

Demographic Crisis in the Mountainous Adjara: Challenges and the Solutions

Merab Putkaradze^{1,*}, Landa Putkaradze²

¹ Batumi Shota Rustaveli State University, Faculty of Natural Sciences and Healthcare, Professor of the department of Geography

² Tbilisi Ivane Javakhishvili State University, Faculty of Social Sciences

* Corresponding author: merab.putkaradze@bsu.edu.ge

Georgian Geographical Journal, 2025, 5(2) 30-35
© The Author(s) 2025



This article is an open access article distributed under the terms and conditions of the Creative Commons Attribution (CC BY) license (<https://creativecommons.org/licenses/by/4.0/>).

DOI:
<https://journals.4science.ge/index.php/GGJ>

Citation: Putkaradze, M.; Putkaradze, L.
Demographic Crisis in the Mountainous Adjara: Challenges and the Solutions.
Georgian Geographical Journal 2025, 5(2), 30-35.
<https://doi.org/10.52340/ggj.2025.05.02.05>

Abstract

Due to political and social-economic processes in independent Georgia, there are serious issues observed in the demographic development of the country, especially in mountainous regions, where the demographic crisis is obviously shaped. Similar problems are observed in mountainous Adjara, the population of which decreased from 85.1 thousand to 58.9 thousand (or by 31.8%) during the 1989-2023 years. Therefore, a population decrease in the region with high reproduction up to recent years would negatively affect the demographic policy of the country. Coming out of this, the topic is quite urgent and needs the evaluation of existing problems and the setting of ways to improve the demographics. Via application of traditional and contemporary (modern) research methods, there were assessed the spatial originalities of quantitative indicators of natural and mechanical movement of population of mountainous Adjara, including those forced to displace – the ecomigrants. The results of qualitative properties of demographic development were found out, and the main reasons causing the crisis were determined. There are analyses of the challenges (related to sustainable development of the region) due to the decrease of the population of mountainous Adjara, and there are solutions set for the demographic crisis.

Keywords: demography; population; natural movement; migration

Introduction

The tendency of population decline in mountainous regions represents a global trend, shaped by a range of social and economic challenges, while also bearing distinct regional characteristics. In Georgia, this issue has long affected the country's highland areas. However, until recent decades, mountainous Adjara stood out as a region with relatively high levels of population reproduction. In recent years, the demographic situation has shifted dramatically, with signs of a demographic crisis becoming increasingly evident. Against this background, the problem acquires particular urgency, and its comprehensive study, together with the identification of measures aimed at improving the situation, is of critical importance.

The main objective of this research is to examine the demographic development of mountainous Adjara, with particular emphasis on identifying both the quantitative and qualitative characteristics of population dynamics, analyzing the mechanisms underlying the current demographic crisis, and outlining potential pathways for its mitigation. To achieve this aim, the study addresses the following specific objectives:

- Assess the distinctive features of population dynamics in mountainous Adjara and identify the key patterns of quantitative change;
- Examine the characteristics of natural population movement and evaluate the principal causes of the observed shifts;
- Analyze the quantitative dimensions of migration processes and their role in shaping the regional demographic crisis;
- Identify the main directions for overcoming the demographic challenges in mountainous Adjara.

The study focuses on the municipalities of Keda, Khulo, and Shuakhevi, which collectively represent the highland region of Adjara. By using these areas as case studies, the research not only provides an in-depth assessment of the demographic crisis in a specific regional context but also generates insights with broader applicability for addressing demographic challenges across Georgia as a whole.

Methods and Materials

For determination of demographic crisis of mountainous Adjara, the following methods were used: statistical method, field research method, comparative method, space-time analysis method, GIS (Geographic Information System) method and other research methods.

Research database is based on the data of General Population Census in 1989, 2002 and 2014, also population estimation data in 2020-2023. Besides, the research is based on theoretical sources regarding evaluation of demographic condition of the country (Jaoshvili, 1996; Meladze, 2007; Tsuladze et al., 2008).

