Ecological dimension of conflict in Nagorno-Karabakh

G. R. Basharov*, F. S. Shedko, D. P. Okolota, A. L. Kotova, and A. A. Volkova Saint-Petersburg State University (SPBU), Saint-Petersburg, Russia

Abstract. This article examines the conflict in Nagorno-Karabakh not only from the point of the usual historical, ethnic and religious context, but also from the point of the environmental and resource dimensions, which are often ignored by researchers and practitioners of conflict resolution. The so called Six Weeks War significantly changed the current state of the conflict, and through focus group interviews and scientific analysis, the authors try to assess the impact of the environmental aspect on this conflict and substantiate its importance. The authors also hypothesize that the importance of environmental and resource factors is ignored by researchers and local residents, although these factors could become one of the foundations for building relationships, building trust and long-term conflict resolution.

1 Introduction

The conflict in Nagorno-Karabakh is one of the longest lasting and has one of the most ancient historical and cultural roots in the entire post-Soviet space. This leads to the multilevel conflict and the presence of many intertwining dimensions. The origins of the conflict go back centuries, but the beginning of its modern history can be considered the 1980s, the last years of the existence of the Soviet Union.

Although the population of Nagorno-Karabakh is predominantly Armenian, the Nagorno-Karabakh Autonomous Oblast (NKAO) was part of the Azerbaijan Soviet Socialist Republic. In February 1988, an extraordinary session of the regional Council of People's Deputies of the NKAO petitioned for the transfer of the NKAO from the Azerbaijan SSR to the Armenian SSR [1]. The refusal to satisfy this petition provoked demonstrations of Armenians not only in Nagorno-Karabakh, but also in the capital of Armenia - Yerevan. Tensions have sparked a wave of violence and ethnic cleansing in Armenia and Azerbaijan. In a referendum held in Nagorno-Karabakh a few weeks before the official collapse of the Soviet Union, the overwhelming majority (99.98%) voted for the complete independence of the Nagorno-Karabakh Republic from Azerbaijan [2]. The Azerbaijani government declared this act illegal and abolished the autonomy of Nagorno-Karabakh [3].

In the ensuing armed conflict, Azerbaijan tried to regain control of Nagorno-Karabakh, while Armenian troops defended independence with the support of the Armenian government and the Armenian diaspora. The internal separatist conflict gradually became internationalized.

© The Authors, published by EDP Sciences. This is an open access article distributed under the terms of the Creative Commons Attribution License 4.0 (http://creativecommons.org/licenses/by/4.0/).

^{*} Corresponding author: basharov.galim@mail.ru

Losses on both sides, according to various estimates, reached up to 25,000 people [4]. Armenia gained control over the territory of the Nagorno-Karabakh Republic and the adjacent seven regions of Azerbaijan (approximately 15% of its current territory) [4]. The hostilities ceased on May 12, 1994 after the signing of a ceasefire agreement [5], but a political solution was not agreed, despite the efforts of the parties of the conflict and numerous international mediators. [6] As a result, Armenia and Azerbaijan remained in an ambiguous state for a long time - without war, but also without peace. Peace talks continued within the framework of the Minsk Group of the Organization for Security and Cooperation in Europe (OSCE), which was established in 1992 by France, Russia and the United States as co-chairs. [7]

In 2016-2017, several outbreaks of armed confrontation between the conflicting parties took place, and the whole year actually passed under the sign of expectation of a possible repetition of those previous events [8, 9]. Then, the parties, with the mediation of Russia, managed to avoid the implementation of the most unfavorable scenarios.

However, the situation repeated itself and sharply worsened in the summer-autumn of 2020. The confrontation has again turned into a hot phase. The military actions were stopped thanks to the intensification of trilateral negotiations and the establishment of a Russian peacekeeping operation on the territory of Nagorno-Karabakh on November 10, 2020 [10]. A peace agreement was signed, providing for «the entry of Russian peacekeepers, the withdrawal of Armenian forces from the areas adjacent to Nagorno-Karabakh and the abandonment of part of the territory of Nagorno-Karabakh, including the city of Shusha, under the control of Azerbaijan» [11].

The peacekeeping contingent in Nagorno-Karabakh is stipulated by the agreement on the cessation of hostilities, which was signed on November 9 by Armenia, Azerbaijan and Russia [12]. It was reported that «a total of 1960 military personnel, 90 armored personnel carriers and 380 units of automobile and special equipment will be sent to the region» [13]. The Russian Defense Ministry's website also publishes daily infographic reports showing that the territory under the control of Russian peacekeepers is divided into two zones – «North» and «South». There are 16 observation posts in these zones, and military police patrols are organized in two areas. [13] According to the decree of the President of the Russian Federation, the peacekeeping contingent will change at least twice a year [14].

