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Climate Change Repercussions in Palestine and Confrontation Policies

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Introduction

Climate change is one of the most pressing global concerns, due to its serious future repercussions, including the drying up of rivers, the submergence of vast coastal areas, and the change in the world agricultural map.¹ The year 2022 was the hottest year on record globally, highlighting the worsening severity of the climate crisis that has already led to widespread human suffering. Millions of people were affected by extreme weather events in 2022, which were made more likely and intensified by climate change. These events included catastrophic floods in Pakistan and South and West Africa, severe droughts in East Africa, heatwaves in China and India, and record-breaking temperatures during the summer across Europe.²

Although Palestine has a relatively low impact on climate change, it has been significantly affected by it. And this impact has been becoming more evident over time, leaving negative effects on multiple sectors. The Palestinian Climate Change Adaptation Strategy of 2010 identified agriculture, water, and food security as the most affected sectors in Palestine while referring to the direct and indirect impact of climate change on all other sectors.

To mitigate the negative effects of climate change, Palestine has sought to join international agreements and conferences addressing climate change. Palestine signed the United Nations Framework Convention on Climate Change on April 22, 2016, which provided a significant margin for effective cooperation to achieve the goals of the convention.³ The Palestinian Authority has initiated the implementation of necessary measures to mitigate the impact of climate change. However, Israeli policies and practices have significantly hindered Palestine's adaptive capacities to address climate change, leading to worsening vulnerability of the Palestinian territories to climate-related changes.⁴ Therefore, this paper aims to present alternatives and policies that can effectively confront the risks and challenges posed by climate change in Palestine.

Objectives

Overall objective

This policy paper aims to present a set of alternatives that include policies and measures to adapt to climate change and its repercussions in Palestine.

Sub-objectives

- The paper aims to outline intervention policies and define the roles and responsibilities of government institutions, civil society, and the private sector in implementing the proposed policy alternatives to mitigate the potential risks of climate change.
- The paper suggests a set of policy solutions for decision-makers to deal with the Israeli policies and measures that hinder Palestinians' access to natural resources and water and limit their ability to develop policies to tackle climate change.

Policy problem

The impact of climate change has become an unavoidable, tangible reality, and fragile states, such as Palestine, remain the most vulnerable to climate change because they lack the ability to respond and adapt to its various threats in a flexible manner.⁵

The policy problem lies in the poor monitoring and evaluation of the climate change's environmental impact and risks in Palestine, which led to the low efficiency of formal and informal interventions required to implement responses and policies to mitigate those effects, and analyzing the main challenges facing Palestine's ability to adapt to climate change and deal with its effects.

Carbon dioxide emissions is considered one of the most important greenhouse gases in Palestine as is the case in the rest of the world. It represents more than 50% of emissions (approximately 2 million tons out of a total of 3.5 million tons annually, most of which come from the energy sector, industry, and transportation). Improper waste disposal process is the first cause of methane emissions in Palestine.

By the year 2050, the population of Palestine is expected to double, resulting in increased energy needs, food production, and waste generation. This will contribute to a rise in greenhouse gas emissions from 8 to 18 million tons by 2050.⁶

Projections also indicate that air temperatures in Palestine may increase by one degree by 2025, two degrees by 2050, and three degrees by 2090. This suggests an increased likelihood of heatwaves, during which temperatures rise significantly above their summer average, which leads to increased rates of evaporation and transpiration. As for rainfall, it may increase in quantity and intensity, resulting in floods. However, rainfall is expected to decrease by 15-30% by 2090, leading to prolonged periods of drought. This causes the expansion of desertified lands and a significant decline in groundwater reserves.⁷

Potential risks of climate change

The impact of climate change has implications on various economic sectors in Palestine, making them vulnerable to several potential risks, which can be identified as follows:

Water sector

The water sector is one of the most affected sectors by climate change in terms of availability and quality. Rising temperatures and increased rates of evaporation and transpiration will lead to water scarcity, especially considering the notable population growth. Water scarcity is one of the most dangerous repercussions of climate change on life in Palestine, especially given the decrease in water supplies purchased from Israel, increased salinity of water sources, and excessive sedimentation rates that threaten the quality of drinking water. This is further compounded by the limited water

treatment facilities, as well as the declining water supplies for other sectors, including agriculture and industry. On the other hand, the heavy rainfall in short periods, due to climate change, increases the chances of flooding in populated areas. This causes rainwater to mix with sewage due to inadequate infrastructure, which requires high costs for their treatment and management.⁸

The situation in the Gaza Strip is expected to get more serious, as water scarcity forces individuals to resort to dangerous alternatives that pose a significant risk to their lives and to the already poor groundwater resources, which Gaza relies on for 95% of its water supply.⁹ Further, Gaza's infrastructure cannot collect rainwater, resulting in 40% of it being wasted in the sea and sewage.