Results

Difference between the standards of living and peculiarities of urbanization processes in the modern world have significantly influenced over the demographic development of mountainous regions. Therefore, almost in every mountainous region there is obviously shaped demographic crisis, but researches (Coleman, 2008; Ehrlich et al., 2021; Gretter et al., 2017; Mladenov, 2011; Thornton et al., 2022), those conducted in direction of evaluation and solution of the problem grant an opportunity to share an international experience for specific region. Besides, on the basis of analysis of researches (Kohler et al., 2017; Meladze, 2007; Putkaradze & Putkaradze, 2019; Tsuladze et al., 2008) performed throughout the country in this regard, there will be developed the solution for demographic crisis in the mountainous Adjara.

Mountainous Adjara was one of the prominent regions of Georgia for its wide reproduction of population until the recent period, where the population was gradually increasing until 1989. Due to political, social and economic changes occurred in the country during the Georgia's independence period, significant decrease of rural population has commenced, which still continues in some particular municipalities of mountainous Adjara. As a result of enactment of the Law of Georgia on the Development of High-mountainous Regions and due to immigration processes in recent years, slow increase tendencies of population at the study area are observed somehow (see Table 1).

Table 1. Population size dynamics of mountainous Adjara in 1989-2023 (thousand man); Source: table is made according to materials of National Statistics Office of Georgia

Municipalities	1989 (Population census)	2002 (Population census)	2014 (Population census)	2020 (Estimate)	2021 (Estimate)	2022 (Estimate)	2023 (Estimate)
Keda	20.1	17.0	16.7	16.8	16.7	16.6	16.5
Shuakhevi	25.4	18.4	15.2	15.0	14.9	14.8	14.8
Khulo	39.6	28.6	23.5	26.3	26.6	26.8	27.6
Total, mountainous Adjara	85.1	63.6	55.4	58.1	58.2	58.2	58.9

Table 1 displays that population number of mountainous Adjara in 1989-2023 years decreased by 26,2 thousand - from 85,1 thousand to 58,9 thousand or it was decreased by 31,8%. There should be noted that the number of regional population was increasing during the whole twentieth century – up to 1989, but population size started decreasing after the migration flows triggered by natural disasters and the political, social and economic changes occurred in the country. Population decrease in the region with special intensity starts in 1989 until 2002 and decreases by 21,5 thousand persons – from 85,1 thousand to 63.6 thousand. The main reason for population's decrease by that period of time was not only forced displacement due to natural disaster processes, but rural population's free migration as well, which mainly implemented to coastal region of Adjara – the principal direction was Batumi City. In 2002-2014 years, slow decrease of population was observed still (see Table 1), but in 2014-2023 years the number of population was increased by 3500 persons, which constitutes unprecedented occurrence

comparing to other mountainous regions of Georgia. If we discuss the topic according to intra-regional standpoint, in 1989-2023 years, the number of population was decreased in all the municipalities, especially in Shuakhevi Municipality (decreased by 41,8%) but in Keda Municipality it was decreased in a relatively small amount (decreased by 18%). The mentioned peculiarity is partially explained the fact that Keda Municipality is located closer to Batumi City, the part of the population of which is employed in Batumi. As of huge decrease in Shuakhevi Municipality's population, it was mainly conditioned by eco-migrants and peculiarities of urbanization processes. As of population dynamics during recent years, quite different situation is observed in Khulo Municipality, which was decreased by 12 thousand persons (or 30,4%) during the study period, but after 2014, a slow increase tendencies of population are observed herein. In particular, local population was increased by 4,1 thousand persons in 2014-2023 years, that is firstly related to development of social and economic processes in rural areas, existence of the Law of Georgia on the Development of High-mountainous Regions (so-called "Mountain Law"), development of agricultural manufacturing and tourism comparing to other municipalities. During the same period, a positive migration balance was observed in Khulo Municipality, which was due to return of eco-migrants from Meskheta and Javakheti Regions. Positive migration balance was somehow influenced by enactment of the Law of Georgia on the Development of High-mountainous Regions (so-called "Mountain Law"), as a result of which, population consisting of retirement pensioners returned due to the higher pension rates.

If we compare the numerical dynamics of the population of mountainous Adjara to similar indicators of mountainous regions of the country, we will observe that population decrease is obvious in each mountainous region, especially in Racha-lechkhumi (Kohler et al., 2017; Putkaradze & Putkaradze 2019), which is the result of political, social and economic processes observed in the country (Jaoshvili, 1996; Putkaradze & Putkaradze, 2018; Putkaradze & Abuselidze, 2022; Tsuladze et al., 2008).

