

THE IMPACT OF MOUNTAINOUS KARABAGH CONFLICT ON NAKHICHEVAN AUTONOMOUS REPUBLIC OF AZERBAIJAN

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Abstract:

The Nakhichevan Autonomous Republic of Azerbaijan, which is located outside the borders of the mainland Azerbaijan is an exclave surrounded by Turkey, Iran and Armenia. It has been subjected to a blockade of electricity, gas and transport by Armenia since the early 1990's. The economy and the people of the Autonomous Republic of Nakhichevan have suffered from this isolation (which was) caused by this conflict with Armenia. The lack of gas, electricity and trade produced economical and social difficulties in Nakhichevan. There have been several attempts and threats to invade the exclave. Indeed, Nakhichevan did not face a large-scale invasion by the Armenians except for the village of Karki. Furthermore, there are relatively small numbers of refugees and internally displaced people (IDP) in Nakhichevan. Due to the blockade the situation of the exclave is significantly worse than the west and south western region of mainland Azerbaijan that were most greatly affected by Armenian aggression. In fact, statistics show that refugees and IDPs in Azerbaijan in many cases have better living conditions than Nakhichevanis.

Key Words: *Autonomous Republic of Nakhichevan, Azerbaijan, Armenia, Karabagh Question.*

Öz:

Azerbaycan sınırlarının dışında bulunan Nahçıvan Muhtar Cumhuriyeti Türkiye, İran ve Ermenistan toprakları ile çevrelenmiştir. Nahçıvan'a 1990'ların başından beri Ermenistan tarafından elektrik gaz ve ulaşım ambargosu uygulanmaktadır. Ermenistan ile yaşanan çatışmalar Nahçıvan Muhtar Cumhuriyeti'nin ekonomisini ve halkını olumsuz olarak etkilemektedir. Gaz, elektrik ve ticarete getirilen bu kısıtlamalar Nahçıvan'da ekonomik ve sosyal sıkıntıların doğmasına yol açmıştır. Bunun yanı sıra işgal veya müdahale tehdidi de sürmektedir. Karki köyü dışında Nahçıvan Ermenistan tarafından büyük çaplı bir işgale maruz kalmamıştır, ayrıca Nahçıvan'da mülteci veya iç göçmen statüsünde göreceli olarak az sayıda insan yaşamaktadır. Ancak yine de ambargo nedeniyle durum kötüye gitmektedir ve Azerbaycan'ın batı ve güney-batı sınırları Ermeni saldırganlığından etkilenmektedir.

Hatta, istatistikler göstermektedir ki, Azerbaycan'da yaşayan mülteci ve iç göçmenlerin durumu Nahçıvan'da yaşayanlara göre daha iyidir.

Anahtar Kelimeler: *Nahçıvan Muhtar Cumhuriyeti, Azerbaycan, Ermenistan, Karabağ Sorunu*

INTRODUCTION

Nakhichevan, which is an exclave of Azerbaijan, has a total area of 5.5 thousand km², comprising 6.3% of Azerbaijan. Nakhichevan includes the administrative districts of Babek, Julfa, Ordubad, Sadarak, Shahbuz, Sharur and Nakhichevan city. The official population of the Autonomous Republic is 364,500 which compromises 4.5% of Azerbaijan's population¹.

Between 1988 and 1994, the Armenians forcibly obtained control over the district of Mountainous Karabagh and seven bordering regions, amounting to approximately 20% of Azerbaijan's territory, and they attacked the Autonomous Republic of Nakhichevan. But all attempts to invade this region between 1988 and 1994 failed. Almost 1 million Azerbaijanis have been driven out of their native lands as a result of this conflict.

The Armenians tried to convince the world public opinion that the war over the Mountainous Karabagh was waged between the government of Azerbaijan and the Armenians of the Mountainous Karabagh, who formed a small republic independent from Azerbaijan at the end of the war. Although Armenia provided assistance to the Karabagh Armenians and although she was actively involved in the conflict, the Armenians repeatedly tried to present the events as if Armenia was not involved in the conflict in Mountainous Karabagh. As a proof of this denial, recently the Chairman of Christian Democratic Union, Khosrov Harutyunyan, recently proclaimed the following: "we must do everything possible so that the conflict is viewed as the Azerbaijani-Karabaghi one". Despite all these efforts, attacks and cruel acts of violence against Azerbaijanis by Armenian forces and Armenian threats and attacks against Nakhichevan clearly reveal that the conflict between Armenia and Azerbaijan is not limited to Karabagh. Armenian

¹ The information in this paragraph cited in: United Nations Online Network in Public Administration and Finance (UNPAN), State Program on Social-Economic Development of Regions of Azerbaijan Republic for the Years 2004-2008 (Baku; 2004), p.24-25. (http://unpan1.un.org/intradoc/groups/public/documents/UNTC/UNPAN016_803.pdf)

aggression is part of a grand design to create a 'Greater Armenia' out of Azerbaijani lands. Numerous attempts to invade the Nakhichevan Autonomous Republic (AR) have been carried out by Armenian forces from the Republic of Armenia and not by Armenians living in Karabagh. Furthermore on numerous occasions Armenian officials claimed Nakhichevan was a part of Armenia. Furthermore, these events reveal that Armenia has more ambitions and ideas than that of merely helping the Mountainous Karabagh Armenians. The Armenian blockade of Nakhichevan also provides proof that the Armenians played a greater role in the conflict than that of merely providing assistance to the Karabagh Armenians².

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There are a lot of papers evaluating the cost or damage of the blockade of Armenia. However there are almost no papers analyzing the damage or cost of the blockade of Nakhichevan by Armenia. The aim of this paper is to investigate the cost of Armenian aggression and the blockade for Nakhichevan. It mainly examines the effects of the Armenian blockade on the economy and the people of Nakhichevan. In conducting this study reports of international organizations, international news agencies and to a smaller extent Azerbaijani sources were used. Accordingly, the reports of the World Bank, the United Nations, UNICEF, the European Bank for Reconstruction and Development (EBRD) and The State Statistical Committee of Azerbaijan (SSC) were utilized to analyze the impacts of Armenian aggression and the blockade on Nakhichevan's social and economic life. This paper reveals the impact of the conflict, especially the blockade, by comparing Nakhichevan with other districts of Azerbaijan and comparing the living conditions of Nakhichevanis with the people living in other districts of Azerbaijan especially with refugees and IDPs, namely, the main victims of conflict.

I. A PARTIAL VIEW OF THE COST OF ATTEMPTS TO INVADE NAKHICHEVAN

Armenians view Nakhichevan as their historical land and the railroad connection between Iran and Armenia passes through Nakhichevan. Thus, between

² A1+ (26.11.2004) and ANN/Groong (27.11.2004).

1988 and 1994, there have been numerous attempts to invade the Nakhichevan Autonomous Republic (AR) along the territory close to the Turkish border. Most of the serious attacks happened to the Sadarak region of Nakhichevan which has vital and strategic ties with Turkey. In addition to human loss, these attacks caused a significant financial damage to the economy of the Autonomous Republic.