This conflict has many dimensions. Against the background of historical, ethnic, religious contradictions, environmental factors often fade into the shadows and are not considered by researchers and local practitioners as a significant factor influencing the entire conflict as a whole. However, it seems that this aspect has a huge impact on the conflict and the course of the settlement. Talking about the relationship between environmental scarcity and conflict, Homer-Dixon et al. (The so-called Toronto Group) argued in the early 1990s that environmental scarcity causes violent conflicts in many parts of the developing world, that these conflicts are usually observed within the country and that they have expansionary characteristics and can spread very quickly. Homer-Dixon's work indicates that environmental deficiency is one of the factors that can lead to armed conflicts within the country [15, 16, 17]. The Nagorno-Karabakh conflict introduces some changes to the above statements. Thus, the conflict in Nagorno-Karabakh was internationalized very quickly, therefore, environmental and resource factors become not only the cause of armed internal, but also internationalized conflicts.

The resource issue is one of the key ones - there are about 155 different deposits of gold, copper, mercury, lead and zinc in Nagorno-Karabakh. According to the estimates of the Johns Hopkins University there are three hydrocarbon deposits with total reserves of at least 150 million tons of oil and up to 250 billion m3 of gas in the Araks Valley of Nagorno-Karabakh, part of which previously fell on the territory of the Nagorno-Karabakh Republic. The water factor is no less important - Azerbaijan has relatively scarce water resources. More than 80%

of river sources are outside the country, which means a certain dependence on the country's water security. NKAO, while still being a part of the Azerbaijan SSR, played a significant role in this dimension, since on its territory there is one of the largest reservoirs in the Sarsang region, commissioned in 1975, the total volume of which is more than 601 million m3 of water, as well as the Tartar and Khachen. At that time, the Sarsang reservoir irrigated 128 thousand hectares of farmland, of which slightly less than 90% (110 thousand hectares) were outside the borders of the NKAO.

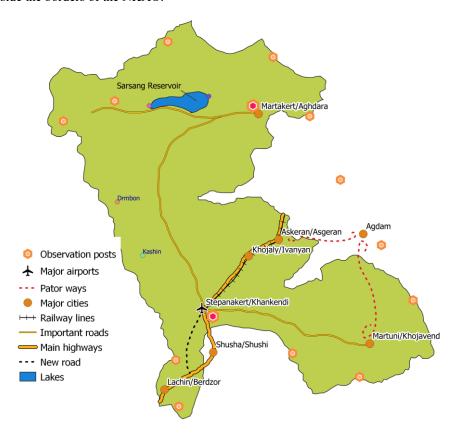


Fig. 1. Infrastructure map of the Nagorno-Karabakh Republic (the map was compiled by the authors independently).

Following the results of the last «six-week war», a significant part of the NKR territory passed to Azerbaijan. Significant water resources came under the control of Azerbaijan. These are, firstly, the sources of the Tartar and Khachen rivers, located in the Kalbajar region. Their average annual flow is about 828 million cubic meters. Secondly, this is a significant part of the territory of the Kashatagh Province and Karvachar region, the average annual flow of which is 2588.5 million cubic meters.

However, NKR is not left without water resources at all. The Sarsang reservoir with a number of key rivers remained under the control of the NKR. At the same time, the population of Nagorno-Karabakh (about 150.000 people) needs about 247 thousand cubic meters per year for food security and about 16 million for drinking needs. This is less than 40% of the volume of the Sarsang reservoir.

2 Materials and Methods

Such general scientific methods as analysis, generalization, comparison, description, content analysis were used in the work. The visualization and mapping method (using the QGIS software) was used to compile the map.

The first step for conducting the research was the analysis of the existing literature on the subject of the Nagorno-Karabakh conflict.

To assess the impact of the environmental factor on the Nagorno-Karabakh conflict, the authors, together with the Eurasian Youth Assembly, conducted interviews with focus groups consisting of residents of Azerbaijan, Armenia and the NKR. In total, the opinions of 3 focus groups were analyzed, each of which consisted of 12 people. In each focus group, residents of Azerbaijan (12 people), Armenia (12 people) and NKR (12 people) were equally represented. The age composition of each of the 3 focus groups was as follows: 4 people aged 18 to 28; 4 people from 29 to 40 years old and 4 people from 40 to 60 years old. Thus, the total number of people who took part in the focus groups is 36.

The interviews were converted into text format with subsequent content analysis. To conduct content analysis, the authors used NVivo and MAXQDA software. The total number of text characters of the focus group interviews was 450,000 characters (excluding spaces). As part of the interview, the authors of the study asked questions about the history of the conflict, its current state and the factors influencing it.

3 Results and Discussion

Based on the results of the content analysis of the focus group interviews, the following conclusions can be drawn. When answering the question: "What are the main factors of the Nagorno-Karabakh conflict?":



Fig. 2. Infographics based on the results of the focus groups (compiled by the authors independently)

- Only 18% of respondents mentioned fossil and rare earth resources in one way or another;
 - 10% of respondents noted the importance of environmental and water factors;
- The majority of respondents in the focus group singled out the significant role of the identity and ethno-religious factor (83%) as the main factor in the conflict;
- The historical factor of confrontation also stands out as significant, 67% of the respondents noted its importance;
- Political and economic factors of the conflict were also noted as important, 61% of the respondents highlighted their importance.