Number of population of mountainous Adjara until the recent year was absolutely depended on the natural increase. Region was on the first place in Georgia according to its wide reproduction of population, but during the recent period, on the background of common reproduction of country's population (where the depopulation is shaped during the several years already), the natural increase is observed still (see Figure 1).

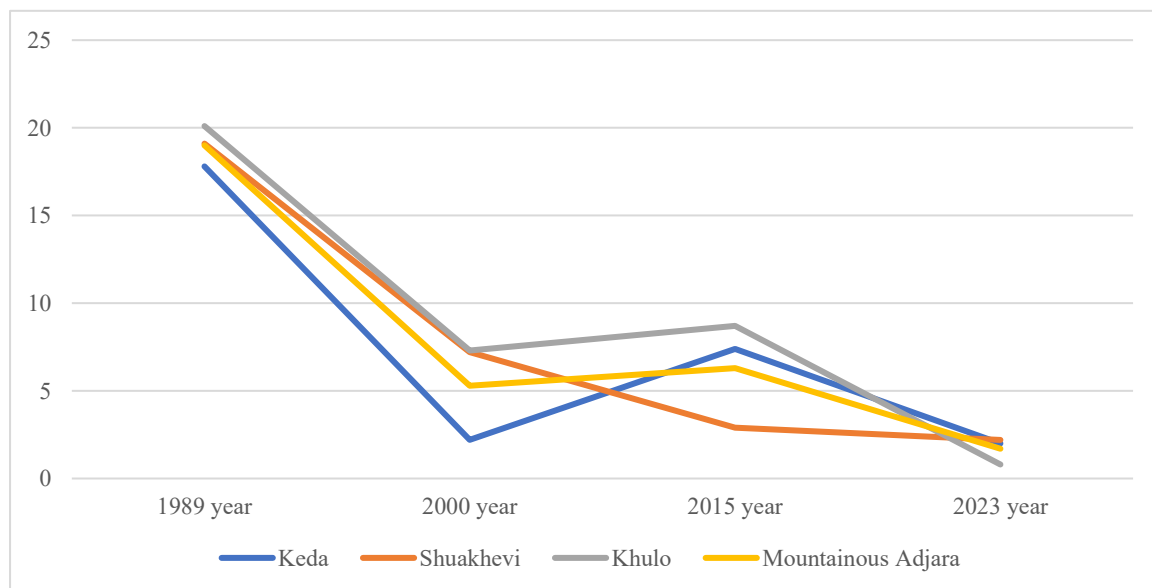


Figure 1. Natural increase of population of Mountainous Adjara in 1989-2023 years; Source: table is created according to materials of National Statistics Office of Georgia

Figure 1 displays that in 1989-2023 years, natural increase indicator of regional population was decreased from 19,0 promille to 1,7 promille. The mentioned peculiarity firstly is related to changes into demographic condition in the country, that by itself is connected to weakening of traditions of large families, worsening the age structure, increase of median age of marriage, migration processes and other factors. If we discuss the indicators of population's natural increase from an intra-regional standpoint, worsening tendencies are observed everywhere, especially in Khulo Municipality (see Figure 1). If we overview the population of Autonomous Republic of Adjara in the direction of natural movement where an average indicator for 2023 was up to 4,8 promille and the same for the country was 0,7 promille,

then we can see that mountainous Adjara (which was the center of wide reproduction of population until the recent years), obviously develops in the direction of demographic crisis.

One of the basic reasons for decrease of natural increase indicators of the population of the study area during recent years is related to changes in the age structure, though the gender structure did not worsen. In particular, number of men in 1989 was 49,2% and this indicator increased to 50,0% for 2014. The mentioned peculiarity is more related to immigration processes. As of age structure, noticeable changes of worsening are observed herein (see figure 2).