UNICEF's survey of Azerbaijan is important with respect to depicting the damage that the war inflicted upon of the war the Azerbaijanis. This survey reveals that the percentage of orphaned Azerbaijani children born between 1986 and 1990 were 7 times; and children born between 1991 and 1995 five times higher than the children born between 1996 and 2000. Furthermore the level of orphans in IDP/Refugee population is significantly higher than the rest of the population (5.3% to 3.1%). These results indicate that children born between 1986 and 1995 lost more family members than those children born after 1996. Although there have been several attempts, Nakhichevan has never faced a large scale military invasion by Armenians except for the village of Karki, also the number of IDPs and refugees in Nakhichevan is relatively lower than other regions of Azerbaijan. The absence of a large scale invasion decreased the number of Azerbaijanis killed during combat activities in comparison to the other regions of Azerbaijan which have a border with Armenia. A relatively lower number of deaths during combat activities and a low number of refugees resulted in the decline of the number of children who were orphaned in Nakhichevan. In Nakhichevan 97.1 % of the children live with both of their parents. This is the highest percentage in the country. The number of children have that have lost either one or both of their parents amounts to 1.2% which is at least 2 or 3 times lower than the other regions of the country³.

On January 19 1990, Armenian forces ran over the Azeri village of Karki, which is a city surrounded by Armenian territory. About 2000 refugees from Karki had to leave their homes and came to Nakhichevan⁴. Today they are still located in Nakhichevan. The most serious attempts to invade Nakhichevan occurred between 1992 and 1993. Interestingly when the assaults to Nakhichevan reached a peak, the assaults at Karabagh were at their highest level, which indicates the coordination between the attacks carried out by the Armenians in both Azerbaijani territories.

3 For more information about enrollment of Armenia in the conflict see Human Rights Watch / Helsinki, Seven Years of Conflict (HRW Dec 1994), p. 67-89

4 The information in this paragraph cited in: UNICEF, Azerbaijan Multiple Indicator Cluster Survey (MICS) 2000 (Dec 2000 Baku), p.34, 86.

The most serious attacks started in May 18, 1992, when well-equipped military forces attacked the strategically important part of the Azerbaijani-Turkish border in the Sadarak region. On the first day of the attack forty soldiers and civilians were seriously wounded and four people were killed, including a doctor trying to rescue a wounded soldier and a woman looking for her son. As a result of these attacks the town of Sadarak was evacuated

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⁵. Subsequently most of the displaced people from Sadarak returned to their homes, only the displaced people from the insecure border villages near Sadarak, which are overlooked by Armenian Army posts had difficulties to return because of fear⁶. When the IDPs returned the Sadarak region, they found themselves in a reconstruction process because the Sadarak district had been destroyed due to Armenian aggression.

In 2004, in the Nakhichevan Autonomous republic there were a total of 1367 refugees and IDP families. 4005 (167 families) of these people are refugees and 1073 (300 families) of them are IDP⁷. These people need shelter, food and jobs. Although more than a decade has passed since the ceasefire, housing for all these people is still not available. The loans and funds from international agencies have been used to build new housing for refugees and IDPs. Furthermore, the Sadarak region which has been destroyed by Armenians had to be restructured, for which international loans were predominantly used. 12 years after the major destruction occurred, on July 17, 2004, the Program of Restoration of the occupied territories of Azerbaijan in Sadarak region was completed. 7 secondary schools with 1612 seats, a three-stage pumping station capable to irrigate over three thousand hectares of Sadarak territories, 24 sub-artesian wells, 75 apartment houses, a support electric power station, 20 km long overhead transmission lines and drinking pump stations, which were destroyed by Armenian aggression, were restored by the funds from the Islamic Development Bank⁸. On July 17, 2004, the Sadarak region returned to where it was before conflict.

⁵ The Economy of an Enclave: How Nakhchivan Survives (FM AMEMBASSY Baku; 03.12.1998), section 4. (<http://www.bisnis.doc.gov/bisnis/country/981203.az.htm>)

⁶ Thomas Golts, *Azerbaijan Diary* (New York and London: M. E. Sharp, 1998), p. 177.

⁷ HRW 2002, Azerbaijan.

⁸ State Statistical Committee of Azerbaijan (SSC) (www.azstat.org)

Although there has been a ceasefire since May 12, 1994, from time to time attacks are still being carried out against the Nakhichevan Autonomous Republic. The last bloody attack took place on July 17, 2003. Subunits of the Armenian Armed Forces attacked the Armed Forces of Azerbaijan near the village of Germechatag of the Shahbuz region of the Nakhichevan Autonomous Republic. One Azeri soldier was killed and another was wounded⁹. Although these attacks caused human loss, which might seem a little effect, their impact on the economy was greater than expected. First, IDPs, who have homes close to the Armenian border, do not want to return to their homes due to the fact that their lives might be in danger and second, international investors do not want to spend their money in a place, which is not stable. Therefore besides human loss, these small-scale attacks continuing after the ceasefire resulted in a significant amount of capital loss. Refugees/IDP and the direct damage of Armenian attacks to the Nakhichevan Autonomous Republic have diverted international and governmental funds, which have been spent for the restoration of the damaged region and for supplying food and shelter to IDPs/refugees, who were driven out from their native lands as a result of Armenian aggression, rather than improving the infrastructure and economy of the region. These damages and diversion of funds definitely caused a significant delay in improving the living conditions in Nakhichevan.

II. THE HISTORY OF BLOCKADE

There are two railroad connections between Baku and Yerevan: the Baku-Megri-Nakhijevan-Yerevan (southern route) and Ghazakh-Ijevan-Yerevan lines (northern route). The southern route, which traverses 46 kilometers of Armenia before entering the Nakhichevan Autonomous Republic of Azerbaijan, served to carry 85% of all goods to Armenia and Nakhichevan¹⁰. Azerbaijanis marked July 29, 1989, as the beginning of the Armenian blockade to Nakhichevan because on that day trains which were going from Azerbaijan to Armenia, were attacked in the territory of Armenia¹¹. Despite all difficulties Azerbaijan tried to continue to send shipments. After the first attack several trains coming from Azerbaijan were attacked, robbed, and the passengers were killed in the territory of Armenia. In September 1989, Azerbaijani railroad workers went on strike due to the attacks on the trains in the territory of Armenia. It is interesting that some sources try to depict the strike of Azerbaijani railroad workers as an organized strike to block

⁹ Restoration Works Finished in Sadarak, Azertag (17.07.2004).

¹⁰ Azertag (19.07.2003).

¹¹ UNDP, Human Development Report (Armenia), 1995, box2.1; (www.undp.am/publications/hndr95/part_2.html)

shipments of materials to both Armenia and Karabagh¹². Not only Azerbaijani railroad workers, who were carrying goods to Armenia, but also those who were carrying goods to Nakhichevan went on a strike due to the lack of security in Armenian territory. Therefore the strikes were not for blocking shipments to Armenia. Similarly, approximately fifteen years later, at the end of July of 2004, Turkey's truckers association stopped shipping to Iraq after the death of a truck driver. Turkish truck drivers have halted transportation and refused to continue shipping due to the attacks while delivering goods to Iraq¹³. The reason for halting transportations in both situations was the same. There was simply no security and Azerbaijani railroad workers and Turkish truck drivers did not want to put their lives in jeopardy.

