

The Russian public services crisis: the municipal infrastructure is in a critical condition

Miłosz Bartosiewicz

Russian public services face chronic difficulties due to factors such as insufficient funding, staff shortages, and the country's uneven socio-economic development. These problems have been exacerbated by Russia's invasion of Ukraine, with budgetary priorities shifting towards defence spending and the broader consequences of the war. The crisis affects not only key sectors like education and healthcare,¹ but also municipal services, which account for around 6% of GDP and employ 2.3 million people. The increasing failure rate of municipal infrastructure, the rapid ageing of the housing stock, and an inefficient waste management system are directly affecting the quality of life of the country's residents.

The deterioration of municipal services is likely to persist in the near future, further exacerbated by systemic corruption and the state's involvement in the war against Ukraine. The government is aware of the scale of the problem but largely resorts to ad hoc measures, while existing funding levels are insufficient to bring about meaningful improvements or even prevent the decline of municipal infrastructure and housing. The Kremlin has pledged to increase spending on modernising municipal services and housing in the coming years; however, the effective use of these funds remains uncertain. Although the poor state of municipal services affects millions of citizens, public discontent over this issue is unlikely to have serious political repercussions for the Kremlin.

Defective municipal infrastructure

Russia's municipal infrastructure has long been in crisis, but the situation has deteriorated significantly in recent years. The failure rate of utility networks in Russia is many times higher than in European countries. According to a survey conducted in late 2023 by the pro-Kremlin People's Front, 60% of respondents in various regions had experienced problems with municipal infrastructure over the past year, with 23% reporting issues with running water and 25% with heating.² That same year, the number of casualties from related incidents increased two and a half times. More than 100 people

¹ M. Bartosiewicz, 'The crisis affecting Russia's public services: healthcare, education, and the postal service', *OSW Commentary*, no. 608, 27 June 2024, osw.waw.pl.

² А. Воронов, 'Этажи проблем', *Коммерсантъ*, 2 April 2024, kommersant.ru.



were injured due to pipe ruptures, while another 36 were hurt in gas explosions. The previous year, official data recorded an average of 220 system failures per day (6,600 per month), marking a 10% increase from 2021. The average repair time also lengthened from eight to nearly ten hours.³ Between 2013 and 2022, at least 104 people died and 310 were injured due to heating system failures alone.⁴

During the winter of 2023/2024, Russia experienced its most severe wave of municipal infrastructure failures in 20 years, potentially affecting several million residents.

” The primary cause of problems in the municipal services sector is the severe wear and tear of infrastructure, which is degrading much faster than it is being replaced – a fact even acknowledged by the authorities.

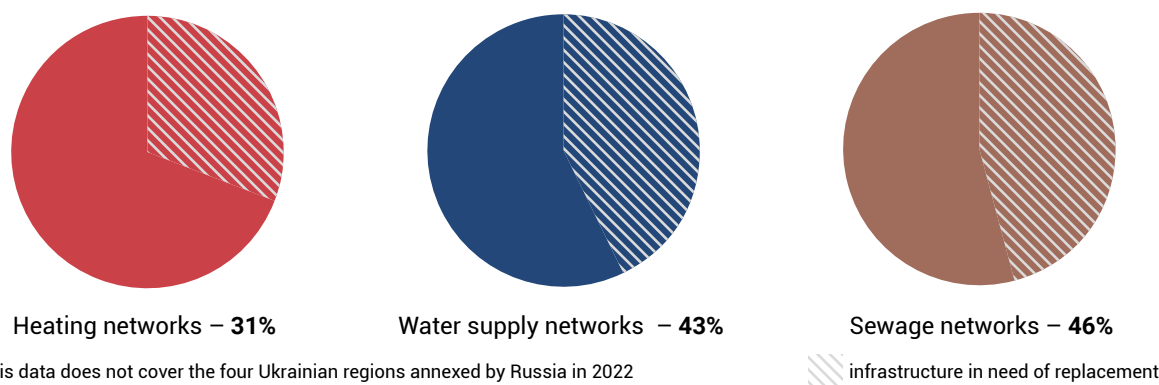
In January 2024 alone, at least

1.5 million people suffered disruptions to utility services. According to Russia’s Ministry of Construction, around 9,000 failures occurred throughout the heating season, including nearly 4,000 in the residential heating system. However, these figures are likely significantly underestimated, as higher numbers were reported at the regional level – for instance, 3,400 in St Petersburg and 1,300 in Bashkortostan.