This has allowed seawater to intrude into the groundwater, increasing its pollution levels significantly. The Israeli authorities hinder the construction or maintenance of water infrastructure, such as tanks, by imposing restrictions on the import of essential building materials. As a result, 90-95% of the water in Gaza is contaminated and not suitable for drinking or irrigation.¹⁰ Estimates indicate that water demand in the West Bank is expected to increase by 200-300% by 2030, and by 100% in the Gaza Strip.¹¹ The increasing demand for water, coupled with the already depleted water resources, will lead to a severe water scarcity crisis where supplies will fail to meet the growing demand, resulting in water insecurity.¹²

Agricultural sector

The agricultural sector in Palestine faces significant challenges because of Israel's measures, including its control over water resources and denying Palestinian farmers access to groundwater. The depletion of groundwater due to limited rainfall, pollution caused by emissions from factories and hazardous waste buried in Palestinian lands, and the wastewater coming from settlements contribute to soil pollution, negatively impacting crop cultivation and productivity.

The agricultural sector is one of the most affected economic sectors by water scarcity, especially since about 87% of agricultural lands depend on rain-fed agriculture. The agricultural sector will be negatively impacted by climate change due to increased water demand for crop irrigation, shortages of pasture, decline in pastoral production, and consequently, higher food prices.¹³

The International Committee of the Red Cross in Gaza has highlighted that the agricultural wealth in Palestine is more threatened than ever before. Through the monitoring of approximately 100 farms in border areas by the Economic Security Department, it has become evident that the majority of them have been affected by climate change. For example, many vegetable farmers have lost over half of their summer season production due to an unusual rise in temperatures.¹⁴

Fishing sector

Climate change poses serious risks to the fishing sector in the Gaza Strip. The increase in water temperature, salinity, and acidity in the sea disrupts the ecosystem and affects marine species. Experts indicate that changes in ocean currents and water temperature result in the extinction of some valuable fish species along the Gaza coast, especially those unable to adapt to extreme temperature variations and resort to migration for self-preservation. On the other hand, climate change has allowed the entry of some toxic fish species into the marine environment along the Gaza coast, such as rabbitfish, which has caused the death of several citizens. Additionally, there has been a massive increase in the number of jellyfish along the Gaza shores, as they reproduce at a larger pace given the marine environment created by the elevated sea temperatures, even during the winter.¹⁵

On the other hand, temperature fluctuations have caused a rise and fall in sea levels by approximately half a meter, resulting in the erosion of Gaza's coastline. During the winter, streets crack due to the high waves pushing towards the shore, as observed in Al Rashid Street in the governorates of Rafah and Khan Yunis.¹⁶

Energy sector

The Gaza Strip suffers a severe shortage of energy and electricity as a result of the blockade that has been imposed on it for over two decades. The energy sources in the region are limited to the power generation station and Israeli electricity supplies. However, these sources can only provide 185 - 220 megawatts of power, while Gaza's demand is around 600 megawatts. Therefore, climate change and the resulting increase in temperatures will lead to a higher demand for energy to allow citizens to deal with the extreme heat. There will also be an increased demand for cooling devices, which will be challenging to provide, putting the health of the population at risk, especially for the majority of Gaza's residents who do not have access to air conditioning. On the other hand, there will be an increased demand for fuel to address water shortages, which will further strain the already-poor power infrastructure due to the blockade.¹⁷

Health sector

The effects of climate change on various economic sectors mentioned earlier will directly impact healthcare services. The decrease in fuel and electricity supplies will lead to a decline in healthcare services. Additionally, the impact on available water, which is unfit for drinking, along with the scarcity and increased cost of wastewater treatment, poses a real threat to the lives of citizens. This situation can result in the spread of various waterborne diseases such as diarrhea, cholera, polio, foot-and-mouth disease (FMD), meningitis, and others.