Since the beginning of the Armenian blockade the Nakhichevanis have been living in conditions akin to the Medieval Ages.

In November 1989, railroad traffic between Azerbaijan and Armenia stopped due to the attacks on Azerbaijani trains in the territory of Armenia. All attacks transpired in Armenian territory. The 10 kilometers of the southern route inside Armenia was destroyed¹⁴. The rest was destroyed in 2003¹⁵. The aim of the Armenians was to block the goods going from Azerbaijan to Nakhichevan, however, when the Armenians were trying to cut their enemy's vital transportation route, they cut their own. So, in reality, the Armenians, who were constantly trying to show themselves as the victim of the blockade, destroyed their main supply route; hence, they blockaded themselves. The northern route was cut off by the Azerbaijanis in order to protect their country when they realized that the route was used to supply goods to the Karabagh Armenians.

Since the beginning of the Armenian blockade the Nakhichevanis have been living in conditions akin to the Medieval Ages. The Armenian blockade of Nakhichevan has resulted in lack of connection to outside world, and lack of electricity and fuel for heating and cooking. The blockade crippled the economy in the exclave and as of this day Nakhichevanis are still trying (today) to survive without adequate heat, sufficient food, or medical care.

¹² For chronology see www.Karabakh.org.

¹³ <http://www.cidcm.umd.edu/incr/mar/data/azearmenchro.htm>

¹⁴ Suzan Fraser, Turkey won't Truck Goods to U.S. in Iraq, The Associated Press (02.08.2004)

¹⁵ Ramiz Abutalibov, The Nakhchivan Connection, Azerbaijan International, 1994 (Spring 2.4)

III. THE COST OF THE BLOCKADE

Both the Republic of Armenia and the Nakhichevan Autonomous Republic are landlocked. Under the Soviet central system, unlike Nakhichevan the AR whose economy was based on output and manufacturing farm products, Armenia developed an industrial sector which mainly supplied manufactured goods to her sister republics. After the collapse of the Soviet system at the end of 1991, Armenia had to switch her economy from a highly industrial economy to a small-scale agriculture economy. On the other hand Nakhichevan's economy was already an agricultural economy. In other words after the fall of the central Soviet system, the poor people of ex-Soviet Union did not need computers from Armenia but they still needed food. As a result, the impact of the fall of central Soviet system was lighter in Nakhichevan than in Armenia. Therefore, the primary reason that ruined Nakhichevan's economy was the Armenian blockade rather than fall of central Soviet system.

The economy of the Autonomous Republic is mainly based on the output and the farm products. There are also light food processing enterprises in Nakhichevan and only 0.5% of Nakhichevan is covered by forests.¹⁶ That Nakhichevan's economy is severely suffering from the Armenian blockade is a fact. The production has been reduced by two thirds due to the blockade of Nakhichevan; the industrial production decreased by 99.99%¹⁷.

1. Lack of Energy

Until the beginning of 1992, 33,330 subscribers in 4 cities, 2 city-type settlements and 91 villages were provided with natural gas by Shusha-Lachin-Bichenek-Nakhichevan gas line. Since January of 1992, the activity of the high-pressured main gas line, which provided vital energy to Nakhichevan, was stopped by Armenia. 29,042 apartments, 3384 domestic subscribers, 19 communal enterprises, 207 organizations and 20 industrial objects were cut off from natural gas. Ten years after the ceasefire, in 2004, Nakhichevan was only place in the Caucasus

¹⁶ Azernews (26.12.2003).

¹⁷ UNPAN, 'State Program on...', p.25

region deprived of natural gas. Due to the supply of natural gas being cut off, 340 employees of 470 gas-housing workers were laid off or had to take leave of absence. The gas lines in Nakhichevan, which have not been used since the beginning of 1992, started falling apart. \$20 million will be spent only to restore the gas lines in Nakhichevan. Besides this, more than \$1.2 million (6 billion Manat) is needed to restore the internal gas lines inside multi-floored buildings (8,000 subscribers) in Nakhichevan. About 20 industrial and production enterprises are still waiting for gas to fully operate¹⁸.

Nakhichevan primarily depends upon Iran for energy because Iran is the only neighbor of Nakhichevan, which has rich hydrocarbon sources and can provide energy (gas, electricity and fuel) to the Autonomous Republic. This monopoly position gives the Islamic Republic of Iran the opportunity to sell slightly more expensive gas or electricity to Nakhichevan.¹⁹ Since 1994 there have been discussions with Iran to supply gas by a 36-kilometer pipeline between Khoy and Culfa. Iran will supply gas to Nakhichevan and Azerbaijan will supply gas to Iran from Astara. Iran will keep 15% of volumes, as a service charge²⁰. More than \$17 million will be spent for installation of pipeline to Iran from Astara²¹.

Prior to the blockade Nakhichevan was getting electricity from Armenia and since 1991 electricity lines coming thorough Armenia were cut. After the blockade Nakhichevan started getting electricity from Turkey (with no cost), Iran and some of the electricity was produced from the water dam "Araz". In 2004 roughly 52% of the electricity which was used in Nakhichevan was supplied by Iran, 36% by Turkey and 12% was generated by "Araz"²². Although there have been improvements, still in 2004 the supply of electricity is lower than demand (150-160 megawatts)²³. Iran tried to use its monopoly on Nakhichevan's energy supply to exert pressure on Azerbaijan for her own international demands. The power sup-

18 Report of United Nation Environmental Program (UNEP/GRID-ARENDAL) on Azerbaijan's Environment. According to same report use of water for industrial purposes in Nakhichevan decreased due to the blockade. Decrease in industrial production calculated from decrease in use of water for industrial purposes (According to SSC in 1995, 8 million m3 and in 2003, 0.05 million m3 water was used for industrial purposes).

19 Information in this paragraph was discussed during the visit of Ilham Eliyev (The current President of Azerbaijan) to Nakhichevan AR at High Assembly of Nakhichevan AR Blockade of Nakhichevan is discussed. Conference at High Assembly of Nahchivan AR, 02.09.2004.

20 Iranian Deputy Foreign Minister Visits Nakhichevan, RFE/RL Newline, (02.01.08)

21 Khadija Ismayilova, Neighbors Show Tactic Support, Caspian Business News (09.08.2004).

22 'Conference at High...'

23 Authors calculation from data cited in 'Electricity Supply Getting Better in Nakhchivan', Azertag (11.09.2004)

ply from Iran to Nakhichevan was cut by Iranian officials several times. In 1995, almost a month after Iran had been excluded from the Azerbaijani oil consortium

Because of the blockade a lot of people lost their jobs and poverty increased. Accordingly, 13.1% of those residing in Nakhichevan are extremely poor.