In July 2024, a failure at the Rostov Nuclear Power Plant left more than 2.5 million residents of the Southern and North Caucasus Federal Districts, as well as the illegally annexed Ukrainian territories, without electricity. A week earlier, a separate outage had already left 600,000 people without power. Further failures occurred in the autumn and winter, the most severe being in December 2024 in Rostov-on-Don, where 80,000 people were left without heating.

The primary cause of these issues is the severe wear and tear of infrastructure, which is degrading much faster than it is being replaced – a fact even acknowledged by the authorities.⁵ Official estimates indicate that to prevent the collapse of municipal networks, at least 5% of their total length must be replaced annually. In May 2023, the Ministry of Construction announced a federal programme to modernise 17,500 km of networks by 2024, covering approximately 4.5% of the infrastructure in need of replacement. However, in December 2024, Minister Irek Fayzullin reported that only 1,300 km had been upgraded, while in January 2025, he claimed that 3,000 km had been improved “in the regions” over the previous year. Most of the infrastructure has not been modernised since the Soviet era. Since the mid-1990s, the proportion of deteriorating pipelines has more than doubled. Moreover, the actual wear and tear of heating, water, and sewage networks is likely greater than the figures reported by Rosstat suggest.

Chart 1. The proportion of Russian municipal networks* in need of replacement (2023)



³ Стратегия развития строительной отрасли и жилищно-коммунального хозяйства Российской Федерации на период до 2030 года с прогнозом до 2035 года, Government of the Russian Federation, 31 October 2022, government.ru.

⁴ Р. Николаева, ‘Кровь износа’, Важные истории, 20 January 2023, istories.media.

⁵ Ю. Малева, ‘Обновление коммунальной инфраструктуры не успевает за ее ветшанием’, Ведомости, 14 November 2024, vedomosti.ru.

The degradation of utility networks has reduced their efficiency. 23% of treated water fails to reach consumers, while heat losses from production to consumption stand at 60% – for comparison, in Finland, this figure is 20%. Additionally, the pace of residential construction in urban areas has far outstripped the development of municipal infrastructure, further increasing its failure rate. Although Rosstat reports an annual decline in the number of breakdowns, these estimates appear unreliable considering the overall state of the system.

The condition of municipal infrastructure varies by region, reflecting Russia's uneven socio-economic development. In Moscow Oblast, the wear and tear of heating networks (31.5%) aligns with the national average. However, in North Ossetia, it exceeds half (57%), while in occupied Sevastopol, it surpasses 90%. Moscow has the best-maintained residential heating system, with just 1% of networks worn out; however, the capital suffers from above-average deterioration of its water and sewage systems. In some administrative centres, nearly the entire infrastructure is in need of replacement. For instance, in Kyzyl (Tuva), 95% of water supply networks and 85% of sewage systems are in disrepair, while in Anadyr (Chukotka Autonomous Okrug), 88% of heating networks have deteriorated. While 88.6% of Russians have access to high-quality drinking water, the situation is starkly different in Kalmykia, where only 8% of the population has such access, and three-quarters of the region's water supply systems fail to meet sanitary standards. Similar problems affect Dagestan, where waterborne poisoning cases occur regularly. In Astrakhan Oblast, the main issue is the centralised water supply – only a quarter of settlements have access to it, despite being home to 77% of the region's population.

Russia's invasion of Ukraine has placed additional strain on municipal infrastructure. Economic sanctions imposed on Russia have disrupted supply chains, affecting the schedule of renovation works and the installation of new networks. Moreover, certain essential equipment, components, and materials are subject to international restrictions, forcing Russia to rely on more expensive parallel imports or domestic substitutes.

