

11 Gldani

From ambitious experimental project to half-realised Soviet mass-housing district in Tbilisi, Georgia

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Growth of Tbilisi and the birth of mass-housing districts

A large part of the contemporary built environment of Tbilisi, the capital of the Republic of Georgia with around 1.2 million residents (GeoStat 2020), came together during the 70 years of the Soviet urban planning and architectural practice. During this period, Tbilisi grew from a small or medium-sized city of about 240,000 people, at the beginning of the Soviet occupation in 1921, to a large metropolis of over 1.2 million people in 1991, after the dissolution of the Soviet Union (GeoStat 2016:3; Jaoshvili 1989:109). In the 1970s, the population of Tbilisi exceeded one million, increasing its importance on the Soviet scale and providing additional funds for development (Jaoshvili 1989). An industrialisation process fueled by the evacuation of Soviet factories from Eastern Europe, which continued slowly after WWII, contributed significantly to the growth of Tbilisi. The majority of large factories were built along the railway line on the left embankment of Tbilisi, as well as on some other lands on the urban fringe not too far from the new Soviet housing districts built to house the increasing workforce required for the growing capital. Thus, Tbilisi population and territorial growth are strictly tied to the industrialisation. Around the early 1970s, the number of people employed in various sectors of industry and construction reached 42% of the total employed population of Tbilisi. The number gradually declined in late years due to the general advances in industrial production (Jaoshvili 1989:121).

Due to this growth, Tbilisi expanded rapidly into the northeast and east, building new residential quarters in these areas (Jaoshvili 1989). As a result of the First (for the period of 1934–1954 authored by Kurdiani, Malazomov and Gogava), Second (1954–1970) and Third (1970–2000) Soviet Master Plans (or General Plans as they were called) of Tbilisi, developed and conceived by Georgian architects and planners, vast areas in the city were built up. Beginning with the First Master Plan of Tbilisi in 1934, housing districts were planned on a larger scale, and street widths were significantly extended. Residential districts occupied approximately five or six hectares and housed a population of up to 4,000 people,

primarily living in apartments of four or five floors. As the population of Tbilisi began to grow further and density of the built areas had to follow, the Second Master Plan, approved in 1953, further extended the size of the residential districts and the new housing units. The Third Master Plan, created by architects Chkhenkeli, Jibladze, Japaridze, Shavdia, Lortkipanidze and Bolkvadze focused primarily on building the large housing districts consisting of microrayons and was approved in 1969. From this period onwards, industrial growth of Tbilisi slowed down and mass housing turned into the main driver of its territorial growth (Salukvadze and Golubchikov 2016). The district of Gldani is one of the key projects realised within the Third Master Plan in the capital of Georgia. While a variety of residential structures stand out in the more recent urban fabric of Tbilisi,¹ most residents live in apartment buildings erected during Georgia's forceful presence in the Soviet Union. These are mostly multi-storey prefabricated estates in the mass-housing districts built from the late 1950s onwards and located in mid-city territories, early suburbs and peripheral locations of Tbilisi.

To meet the increasing housing demands, the Georgian Soviet Socialist Republic (Georgian SSR) constructed Gldani, a mass-housing district on the northern edge of Tbilisi (Figure 11.1). Tbilisi City Council commissioned Gldani project to TbilQalaqProject, an institution involved in the