(Contract of Century), Iran cut the electricity supplies to Nakhichevan, and interestingly it was just three weeks later that Iran agreed to supply Armenia with natural gas and electricity for a period of 20 years²⁴. Most recently on

27 October 2000, Iran cut power supplies to Nakhichevan using \$45 million debt of Azerbaijan as an excuse. Iran resumed power supplies on November 4, 2000 after negotiations with Baku²⁵. Iran and Baku agreed to the construction of the Ordubad power dam in August 2004, and agreed to increase the supply of electricity from Iran to Nakhichevan²⁶.

Trade blockades disturbed energy politics in Nakhichevan, which made it difficult to pay increased energy tariffs for Nakhichevanis, most of whom are unemployed. The gas prices will be at least 15% higher in Nakhichevan because of the Iranian connection fee. Due to the blockade, electricity prices have increased which resulted in demonstrations from time to time²⁷. Furthermore there have been restrictions on the usage of electrical appliances,²⁸ and street lamps,²⁹ which were turned off to reduce electricity consumption in Nakhichevan.

Transportation between the villages is vital for Nakhichevan where 79.3% of the households are in rural areas, and the main health and economic facilities are in urban areas³⁰. The fuel used to come from Azerbaijan by trains, began to be carried through Iran by trucks after the blockade. Carrying the fuel by trucks rather than trains increased the time and length of the transportation, and therefore the cost of fuel. The situations that caused a lack of fuel also caused difficulties in public transportation. Only 33% of the villages in Nakhichevan have consistently

24 'The Economy of an Enclave...'

25 Svante E. Cornell, Iran and the Caucasus, Middle East Policy Journal (Vol. V, No.4, 1998) (www.mepc.org/public_asp/journal_vol5/9801_cornell.asp)

26 RFE/RL (08.11.2000)

27 'Statement for Media', Azertag (09.09.2004)

28 REL/RF(Volume 8, No17, 28.01.2004)

29 *ibid.*

30 Thomas De Waal, Black Garden: Armenia and Azerbaijan through Peace and War, (New York University Press, 2003), p. 271.

working normal bus routes which is the lowest percentage in the republic³¹.

The blockade of the Nakhichevan AR by Armenia has caused great damage, not only to the region's industry, but to the agriculture of Nakhichevan as well. According to UNEP report, the extreme deficiency of fuel and electric power, which is the result of the blockade, did not allow improving and taking soil-recreating measures. The whole territory of Nakhichevan is prone to erosion³².

2. Lack of Trade

Since 1991, roads and railways coming to the Autonomous Republic from Armenia were decreased.³³ By stopping the traffic through its territory, Armenia prevented Nakhichevan from being connected to other countries including Azerbaijan's mainland. The blockade increased the transportation costs; lengthened the average distance between Nakhichevan and potential markets and raw material sources including Azerbaijan's mainland; and altered the trade partners.

With the blockade, Nakhichevan became akin to an isolated island with no connection to the outer world. On October 31, 1991, a connection between Nakhichevan and Turkey was established via the bridge over Araz which provided a vital route to Nakhichevan³⁴. The rail link between Tabriz and Nakhichevan City, through which 3 million tons of cargo was transported, has been halted since the beginning of Karabagh conflict. The closure of this railway link caused \$2 billion worth of damage to the countries of the region³⁵. In December 2004, in an attempt to ease the isolation of Nakhichevan, Iran and Azerbaijan (had) agreed on the construction of two bridges: one between Poldasht (Iran) and Saxtaxti (NAR), and the other between Jolfa (Iran) and Julfa (NAR). The construction costs of three million dollars for the former and four million dollars for the latter will be jointly paid by Iran and Azerbaijan³⁶.

85% of the goods, which are consumed in Nakhichevan, used to come from Azerbaijan thorough Armenia by railroad³⁷. After the blockade goods (almost

31 Author's calculation from table 3 at MICS p.44

32 SSC

33 'Report of UNEP/GRID-ARENDAL...'

34 'Conference at High...'

35 Edgar O'balance, *Wars in the Caucasus 1990-1995*, (New York University Press 1997) p. 52.

36 Iran seeks to re-open Tabriz-Julfa-Nakhchivan-Iran Railway, *Assa-Irada*, (21.12.2004)

37 Iran, Azerbaijan Agree on Building two Bridges to Naxjivan, *MPA News Agency*, 06.12.2004. and *ANN/Groong* 07.12.2004.

all of it is fuel) from Azerbaijan started coming either from Iran by trucks or by planes. Carrying the goods by trucks or airplanes instead of trains increased the cost and time of transportation between Azerbaijan's mainland and Nakhichevan. The blockade of transit routes by Armenia caused the loss of access to raw materials and markets, increased the cost of trade, and naturally decreased the amount of trade.

Nakhichevan is a landlocked exclave. In 2004, the Nakhichevan Autonomous Republic had the worst economical conditions in the republic³⁸ due to the lack of a sales market, raw materials, and energy (45 production and refining enterprises were shut down and the rest are operating 10-15% capacity)³⁹. Nakhichevan has been running high trade deficits because restrictions on the direct movement of goods results in low export. The construction of Umut (or Umud) bridge across Aras provided the exclave with a vital link to the outside world. Although new markets are emerging in Turkey and Iran, the blockade severely impairs the economy. The blockade forced Nakhichevan to change its trade partners, because Nakhichevan cannot gain access to the markets in the Commonwealth of Independent States (CIS). The Armenian blockade cut the easy and reasonable access of Nakhichevan with its nearest members of CIS such as Russia, Georgia and Ukraine, which have large markets and rich raw materials.

Table I⁴¹: Import and Export Figures of Nakhichevan

| Table I ⁴¹ | Import | | | Export | | |
|-----------------------|-----------|----------|------|-----------|----------|------|
| | Total | CIS | % | Total | CIS | % |
| Julfa | 8944,6 | 749,0 | 8.4 | \$10,4 | 0 | 0 |
| Sadarak | 21816,3 | 0 | 0 | \$4157,4 | \$9,9 | 0.2 |
| Azerbaijan | 2626427,3 | 851201,8 | 32.4 | 2591719,4 | 333633,1 | 12.9 |

Nakhichevan has two customhouses. Julfa connects it to Iran and Sadarak to Turkey. According to 2003 SSC statistics, trade from these customs with CIS is the lowest between all Azerbaijani customs which clearly indicates a lack of connection between CIS and Nakhichevan AR (Table I)⁴⁰. Even the main import of Nakhichevan from mainland Azerbaijan is fuel, which is carried by trucks thorough Iran. Because of the lack of a connection with CIS countries and Azerbaijan's mainland, production of food and industrial products mainly demanded by

38 Abutalibov, 'The Nakhichevan Connection...'

39 Nakhichevan has the highest poverty incidence. State Program on Poverty Reduction and Economic Development, Annual Progress Report 2003 (Baku 2004), p.17

40 Council of Europe, Parliamentary Assembly, 815 Meeting; 30 October 2002 (<http://karabakh-doc.gen.az/ru/istoch/is007eng.htm>) and The Economy of an Enclave....' sec.3.

these countries has decreased since the beginning of the Mountainous Karabagh conflict.