Experts indicate that climate change leads to alterations in the body's thermal regulation, resulting in physiological changes that weaken the immune system and pose a significant threat to human life. This is particularly concerning as climate-related

diseases primarily affect the respiratory system, such as lung infections, laryngitis, bronchitis, bronchiolitis, and sinusitis. If these diseases are not properly treated, they can exacerbate severe lung infections that may result in death due to delayed diagnosis and treatment. Climate change also contributes to chronic obstructive pulmonary disease (COPD) as it exacerbates reactive airway irritation, leading to breathing difficulties, severe coughing, and general fatigue.¹⁸

Climate change challenges

There are several interconnected challenges that hinder Palestine's ability to adapt to climate change and deal with its impacts, including:

Israeli occupation

Climate change is not a direct cause of conflicts, they rather worsen the situation. Climate change weighs heavily on war-affected, displaced civilians, as armed conflicts limit their ability to cope with climate change impacts. This is partly attributed to the fact that conflicts, especially protracted ones, impose significant challenges on communities. They undermine infrastructure, cause severe damage to institutions and social capital, and disrupt livelihoods, making climate change adaptation more difficult.¹⁹

The policies imposed by the Israeli occupation are indeed the biggest and most dangerous challenge that weakens Palestine's ability to adopt policies and take measures to support climate change adaptation. They pose barriers to introducing necessary modifications in human and natural systems to respond to the impacts of climate change. These policies include restricting Palestinian access to water resources and their utilization, limitations on developing water infrastructure, including wastewater treatment plants and drilling artesian wells and building dams. Moreover, Israeli restrictions hinder the implementation of renewable energy projects to reduce carbon footprint or expand renewable energy infrastructure.²⁰

In addition to the blockade imposed on the Gaza Strip and the repeated Israeli military attacks, emissions from explosions, toxic materials, and gases infiltrate the soil, air, water, and sea. This leads to the spread of epidemics and diseases, as well as the destruction of agricultural lands, wells, water pipelines, and wastewater treatment plants. Furthermore, the waste generated by Israeli settlements and factories, which is disposed of in areas under Palestinian control, poses a real threat to the climate, humans, and the environment as a whole.²¹

Political division

The internal political division poses a significant obstacle to the success of any national plans or programs to address the environmental threat and climate change, which are increasingly endangering the Palestinian existence and resilience. The internal Palestinian division affected all aspects of life in Palestine and hindered efforts to adapt

to climate change. The lack of coordination and coherence among different official and non-official institutions and sectors in implementing initiatives and planning public policies that preserve the environment and promote optimal use of available natural resources have slowed down and dispersed adaptation efforts. This divergence has resulted in noticeable disparities in the extent of vulnerability to climate change, the capacity to deal with it, and the ability to conduct assessments of its impacts due to limited data availability and inconsistency in data collection processes.²²

The internal division has also weakened the private sector's capacity to invest in environment-friendly projects, such as solar energy. The percentage of companies operating in the Gaza Strip in financing such projects does not exceed 6%, particularly those funded by the Palestinian Energy and Natural Resources Authority, the European Union, or the Palestinian Investment Fund.²³

Administrative, financial, and technical challenges

There are various other challenges that confront climate change adaptation planning. These challenges include:

- Weakness of national institutions and local authorities in developing effective strategies for adaptation and disaster risk management, particularly in the West Bank, where the inability to access the area hinders monitoring the impact of climate change on its environment.
- Lack of early warning tools and systems and a deficiency in the necessary technology to enable proper planning and implementation of climate adaptation, particularly in the Gaza Strip. The blockade has hindered the import of necessary technology for monitoring climate change and accurately assessing its impacts.
- Limited availability of necessary information for studying climate change and the lack of a robust database that can be relied upon, particularly in the Gaza Strip. It is challenging to assess climate trends with a high degree of accuracy due to the absence of a precise infrastructure for collecting meteorological data.²⁴
- Lack of financial resources to cover the necessary financial needs for implementing the future national adaptation plan. The Palestinian Environmental Quality Authority has estimated the costs of adaptation in all sectors to be approximately \$3.544 billion.²⁵

The previous overview of challenges indicates that Palestine, like other developing countries, will bear a significant burden due to the damages caused by climate change, despite its minimal contribution to exacerbating it. Due to the challenges posed by the Israeli occupation, Palestine is among the least prepared and capable countries to face the risks of climate change. Therefore, it is likely that climate change will result in damaging various sectors such as water, energy, agriculture, and food security, as well as an increase in the spread of diseases and mortality rates.

