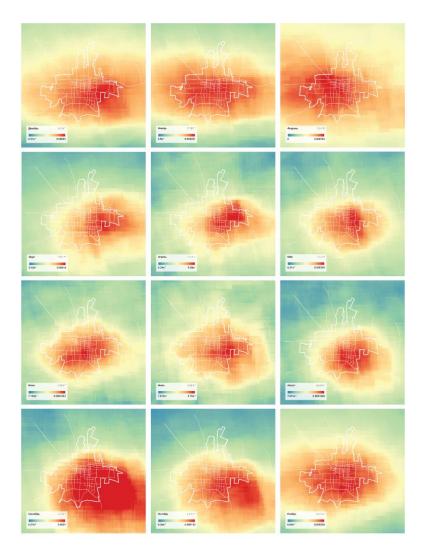


Figure 3. Satellite map images show how a cloud of nitrogen dioxide (NO₂) forms over Bishkek during the year 2020¹⁰

Diesel-powered trucks and marshrutkas (minibuses) are the largest¹¹ transportation-related contributors to air pollution in Bishkek. The annual mean concentration levels of nitrogen dioxide (NO₂) measured in Bishkek's urban background area are around 40 micrograms per cubic metre ($\mu g/m^3$), exceeding the World Health Organization's recommended limits.

⁹ United Nations Development Programme in the Kyrgyz Republic, United Nations Environment Programme, <u>Air Quality in Bishkek: Assessment of emission sources and road map for supporting air quality management</u>, *United Nations Development Programme in the Kyrgyz Republic*, *United Nations Environment Programme*, 8 October 2022.

¹⁰ Rada Valentina Kyzy, Altynai Nogoibaeva, <u>Как мы дышим диоксидом азота – опасным антропогенным газом</u>, *Peshcom*, 2022.

¹¹ Ibidem.



3. Existing policies for the development of urban mobility

Recently, Bishkek has seen positive developments in public transportation. In 2023, 624 new compressed natural gas (CNG) buses were purchased using funds from the national budget and the European Bank for Reconstruction and Development (EBRD). More buses, including electric ones from the Asian Development Bank (ADB), are expected. The number of electronic payments has increased¹² thanks to a differentiated fare system for cash and cashless payments. The schedule for municipal public transport has been improved, ¹³ dedicated bus lanes are being implemented, ¹⁴ and bus stops are being renovated. ¹⁵

The mayor's office is also actively addressing traffic congestion by increasing ¹⁶ the number of one-way streets for cars, piloting ¹⁷ an automatic traffic management system (smart traffic lights), and launching ¹⁸ the first electronic parking system. To promote environmentally friendly transportation, a pilot ¹⁹ public-private partnership (PPP) project for eco-taxis with 10 electric vehicles has been initiated. Additionally, the import of electric vehicles into Kyrgyzstan is exempt ²⁰ from customs duties until 2025.

At the same time, certain projects, such as road expansions and the construction of interchanges, prioritise the needs of private cars. This approach contradicts the principles of sustainable urban mobility and increases the risk of road traffic accidents.

The primary focus of the city administration is to address congestion issues, emphasising road infrastructure at the expense of pedestrian accessibility, such as the construction²¹ of underground and overground crossings. Currently, only two out of 16 underground crossings in Bishkek are suitable²² for pedestrian use, and they remain inaccessible to people with limited mobility.

The mayor's plans to increase the average traffic flow speed by 30 per cent, as outlined²³ in a concept for reducing traffic congestion and increasing road network capacity approved in early 2024, are concerning. According to the National Road Safety Strategy of the Kyrgyz Republic for 2023 to 2027, one of the key

¹² Maria Orlova, <u>Половина проекта «Тулпар» теперь принадлежит мэрии Бишкека</u>, *24.kg News Agency*, 28 January 2024.

¹³ Maria Orlova, <u>Снег в Бишкеке. Мэрия призвала горожан пересесть на общественный транспорт,</u> 24.kg News Agency, 12 December 2024.

¹⁴ K-News, <u>В Бишкеке внедрили выделенную полосу для общественного транспорта</u>, K-News, 30 August 2023.

¹⁵ Maria Orlova, <u>Все остановки транспорта в Бишкеке оснастят интернетом и кондиционерами</u>, 24.kg News Agency, 22 September 2023.

¹⁶ City Administration of Bishkek, <u>Внимание! 27 декабря две улицы Бишкека станут односторонними</u>, City Administration of Bishkek, January 2024

¹⁷ Maria Orlova, <u>"Smart" traffic lights put into operation in Bishkek</u>, 24.kg News Agency, 12 January 2023.