Between 1990 and 1995 agricultural production decreased. After the ceasefire, the government started spending more money on the economy instead of on defense. However, only the farm products such as vegetables, sugar beets and animal products, which are mainly demanded by Turkey, Iran and Nakhichevan's population, increased after the ceasefire (Table II). On the other hand, Turkey and Iran have also developed farming output, thus the development of Nakhichevan is limited without other trading partners. Production of tobacco, grapes, alcoholic beverages (cognac and vine) and related industries (such as bottle production), which are demanded and imported by Russia, Ukraine, Belarus and Georgia, decreased even after the cease fire⁴¹. Therefore the decrease of production of these products is not related to a lack in demand. The decrease is direct consequence the blockade⁴².

Table II⁴³: Output of crop production in Nakhichevan in thousands tons.

| Year | Grains | Tobacco | Vegetables | Potatoes | Fruits | Grapes | S u g a r beet |
|------|--------|---------|------------|----------|--------|--------|-------------------|
| 1990 | 31.3 | 5.1 | 4.6 | 0.4 | 4.9 | 101.5 | - |
| 1991 | 26.4 | 3.3 | 4.5 | 0.3 | 2.3 | 69 | - |
| 1992 | 25.4 | 2.9 | 1.6 | 0.4 | 0.6 | 26.6 | - |
| 1993 | 19.8 | 2.3 | 1.1 | 0.3 | 0.1 | 8.8 | - |
| 1994 | 19.3 | 1.0 | 1.6 | 0.4 | 0.7 | 30.5 | 5.6 |
| 1995 | 21.6 | 0.9 | 1.3 | 0.8 | 0.2 | 28.3 | 7.9 |
| 1996 | 22.2 | 1.3 | 18.0 | 6 | 18.8 | 30.7 | 15.5 |
| 1997 | 43.1 | 1.2 | 19.4 | 8.9 | 20.7 | 26 | 23.3 |
| 1998 | 55.2 | 1.4 | 22.7 | 10.3 | 22.8 | 24.3 | 39.1 |
| 1999 | 43.0 | 0.0155 | 26.2 | 10.6 | 26.2 | 13.1 | 38.7 |
| 2000 | 54.4 | 0.0028 | 42.7 | 13.5 | 28.4 | 14.0 | 45.5 |
| 2001 | 63.3 | 0.00056 | 47.8 | 15.2 | 28.7 | 13.8 | 41.3 |
| 2002 | 73.7 | - | 50.2 | 13.6 | 28.8 | 12.6 | 115.8 |

41 Source: SSC. Table I shows the total trade of Azerbaijan and trade through Julfa and Sadarak custom houses with the amount (thousand dollars) and percentage of this trade related with CIS countries. The trade through these customs with CIS countries is the lowest values among all custom houses of Azerbaijan. (Except export to CIS through Julfa is higher than export to CIS through Balaken custom house).

42 SSC and Nakhichevan: City Information (http://www.gateway.az/cgi-bin/cl2_gw/browse.cgi?lang=en&topic=000e0404)

43 The decrease is not only the result of transportation; the energy blockade prevents the function of the factories. The blockade resulted in starvation in Nakhichevan. Farmers started producing their own food at the back of their houses instead of producing the tobacco and grapes. The blockade changed the content of the farm products in Nakhichevan. Also destruction of the irrigation system because of lack of maintenance (lack of import of maintenance elements such as parts of pumps) resulted in decrease in farm production. For more information see HRW/Helsinki, Seven years of ... page75-77.

In addition, because of the lack of trade and insufficient funds (the result of the diversion of funds for immediate needs such as fuel, food and housing for IDP/refugees) rich natural sources in Nakhichevan such as polymetal ores, rocksalt, marble and construction material can neither be extracted properly nor exported. All of the republic's molybdenum and dolomite reserves are closed⁴⁴. Even though there is high demand for natural sources located in Nakhichevan, the employees in the mining and quarrying field dropped to 127 in 2002 from 215 people in 1999⁴⁵.

In 2004, because of no direct railroad and motor road connection between Azerbaijan and Nakhichevan, the goods to Nakhichevan from mainland Azerbaijan must be carried by air or by motorway through Iran⁴⁶. Roads in Iran are poor and not reliable, and harsh weather conditions during the winter make transportation through Iran difficult. Due to the blockade, the transportation between mainland Azerbaijan and Nakhichevan is more expensive, more difficult and takes an additional day⁴⁷.

Because of the blockade transport costs increased and some nearby trading opportunities were eliminated. In 2003 Nakhichevan's international export was \$4.2 million on the other hand its import is roughly \$30.8 million⁴⁸. To understand the magnitude of the blockade it might be valuable to estimate some of the missing exports of Nakhichevan to other countries and to Azerbaijan's mainland.

Indeed, Nakhichevan had a developed construction industry. The blockade-related financial difficulties reduced the construction rate and building houses in the region⁴⁹. The transportation blockade severely prevents the trade of heavy and low valued goods (such as building stones and cement) and the products which required special transport requirements (such as meat, glass, bottled products etc)⁵⁰. Thus, the blockade prevented the export of construction material, which is rich in Nakhichevan, although Azerbaijan's mainland imports construction mate-

44 Data for 1990-1997 was cited in 'Nakhchivan: City Information' and data for 1998-2001 was provided from in SSC.

45 UNPAN, 'State Program on...', p.25

46 'The Economy of an Enclave...', section 3

47 SSC

48 Gwendolyn Burchell, Nakhchivan Blockade, Azerbaijan International (Winter 1997(5.4)). In addition there are 1 to 2 days delays on the Iranian border due to limited opening hours of Iranian border stations and difficulties with Iranian documentation. (World Bank Report, 'Trade Facilitation in the Caucasus' (Oct. 2000) p.36)

49 SSC

50 'Nakhchivan: City Information'

rial⁵¹. Although Nakhichevan has over 200 mineral water springs, which constitute 60% of the mineral water reserves in Azerbaijan⁵², due to the difficulties in transportation resulting from the Armenian blockade Azerbaijan had to import the mineral water from other countries instead of Nakhichevan⁵³ (Table III).