Policy solutions

Palestine, like other countries in the region, is exposed to dangerous repercussions due to climate change and sharp fluctuations in the weather, specifically global warming, the most dangerous of which is the "wrong disposal of waste". The unprecedented rise in temperatures, according to climate experts, may lead to a variable and contradictory state of rain at the same time. It may increase in quantity and intensity. It may decrease after decades, causing longer periods of drought.

Taking into consideration the population growth over the past decades and the urgent need for water, the impacts of climate change become even more critical, particularly in terms of expanding arid lands and significant depletion of groundwater reservoirs. This is in addition to the ongoing Israeli policies and actions that negatively affect the Palestinian environment.

Climate change brings significant challenges to all sectors of the Palestinian economy in an interconnected manner. Therefore, addressing climate change requires the development of policy alternatives and solutions to confront the challenges and potential risks of climate change within the limits of Palestinian capacities, in coordination between relevant governmental and non-governmental entities. In light of this, the paper presents three policy alternatives.

First: Proactive Confrontation to Mitigate the Severity of Climate Change Impacts.

Early adaptation measures and building resilience to climate change are considered more cost-effective compared to post-impact response measures. Therefore, there should be a set of policies for proactive climate mitigation to reduce future climate change impacts in Palestine.

1. Increasing environmental awareness: Climate change mitigation policies should start by raising awareness about its dangers in the Palestinian society. Enhancing environmental awareness relies on intensifying collective work, fostering community partnerships, and involving all government institutions, civil society organizations, and citizens in the responsibility of environmental preservation. It also involves promoting environmental values among all citizens to protect the environment and confront the risks it faces. This requires:
 - Supporting awareness and education about the environment in Palestine by integrating the environment into the educational process and promoting environmentally-friendly behaviors. This can be achieved by incorporating environmental topics into school curricula, highlighting environmental risks, and enhancing environmental awareness concepts in university programs.
 - Launching specialized awareness campaigns targeting the agricultural sector and its workforce. These campaigns should focus on the dangers of climate change, the importance of addressing it, and its role in achieving food security.

2. Enhancing knowledge production and scientific research on climate change is crucial. Accurate and scientifically informed predictions about the impacts and risks of climate change require the establishment of a comprehensive database of information and statistics. Such a database would assist in formulating measures to address climate change. When conducting research with relevant government entities and sectors most vulnerable to climate change in Gaza, a significant lack of information and data becomes apparent. This observation is also supported by experts in Palestinian ministries and environmental professionals.²⁶

This requires:

- Building a climate change-related database in Palestine to utilize the information in policy development and solution-building.
- Encouraging local research projects and quantitative and qualitative in-depth studies to provide accurate information and data on the impacts of climate change in Palestine.

Supporting scientific and knowledge production specialized in climate change contributes to assessing the extent, vulnerability, and adaptation to climate change and provides suggestions for necessary interventions to reduce the effects of climate change, and how to integrate climate adaptation into economic and social development. It is expected that environmental research and studies will contribute to directing plans and policies to confront environmental risks in order to be more effective and impactful.

It is not possible not to deal with the issue of climate change and its negative impacts on all productive sectors in Palestine until the internal division is resolved and political unity is achieved, especially in light of the existing cooperation between some ministries such as health, education, and community development. It is essential to have cooperation between the relevant ministries as well to address climate change and mitigate its effects on Palestinian society, particularly regarding:

- Unifying the procedures and ministerial decisions related to environmental conservation in both Gaza and the West Bank is necessary to achieve integration and coordination in roles, responsibilities, and authorities among the relevant institutions. This will ensure the elimination of competition and conflicts that deepen the environmental risks facing the country.
- Collaboration with the international community and institutions to confront climate change, through joining more international agreements related to environmental protection, such as The United Nations Convention to Combat Desertification and The Convention on Biological Diversity. As well as participation in conferences on climate change, so that Gaza is present and included in those agreements and conferences. This measure may contribute to

Palestine obtaining funding from international environmental institutions to cover the financial needs necessary to confront the risks of climate change.