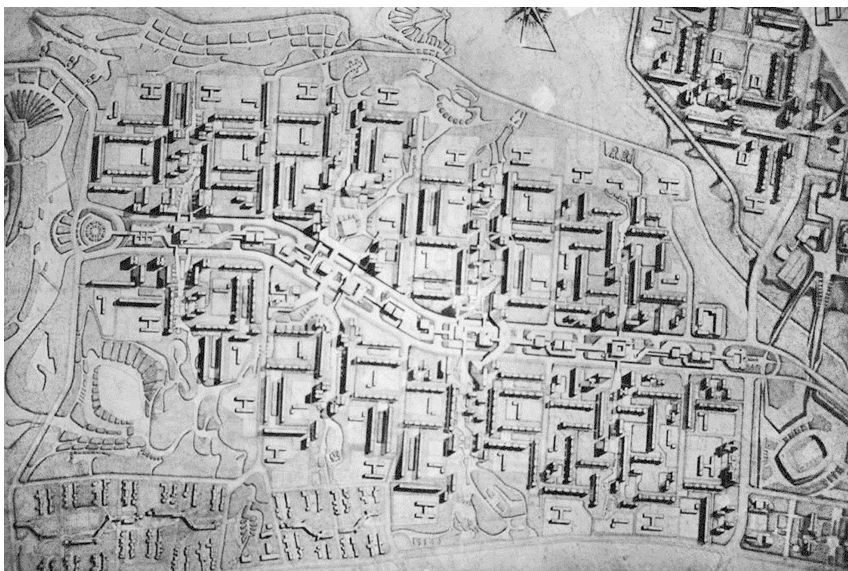


Figure 11.1 The plan view of Gldani mass-housing district. The vertical axis running between the microrayons was never completed as well as some other features on the outskirts of the district (bottom right corner). Author: National Archive of Georgia, 1968.

urban planning practices in Tbilisi. The future author of Gldani project, Temur Bochorishvili,² a 27-year-old architect at that time, worked at Tbilisi Zonal Scientific Research and Project Institute (Зональный Научно Исследовательский и Проектный Институт) that was involved in developing typical and experimental residential and public buildings. Taking advantage of this opportunity, Bochorishvili submitted his winning project to the commissioning agency. According to the author, his work caused widespread excitement, and as it was approved, he joined the TbilQalaqProject that was assigned the task of implementing the project.

Construction of this residential district began in 1969 and lasted for approximately ten years. There are eight microrayons in Gldani, plus “microrayon A” with approximately half the size of the usual microrayon standard. The district was planned to house up to 147,000 people. Without a doubt, if we consider the number of residential units and the intended or actual number of residents, Gldani is the largest housing district compared to others built in Tbilisi, also designed by various Georgian planners and architects and developed since the early 1960s (Afterthesoviets 2009b). According to the municipal election data from 2014, Gldani had over 132,000 voters (residents of age 18 years old and more), but according to some unofficial sources, the actual population is even higher. The purpose of Gldani’s construction was to both improve the living conditions of Tbilisians and provide an urban home for rural immigrants who had come to work in the newly established or expanding factories in the area (Kvirkvelia 1985). In the early 1970s, the first residents moved into the buildings in Gldani. However, some of its components were either significantly delayed or never completed which made living in the district hard and forced residents to find alternative solutions to the issues experienced as a result.

Like every other urban area in Georgia, from the late Soviet years, Gldani has experienced a rapid and marked process of social and physical transformation. Some of these changes were caused by the unfinished infrastructure in the district, while others were brought by the new economic system. The effects of the transition between a state-planned and a market-based economy were particularly evident. During the first decade of transition, this process was accompanied by weak institutions, poor governance, and murky corruption practices (Van Assche et al., 2012). This followed the general pattern of transition experienced by many cities from the postsocialist Global East (Hirt 2013; Sýkora and Bouzarovski 2012).

This chapter is based on observations and research conducted as part of individual and collective projects beginning in 2009. Throughout 2009, 2011 and 2017, data were collected primarily through meetings with planners and architects (working during and after the Soviet era) and through interviews conducted on-site with residents of Gldani mass-housing district. Interviews with the author of Gldani project, Temur Bochorishvili, who passed away in 2014, were conducted in 2009 and 2011. Additional data were collected

during fieldwork in Gldani in the same years. The research is framed by a critical analysis of significant aspects of Soviet housing policy, including prefabricated mass-housing estates and their transformation from the late Soviet year and the post-Soviet period. Throughout this chapter, I will describe the most noticeable features of this transformation on the physical landscape of Gldani and tell the story of its conception.

The Soviet housing issue and its evolving stages

From the early years of the Soviet Union, the Communist Party officials recognised that housing problems were a concern for the general population (Andrusz et al. 1996; Hirt 2012). Industrialisation and urbanisation exacerbated the housing shortage during the post-WWII era in the Soviet Union. For a long time, housing was considered a public good in the USSR, but it was given a lower priority than other essential services such as steelmaking (Gentile and Sjöberg 2010; McCutcheon 1989). To address the housing question, building standards and construction practices were developed from the late 1950s, and mass-housing programmes were introduced to accommodate the ever-growing urban population and escalating housing needs (Harris 2013). Initially, this led to a growing number of low-quality, standardised apartment blocks known as Khrushchekas. The buildings were constructed in the early 1960s during Nikita Khrushchev's tenure as head of the Communist Party. Even though these apartment blocks improved the living conditions for millions, the buildings were also known for their draughts, water leaks, poor acoustic insulation between flats and poor thermal insulation due to concrete walls and metal window frames. In addition, the amount of living space allocated per resident was also low (Hess and Metspalu 2019; Hirt 2012).