Table III⁵⁴: Some of the Missing Export Items to Azerbaijan's Mainland.

| Table III | Production in Nakhichevan in 1990 (Quantity) | Value of production | Import of Azerbaijan (Quantity) | Value of import |
|---------------|--|---------------------|---------------------------------|-----------------|
| Mineral water | 153 million bottle | \$42,000,000 | 0.8 million decalitres | \$28,640 |
| Canned goods | 34 million cond. Bottles. | unknown | 3847,9 tons (canned meat) | \$4,386,000 |
| Raw silk | 82.7 tons | 1,820,000 | unknown | \$1,107,300 |
| Bricks | 7215 thousand pieces | \$500,000 | 4780,5 thousand pieces | \$329500 |
| Tobacco | 5100 tons | \$6,043,000 | 5383,4 tons | \$6,378,800 |

Although there is no way to find the precise amount of the missing international exports of Nakhichevan, the following method might give an idea about it. In 2003, Azerbaijan's total export was \$2.6 billion. There is no oil production in Nakhichevan and approximately \$370 million out of \$2.6 billion Azerbaijan's export comes from products that are not related to oil. Nakhichevan's population consists of 4.5% of the republic. Under normal conditions Nakhichevan could easily do roughly 4.5% of \$370 million export, which equates to \$16.6 million. Although there is no oil production, Nakhichevan is rich in mineral water (\$40 million export estimated) which replaces oil⁵⁵. The total of Nakhichevan's ex-

51 Richard Beilock, Armenia's Economic Dead End, University of Florida. p.6.

52 SSC

53 UNPAN, 'State Program on...', p.25

54 Evgeny Polyakov, Changing Trade Partners after Conflict Resolution in South Caucasus, (World Bank; 2000), p.52. ([http://lnweb18.worldbank.org/eca/eca.nsf/0/23ac8865ce0dc520852568fc005ba956/\\$FILE/ATT00ZE9/Trade+flows3.pdf](http://lnweb18.worldbank.org/eca/eca.nsf/0/23ac8865ce0dc520852568fc005ba956/$FILE/ATT00ZE9/Trade+flows3.pdf))

55 This table is to give an idea to the reader about the missing exports to Azerbaijan's mainland. Some of the export items such as cement, metals, textile and most food stuff (which are rich, producing or there is existing production enterprise in Nakhichevan and imported by Azerbaijan) have not been included. The Azerbaijan's import was cited in SSC (Tobacco (2003), bricks (2002), silk (2003), canned goods (2003) and water (average import between 1995-2002)) and unit values were calculated according to SSC data (value of import/amount of import). Then unit values multiplied by production of that product in Nakhichevan in

port to countries other than Armenia and Azerbaijan's mainland could be around \$56.6 million. This would mean an additional \$52.2 million in export which is almost five times that of the enclave's budget (\$11 million)⁵⁶.

3. *Lack of FDI*

Foreign Direct Investment (FDI) is beneficial for the economy. FDI helps to increase production, number of jobs, and most of the time increases export. The energy and transport blockade of Nakhichevan maintained by Armenia restricts FDI. Foreign investors naturally do not want to spend their money where there is no power, no stability and no market. In simple words, foreign investors do not want to spend money for building enterprises under the risk of not becoming operational fully because of limited energy and lack of sales market or the risk of destruction by military action. Since gaining independence, so far Exxon Mobil Company spent some money to look for hydrocarbon sources in Nakhichevan. Azerbaijani Oil Company SOCAR and Exxon Mobil formed a consortium (50%: 50%) to search for oil in Nakhichevan. However the search efforts failed in February 2002.⁵⁷

IV. IMPACT OF CONFLICT ON EVERYDAY LIFE IN NAKHICHEVAN

This is not the first time that Nakhichevan was blockaded and attacked by Armenians. Between 1918 and 1920 Nakhichevanis suffered from Armenian assaults and blockades.⁵⁸ Between 1918 and 1920, in the town of Sadarak, 102 people were killed during actual attacks of Armenians and 1500 people died due to the famine, exposure and maladies.⁵⁹ Therefore, poor living conditions stemming from aggression and the blockade caused greater damage to the people than the actual assaults. Thus the effect of the blockade on the living conditions of the Nakhichevanis should be investigated.

1990 (from 'Nakhivan: City Information'). For calculating value of silk which is produced in Nakhichevan, the unit price of silk per ton was taken \$22000 (cited in Wu Qi, 'Upward trend for Silk' Inteletex News and Analysis, (April 2004) as normal level of price 185,000 yuan per ton and \$1 is 8.3 yuan which makes price of raw silk roughly 22,000 per ton). For mineral water: 1 bottle = 0.076895dlk (Russian bottle volume), and 1dlk mineral water is \$3.58 (Polyakov 'Changing...' p.52).

56 Export is cited in SSC. The export to Azerbaijan's mainland and internal consumption (estimated roughly \$2million) subtracted from mineral water production.

57 State budget cited in 'The Economy of an Enclave...', section 8.

58 Exxon Mobil to abandon Azerbaijan oil well, Caspian News Agency (26.02.2002)

59 During the first Republic of Armenia (Tashnak Armenia; 1918-1920), Armenians attacked to Nakhichevan and destroyed several villages on the railroad (BOA. HR. SYS. 2878/76). They also hold the roads and attacked the passengers (BOA. HR. SYS. 2878/93).

1. Unemployment

Because of the blockade a lot of people lost their jobs and poverty increased. Accordingly, 13.1% of those residing in Nakhichevan are extremely poor⁶⁰. Although the official unemployment rate is 6.6% in Nakhichevan, in reality, this percentage is much higher⁶¹. There are 198,000 people in Nakhichevan who are able to work and 41,948 people are employed which makes unemployment 78.8 %.⁶² Furthermore it has been reported that in Sadarak only 230 people out of the 7,500 people in the workforce have jobs.⁶³

Using the forests in a controlled way and making use of the waste of cereal crops as a fuel in private household equipment might also help to alleviate the energy problem of Nakhichevan.

2. Lack of Water

Access to safe water sources is one of the major necessities for health. Unsafe water is a major invitation for diseases such as trachoma, cholera, typhoid etc. According to statistics, in Nakhichevan, 31.6% of the population uses unsafe drinking water sources such as pond, river/stream, unprotected spring etc.⁶⁴ This situation threatens the health of the people in the region.

Water is essential for life and for the economy of Nakhichevan where agriculture is the driving force and the climate is dry. The agricultural work is performed only in irrigated lands in Nakhichevan. Due to the blockade the irrigation system in Nakhichevan fell apart because of a lack of equipment required for maintenance (such as pumps)⁶⁵.

60 BOA. HR. SYS. 2878/76

61 'State Program Poverty Reduction ...', p.17

62 'Nakhichevan: City ...', Section: Business.

63 Able-bodied cited in UNPAN: 'State Program on Social-Economic...', p.25. Number of employed people cited in SSC (2002). According to Employment office in Nakhichevan, of the enclave's able-bodied population of 172,897, 79,500 have full-time, 7,000 have part-time jobs [unemployment 50 %] (Gulnara Mamedzade, Nakhichevan: Trouble Brewing in Aliyev's Backyard, (IWPR; CRS No. 117, February 21, 2002), paragraph 9), on the other hand according to SSC there are only 6645 people who received unemployment status in Nakhichevan (2002). It is highly possible that because of internal politics the unemployment rate could be shown lower than it is by government officials.