¹⁸ City Administration of Bishkek, <u>В столице в тестовом режиме запустили электронную систему платной парковки, City Administration of Bishkek, February 2024.</u>

¹⁹ City Administration of Bishkek, Запуск Муниципального ECO TAXI в Бишкеке, City Administration of Bishkek, October 2023.

²⁰ Ministry of Economy and Finance of the Kyrgyz Republic, <u>Продлена тарифная льгота на импорт электромобилей в Кыргызстан на 2024-2025 годы, Ministry of Economy and Finance of the Kyrgyz Republic, 27 November 2023.</u>

²¹ Ruslan Harizov, <u>В Бишкеке на проспекте Чуй построят два подземных перехода</u>, 24.kg News Agency, 6 July 2022.

²² Peshcom, <u>Построить и забыть. Что не так с подземными и надземными переходами Бишкека?</u>, *Peshcom*, 21 May 2023.

²³ Bishkek City Hall, <u>Концепция снижения транспортных заторов</u> и повышения пропускной способности улично-дорожной сети на территории города Бишкек на 2024-2030 годы, *Bishkek City Hall*, 2024.





causes of traffic accidents in Kyrgyzstan is drivers exceeding ²⁴ the speed limit. The World Health Organization has estimated that a 1 per cent increase in speed leads to a 4 per cent increase in the risk of fatal traffic accidents.²⁵

Bishkek contributes²⁶ to every third road accident in the country, averaging approximately eight accidents per day. Over the past decade, nearly 900 fatalities and over 30,000 injuries have occurred due to road accidents in the city, equating to approximately 3,000 casualties per year. More than half of the traffic accidents in the city involve pedestrians.

The mayor's office has announced a project²⁷ to build a highway on the site of the existing railway in the city centre. This initiative risks significantly worsening the environmental situation and quality of life for residents in that area. Additionally, experts believe this will not solve²⁸ the traffic congestion problem, but will instead exacerbate it. The trains are used by suburban residents, and if the railway is moved outside the city, people will switch to other forms of transport, increasing the load on the streets. The railway also handles freight transportation, and after its relocation, delivering goods to the city will add a heavier burden to the capital's roads.

The relocation of the two main bus terminals and the largest market (Osh Bazaar) outside the city in order to alleviate road congestion raises concerns, as it is unclear on what basis these decisions were made. Transport operators believe ²⁹ that traffic jams will worsen because passengers will travel to the bus terminals by taxi on already congested roads. Additionally, the increased distance will double the costs and travel time for passengers.



Figure 4. The former Eastern Bus Terminal on Zhibek Zholu Avenue was built in 1962 (photo: Bishkek Chief Architect's Office).



Figure 5. The new bus terminal, opened in 2024, is located on a bypass road (photo: Press Service of the Bishkek Mayor's Office).

²⁴ Ministry of Justice of the Kyrgyz Republic, <u>Национальная стратегия безопасности дорожного движения в Кыргызской Республике на 2023-2027 годы</u>, *Ministry of Justice of the Kyrgyz Republic*, accessed 12 June 2024.

²⁵ The World Health Organization, Road traffic injuries, The World Health Organization, 13 December 2023.

²⁶ Alexey Juravlev, Altynai Nogoibaeva, Aigerim Ryskulbekova, "Hardly staying alive". Why doesn't the number of road accidents in Kyrgyzstan decrease, and what can we do about it?, Peshcom, 7 November 2023.

 $^{^{27}}$ Kaktus.media, <u>Эстакада, трамвай и перенос железной дороги. Планы мэрии по избавлению Бишкека от пробок, *Kaktus.media*, 23 November 2019.</u>

²⁸ Peshcom, <u>Пандемия и маятниковая миграция. Как из-за коронавируса кыргызстанцев лишили поездов, *Peshcom*, October 2020.</u>

²⁹ Meerimai Alybekova, <u>Перенос автовокзалов. Перевозчики заявили о нарушении их прав и интересов,</u> 24.kg News Agency, 8 January 2024.





The restrictions on non-residential transport movement in the capital outlined in the 2024 concept contradict the principles of a socially just city and will worsen segregation between urban and rural populations, further depriving them of access to convenient public transport.

None of the adopted urban mobility development documents include plans for last-mile transport development. The 'last mile' refers to the distance from a person's residence to a public transport stop, which is typically covered by walking or using personal mobility devices such as bicycles or scooters.