- Regional cooperation with neighboring countries, particularly the Arab Republic of Egypt. It is important to benefit from neighboring countries' experiences and expertise in addressing the potential risks of climate change.

Second: Interactive Responses to Adaptation to Climate Impacts

Despite the importance of proactive measures to mitigate the severity of climate change impacts, the effects of climate change have become obstacles to productive sectors in Palestine, particularly the agricultural sector. This necessitates the adoption of a range of urgent responsive measures to adapt to and mitigate these impacts. The alternative proposes a set of quick response measures that can help mitigate the effects of climate change on the Palestinian society, as follows:

1. Reducing greenhouse gas emissions: This can be achieved by promoting low-input production patterns. The increased use of external inputs in agricultural units raises the levels of carbon dioxide and methane emissions and increases the consumption of fossil fuels. It is essential to work on mainstreaming agricultural techniques that reduce external inputs through practices such as reuse, recycling, and efficient management of agricultural materials, equipment, and energy. This will help curb the accelerating emissions of greenhouse gases.
2. Increasing energy efficiency: This can be achieved by expanding the use of clean energy sources, such as solar energy. Supporting and investing in renewable energy projects can help reduce reliance on fossil fuels. By promoting the adoption of renewable energy technologies and improving energy efficiency in various sectors, Palestine can reduce greenhouse gas emissions and contribute to mitigating the impacts of climate change.
3. Enhancing available economic opportunities for climate change adaptation can be achieved through:
 - Encouraging all sectors in Palestine to unite efforts in promoting a green economy, preserving the environment, and establishing green projects.
 - Developing sustainable agriculture and precision farming and encouraging the use of precision farming techniques, such as targeted irrigation and fertilization, to optimize resource efficiency and reduce the use of agrochemicals.
 - Transitioning to drought-resistant crops and livestock.
 - Relying on green fertilizers, and encouraging self-production of organic fertilizers to improve soil fertility.
 - Focusing on brackish water desalination, and investing in effective irrigation equipment (drip irrigation).

Third: Confronting Israeli violations of the Palestinian environment

International humanitarian law prohibits the use of the environment as a weapon. However, warring parties often resort to military strategies that have significant environmental implications. Recognizing the impact of climate change on environmental degradation and resource depletion, the International Committee of the Red Cross (ICRC) has committed itself to addressing these issues. Its aim is to empower populations to adapt and cope with deteriorating environments and growing risks.²⁷

The Israeli policies have indeed created numerous obstacles that have added to the potential challenges posed by climate change in Palestine. It is important to note that Additional Protocol I to the Geneva Conventions of 1949 explicitly states in Article 35: "3. It is prohibited to employ methods or means of warfare which are intended, or may be expected, to cause widespread, long-term and severe damage to the natural environment²⁸." Article 55 further emphasizes the protection of the natural environment: "1. Care shall be taken in warfare to protect the natural environment against widespread, long-term, and severe damage. This protection includes a prohibition of methods or means of warfare that are intended or may be expected to cause such damage to the natural environment and thereby to harm the health or survival of the population. 2. Attacks against the natural environment shall be prohibited."

In light of these principles, it is imperative to monitor and document Israeli violations of the Palestinian environment. Israel engages in various destructive actions and policies that harm the Palestinian environment, ranging from uprooting trees to the confiscation of agricultural lands. One of the most significant violations is denying Palestinians access to and control over their natural resources, whether through restrictions or blockades. It is essential to monitor and track these ongoing violations through collective efforts involving relevant governmental and non-governmental institutions dedicated to monitoring and documentation. Regular and consistent exposure of these violations should occur, along with the development of policies and measures to address them.

The Palestinian diplomatic efforts should be directed towards the international community in all its components and entities to exert genuine pressure on Israel to halt its environmental violations in Palestinian territories and enable the Palestinian people to access and utilize their natural resources, including agricultural lands, water sources, and energy resources. There should be a concerted effort to pressurize Israel to share its modern methods of adapting to environmental risks with Palestinians, without undermining Palestinian rights to land and water.

Comparison between the solutions

The paper proposes adopting the three policy solutions to address the policy problem at the same time, as it addresses the potential challenges and risks of climate change. The paper recommends starting with the first and second alternatives, and they will contribute to and enhance the implementation of the third alternative at the global diplomatic level.