At the same time, Russian regions are engaged in the reconstruction of occupied Ukrainian territories, acting as 'patrons' of specific cities and districts. According to Minister

„ In some administrative centres, nearly the entire infrastructure requires replacement. For instance, in Kyzyl (Tuva), 95% of water supply networks and 85% of sewage systems are in disrepair.

Irek Fayzullin, as of April 2024, seven regions were involved in reconstruction efforts in Kherson Oblast, 16 in Zaporizhzhia Oblast, 27 in the so-called Donetsk People's Republic (DPR), and 33 in the Luhansk People's Republic (LPR).⁶ In December 2024, Vladimir Putin claimed that since 2022, regional budgets had funded the restoration of 10,000 various public facilities.⁷ For instance, Ingushetia – one of Russia's least developed regions – is reconstructing municipal infrastructure in occupied Molochansk (Zaporizhzhia Oblast) at its own expense.

While the authorities acknowledge the scale of the problem, their response remains predominantly reactive. Measures are largely symbolic, aimed at placating public opinion – for example, tightening penalties for municipal service providers – or ad hoc efforts to mitigate the effects of failures, often with counterproductive results. Since the start of the Russian invasion of Ukraine, the nationalisation of municipal heating assets has accelerated, despite publicly managed networks having an average failure rate nearly 1.5 times higher than that of private ones.⁸ As a result, large entities with close ties to the Kremlin dominate the sector, which adversely affects infrastructure performance. In Saratov,

⁶ 'Марат Хуснуллин провёл совещание по восстановлению новых регионов', Government of the Russian Federation, 4 April 2024, government.ru.

⁷ 'Итоги года с Владимиром Путиным', Presidential Executive Office of Russia, 19 December 2024, kremlin.ru.

⁸ Д. Таланова, С. Тепляков, 'Кто на хозяйстве?', Новая газета Европа, 12 February 2024, novayagazeta.eu.

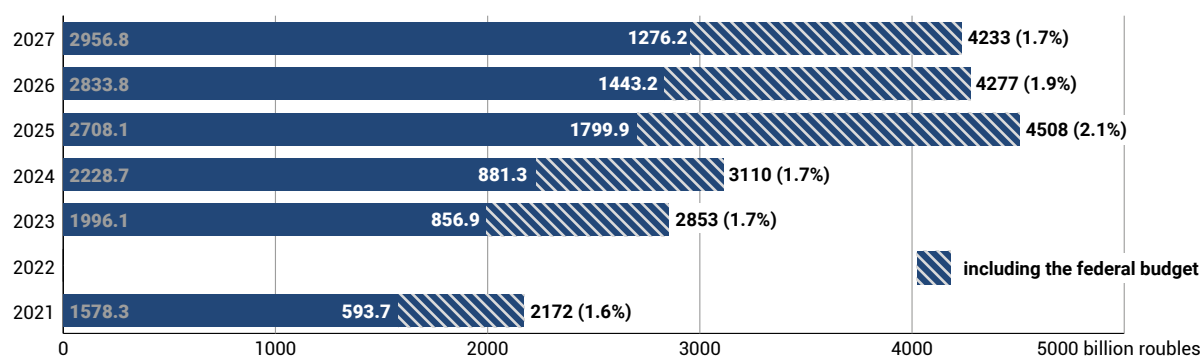
for example, the city’s heating system is operated by T Plus, Russia’s largest private energy holding, controlled by oligarch Viktor Vekselberg. A failure in its network left 180,000 people without heating, and the regional ministry reported that malfunctions in T Plus-managed facilities had doubled. However, even major players cannot be certain of their position, as shown by the state’s acquisition of shares in an energy sales company in Komi, which was part of the T Plus group.⁹

The insufficient involvement of private businesses in the development and maintenance of municipal infrastructure further exacerbates the situation. By the end of 2023, concession contracts in the residential heating sector were valued at 830 billion roubles, far below the expected 2 trillion. This shortfall is partly attributed to low and inflexible municipal tariffs. The Kremlin remains cautious about raising them, fearing political and public backlash. In 2022, 13% of Russian households struggled to pay their utility bills, and by 2024, outstanding debts had reached nearly 900 billion roubles. The most recent tariff adjustment, varying by region, took place in July 2024 after an 18-month freeze.