64 Latest Suicide Highlights Extend of Poverty, Unemployment in Nakhichevan, (RFE/RL 13.09.2002, Vol 5, No 30)

65 SSC

According to a report of the International Organization for Migration (IOM), the opportunities of the local people to manage their family and invest money in agriculture and animal husbandry became limited due to the lack of irrigation water. Dry farms resulted in the loss of crops and a rise in unemployment. In addition, IOM stated that water scarcity, in many parts of Nakhichevan, forced people to migrate to other countries, and most notably to Turkey⁶⁶. At least one third of Nakhichevan's population has immigrated for searching jobs⁶⁷.

3. *Child Labor and Education*

Another side effect of the lack of energy and lack of water is the increase of domestic work, which covers cooking, cleaning, washing clothes, fetching water and caring for children. Due to the blockade the life conditions became worse which increased the heavy burden on the children. For example in the summer time, there is a shortage of basic drinking water especially in south Nakhichevan⁶⁸. The people must walk many kilometers to bring water home, which increases domestic work especially for children. MICS results indicate that 12.4% of the children in Nakhichevan are doing more than four hours of domestic work⁶⁹. This is the highest percentage in the republic and worse than the situation of children of IDP and refugees (Table IV).

Table IV⁷⁰ shows the child labor in Nakhichevan.

| Table IV | Domestic Work Less Than 4 hours/day | Domestic Work 4 or more hours/ day | Family Work | Currently Working |
|---------------|---|--|-------------|----------------------|
| Baku | 49.9 | 2.3 | 1.2 | 4.6 |
| Nakhichevan | 56.2 | 12.4 | 8.7 | 20.2 |
| Center, North | 54.7 | 7.9 | 4.8 | 16.6 |
| West, S. West | 57.2 | 5.1 | 6.3 | 15.2 |
| South | 47.1 | 1.3 | 2.4 | 13.1 |
| Resident | 53.7 | 5.4 | 4.1 | 13.4 |
| IDP/Refugee | 46.5 | 3.7 | 3.7 | 9.1 |

66 HRW/Helsinki, 'Seven years of ...', page 76-77 (The observation of ADRA worker in Nakhichevan).

67 IOM in Eastern Europe and Central Asia, (Issue No. 7 April-June 2002), p.4. (http://www.tcc.iom.int/iom/images/uploads/Issue7_1075282828.pdf)

68 Adalet Bargarar, Nakhichevan: Disappointment and Secrecy, (IWPR, CRS No. 234, May 19, 2004), paragraph 9.

69 Mamedzade, 'Nakhichevan: Trouble...', paragraph 6.

70 MICS p.87

Child labor is very important because children who are working are less likely to attend school and more likely to drop out. Nakhichevan has the lowest literacy rate in the republic, 90.6%⁷¹. This rate is likely to go down because of the fact that it retains the highest level of child labor (20.2%) and the highest number of drop outs in the country. 5.9 % of the children who started first grade dropped out in the first year, which is highest drop out rate in the republic⁷². Parents cannot afford school expenses, thus the number of children aged 36-59 months in Nakhichevan who attend some sort of an organized early education program constitute the second lowest (2.7%) attendance rate in the republic.⁷³

4. Lack of Food and Malnutrition

Due to the blockade Nakhichevan became an isolated place since the beginning of the 1990's. Lack of sufficient food supply caused starvation. When the news of starvation reached Turkey⁷⁴ and Iran⁷⁵, tons of food from both countries was sent to Nakhichevan by trucks. This starvation was not a short-lived incident. In 1998 the relief agency ADRA provided supplement feeding (4 kilogram food per person per month) for 100,000 needy people in Nakhichevan⁷⁶.

Household wealth correlates strongly with nutrition and children's nutritional status is a reflection of their health. High poverty and lack of sufficient food brought child malnutrition to Nakhichevan. Furthermore, an inadequate supply of food and a high disease rate (prevalence) affected the development of children. MICS results show that 23.7% of children under the age of five are stunting (shorter according to their age; chronic malnutrition) and 12.4 % are severely stunting. 19.6% of under-five children are underweight (thinner according to their age; general malnutrition) and 7.2 percent are severely underweight. 7.2% of the (under-five) children under the age of five suffer from malnutrition⁷⁷. The 19.9% newly borns weigh below 2500 grams at birth and this is the highest

71 Numbers that are used for to make the table were cited in Table 38 of MICS p.87.

72 MICS p.53.

73 Calculated from table 11 of MICS p.52. Also the World Bank Poverty Assessment (1996) found that 38% of the poorest primary school children, in Nakhichevan, were not attending school for extended periods of one month or more.

74 MICS p.50.

75 Information in this paragraph cited in: 'Report of UNEP/GRE-ARENDAL...'

76 Turkish Red Crescent Society (Golts, 'Azerbaijan...', p.73) and Turkish Businessmen (Abdullah Aymaz, Sahibini Bulan Küpeler, Zaman (02.26.2002)) has sent food to Nakhichevan

77 Interview conducted by Konul Khaliyova with Brenda Shaffer, "Brothers and Brethren" reveals the dilemmas of ethnic politics in Iran; 525ci, (Belfer Center for Science and International Affairs; 28.02.2002),

percentage in the country⁷⁸ These numbers reveal the true character of malnutrition in Nakhichevan. Severe undernourishment was prevented by small kitchen gardens and subsidized prices for bread⁷⁹. Although Nakhichevan was never invaded by Armenia and there are relatively small numbers of IDPs and refugees in Nakhichevan, the numbers clearly indicate that in most cases Nakhichevanis suffer more than refugees/IDPs.

The blockades lower the quality of the products produced for domestic consumption⁸⁰. The best example is the quality of table salt sold in Nakhichevan. Deficiency of iodine in the diet is the world's largest single great cause of preventable mental retardation and can lower the average intelligence quotient (IQ) of a population by as much as 13 points⁸¹. Furthermore iodine deficiency results in widespread goiter problems, stunted growth among children and miscarriages among pregnant woman⁸². As it is expected the percentage of households with adequately iodized salt is around 11% in Nakhichevan, which is the lowest in the country⁸³.

Table V⁸⁴: Cooperation of Nakhichevan with other regions of the republic and total refugee and IDP population particularly with regard to malnutrition and proper salt ionization.

| Table V | percentage of children under five reported | | | | | | percentage of | |
|----------------|--|----------------------|---------|------------------|--------|-----------------|-------------------------|---|
| Description | Underweight | Severely Underweight | Stunted | Severely Stunted | Wasted | Severely Wasted | Live births under 2500g | Households with adequately iodized salt |
| Baku | 11.4 | 2.7 | 15.4 | 4.9 | 5.4 | 1.1 | 6.3 | 34.7 |
| Nakhichevan | 19.6 | 7.2 | 23.7 | 12.4 | 7.2 | 1.0 | 19.9 | 10.6 |
| Center & North | 16.3 | 3.3 | 19.6 | 6.5 | 8.3 | 2.1 | 8.1 | 43.8 |
| West & S.west | 22.4 | 8.0 | 25.1 | 12.3 | 10.7 | 2.7 | 7.1 | 48.5 |
| South | 16.3 | 2.3 | 16.0 | 3.1 | 7.0 | 1.9 | 13.5 | 47.8 |
| Resident | 16.9 | 4.4 | 19.5 | 7.4 | 7.8 | 2.0 | 9.7 | 41.2 |
| IDP/Refugee | 15.6 | 2.7 | 20.4 | 6.1 | 9.5 | 1.4 | 7.3 | 42.6 |

78 'The Economy of an Enclave...', section 11.