At the same time, the mayor's office has announced³⁰ plans to construct a costly and questionable project such as a cable car with few stops, requiring additional access in order to reach them. However, there seems to be insufficient justification for such a project in Bishkek, as cable cars are typically used to overcome natural obstacles like wide rivers or rugged terrain.

It is clear from the mayor's plans that various forms of urban transportation are being addressed separately rather than as part of a unified strategy. Presently, the city's programmes and concepts, along with the decisions stemming from them, seem disjointed and often lack solid justification, potentially harming urban mobility. This underscores the importance of conducting thorough evaluations and crafting cohesive plans. Urban mobility involves a mix of transportation modes, highlighting the necessity for Bishkek to establish a multimodal transportation system that seamlessly integrates each aspect of urban mobility into a unified framework.

4. Review of recent international investments and technical assistance

Major infrastructure projects for the development of public transport in Bishkek are being implemented using credit and grant funds from the EBRD and ADB, with the transport departments of the city municipality serving as both the client and the executor.

Projects of the European Bank for Reconstruction and Development (EBRD)

Within the framework of EBRD project,³¹ 131 trolleybuses were procured, and the trolleybus infrastructure was partially renovated from 2013³² to 2018.³³ In April 2024, Bishkek City Hall announced plans to transfer trolleybuses, along with their overhead wires and power substations, to the cities of Osh, Kara–Balta, and Tokmok for further operation. The rationale behind this decision is that most trolleybuses have exceeded their service life, and the disorganised overhead wires negatively affect the city's appearance. The plan is to replace the trolleybuses with new battery-powered ones.³⁴

³⁰ Maria Orlova, <u>Канатно-дорожная система в Бишкеке. Утвержден план реализации проекта</u>, 24.kg News Agency, 31 January 2024.

³¹ European Bank for Reconstruction and Development, <u>Bishkek Public Transport Project</u>, European Bank for Reconstruction and Development, accessed 12 June 2024.

³² Committee on Budget and Finance of the Jogorku Kenesh of the Kyrgyz Republic, <u>Заключение о проекте Закона Кыргызской Республики О</u> ратификации Кредитного соглашения между Кыргызской Республикой и Европейским банком реконструкции и развития ('Продление проекта по развитию общественного транспорта города Бишкек'), подписанного 30 ноября 2015 года в городе Бишкек, 21 November 2016.

³³ Kristina Kumanchenko, <u>Когда на улицах Бишкека появятся троллейбусы, за которые заплатили € 6,3 млн</u>, *Sputnik Kyrgyzstan*, 1 August 2018, updated 14 December 2021, accessed 13 June 2024.

³⁴ Response from the Department of Transport and Road Transport Infrastructure Development, Bishkek Mayor's Office, 5 April 2024.





In response to this news, the left-wing Marxist publication Kyrgsots and the Initiative Group for the Preservation of Bishkek Trolleybuses launched³⁵ a petition called Preserve Bishkek Trolleybuses, which garnered around 1,000 signatures. Various independent experts also advocated³⁶ for the preservation of the trolleybuses.

The second project,³⁷ under the EBRD's Green Cities Framework 2, Window 2 (GrCF2 W2), has been ongoing since 2020. By 2023, 124 natural gas buses had been procured, with plans for additional bus purchases and fleet reconstruction. The procurement of the buses was a 'trigger project', marking Bishkek's commitment to join the Green Cities Programme, followed by the initiation of the process of developing a Green City Action Plan (GCAP) in September 2022. Transportation issues are also being considered in the GCAP, as confirmed at a presentation organised in April 2024, however the final plan is not publicly available to date.

Projects of the Asian Development Bank (ADB)

Since 2021, a project³⁸ has been underway with the ADB to acquire 120 electric buses, upgrade two trolleybus depots, and establish a pilot green mobility corridor³⁹ on one of the central streets of Bishkek.

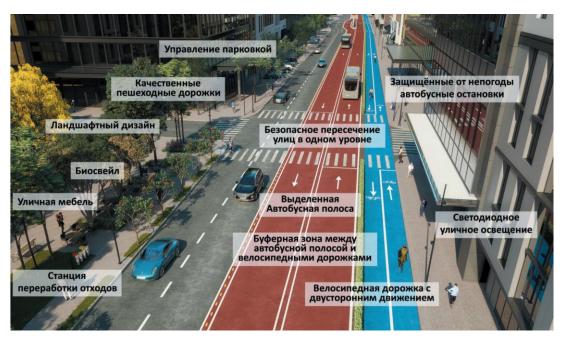


Figure 6. Green Mobility Corridor Pilot. Source: Asian Development Bank, unpublished material, 2023

In February 2024, funding was approved for an e-mobility programme, to be implemented by the ADB in partnership with the Green Climate Fund. Under this programme, Kyrgyzstan will receive grant and credit

³⁵ Avaaz.org, <u>За сохранение экологического транспорта - Бишкекского троллейбуса</u>, *Avaaz.org*, accessed 12 June 2024.