References

- ¹ Hawara Syed. Climate change, its causes and consequences, Academic Journal for Scientific Research and Publishing, fifth edition, 2019, p. 2.
- ² Amnesty International. Climate: Record Temperatures of 2022 Show Urgent Need for Action and Avert Climate Collapse, 10 January 2023 <https://bit.ly/3Hsb8kJ>
- ³ Environmental Quality Authority, First National Communication Submitted to the United Nations Framework Convention on Climate Change - Executive Summary, pp. 2-3.
- ⁴ Same resource
- ⁵ Amira Abdel Halim, Climate Change and Armed Conflict, a study on "Security Implications for Climate Change: Applied Cases", Al-Ahram Center for Political and Strategic Studies, November 2022, p. 10.
- ⁶ Environmental Quality Authority, Climate Change Fact Sheet: Global Causes and Impacts, 2018
- ⁷ Ahmed Saleh, Climate Change in Palestine and the Need for Adaptation, Horizons of Environment and E-Development Magazine, Issue 72, Development Action Center / Ma'an, March 2015.
- ⁸ Ghadeer Arafa, Towards Achieving "Climate Justice" in Palestine: Legal Orientations and Future Policies in Light of Conflicts and Crises. Masarat Center, 10/31/ 2021. <https://www.masarat.ps/>
- ⁹ Personal interview, Ahmed Helles, an expert in environmental issues. 6/21/2023.
- ¹⁰ Zeina Al-Agha. Climate change and occupation: multiple challenges, Nawa Network, January 10, 2020. <https://www.nawa.ps>
- ¹¹ Ruba Anabtawi, Climate Conference in Poland... Slow response in a time of no return and Palestine "the greatest challenge", 7/3/2019 <https://ps.boell.org/ar>
- ¹² Zeina Al-Agha. Climate Change, Occupation, and Vulnerable Palestine, March 26, 2019, <https://bit.ly/3nhIDzs>.
- ¹³ Palestinian prime minister. Sustainable Development Goals: First Voluntary National Review on Follow-up and Implementation of the 2030 Agenda for Sustainable Development, June 2018
- ¹⁴ Osama Al-Makhalati. Palestinian Peasants Victims of Climate and Environmental Changes, Al-Insaniya Magazine, Spring/Summer 2019, pp. 20-21.
- ¹⁵ Safa, Palestinian Press Agency, How does climate change affect the marine environment in Gaza? October 31, 2022. <https://safa.ps/post/338946/>
- ¹⁶ An interview with Dr. Ahmed Helles, an expert in environmental issues. 6/21/2023.
- ¹⁷ United Nations Development Programme, Programme of Assistance to the Palestinian People: Climate Change Adaptation Strategy and Programme of Action for the Palestinian Authority, 2010, p27.
- ¹⁸ Fatima Zahraa Sehuil. Climate Change in Palestine. Its Reality and Repercussions. Palestine ULTRA 18-April- 2018. <https://ultrapal.ultrasawt.com/>
- ¹⁹ Humanitarian Magazine, Spring/Summer 2019, p.10
- ²⁰ Ruba Anabtawi, previous reference.
- ²¹ Noha Tobasi. Goal 13 for sustainable development and the threat of occupation on the environment and climate, Amad Media Agency, 1/2/2022 <https://www.amad.ps>
- ²² Zeina Al-Agha. Climate Change, Occupation, and Vulnerable Palestine. Previous reference.
- ²³ Asma Abu Mazyad. Confronting Energy Poverty in Gaza, Palestinian Policy Network, March 29, 2023, <https://al-shabaka.org/briefs/>
- ²⁴ Palestinian prime minister. Sustainable Development Goals, previous reference.
- ²⁵ Environmental Quality Authority. First National Communication to the United Nations Framework Convention for Climate Intervention (Executive Summary), 2016, p. 25.
- ²⁶ Interview with Mr. Khaled Jabr (Deputy Director General of Planning and Policies), and Eng. Maher Al-Jamal, Ministry of Agriculture - Gaza. 6/20/2023.
- ²⁷ Humanitarian Magazine, pg. 12.
- ²⁸ Additional Protocol I to the Geneva Conventions, 1977.