The development of more elaborate prefabricated multi-apartment dwellings began in the late 1960s and 1970s, following standardised plans for high-density, multi-storey buildings. Ever more prefabricated and mass-produced residential units were developed by the industrial building sector. Eventually, construction began incorporating full prefabrication: finished panels for "room-sized boxes" (McCutcheon 1989:44). All over the Soviet Union, concrete plants manufactured the elements for apartment blocks. With the increasing demands of housing construction, the production capacity of these plants increased, including the ones located in Tbilisi and other Georgian cities. The housing programmes, however, were not sufficient to meet the needs of the growing urban population nor to meet the demands of higher standards of living. While these measures provided shelter and improved living standards for many citizens, they did not solve the problem of limited residential space or comfort. The number of housing units provided was not adequate (Bouzarovski et al. 2011). The housing shortage in the USSR in the 1980s led to some of the transformations experienced by the housing district discussed in this chapter.

The industrialisation of residential construction also led to a standardisation and simplification of housing units (Morton 1980). The institutionalised uniformity of most of the Soviet residential estates and buildings was underpinned by the ideological motive that all Soviet citizens were equal, at least on a discursive level. Therefore, their housing should be homogeneous as well. Soviet guidelines defined the construction and planning processes and left little room for creativity for architects and planners (Afterthesoviets 2009b). Building projects were based on state-provided building catalogues and approved in Moscow. The architects' role was subordinated in the era of mass-produced housing developments in the Soviet Union to the construction firms that produced reinforced concrete panels and assembled them on site in identical residential buildings (Harris 2013:31). In certain projects, including the one discussed in this chapter, some individual features were achieved, although they remained limited. In this historical context, the mass-housing district of Gldani and its microrayons were built on the outskirts of Soviet Tbilisi.

The birth of the largest mass-housing district in Tbilisi

In August 1970, the Council of Ministers of the Georgian SSR approved the Third Master Plan of Tbilisi, which included the mass-housing district of Gldani (Neidze 1989). Gldani is one of eleven housing districts built as microrayons in Tbilisi to house the growing urban population of the city starting from the late 1950s and going on until the very end of the Soviet era in 1991. The Master Plan was designed to facilitate the development of Tbilisi until 2000 and prevent it from sprawling and merging with nearby towns, a scenario that seemed likely at the time (Kvirkvelia 1985).³ By constructing large, dense microrayons of prefabricated housing, the new master plan aimed to direct territorial growth towards the north and northeast of the capital.

Gldani mass-housing district

Temur Bochorishvili, an architect and planner working at Tbilisi Zonal Scientific Research and Project Institute, designed and planned Gldani. TbilQalaqProject was commissioned by the Tbilisi City Council to develop the general building plan for the Gldani district. Bochorishvili soon applied with his proposal, which was sent to Moscow and received high praise from the competition commission headed by the Chief Architect of Tbilisi at the time, Ivane Chkhenkeli. Despite the strict rules and standards, Bochorishvili managed to include some original and experimental features in the project. One of them is the balconies the architect was allowed to design by the government to “counter the discontent of the local population stemming from the uniformity of the buildings” (Bochorishvili 2009). The vertical axis running between the microrayons in the author's plan was the second feature that was particularly favoured by the architect (Figure 11.2).



Figure 11.2 The aerial photo of Gldani shot in 1981. The undeveloped territories, initially devoted to the vertical axis since the 1990s was filled up by various small-scale developments as the privatisation of urban land started further separating disconnected microrayons on both lines of the axis. Photo: National Archive of Georgia, 1981.

The axis was crossed by the unique bridge modelled after Florence's Ponte Vecchio which was "designed to offer shops, restaurants, barber shops, gyms, clothes workshops, and a variety of other functions that would bring residents of two districts together" (Bochorishvili 2011). Besides these features, Gldani is a typical Soviet urban planning project which was constructed in accordance with strict standards approved by Communist Party leadership (Afterthesoviets 2009b).