Funding levels to date have been insufficient to meaningfully improve the situation or even prevent the degradation of municipal networks. A wave of infrastructure failures between late 2023 and early 2024 prompted the government to increase spending on municipal services and housing. This included a greater contribution from the federal budget, reversing earlier plans from September 2023, which had proposed budget cuts in this sector.¹⁰ However, these commitments are largely declarative and primarily driven by political considerations. By 2027, the share of budgetary spending on municipal infrastructure is expected to return to its 2023 level. It is also doubtful whether the planned expenditure will tackle the root causes of the crisis rather than merely alleviating its symptoms.

In early 2024, Vladimir Putin announced a record 4.5 trillion rouble (approximately \$44 billion) modernisation programme aimed at improving utility services for 20 million Russians by 2030. Officials claim that an annual investment of 900 billion roubles – 2.5 times the previous level – will be sufficient to resolve the issue. However, more cautious experts argue that achieving rapid improvements will be challenging. The programme’s success will depend on the use of appropriate financial instruments, including significant investment inflows, as well as additional funding for sectors linked to municipal services.¹¹ Meanwhile, in 2025 alone, Russia’s planned defence and security spending – almost certainly underestimated in official figures – is set to reach 17.4 trillion roubles (around \$170 billion).

Chart 2. Budgetary expenses of the Russian Federation* on housing and municipal services from 2021 to 2027



*Aggregate expenditure of the federal, regional and local budgets, and state non-budgetary funds.

Source: Ministry of Finance of the Russian Federation.

⁹ Я. Суринаская, А. Волобуев, ‘Суд изъял в доход государства доли в энергосбытовой компании Республики Коми’, *Ведомости*, 3 May 2023, vedomosti.ru.

¹⁰ ‘Правительство вдвое сократит расходы на ЖКХ, несмотря на массовые аварии’, *The Moscow Times*, 9 January 2024, moscowtimes.ru.

¹¹ Ю. Малева, ‘До 2030 года на модернизацию сферы ЖКХ направят 4,5 трлн рублей’, *Ведомости*, 29 December 2024, vedomosti.ru.

Ageing housing stock

According to the latest available data (2022), outdated housing in Russia covered 56.7 million square metres, approximately 1.4% of the country's total housing stock. Of this, 19.7 million square metres fell into the category of emergency housing – the lowest technical condition classification, posing a direct risk to residents. As of early 2024, around 70,000 buildings were in this condition, sometimes affecting entire districts. More than one million people lived in these structures, with one-third residing there for over five years. There have also been documented cases of building collapses involving such properties.

The problem is particularly severe in the northern regions and the Russian Far East. In the coming decades, the volume of outdated housing in Russia is expected to rise sharply. This is due to Soviet-era residential buildings from the 1950s to 1970s reaching their expected lifespan. By 2040, the accumulated volume of obsolete housing could exceed 270 million square metres – around 6.5% of Russia's current housing stock. Of this, more than 160 million square metres (nearly 4% of the existing stock) will have to be demolished.¹²

Although the authorities have launched two resettlement programmes for residents of emergency housing, the total number of people living in such conditions is likely to rise. This is due to the rapid increase in emergency housing stock, which is expanding by 2.5 million square metres annually – having grown by 13 million square metres between 2017 and 2022. Estimates suggest that counteracting this trend would require up to 220 billion roubles per year, less than 1% of total federal budget expenditure. However, the government initially planned to allocate only 430 billion roubles from federal funds for the first six-year programme and merely 45 billion for the second.

Aware of the extent to which this issue affects the public, the government seeks to create an appearance of action through repressive measures. In 2023, the

” In the coming decades, the volume of outdated housing in Russia is expected to rise sharply. This is due to Soviet-era residential buildings reaching their conditional maximum service life.

number of criminal cases related to emergency housing was five times greater than in the previous year. Alexander Bastrykin, Chairman of the Investigative Committee of the Russian Federation, ordered intensified monitoring of the situation. At the same time, housing construction figures – 103 million square metres completed in 2022, 110 million in 2023, and 105 million in 2024 – are a key element of the government's pro-development propaganda narrative aimed at the public.¹³ In 2024, the government also introduced a programme complementary to the municipal infrastructure modernisation project. Like its counterpart, it is highly optimistic in its assumptions and aims to improve housing conditions by 2030, including the planned relocation of more than 1.1 million residents.