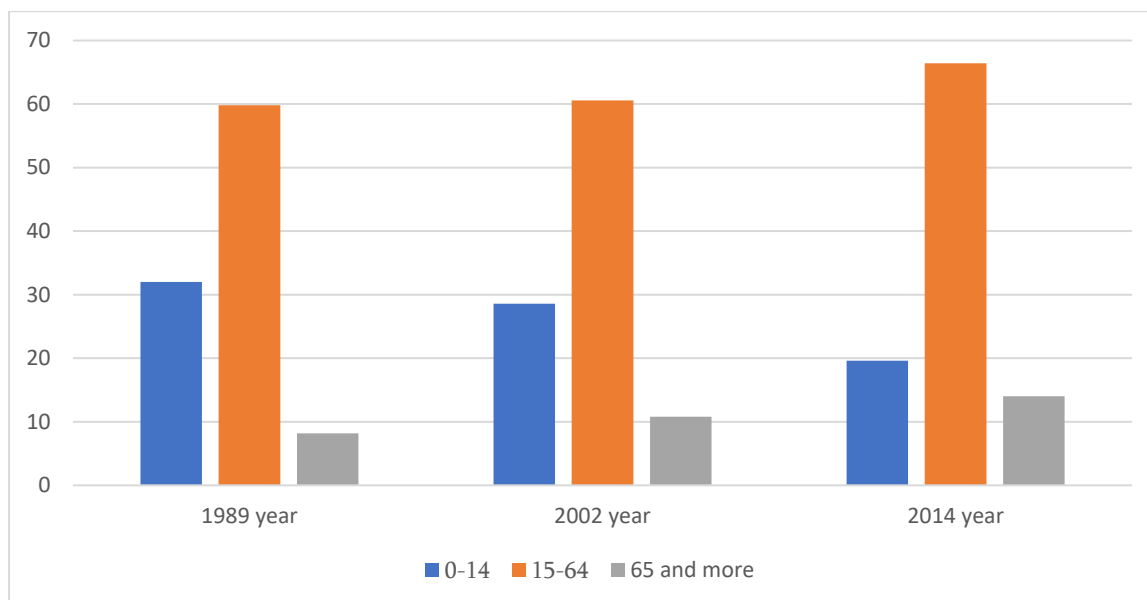


Figure 2. Age structure of Mountainous Adjara in 1989-2014 years; Source: table is made according to materials of National Statistics Office of Georgia

Figure 2 displays that 0-14 age group gradually decreases in the population age structure and the population of retirement age increase. The data brought and the factors named above constitute the main reasons of demographic crisis's formation in the region.

Population dynamics of mountainous Adjara is essentially connected to migration processes. Actually, during recent 150 years, region had a negative migration balance, which had a different progress during some particular periods of independent Georgia. Population of study region increased by 47387 persons as a natural increase in 1990-2023 years. If the population of the region was 85,100 in 1989 and 47 387 persons were added as a natural increase, then a negative migration balance in 1989-2023 years equals to 73587 persons $[(85100+47387)-58900]$ coming out of it. It turns out that annually region was left by 2164 persons in average, or average migration intensity was 31 persons per 1000. Migration intensity during the study period was quite different according to separate periods. In particular, as a result of natural disaster emerged in 1989-1990 years, 19138 forced displaced migrants from the region was settled in some other different regions, including the Krasnodar Kray of Russian Federation [Putkaradze, 1996] Migration intensity in 1991-1994 years, was decreased at its minimum due to difficult political, social and economic processes created in the country, moreover – some particular part of the population returned back at their old dwelling places. Migration begins to activate with slow pace in 1995-2014 years still, but number of population in 2014-2023 years was increased by 3500 persons (from 55,4 thousand to 58,9 thousand). During the mentioned period, region had a natural increase of 1951 persons. It is obvious, that regional population was increased by 1549 persons in a way of migration, that constitutes an unprecedented occurrence regarding mountainous regions. Actually, during the whole 140 years, region had a negative migration balance. The mentioned demographic condition relates only to Khulo Municipality. In particular, some part of the population settled in Meskheta and Javakheti regions due to natural disaster processes returned back. Besides, some particular part of immigrants are presented by population or retirement age.

Discussions

One of the originalities of modern demographic development of mountainous Adjara is also that so-called "hidden migration" is observed in the region, or the number of actual population from the

permanent population is decreased by 30-35% on average. Actually, a big part of the labour resources of the region are temporarily employed in Batumi. The mentioned circumstance somehow hinders the rate of application of regional natural resources, which by itself presents one of the hindering circumstances for the development of highlands, the regulation of which in the whole country is quite an important problem, and it requires a separate study. By evaluating the modern demographic condition of mountainous Adjara, it is found out that the region actually is under demographic crisis. Notwithstanding the fact that recently only in Khulo Municipality has a population's slow increase been observed, in general the natural increase of the region is decreased at its minimum, and it is at the edge of depopulation. Age structure is worsened, where the specific share of the population of young age is obviously decreased. A negative migration balance is observed in Keda and Shuakhevi Municipalities, but "hidden migration" is obviously shaped everywhere, or the present population (compared to the permanent population) is decreased by 30-35%.