In Bochorishvili's view, the success of his project was due to its ambitious and experimental nature, as he was quite young and not as conservative as his senior colleagues (Bochorishvili 2011). Gldani was constructed on land used by the inhabitants of a nearby village with the same name (Kharadze 1997). Soon one smaller district was developed just north of the district that was also authored by Bochorishvili and was called Gldanula, meaning small "Gldani" in Georgian. Gldanula is significantly smaller compared to Gldani and concentrates only four 16-floor residential buildings and six 9-floor buildings, as well as some additional structures for service and trade.

Gldani, situated on the outskirts of Tbilisi, is part of the district of Gldani-Nadzaladevi. It is located near the railway line that connects industrial zones with the central railway station (Neidze 1989).⁴ After the first part of the district was built between 1969 and 1971, the first residents

moved in (Kverenchkhiladze 1989). However, due to the grand scale of the project, its construction continued for over a decade. While all residential units were completed in the 1970s, the public halls and other recreational areas remained unfinished.⁵ Bochorishvili and those involved in the Gldani project were required to adhere to a construction catalogue regarding the design of the buildings and the rules for each microrayon (Afterthesoviets 2009a). The structural elements of the building, such as the facade panels and the exterior landscaping, were erected using prefabricated structures produced in Georgia (Kvirkvelia 1985). All windows, doors and other smaller parts were produced industrially and used throughout the district. The design of green and recreational spaces, streets and transportation systems was left to the discretion and imagination of the working group (Afterthesoviets 2009a).

Gldani physical features

Gldani mass-housing district covers over 4,200 square metres of which up to 1,300 square metres are dedicated to housing of over 147,000 people (Kvirkvelia 1985:169). Microrayons and micro-districts were Soviet planning units consisting of apartment buildings (with 9 to 16 floors) housing 5,000 to 12,000 people (Gurgenidze 2016). Soviet legislation also defined a residential norm of nine square metres per person, which also defined the standards for the development of Gldani (Bouzarovski et al. 2011:2700). Overall, the district had 13,231,000 square metres devoted to housing out of the 4,200,000 square metres plot (Bochorishvili 2011).

Each microrayon was supposed to provide necessary amenities like kindergartens, schools, health care and grocery stores (Afterthesoviets 2009a). This was also the ambition of the author of the district, Bochorishvili wanted to show his professional abilities and planned “to develop a modern and a self-sufficient city plan where almost all the requirements for employment and living would be concentrated” (Bochorishvili 2009). According to the master plan, two metro stations were supposed to be built in Gldani to ensure good connectivity of the district with other parts of Tbilisi; however, only one station was completed and launched in 1989, while the district welcomed its residents in the early 1970s. Because of this delay in the development of the transportation infrastructure, the district was difficult to access.

Gldani’s microrayons are arranged along a vertical axis that extends almost 2.5 kilometres. Various social and public services would be provided along this axis, mostly for the residents of the area (Figure 11.2). With a set of horizontal pedestrian bridges that run alongside all the microrayons, the axis was connected to all the microrayons (Figure 11.1). Another parallel road – every 500 metres – connects these streets with the rest of the microrayons. It created a multilevel transit system that separated pedestrian traffic from public transportation and other traffic via bridges that connected housing

areas to the central axis. One of the bridges realised, modelled and inspired after the bridge in Florence which was supposed to act as a multifunctional pedestrian bridge connecting the two parts of the district. A large public park was also envisioned on the fringes of what became Gldani in the original plan (Afterthesoviets 2009a). Due to a lack of funds and the chaos that followed the dissolution of the Soviet Union, this part of the project was never materialised (Gurgenidze 2016). Despite these shortcomings, Gldani was an innovative project for Georgia and Tbilisi – it was the first linear and multilevel mass-housing district with horizontal public and commercial spaces connecting its microrayons (Bochorishvili 2011).