Moscow has partially delegated the task of improving housing conditions to regional authorities; however, progress has been inconsistent. Throughout 2023, Ingushetia carried out major renovations on only five apartment buildings, while Kalmykia managed 20. By contrast, more than 1,000 buildings were renovated in Tula Oblast and over 1,300 in Samara Oblast. Nationwide, only 47,000 apartment buildings underwent renovation that year – the lowest figure in five years.

The situation in the housing sector is further complicated by the costs associated with the annexation of Ukrainian territories. For instance, in the so-called Donetsk People's Republic, more than a quarter of the housing stock is classified as emergency housing. Meanwhile, the Kremlin spent over 220 billion

¹² Н. Густова, 'В России резко вырастет объем устаревшего жилья. Что это значит', РБК, 25 September 2023, rbc.ru.

¹³ И. Бушухин, 'Замглавы Минстроя Никита Стасишин: «Люди верят в жилье»', РБК, 27 December 2024, rbc.ru.

roubles on the voluntary relocation of more than 55,000 residents from Kherson Oblast to Russia. This amount is only slightly lower than the estimated 300 billion roubles required to provide housing for all orphans in Russia, more than 250,000 of whom were still on waiting lists as of 2022.

Inefficient waste management

Russia's municipal services also struggle with waste management. A wave of public protests on the issue prompted the introduction of the so-called waste reform in 2019, aimed at modernising the Russian waste management system that had remained unchanged for decades. However, despite these efforts, 30% of Russians have reported a deterioration in waste management since the reform, while a further 27% have seen no improvement.¹⁴ Even government officials acknowledge the reform's failure.¹⁵

Although the proportion of municipal waste sent for recycling has increased more than sixfold during this period – to 13% (compared with over 40% in Poland) – 40% of Russian regions do not recycle at all. The low recycling rate has led to a continued rise in the volume of household waste being sent to landfill, which increased by 3% in 2023. Currently, landfill sites in Russia cover more than 4 million hectares – an area comparable to that of the Netherlands – and, if illegal dumping is not curbed, they could expand to 1% of the country's total territory by 2050. There are more than 10,000 unregulated landfill sites, though their number has been decreasing in recent years. The war in Ukraine has also affected waste management efforts. In 2024, funding for the federal Clean Country programme, which is dedicated to eliminating illegal waste dumps, was reduced by more than 500 million roubles. Part of the savings was reallocated to the purchase of drones under Russia's programme for the development of UAV systems.

Under the waste reform, each federal subject selects a single waste management operator for a 10-year period. In practice, this has resulted in well-connected

” Currently, landfill sites in Russia cover more than 4 million hectares – an area comparable to the Netherlands – and they could expand to 1% of the country's total territory by 2050.

large firms forcing out local businesses. For example, in Volgograd Oblast, informal pressure compelled a local company to withdraw from the tender in favour of a firm linked to oligarch Yuri Kovalchuk, a close associate of Vladimir Putin. As a result, the reform has primarily benefited enterprises with ties to federal and regional authorities rather than ordinary citizens.¹⁶ The centralisation of the waste management system, and the opportunities for corruption it creates, have contributed to recurring crises in waste collection, particularly in major cities. The problem has been exacerbated by delays in waste collection following an exodus of migrant workers, who faced systemic harassment following the terrorist attack in Krasnogorsk.¹⁷

Since the departure of Central Asian migrant workers from Russia, cities across the country have faced serious difficulties with snow removal. Heavy snowfall paralysed large urban areas such as Kazan, further disrupting waste collection. During the winter of 2023/2024, there was a severe shortage of caretakers, with estimates in Moscow ranging from 30% to 50%. Authorities also attributed the shortage of municipal service workers to two other factors: some personnel had been deployed to fight in the war, while others had been drawn to the defence industry, which offered higher wages.