Conclusion

In order to stop the demographic crisis in mountainous Adjara, the following important measures should be applied:

1. Social and economic development of the region should be increased more, and by foreseeing the worsened ecological condition, implementation of effective policy of sustainable economic development should be prioritised;
2. Operation of the Law of Georgia on the Development of High-mountainous Regions (so-called "Mountain Law") should become more effective in the direction of improvement of regional demographic condition. In particular, immigration processes should be promoted with state subsidies, large families should be encouraged with financial assistance and other;
3. In order to stop the migration processes, especially "hidden migration", it is necessary to create jobs and renovate the sectoral structure of the economy, and tourism should be prioritised in the sustainable development of the region;
4. Maintenance and stay of the population in mountainous Adjara and its social and economic development should be implemented by issuing low-interest loans and working out an effective taxation system. Stoppage of the demographic crisis in mountainous Adjara and the measures to be applied in this regard actually will be an effective event implemented in order to improve the demographic policy of the country.


Competing interests


The authors declare that they have no competing interests.

Authors' contribution

All authors provided critical feedback and helped shape the research, analysis and manuscript.

ORCID iD

Merab Putkaradze  <https://orcid.org/0000-0003-36440-4626>

Landa Putkaradze  <https://orcid.org/0009-0001-0848-9512>

Reference

- Coleman, D. (2008). The demographic effects of international migration in Europe. *Oxford Review of Economic Policy*: 24(3): 453–477. <https://doi.org/10.1093/oxrep/grn027>
- Ehrlich D., Melchiorri M., Capitani C. (2021). Population trends and urbanisation in mountain ranges of the world. *Land*. 10(3):1–19. <https://doi.org/10.3390/land10030255>
- Gretter, A., Machold, I., Membretti, A. & Dax, T. (2017). Pathways of immigration in the Alps and Carpathians: social innovation and the creation of a welcoming culture. *Mountain research and development*: 37(4): 396-405. <https://doi.org/10.1659/MRD-JOURNAL-D-17-00031.1>
- Jaoshvili, V. Population of Georgia Tbilisi, 1996. (In Georgian)
- Kohler, T., Elizbarashvili, N., Meladze, G., Svanadze, D. & Meessen, H. (2017). The Geodemographic crisis in Racha, Georgia: depopulation in the Central Caucasus Mountains. *Mountain research and development*: 37(4):415-424. <https://doi.org/10.1659/MRD-JOURNAL-D-17-00064.1>
- Meladze, G. (2007). Georgia's demographic challenges. Tbilisi. (In Georgian)

- Mladenov, C. (2011). Demographic potential and problems of the settlements network in the Mountains of Bulgaria. Sustainable development in mountain regions; Southeastern Europe, Springer.
<https://doi.org/10.1007/978-94-007-0131-1>
- Putkaradze, M. (1996). Economic-geographical problems of population of mountainous Adjara. (In Georgian)
- Putkaradze, M. & Putkaradze L. (2018). Effect of Political Processes on Demographic Development of Georgia. Journal of Geography and Earth Sciences. 6 (2): 50-57. <https://doi.org/10.15640/jges.v6n2a4>
- Putkaradze, M., Putkaradze, L., (2019). The Intra-Regional Originalities of Population's Dynamics of Mountain Regions of Georgia, *European Journal of Geography*, 10(2), 107–117.
- Putkaradze, M & Abuselidze, G. (2022) Social-economic aspects of potential migrants of mountainous region of Georgia: analysis and results. Journal of Geography, Politics and Society. Vol.12. no.2: 8-15.
DOI: <https://doi.org/10.26881/jpgs.2022.2.02>.
- Thornton, J. et al. (2022). Human populations in the world's mountains: Spatio-temporal patterns and potential controls. PLOS ONE.17(7). <https://doi.org/10.1371/journal.pone.0271466>
- Tsuladze, G., Sulaberidze, A., Maghlapheridze, N. & Mamardashvili, G. (2008). Demographic development of Georgia: Yesterday, today, tomorrow, Tbilisi.