There was also a plan to construct parking spaces along with the vertical line, but this feature was not deemed important by the officials that oversaw the construction and was dropped, as the project author recalls (Bochorishvili 2011). This approach was different compared to the vision that accompanied the planning and construction of new residential districts later in the USSR, where the number of parking spaces increased compared to the previous approach (Siegelbaum 2008). This was not the case when Gldani was realised. Thus, the district provided only a limited amount of parking for residents and some temporary parking for visitors. A lack of parking spaces was also caused by the incomplete vertical axis, which resulted in an insufficient number of parking places. This led to the DIY urban transformations initiated by residents in the late 1980s and intensified further after the collapse of the Soviet Union. Gldani's garage count was also calculated based on the overall (limited) role that the automobile played in urban life in Tbilisi during the Soviet period. According to Siegelbaum (2008), this absence of parking was intended to encourage the use of other modes of public transportation and reflected the scarcity of private automobiles in the city. As an example, in 1975 there were 125 cars per 1,000 inhabitants in the United Kingdom, but in Georgia this number reached only 35 and a decade later, in 1985, 71 (Siegelbaum 2008:9; Tuvikene 2010:515).

Gldani social features

Populated by the residents from Tbilisi and other rural parts of Georgia, Gldani was built to accommodate residents relocating from various geographies and types of settlements. Residents of historical neighbourhoods in Tbilisi relocated to the newly built district as their houses had become dilapidated or had been damaged by floods a few years ago (Jaoshvili 1989:131). Despite relocating to the district far from Tbilisi's central area, their move was considered an improvement in living standards compared to the old and overcrowded central living quarters of Tbilisi where they lived before (Bochorishvili 2009). A large part of the residents of Gldani moved from Georgia's rural areas to work in the factories expanding along the railway line in the Soviet era. This is the

reason behind the high concentration of ethnically Georgian population in this district despite the relative ethnic heterogeneity of Tbilisi until the dissolution of the USSR (Jaoshvili 1989).

Apartment building extensions

The socialist housing construction marathon was unable to meet the housing needs of all and thus provided the basis for extension policies and practices starting from the late 1980s that particularly accelerated following the collapse of socialism. A significant political decision made by the late Soviet government shaped the current urban morphology of Gldani and other cities in Georgia. During *Perestroika*, state policies were “humanized” by acknowledging the societal problem of inadequate living conditions (Bouzarovski et al. 2011:2694). A project titled “*Zhilishche 2000*” (Housing/Habitat 2000) was launched in 1988 to soften the rigid housing rules. This programme aimed to address the persistent housing problem and ultimately provide a home for every Soviet family by increasing the available residential space in situ. In accordance with this initiative, Georgia’s socialist government permitted the extension of state-owned residential apartments in compliance with a number of regulations, including planning, construction and technical controls, as well as size and volume regulations for the extension of apartments (Salukvadze and Sichinava 2019).

From 1988 to 1991 Georgian cities saw the widespread erection of metallic frames for apartment building extensions for thousands of five- to nine-storey block buildings. In the beginning, this work was carried out by state companies. Following the collapse of the Soviet Union, state-owned construction companies were disbanded, and “do-it-yourself” practices became widespread. Over the following decades, this process continued at a varying pace until it was fully banned in the second half of the 2000s (Gogishvili 2021). Thus, in Gldani and other parts of Tbilisi, residents have been able to manage and extend their living spaces. Numerous apartment building extensions were done by residents using a variety of materials and in a variety of forms, often violating safety standards (Bouzarovski et al. 2011). It was possible for residents to encroach on public spaces by disregarding former construction regulations. Although these developments provided additional living spaces and occasionally improved living conditions, they also limited the amount of public space available within neighbourhoods.

Extensions to apartment buildings took a variety of forms and sizes: from enclosing balconies without enlarging the living space significantly to constructing extensions on the ground floor or making use of stairwells. The result was the occupation of previously public spaces and their conversion into residential areas. Moreover, various façade-attached extensions took place either by using extension from balcony, cantilever or frames.⁶

Multiple transitions of Tbilisi: from the 1980s onwards

Similar to many post-Soviet cities, Tbilisi stepped on the postsocialist transition treadmill (Salukvadze and Golubchikov 2016). Urban built environments were dramatically affected by the shift from a centrally planned to a market economy, and this was particularly visible at the urban level (Gogishvili 2021; Stanilov 2007; Sýkora and Bouzarovski 2012). In Gldani, we can observe the results of more than two decades of transformations that started with the decision of the Soviet government to improve the living conditions of the Soviet citizens (Bouzarovski et al. 2011), but importantly changes that were defined by the Soviet legacy and the conditions of the time. These changes have manifested in various aspects of the built environment, be it residential areas, public infrastructure such as the vertical axis designed by Bochorishvili or massive proliferation of garages (Figure 11.2). In Gldani as in other parts of Tbilisi, residents demonstrated social resilience and tailored homes and outdoor spaces according to their existing and newly formed needs rather than conforming to existing structures (Bouzarovski et al. 2011; Gurgenedze 2016). Multiple, often conflicting actors have initiated these changes, which have often resulted in a deterioration of the built environment and living conditions.