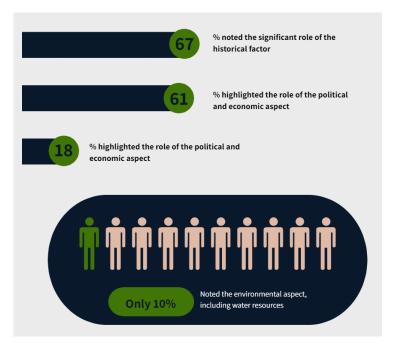


Fig. 3. Infographics based on the results of the focus groups (compiled by the authors independently)

After the initial survey, 91% of respondents believed that the role of the environmental and resource factor was absent or completely insignificant. After a short briefing for the respondents with the provision of information about water and other resources in this conflict, some of the respondents changed their minds. When asked again about the importance of the environmental and resource factor, 43% of the respondents said that cooperation in the field of ecology and water resources could be the first step towards a long-term settlement. It should be emphasized that the authors of the study in no way tried to influence the opinion of the respondents, but only gave them brief factual information, also described in this study.

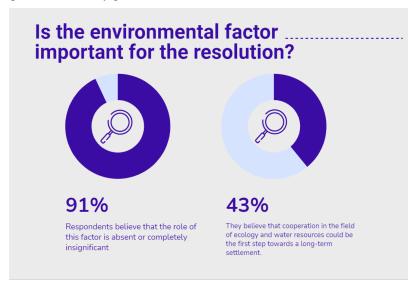


Fig. 4. Infographics based on the results of the focus groups (compiled by the authors independently)

4 Conclusion

The first part of the authors' hypothesis about ignoring the importance of the environmental and resource factor of the Nagorno-Karabakh conflict was confirmed, 91% of the respondents initially believed that the role of the environmental and resource factor was absent or completely insignificant.

The second part of the hypothesis is confirmed by the fact that the percentage of respondents who believe that cooperation in the field of ecology and water resources could be the first step towards a long-term settlement increased from 9% to 43% after providing respondents with factual information about this dimension of the conflict. The authors of the study also believe that the second part of the hypothesis can be confirmed by the fact that environmental and resource cooperation can become part of the so-called «tactics of small steps» method, when the parties gradually take steps towards confidence-building. Small steps usually contribute to the formation of an atmosphere of trust between the parties, which is extremely necessary for the normalization of relations [18]. Environmental and resource cooperation between the three parties to the conflict could, in our opinion, really contribute to confidence-building and the most effective activation of the long-term settlement process.

References

- 1. Judgement of the extraordinary session of the Council of People's Deputies of the NKAO "On a petition to the Supreme Soviets of the Azerbaijan SSR and the Armenian SSR on the transfer of the NKAO from the Azerbaijan SSR to the Armenian SSR" dated 03/20/1988, ANI Armenian Research Center, https://www.aniarc.am
- 2. Results of the referendum on the independence of Nagorno-Karabakh from Azerbaijan, dated 10.12.1991, https://www.sudd.ch
- 3. A. A. Melik-Shakhnazarov, Post-Soviet studies, **2**, 139 (2018)
- 4. E. Klimenko, Protracted Armed Conflicts in the Post-Soviet Space and their Impact on Black Sea Security, SIPRI Insights on Peace and Security (2018) https://www.sipri.org
- 5. Agreement on a ceasefire in the area of the Nagorno-Karabakh conflict (1994)
- 6. V. A. Kolosov, M.V. Zotova, Geography, environment, sustainability, **13(1)**, 84 (2020)
- 7. S. Minasyan, The Nagorno-Karabakh conflict in the context of South Caucasus regional security issues: An Armenian perspective, Nationalities Papers, **45(1)**, 131 (2017)
- 8. S. M. Markedonov, RIAC analytical articles (2018) https://russiancouncil.ru
- 9. A. Bayramov, Security and Human Rights, **27(1-2)**, 116 (2016)
- 10. Statement of the President of the Republic of Azerbaijan, Prime Minister of the Republic of Armenia and the President of the Russian Federation dated 11/10/2020, Official network resources of the President of Russia, http://kremlin.ru
- 11. RBC, Armenia made peace and went to concessions to Azerbaijan, rbc, https://www.rbc.ru
- 12. RBC, Experts assessed the weapons of the Russian peacekeepers in Karabakh, rbc https://www.rbc.ru
- 13. Russian peacekeeping contingent in Nagorno-Karabakh, Ministry of Defense of the Russian Federation, http://mil.ru
- 14. Decree of the President of the Russian Federation dated 11/10/ 2020 No. 695 "On measures to maintain peace in Nagorno-Karabakh", Official Internet portal of legal information, http://publication.pravo.gov.ru

- 15. T. Homer-Dixon, International Security, **19(1)**, 5 (1994)
- 16. A. Rwabizambuga, Conflict, Security and Development, 7(1), 203
- 17. P. Wallensteen, Journal of Peace Research, 13(4), 277 (1976)
- 18. N. V. Shtanski, International processes, 36-37, 33 (2014)