³⁶ Nurzada Tynaeva, <u>'Спасти троллейбусы'. В Бишкеке активисты выступили против планов мэрии</u>, *Radio Free Europe/Radio Liberty*, 8 May 2024.

³⁷ European Bank for Reconstruction and Development, <u>GrCF2 W2: Bishkek Buses</u>, *European Bank for Reconstruction and Development*, accessed 12 June 2024.

³⁸ Asian Development Bank, <u>ADB Approves \$51 Million Battery-Electric Bus Project in the Kyrgyz Republic</u>, *Asian Development Bank*, 1 December 2021.

³⁹ Asian Development Bank, <u>Project Administration Manual, Kyrgyz Republic: Urban Transport Electrification Project</u>, *Asian Development Bank*, 2 November 2021.





funds for climate-resilient urban infrastructure, including the development of bus lanes and infrastructure for non-motorised transport.⁴⁰

Urban mobility issues are also included⁴¹ in PPP projects, the development of which will be supported by the ADB through consultations with the PPP Center of the Kyrgyz Republic.

Projects of the World Bank and the United Nations Economic Commission for Europe (UNECE)

The World Bank's work focuses on data analysis and studying the needs in the field of urban mobility in Bishkek. Additionally, the World Bank provides technical assistance to municipal officials for exchanging experiences with peers from other countries. The UNECE wrote⁴² a car-sharing and carpooling policy in 2023, which will be incorporated into the Smart Sustainable City Bishkek by 2033 concept, developed with UN assistance.

Project information disclosure and transparency issues

Civil society learns about the results of infrastructure projects funded by the EBRD and ADB through the media, which receive information from press releases issued by the municipality and local offices of the Banks. The outcomes of these projects are often reduced to the quantity of purchased transportation equipment, while other aspects of the projects remain undisclosed. For instance, early media reports ⁴³ mentioned the study of the electronic ticketing system by German consultants, who won a USD 520 000 tender under the EBRD project and were expected to provide recommendations. However, nothing is known about the results of this work.

There is also no information about the public transport strategy for the city of Bishkek, which was supposed⁴⁴ to be developed as part of another EBRD project. It is unclear whether the Bank is involved in the current strategy⁴⁵ or not.

As a result, there is no consolidated information from the municipality that comprehensively covers all activities under international credit and grant agreements in the transport sector and helps assess the outcomes of this work. Currently, this information has to be pieced together from various sources, and often the data from different sources is inconsistent. It is also challenging to obtain information from international banks.

⁴⁰ Asian Development Bank's response, 21 May 2024.

⁴¹ Asian Development Bank, <u>ADB Partners with Kyrgyz Republic to Support PPP Development in Key Sectors</u>, *Asian Development Bank*, September 2023.

⁴² United Nations Economic Commission for Europe, <u>Разработка политики устойчивой городской мобильности в рамках инициатив по каршерингу и карпулингу Кыргызстан, United Nations Economic Commission for Europe, September 2023.</u>

⁴³ Anastasia Bengard, <u>На изучение системы электронного билетирования в общественном транспорте в Бишкеке затратят \$520 тысяч, *24.kg News Agency*, 12 April 2013.</u>

⁴⁴ Akchabar, <u>Закупленные на кредит и грант ЕБРР новые троллейбусы в Бишкеке ожидают в сентябре</u>, *Akchabar*, 8 August 2017.

⁴⁵ Bishkek City Council, <u>Концепция развития общественного пассажирского транспорта и дорожной инфраструктуры города Бишкек на 2023 - 2026 годы, Bishkek City Council</u>, 2024.

5. Are there opportunities for civil society participation in urban politics?

One of the tools for public participation in decision-making at the state level in Kyrgyzstan is the provision⁴⁶ for public discussions on laws and other regulatory documents. However, this mechanism is ineffective for several reasons,⁴⁷ resulting in these discussions being conducted formally without the proper collection and consideration of citizens' feedback.