The privatisation of housing has been one of the defining urban processes of transition and has had a lasting impact on Gldani. It began in the early 1990s and was followed by the privatisation of urban land and non-residential buildings. In the early stages, becoming an apartment owner was possible only through relatively tightly controlled state procedures and costs. This was soon replaced by an almost automated process of apartment privatisation that lacked a coherent strategy (Salukvadze and Golubchikov 2016) but was mostly a populist move of the government struggling in different spheres. The privatisation of the housing stock reached almost 95% by 2004 (Vardosanidze 2010). Control of the apartment blocks was chaotically transferred from the state to newly formed groups of homeowners and private developers. This soon led to the rapid deterioration of residential buildings and their related infrastructure (such as courtyards, gardens and access routes). Since 2007, local governments have reclaimed some housing management responsibilities and have also established homeowner associations that have assumed responsibility for building maintenance and management (Gogishvili 2021). Later, these associations were involved in the privatisation of adjacent plots of public land. This has led to significant changes in both the built environment and the daily lives of the residents of Gldani.

A lack of government support and control over urban land distribution in the early 1990s led to the appropriation of vacant spaces between buildings and factories, as well as green spaces between residential areas and collectively owned spaces such as courtyards. Often these spaces were converted for commercial purposes, but cars were also parked there. Starting from the late

1980s to the 1990s and especially the 2000s, the inner courtyards of Gldani, as well as other cities, have become increasingly crowded with cars and garages (Gogishvili 2021). Many were constructed using whatever materials were available and without any permits or approvals from the local authorities. In the 1990s, the motorisation rate was rising but remained still low, so some saw this as an opportunity to occupy a portion of land in front of their home regardless of whether they owned a vehicle. While the country was in the midst of a deep socio-economic crisis, owning or controlling an additional land parcel was highly valuable. This led to even greater densification and overloading of residential areas, converting large and open green spaces into disconnected parking lots, causing traffic problems, disturbing the peace and quiet in urban areas and giving private individuals access to valuable public spaces (Salukvadze and Golubchikov 2016).

Commercial activities

The introduction of new commercial initiatives, mostly initiated by individuals or small businesses, was another significant change that occurred in Gldani from the late 1980s onwards. Most of these activities, which had previously been almost entirely alien to the district, ended up being concentrated in several key areas of each microrayon. First, each microrayon had a centrally located street that served as a commercial district. Microrayons located near major transport hubs or in the centre of the district are particularly affected by this phenomenon. In these areas, most commercial goods and services were closely related to the needs, desires and conventions of the surrounding community. Loaves of bread and computer lessons were exchanged and sold. Seasonal fruits and vegetables and ice cream were available from informal kiosks. In Gldani, the central strip is lined with kiosks and market stalls, as well as shops built into adjacent apartment blocks. Most of the formal and informal shopping areas can be found in the central nodes of the district. A vertical axis that was originally assigned to be constructed along all microrayons was supposed to be the primary area where the commercial and other public functions were to be concentrated. But as this plan was only partly realised and the strict state control disappeared from 1991, these functions started to spread in various locations described above. The territory that stayed vacant due to the failure of the plans related to the vertical axis as been filled in various parts as well (see Figure 11.2). This has been mentioned with a regret by the architect, who experienced the loss of function and transformation of the commercial axis and the bridge inspired by the example from Florence into a self-managed and unregulated commercial centre (Bochorishvili 2011).

The area around the Gldani metro station was also envisioned as a commercial, leisure and transport hub. Eventually, this vision became a reality and remains so today. At present, the area is also home to small local

businesses, including currency exchange kiosks, shopping centres, street vendors and cafes. The concentration of commercial activity decreases as one moves away from the metro station. Initially, provisions and other services were sold from unlicensed garages and small buildings. Recent changes in the microrayons include the arrival of shopping malls and chain stores, which outcompete and displace kiosks and corner shops. Often, large grocery chains have taken over the physical space of corner shops as well as their local customers.

