

# Effects of Climate Change on Children in Azerbaijan

Erkin Rahimov 

Department of Pediatrics, Institute of Baku Medical Plaza, Baku, Azerbaijan

According to the Climate Risk Country Profile report by the World Bank and Asian Development Bank, 9 out of 11 climate zones are present in the Azerbaijan Republic.<sup>1</sup> There are dry subtropical, humid subtropical, temperate, and cold climate types in the country. Average annual temperatures are +14°C on the plains and 0°C and lower in mountainous regions. Average July temperatures are 25°C–27°C on the plains and 5°C in the mountains, while average January temperatures are 3°C–6°C and –3°C to –5°C. The maximum temperature reaches 43°C, and the minimum temperature reaches –30°C. Precipitation is very unevenly distributed: below 200 mm along the Absheron coast, 300–900 mm in the plains and foothills, 1000–1300 mm on the southern slopes of the Greater Caucasus, and over 1200–1400 mm in the Lenkeran–Astara region.<sup>2</sup> The most precipitation is seen in the spring and fall. In general, summers are hot and winters are moderately cold in Azerbaijan.<sup>1</sup>

According to the latest report by the Climate Change Expert Group, the average temperature on the planet has increased by 0.8°C during the past century. This increase is mainly attributed to anthropogenic factors. Satellite observations over the past decades show that storms and blizzards have increased in both intensity and frequency. Hot winds, hurricanes, precipitation, and floods have also increased.<sup>3,4</sup>

Azerbaijan has also been affected by global climate change. Average annual temperature has increased by 0.4°C–1.3°C in the past 100 years. According to the prognosis in the Climate Risk Country Profile report,<sup>1</sup> the following changes are to be expected:

- The average temperature is projected to increase faster in the country as compared to the global increase, particularly in the summer, which will negatively affect the agriculture sector, the water supply, and the healthcare sector.
- The number and duration of heatwaves will gradually increase, negatively impacting health.
- The 2 types of droughts that can be expected are meteorological and hydrological, and both can lead to agricultural drought. Food security may be threatened.
- Unlike global projections, flooding due to increased rainfall is not expected. More research is needed on this topic.<sup>1</sup>

All of the listed aspects of climate change will negatively affect human health, making the pediatric population one of the most at-risk population. A child's body, different from an adult's one, is more sensitive to the effects of unfavorable environmental factors. Along with traditional environmental factors, air pollution and worsening climatic factors have an increasingly damaging effect on children's health and their general development.<sup>5</sup> Rovshan Abbasov's "Climate, landscape analysis for children in Azerbaijan" report<sup>6</sup> enumerates the following ways climate change can have an impact on children:

- Heatwaves and drought can cause sanitation and drinking water problems, particularly in rural areas. Children need more water per kilogram of body weight than adults and are thus more exposed to toxins in water, as well as having poor personal hygiene habits, which increases their risk of infection.

## Corresponding author:

Erkin Rahimov

✉ erkinrahimov@yahoo.com

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- The 5-fold increase of maximum temperature days over the past 20 years has led to increased instances of sunstroke and heatstroke. Schools in particular are poorly prepared to handle heatwaves.
- Increased temperatures have epidemiological consequences. While there have been no cases of malaria in Azerbaijan since 2013, temperature increases could cause an outbreak, particularly in mountainous regions. A similar prognosis has been issued for Hepatitis A.
- There is a known link between iron deficiency anemia and high CO<sub>2</sub> levels. Statistics show an increase in anemia cases in Azerbaijan in recent years, and this increase is projected to continue.<sup>6</sup>

According to UNICEF's "The coldest year of the rest of their lives – protecting children from the escalating impacts of heatwaves" report,<sup>7</sup> in 2020 160000 children in Azerbaijan (6%) were exposed to increasing frequency of heatwaves while 2800000 (100%) children were exposed to prolonged heatwaves. By 2050, exposure will be 100% in both groups according to both positive and negative scenarios.

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