One good example of a dialogue platform between the municipality and the civil sector is the Environmental Council, established in 2020 on the initiative of environmental activists with the support of the mayor's office. Unfortunately, the council is currently inactive due to frequent personnel changes in the mayor's office.

Personnel instability in municipal bodies is a significant obstacle that greatly reduces the effectiveness of all implemented measures. It leads to a lack of accountability and continuity, and it negatively impacts the engagement of civil society.

Despite these challenges, Bishkek has developed a proactive civil society, largely thanks to the support of international institutions and, until recently, favourable legislation. Currently, there are several public organisations promoting the principles of sustainable urban mobility.



Figure 7. The '1 Bus Instead of 50 Cars' campaign. Photo: community of activist organisations, Urban Hub Bishkek

⁴⁶ Ministry of Justice of the Kyrgyz Republic, <u>Закон Кыргызской Республики от 20 июля 2009 года № 241 О нормативных правовых актах Кыргызской Республики, Ministry of Justice of the Kyrgyz Republic, accessed 12 June 2024.</u>

⁴⁷ Tatyana Kudyavtseva, <u>Портал общественного обсуждения работает некорректно. Просят срочно исправить</u>, *24.kg News Agency*, 9 December 2023.





Recently, there has been a shift towards centralising power. City councils and their deputies, who represent the populace, have experienced a reduction in their authority to oversee the executive branch's actions. For example, since 2021, they have lost⁴⁸ the ability to appoint mayors, a power now exclusively held by the president.

Overall, the conditions in Bishkek are not conducive to the active participation of civil society in discussions directly impacting the quality of life for residents. The low level of civic engagement is attributed to the lack of effective mechanisms for interaction with municipal organisations, as well as the constantly changing rules of the game depending on the personalities of appointed municipal leaders.

6. Shrinking civic space in Kyrgyzstan

On 2 April 2024, the President signed the Law of the Kyrgyz Republic on Foreign Agents, which is akin to Russia's law on foreign agents. This law significantly restricts the work of civil society organisations and is openly repressive in nature.

For over two years, peaceful gatherings have been banned in the centre of Bishkek. Cases are filed against journalists, activists, and cultural figures for criticising the authorities. Most charges against them are brought to court under articles related to 'attempting to seize power by force' and 'inciting mass disorder'.

In February 2024, an independent media outlet, Kloop Media, was liquidated by court order, with allegations that the majority of its publications carried a negative tone aimed at discrediting representatives of state and municipal authorities.

In early January 2024, the presidential administration drafted a new bill on mass media, which is currently undergoing revisions. This bill poses a threat to freedom of speech and independent media in Kyrgyzstan. An analysis conducted ⁴⁹ by the Ombudsman Institute of the Kyrgyz Republic, with the assistance of international experts, revealed that the bill contradicts universally recognised principles and international law.

Kyrgyzstan is classified as 'not free' according to the rating of the international non-governmental organisation Freedom House. ⁵⁰ The country's level of freedom is assessed at 27 out of 100 points, its political rights at 4 out of 40, and its civil liberties at 23 out of 60. From 2009 to 2021, Kyrgyzstan was classified as 'partially free'.

In 2023, Kyrgyzstan descended in the ranking of the international civil society alliance Civicus Monitor⁵¹ and transitioned from the group of 'countries with civic space narrowing' to the category of 'repressive states'.

⁴⁸ Ministry of Justice of the Kyrgyz Republic, <u>Закон Кыргызской Республики от 20 октября 2021 года № 123 О местной государственной администрации и органах местного самоуправления, Ministry of Justice of the Kyrgyz Republic, accessed 12 June 2024.</u>

⁴⁹ Vesti.kg, Институт Омбудсмена призывает власти КР доработать законопроект о СМИ, Vesti.kg, 31 October 2023.

⁵⁰ Freedom House, Kyrgyzstan, Freedom House, accessed 12 June 2024.

⁵¹ Civicus, Watchlist March 2024, Civicus, accessed 12 June 2024.



7. Recommendations

Sustainable urban mobility

For many years, the municipality of Bishkek has been developing the capital using a car-centric approach, primarily focusing on increasing road capacity through reconstruction and the construction of new roads as the main measure to combat traffic congestion. However, global practices demonstrate that such attempts do not yield positive long-term results. 'A city on the needle of total automotive dependence becomes infunctional [sic], inefficient and inconvenient for life. The goal of the transport system is to move people, not vehicles.'52

The design of cities and their transportation systems focused primarily on accommodating vehicular traffic leads to adverse consequences. Annually, this approach contributes ⁵³ to approximately 1.25 million fatalities caused by road traffic accidents and an additional 3.2 million premature deaths due to air pollution globally.