¹⁴ Ю. Малева, 'Каждый третий россиянин отетил ухудшение ситуации с вывозом мусора', *Ведомости*, 13 September 2024, vedomosti.ru.

¹⁵ 'Матвиенко раскритиковала «мусорную реформу»', *Ведомости*, 17 December 2024, vedomosti.ru.

¹⁶ Р. Анин, 'Люди из окружения президента России поделили между собой мусорный рынок на 2 триллиона рублей', *Важные истории*, 18 June 2020, istories.media.

¹⁷ See M. Popławski, 'Tajikistan: migrations as a safety valve', *OSW*, 5 June 2024, osw.waw.pl.

Ongoing degradation of municipal infrastructure amid limited protest potential

As public opinion surveys indicate, the Russian population faces daily hardships due to the crisis in public services and the poor quality of municipal utilities. Interruptions in utility supplies, high service tariffs, housing issues, and the inefficiency of municipal and regional waste management directly impact people's lives, prompting them to act despite the increasing repressiveness of Putin's regime and the near-total suppression of civil society structures. Local protests over these issues take place regularly across the country. Residents organise spontaneous demonstrations and rallies, block roads, submit petitions and appeals, and even go on hunger strikes. Such actions are often supported – or, less frequently, initiated – by local independent deputies or representatives of licensed opposition parties, primarily the Communist Party of the Russian Federation.

Despite repression by local authorities and law enforcement agencies, protesters occasionally achieve their objectives. A key

” **A great part of the Russian population experiences daily hardships due to the crisis in public services and the poor quality of municipal utilities.**

factor in their success is attracting the attention of central authorities, which protesters often view as the ultimate authority to appeal for intervention. For example, in 2024, residents of Borzya (Zabaykalsky Krai), who were left without heating during the winter, threatened to go on hunger strike. This led to the federal Ministry of Finance granting regional authorities a 45.5 million rouble subsidy for preparations for the next heating season.¹⁸ The previous year, resistance to tariff hikes in several regions, including Karelia, the Altai Republic, and Kirov Oblast, led the Federal Antimonopoly Service to review tariff indexation in 16,000 municipalities,¹⁹ and lower rates in five regions. Similarly, a wave of protests in dozens of regions hastened the implementation of the so-called waste reform in 2019. However, the changes did not result in significant improvements, and demonstrations over waste management continue to erupt, particularly in regions such as Dagestan and Arkhangelsk.²⁰

Acts of protest, though frequent and numerous, are generally apolitical, limited in scale, and strictly local. Therefore, they are unlikely to escalate to the regional or national level, where they could pose a political risk to Putin's regime. While public anger over the deteriorating state of municipal infrastructure may grow, it does not currently pose a serious challenge to the Kremlin. The federal government can position itself as an arbiter, publicly punishing lower-level officials or service providers to deflect blame.

The increasing failure rate of infrastructure, the rapid ageing of the housing stock, and the inefficiency of waste management suggest that Russia's municipal services will continue to decline in the foreseeable future. Corruption and the financial strain of the war in Ukraine are further accelerating this decline.

The government's response consists primarily of ad hoc or symbolic measures that are insufficient to comprehensively address these issues. At best, they may bring partial improvements or alleviate some symptoms of the deepening crisis in the municipal services sector. The effectiveness of future funding increases aimed at improving the quality of these services, as pledged by the government, remains uncertain. However, given wartime conditions and systemic corruption, these modernisation programmes are likely to encounter serious obstacles.

¹⁸ 'Жители Забайкалья решили начать голодовку ради подготовки к отопительному сезону', *Сибирь.Реалии*, 28 June 2024, sibreal.org.

¹⁹ М. Загайнов, 'ФАС начала анализ индексации тарифов ЖКХ в 16 тысячах муниципалитетов РФ', *Российская газета*, 1 February 2023, rg.ru.

²⁰ 'Мусорный полигон', *ОВД-Инфо*, ovd.info.