79 MICS p.57.

80 MICS p.60.

81 HRW/Helsinki, 'Seven years of ...', p.77.

82 Richard Beilock, Helping Armenia without Helping the Blockade, (Armenian International Policy Research Group; Jan. 2003), p.10.

83 MICS p.27.

84 Norwegian Refugee Council (NRC), Profile of Internal Displacement in Azerbaijan, (05.05.2003), p.42. ([www.db.idpproject.org/Sites/IdpProjectDb/idpSurvey.nsf/wCountries/Azerbaijan/\\$file/Azerbaijan+-May+2003.pdf](http://www.db.idpproject.org/Sites/IdpProjectDb/idpSurvey.nsf/wCountries/Azerbaijan/$file/Azerbaijan+-May+2003.pdf))

V. WHAT NEEDS TO BE DONE?

Despite all peace efforts, it is clear that Armenia will continue to pursue aggressive policies (her aggressive behavior) towards her neighbors. Through the completion of the Baku-Tbilisi-Ceyhan oil pipeline in 2005 the export of Azerbaijani oil will increase. Hopefully the projects, which alleviate the isolation of Nakhichevan, will be funded easily.

1. *Alternative Transportation routes for Nakhichevan*

The railway route linking Georgia with Nakhichevan via Turkey can be put into operation. The construction of the Kars-Tbilisi railway is on its way⁸⁵. The project of the Kars-Nakhichevan railway communication will provide a vital rail link between Nakhichevan and members of CIS as well as Turkey. By using railway communication Nakhichevan can export more products to members of CIS cheaper and easily. With the opening of the Nakhchivan-Erzurum-Istanbul air route Nakhichevan's isolation will be eased⁸⁶. Better and shorter railways and motorways through Iran will definitely establish communication between Nakhichevan and Azerbaijan's mainland.

2. *Production of Sufficient Energy*

The recent agreements between Iran and Azerbaijan will solve the energy problem in Nakhichevan temporarily. However, in the past, Iran used its monopoly on Nakhichevan's energy supply to pressurize Azerbaijan for her own demands. Recent tension between Iran and USA over international terrorism and Iran's nuclear program forced Iran to develop better relations with her neighbors. Iran has an Azeri minority, which threatens Tehran. Any movement in Azeris of Iran may end the recent good relations between Iran and Azerbaijan. Therefore, Nakhichevan should take steps for self-sufficient energy production.

The efficiency of the Araz power plant could easily be increased. With improvements in the economy the Nakhichevanis could buy better cars with improved fuel economy. Rehabilitation Reconstruction of the road network will also improve fuel economy. Biomass can be converted into a number of liquid

⁸⁵ MICS. p.27

⁸⁶ Numbers used in this table cited in MICS Table 15 p.57, Table 17 p.59 and Table 18 p.60. According to MICS in all cases when household wealth increases negative values of the indicated aspects decreases, thus the primary reason of the continuation malnutrition in Nakhichevan is high poverty which is skyrocketed due to blockade.

fuels, including methanol, ethanol, biodisel, and pyrolysis oil. In Nakhichevan where agriculture is the main economical branch, energy from biomass could be produced. Especially ethanol, which could be produced from sugar beet and corn, can reduce the energy import of the exclave. Forest management and agricultural soil management is in any case needed for the prevention of salinization and erosion. Using the forests in a controlled way and making use of the waste of cereal crops as a fuel in private household equipment might also help to alleviate the energy problem of Nakhichevan. Soviet-style buildings do not have good isolation⁸⁷. Building more energy efficient buildings will reduce the energy consumption. According to ERBD Nakhichevan has the best solar energy resource potential in the republic (between 3.0 to 4.7kWh/m²/day)⁸⁸, furthermore Nakhichevan has the potential to produce 70MW/year from wind energy⁸⁹. According to same report small hydro power projects on the territory of Nakhichevan are feasible (Table VII)⁹⁰.

TableVII⁹¹: Possible Energy Projects in Nakhichevan.

| Table VII | Description | Capacity |
|----------------------|-----------------------------------|---------------------------------|
| Renewable Energy | Wind energy | 70 MW |
| | Solar energy | 3.0-4.7 kWh/m ² /day |
| Hydro power projects | Arpchai on Arpchai River | 12.0 MW |
| | Vaikhir on Nakhchvanchai River | 4.7 MW |
| | HPS #1 and #2 on Gianjachai River | 12.9 MW |

CONCLUSION

Between 1988 and 1994, Armenians forcibly gained control over the Mountainous Karabagh district and seven regions bordering, which constitutes (consists of) almost 20% of the Azerbaijan's territory, and attacked the Nakhichevan Autonomous Republic. Since the beginning of the 1990's Nakhichevan is under the blockade of Armenia. The Armenian blockade turned the clock back to the medieval ages in Nakhichevan. The blockade affected every aspect of the lives of the Nakhichevanis. The economy is crippled. Production has decreased by 2/3.

87 Foreign Minister Meets Chairman of Turkey's Industrialist Associations, Azertag, (May 11, 2004).

88 Donald E. Miller and Lorna Touryan Miller, *Armenia: Portraits of Survival and Hope* (University of California Press, 2003) p.112

89 Renewable Energy Country Profile, (European Bank for Reconstruction and Development (EBRD), 27 September, 2002), Section: solar resources p.13.

90 *ibid.* Section: Wind energy p.2

91 *ibid.* Section: Renewable Energy Profile (Draft) p.3.

Unemployment increased, 44,798 people lost their jobs⁹². When the numbers of available jobs were going down, the prices went up. Trade stopped. Due to high poverty, prevalence of diseases increased, even the number of suicides increased. It is expected that Nakhichevan has the highest infant and under-five child mortality rate in the republic⁹³. Although the Armenians complain about the so-called blockade, the economical situation is worse in Nakhichevan than in Armenia⁹⁴. According to UNICEF's survey the living conditions of Nakhichevanis in most cases are worse than the Refugee and IDP population in the country. As a conclusion, although it is getting better, the Armenian blockade made it difficult to live in Nakhichevan over the past 15 years.

92 Information is cited in the report *ibid*

93 Source: SSC

94 Unfortunately there are no healthy estimates of infant and under-five mortality in Azerbaijan. (see MICS p.21-22 and 'State Program on Poverty...', p. 27-28). On the other hand MICS stated that mortality rates in rural areas are almost 50% higher than in urban areas, while children born to women in poor households face three times higher mortality risk than children born to women in rich households (p21). Thus, Nakhichevan, where has the highest poverty incidence and more than 79% of the households are in rural areas, is expected to have the highest infant and under-five mortality rate in the republic.