We suggest that the municipality of Bishkek align its approach with the concept of the Sustainable Urban Mobility Plan (SUMP), which many European cities adhere to. The concept of sustainable mobility aims to ensure the mobility of the population by shifting transportation demand towards safer and environmentally friendly modes of transport. Essentially, it represents a new mindset focused on reducing reliance on cars.

In the strategies and plans of the Bishkek mayor's office, there is a partial scenario for sustainable development – an increase in the share of public transport, cycling, and walking. While some shifts can be observed in the development of public transport, improvements in conditions for cycling and walking are not yet evident, with plans being vague and lacking clear indicators.

Developing a SUMP for Bishkek would facilitate the creation of a more resilient urban mobility system in the capital. This SUMP would not only contribute to reducing traffic congestion and environmental pollution, but it would also improve the quality of life for residents in terms of social equity, health, and economic viability.

Spatial planning

In the past few decades, Bishkek has experienced rapid urban population growth, resulting in the city's expansion. This expansion has led to the occupation of large areas, inefficient land use, low-population density, and increased dependence on cars. Consequently, Bishkek's urban space has become disjointed and inefficient, resulting in the loss of urban advantages and the essence of urban living.

Thus far, Bishkek's administration has primarily addressed traffic congestion rather than tackling the core issue of urban sprawl. However, the most effective solution for the city would involve implementing the '15-minute city' (or 'compact city') policy and enhancing last-mile transportation options.

⁵² Vukan Vuchic, <u>Transportation for Livable Cities</u>, *Routledge*, 27 July 2017.

⁵³ United Nations Economic Commission for Europe, <u>A Handbook on Sustainable Urban Mobility and Spatial Planning: Promoting Active Mobility</u>, *United Nations Economic Commission for Europe*, 5 September 2020.





The '15-minute city' concept involves developing compact urban areas with diverse amenities within a short walking distance from residents' homes. These amenities include workplaces, shops, service businesses, cafes, parks, schools, and kindergartens, among others. The essence of the concept is that within a 15-minute radius on foot, by bicycle, or using public transport, residents can reach essential destinations.

The Bishkek Chief Architect has announced⁵⁴ the initiation of a new general plan for the city, considering that the current plan extends only until 2025. We recommend that the municipality integrate the principles of the '15-minute city' into this new plan.

Active mobility

The comprehensive development of various forms of active mobility is a vital condition for sustainable urban transport planning. The benefits of fostering active urban mobility accrue not only to individuals, through reduced medical expenses stemming from improved health, but also to municipal authorities, through decreased healthcare costs.

The promotion of active mobility also benefits the urban economy. Pedestrians and cyclists tend to spend ⁵⁵ 40 per cent more in shops than motorists do. Since physical activity is one of the primary determinants of health, it is advisable to incorporate active mobility into Kyrgyzstan's healthcare policy. This process can involve not only municipal services but also civil society organisations.

We recommend that the municipality of Bishkek create the necessary conditions and promote cycling and other forms of active mobility among the population, in conjunction with public transportation, to make regular physical activity a part of the daily lives of city residents. This will require the creation of safe conditions, primarily achieved through dedicated infrastructure and increased prioritisation of cycling as a mode of transportation.

Public transport and walkability

The allocation of street space among different modes of transport is determined by the capacity of that particular mode to handle passenger flow – specifically, the number of passengers that a given system can accommodate per lane. When passenger volumes are high, standard buses may not provide sufficient capacity. In such cases, it is necessary to increase the capacity of transport vehicles and consider the development of rail-based transport systems. Rail transport offers the best adaptability, as the capacity of rolling stock and throughput can be gradually increased without significant infrastructure reconstruction.

Instead of planning high-cost and questionable projects that limit accessibility and capacity, such as the cable car system, we recommend that the Bishkek municipality focus on more effective solutions. In the medium term, this should include considering the construction of a ground-level rail system. Additionally, we advise that transport planning should expand its geographical scope to include pendulum commuters, who also use the urban transport infrastructure.

⁵⁴ Maria Orlova, <u>Территориальная реформа. Для Бишкека разработают новый Генплан, 24.kg News Agency, 25 April 2024.</u>

⁵⁵ Transport for London, Walking & Cycling: The Economic Benefits, Transport for London, accessed 12 June 2024.