Gldani today

Gldani is the largest residential area in Tbilisi and is part of an even larger district, Gldani-Nadzaladevi, located on the northern edge of the Georgian capital. The changes discussed above, combined with current realities, create a challenging environment for the residents of Gldani. It is important to note that some of these challenges are the result of unfinished work on the Gldani project, while others are the result of the transition from a state-planned economy to a free market economy during the first two decades of Georgia's independence. As in other parts of Tbilisi, Gldani's Soviet-era housing is slowly falling into disrepair. In addition to the age of the structures, the main source of the problem is the Soviet government's decision in the 1980s to improve housing standards by allowing the expansion of private living space. While residents were primarily responsible for these changes, the process was largely controlled by the state, and with the dissolution of the USSR, state control mechanisms disappeared (Bouzarovski et al. 2011).

Mobility issues are often cited by residents as another major concern. Connectivity of the district with the rest of the city and within the district needs to be improved. Part of the problem can be attributed to the limited capacity and coverage of the Tbilisi metro system and unrealised plans for the construction of the second metro station in the district. The number of private cars in Gldani and throughout Tbilisi is increasing, leading to congestion, pollution and loss of public parking spaces as organised parking spaces are scarce, leading drivers to convert recreational areas for parking.

The collapse of the Soviet Union caused many industries in Tbilisi and other parts of Georgia to shrink or cease operations entirely. This had a significant impact on the lives of those who had moved from rural to urban areas in search of work. This problem was experienced by many households in Gldani. As a result of this collapse, many of the residents were unemployed or underemployed. The proliferation of informal economic activities and the attempt to reclaim public land for economic use are examples of this. Despite the lack of clear data on unemployment or household income at the district level, it is likely that Gldani has one of the lowest household incomes in Tbilisi.

Conclusion

Thousands of Soviet citizens were provided with flats in large prefabricated housing estates such as Gldani as a partial response to the acute housing shortage in the USSR. However, the improvements they brought were often marginal and failed to solve the housing problem at the end. Overall, Gldani failed to meet the growing needs of the rapidly expanding urban population and the growing demand for higher standards of living. Living space in such housing units was strictly limited and planned according to the standard minimum of nine square metres per Soviet citizen. Tbilisi's Third Master Plan in 1970, which significantly improved living standards for the majority of the population, contributed to more than half of the current housing stock. Despite the improvement in living standards, housing remained inadequate.

Gldani mass housing district, like many other Soviet-era projects, was not fully implemented. This led to problems later on. From the late 1980s, Gldani's built environment underwent radical changes, largely driven by the concerns of its residents and the failures of the original project. This process was out of control of the weak local and central governments. While many initiatives, such as garages and apartment extensions, have significantly altered the cityscape in an uncontrolled and unplanned manner but also partly addressed the problems left from the previous era, these initiatives have also damaged the built environment and often resulted in an unequal distribution of space among residents. Despite its involvement in maintenance and renovation issues, the municipality does not have a clear vision for the future direction of the district. It is imperative that future interventions address the district's problems.

Notes

- 1 These currently cover over one-third of Tbilisi built-up area, which is around 50 square kilometres.
- 2 Bochorishvili later designed an extension of the Gldani district called Gldanula which is regarded as a separate neighbourhood and one of the microrayons of Temqa which is another mass-housing area developed to house the increasing population of Tbilisi. He is also the architect of many other individual buildings in Tbilisi.
- 3 It was part of the Soviet failed project that would turn peripheral "Tbilisi", a reservoir and an artificial lake located northeast from Gldani, into the heart of the city. This vision was based on the fact that Tbilisi population would increase further and reach two million by the end of the 20th century (Jaoshvili 1989).
- 4 This proximity to the railway line was one of the main reasons for locating the mass-housing district here.
- 5 This is particularly visible from the central axis which is suddenly disrupted somewhere after the third and fifth microrayons.
- 6 More detailed categorisation of the apartment building extensions created through my participation is provided on the following link: https://www.researchgate.net/publication/313853402_Micro-rayon_Living_-_Everyday_Life_Strategies_and_DIY_Practices_in_the_Post-soviet_Micro-rayon

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