To reduce the number of private cars in the capital and on suburban roads, the possibility of developing suburban rail transport should be explored, particularly since an already existing railway runs from west to east. This would be a more rational solution than restricting the movement of out-of-town vehicles in the capital, as proposed in the 'concept for reducing traffic congestion and increasing road network capacity'.

Pedestrian access to bus stops should also be considered an integral part of the public transport system. This requires the creation of a convenient network of pedestrian paths that are well-lit and shielded from dirt and noise, passing through attractive urban environments.

In this regard, we recommend that the Bishkek municipality stop viewing pedestrian movement as an obstacle to vehicular traffic and instead focus on its development. For instance, the construction of underground and overground crossings, as outlined in the capital's development programmes, creates significant barriers for pedestrians. This contradicts the concept of the '15-minute city' and reduces the attractiveness of Bishkek as a pedestrian environment.

Multimodal streets

Multimodality (co-modality, intermodality) refers to the development of an integrated transportation system that fosters synergy among various modes of mobility. A simplistic approach to transportation, where modes are strictly segregated, hinders the integration of transport into a unified system.

Historically, the metro, city railway, and tram originated as integrated modes of transport but became fragmented over time, resulting in inconvenience and unnecessary transfers for passengers. Presently, efforts are being made to reverse this trend through integrated ticketing systems that allow unlimited transfers across all modes of transport within a specified time frame, such as a 90-minute ticket validity period.

Another example of multimodality is the integration of public transportation and cycling. Together, these two modes of transport offer sustainable door-to-door travel over long distances. This approach allows many individuals to shorten the first and last miles to and from public transit stops and transit hubs. To implement this scheme effectively, it is crucial to ensure that public transit stops are seamlessly connected to the entire network of cycling routes in the city.

Road safety

Given the prevalence of road accidents in Bishkek, the plans to increase traffic speeds outlined ⁵⁷ in the concept for reducing traffic congestion appear illogical. High speeds do not contribute to safety; rather, they serve as a primary cause of road accidents in Kyrgyzstan. In light of this, the Bishkek municipality should consider traffic calming measures and implementing speed limits of 20 to 40 or 30 to 50 kilometres per hour instead of expanding roads.

⁵⁶ Bishkek City Hall, <u>Концепция снижения транспортных заторов и повышения пропускной способности улично-дорожной сети на территории города Бишкек на 2024-2030 годы, Bishkek City Hall, 2024.</u>

⁵⁷ Ibid.





Motorists often protest against reducing speed limits, fearing that it will cause gridlock. However, it is generally believed⁵⁸ that the optimal traffic flow in urban areas is achieved at speeds of 50 to 60 kilometres per hour, and reducing the speed limit to 30 kilometres per hour only increases travel time by a few minutes.

We also recommend considering the Vision Zero concept, aiming for zero traffic fatalities, and gradually implementing a 'road diet' strategy. According to the Vision Zero concept, it is acknowledged that people will inevitably make mistakes, so the road transport system must be designed to prevent⁵⁹ serious injuries and fatalities when these errors occur. This approach shifts the primary responsibility for safety from pedestrians to the creators of the road transport system. This concept has already proven effective in various cities. For instance, in Minsk, road fatalities decreased⁶⁰ sixfold over ten years, reaching a historic low in 2022. In Sweden, where the programme originated, the number of road deaths has been reduced by nearly 75 per cent since 2000.

The concept of a 'road diet'⁶¹ refers to changing the configuration of roadways by reducing their width and lanes. This calms traffic and provides better mobility and accessibility for all road users. It also provides space for bike lanes, public transport lanes, and pavements.

Organisation of parking spaces and car-free zones

Bishkek City Hall began implementing paid municipal parking lots in 2020. The parking fee is KGS 25 (approximately USD 0.30) regardless of the duration of parking. Currently, municipal parking lots operate⁶² in 36 locations across the city. Essentially, these parking lots are unorganised spaces located along roadsides or on verges. Additionally, free parking is permitted on streets where there are no prohibitory signs.



Figure 8. Free perpendicular parking on both sides of Toktogul Street. Photo: Anna Karamurzina for Peshcom

⁵⁸ United Nations Economic Commission for Europe, <u>A Handbook on Sustainable Urban Mobility</u>: <u>Promoting Active Mobility</u>, 132.

⁵⁹ Vägverket, <u>Безопасность дорожного движения- Концепц</u>ия <u>нулевой смертности,</u> *Vägverket*, April 2006.

⁶⁰ Belta, <u>В 2022 году смертность на дорогах столицы достигла минимума за 20 лет,</u> *Belta*, 4 April 2023.

⁶¹ U.S. Department of Transportation, Federal Highway Administration, <u>Road Diets (Road Reconfiguration)</u>, U.S. Department of Transportation, accessed 12 June 2024

⁶² City Administration of Bishkek, <u>Муниципальные парковки, эвакуатор: в столице продолжается борьба с пробками</u>, *City Administration of Bishkek*, March 2024.





In April 2024, the mayor's office announced a tender for automated parking services. We suggest considering hourly parking fees, progressively increasing with each subsequent hour, and implementing parallel parking on narrow streets with appropriate markings and signage where perpendicular parking is impractical. Furthermore, we propose reducing street parking in central areas, particularly near major shopping centres equipped with off-street underground parking facilities.

The proposal to transform a street into a fully pedestrianised area has been discussed at the municipal level multiple times in recent years, yet no concrete action has been taken. We recommend ramping up efforts in this regard by engaging relevant public organisations, conducting thorough preliminary and final studies, and devising a comprehensive plan for street modification.

Electric buses versus trolleybuses

In recent times, there has been a trend in Kyrgyzstan towards incentivising the use of individual electric vehicles. In addition to exempting⁶³ these from customs duties, other privileges are being considered, including special parking conditions, reduced fines for traffic violations, and lower vehicle taxes. Electric vehicles used as municipal taxis may also be permitted to travel in dedicated public transport lanes.

In Sweden, excessive incentives for private electric vehicles had unintended negative ⁶⁴ consequences. Public transport lost its advantages on dedicated lanes due to overcrowding, leading to a significant increase in private vehicle usage. This resulted in environmental pollution from tire abrasion, more road traffic accidents, and increased congestion. While measures to promote electromobility are positive in terms of reducing environmental impact, they should never compromise the priority of public transport over individual transport.

While efforts to promote electric vehicle usage are underway in Bishkek, electric scooters remain overlooked. Electric scooters are more affordable for a wider demographic compared to electric cars, and over time, their numbers are expected to increase. Urban mobility plans should incorporate electric scooters, necessitating infrastructure development and regulatory frameworks. Charging stations designed for electric vehicles are not suitable for scooters, so integration is recommended. Regulation is necessary for the safe use of e-scooters, as current regulations do not require a driver's licence or vehicle registration. Consequently, many owners use them on pavements and bike lanes, posing risks to pedestrians and cyclists.

Public participation

In Kyrgyzstan, particularly in Bishkek, substantial investments are made in road and transportation infrastructure, funded by the state budget, by grants, and by loans from international banks and organisations. Past experiences have shown that transportation projects often suffer from quality violations and are marred by corrupt practices, burdening Kyrgyzstan's economy for years to come. It is evident that investments in urban mobility development should not proceed without sound management and broad communication with all stakeholders, including citizens. However, civil society is increasingly alienated from these processes due to a lack of transparency, accountability mechanisms, and involvement in

⁶³ Vesti.kg, <u>Владельцам электромобилей будут предоставлять льготы - подписан закон,</u> *Vesti.kg*, 25 April 2024.

⁶⁴ United Nations Economic Commission for Europe, <u>A Handbook on Sustainable Urban Mobility and Spatial Planning: Promoting Active Mobility</u>, 87, *United Nations Economic Commission for Europe*, 2020.





planning processes. Moreover, the centralisation of power and repressive laws have further restricted the space for public participation and influence.

Ensuring transparency and involving the public in planning processes are crucial for sustainable urban mobility. We strongly recommend enhancing collaboration with non-governmental organisations and active citizens. It is critically important to develop mechanisms of civic participation and ensure their effective operation, based on the continuity of decisions within municipal services. Some of these mechanisms already exist, but their functioning needs to be fine-tuned in line with recommendations from civil society organisations, public consultations, and the environmental council.

To monitor urban mobility projects, it is crucial to ensure transparency in the municipality's activities in this area. We recommend systematically implementing indicators to assess project effectiveness and producing annual public reports on urban mobility development. Information on projects under international credit and grant agreements should be more detailed and comprehensive, including additional performance indicators beyond the number of public transport units procured. When planning projects, the municipality should disclose information on which data and conclusions decisions are proposed, including information on funding sources.

International banks and organisations investing in Kyrgyzstan should prioritise the inclusion of civil society in both the planning and monitoring stages of urban mobility projects, even though these projects are commissioned by municipal authorities.