Editorial

Editorial Introduction: Environmental Security – Historical and Geographical Perspectives

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ACCESS TO AND CONTROL OF NATURAL RESOURCES AND NATIONAL AND REGIONAL SECURITY

During the first quarter of the 21st century, but especially in recent years, the control of and access to basic natural resources, i.e. food, water, energy, have remained high in the priorities of humanity. This is especially so due to the great number of wars breaking out throughout the world for the first time since the Second World War, signaling what may be the transition period to a new world order. These wars include, but are not limited to, the Russian invasion of The Ukraine in February 2022, the Sudanese Civil War which broke out in April 2023, the Gaza War and its regional effects, the Twelve-Day War between Israel and Iran, the 2026 Iran War (or Middle Eastern War), and the 2025 India-Pakistan Conflict. In Africa, in the meantime, terrorism has increased and has been wreaking havoc in the Sahel and West Africa, Somalia, Mozambique, and Central Africa, especially in the Democratic Republic of Congo.

Basic natural resources, such as water, land and energy have been playing a very central role in all these wars, conflicts and terrorist activities. Attacks against energy infrastructures, especially during the Russian invasion of The Ukraine, the Sudanese Civil War, the Gaza War, and the 2026 Iran War have been launched in an attempt either to beat the other side into submission or to react by the same token against similar attacks. During the 2026 Iran War, another motivation was to strike energy infrastructures in many Gulf countries in order to shut their activities. This step, together with the closure of the Strait of Hormuz by Iran and the counter blockade by the United States, hit the energy-based economies of the Gulf countries and the

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supply of oil, gas and fertilizers to Asia, Europe and Africa. If continued, it may cause a global economic recession.

Similarly, intentional prevention and destruction of water and food resources and the use of a scorched-earth policy against the enemy have been used as a way to starve the enemy into submission. Yet, especially in the case of the Russian invasion of The Ukraine, it has had other ripple-effects, such as the temporary suspension of wheat exports from the latter, which affected the food security situation of many countries in Africa and Asia dependent on this food supply for its citizens. Moreover, the Iranian threat to attack desalination plants in the Gulf countries and Israel as part of the 2026 Iran War has also been a threat to the very existence of the Gulf countries which are almost fully dependent on desalination plants for its water supply .

Thus, these numerous conflicts, some are still ongoing, have just stressed the need to find alternative ways to secure access to and control of water, food and energy resources not only as part of national security, but regional security as well.

CLIMATE CHANGE AS A CAUSE FOR CURRENT AND FUTURE GEOPOLITICAL TENSIONS AND CONFLICTS

Despite the fact that engagement with climate change has been pushed aside for the sake of geopolitical tensions, military confrontations and securing access to and control of basic natural resources, climate change has also been the cause of current and future geopolitical tensions and conflicts. The best example which illustrates this phenomenon is the Arctic. The Arctic has been warming up faster than any other region on earth, with temperatures melting sea ice and thawing permafrost. As a result, this region has become a theater of accelerating geopolitical competition for natural resources, including oil, gas, critical minerals, fish, new shipping routes, such as the Northern Sea Route, and, as a result, increased militarization. Thus, since Russia and China have increased their presence in the region, NATO and the US have responded by increasing their defensive activities in the region. An inseparable part of this competition is the wish of the US to control Greenland in order to secure access to and control of its rare minerals.

Climate Change as a Threat to National Security

In parallel, climate change and its effects have been threatening the very existence of whole countries throughout the world regardless of conflicts. For example, in December 2025, the Icelandic government declared the possible collapse of the Atlantic Meridional Overturning Circulation (AMOC) a direct threat to national resilience and security. The AMOC is an ocean current system that brings warmer waters from the tropics through the Arctic and into the North Atlantic Ocean, as well as colder waters southwards, which helps regulate the global climate. Its collapse may mean harsher winters in Europe and the North Atlantic, increasing sea

ice around the island, which in its turn will cause disruption and even destruction of fish habitats, and, thus, disruptions to food supply.

Another case in point is the Small Island Developing States (SIDS), a group of 39 states and 18 associate members of the UN regional commissions, which are located in the Caribbean, the Pacific, the Atlantic, the Mediterranean, the Indian Ocean and the South China Sea. SIDS are on the frontline of the climate crisis and some, such as the Maldives, Vanuatu, Kiribati, the Marshal Islands, face an existential threat from sea-level rise, more frequent and intense extreme weather events, ecosystem destruction partly caused by ocean warming and acidification.

As a result, these countries are also on the frontline of climate advocacy and climate solutions in an attempt to rescue themselves from completely disappearing under the waves or lacking basic natural resources needed for the survival of its peoples.

Challenges for Ecological and Human Security

In addition to militarization of the environment and climate change as a threat to national security, another threat to ecological resilience, which threatens human security, is the degradation of ecosystem resilience and functions due to many reasons, including: rising temperatures, extreme weather, biodiversity loss, population growth and density, urbanization processes, deforestation, neglect by the regional and national authorities, and intended policy of destruction of whole ecosystems, i.e., ecocide, etc. This phenomenon mostly takes place in developing countries and affects its populations.

For example, recent research on grazing systems, which represent the most extensive production systems in the world and are highly sensitive to climate change, projects a net decline of 36% to 50% of areas in climate suitability for grazing by 2100, accompanied by inter- and intracontinental shift of grazing suitability. These changes are expected to negatively affect 110-140 million pastoralists and 1-1.6 billion livestock, with particularly severe impacts in Africa. The research further shows that 51%-81% of these impacted populations reside in countries with low income, serious hunger, severe gender inequality, and high political fragility. Therefore, the study implies that future climate change will threaten grazing suitability across large portions of the world, endangering the livelihoods of numerous communities and potentially triggering widespread socioeconomic consequences (Li, et al., 2026).

Yet, this also takes place in more developed countries. Rising temperatures in the Arctic has had huge impacts on indigenous peoples, whose livelihood, culture and way of life, which are dependent on the environment, have been under threat. For instance, in Greenland there are no roads and the ice has served as transport infrastructure for the Greenlandic Inuits. Nevertheless, ice melting has already caused a rapid decline in the number of sled dogs, central to Inuit culture, which have been used for travel and hunting. Disruptions in land transport also jeopardize access to critical resources and services. Moreover, shorter winters, extended periods

without sea ice, thinner and slowly disappearing sea ice has made access to marine animals, such as fish and seals, much more challenging and rendered hunting conditions increasingly unsafe. Traditional food represents a significant amount of the energy intake of Greenlandic Inuit. A decline in subsistence hunting, reinforced by reduced availability of some species and westernization of diet, can threaten food security and have considerable implications for the health and wellbeing of the Greenlandic Inuits (Beshparova, 2021).

Additionally, environmental mismanagement has been responsible for the destruction of whole ecosystems, while endangering the livelihoods of numerous communities and forcing them to leave in search of livelihood. Cases in point are the Aral Sea, formerly the fourth largest lake in the world lying between Kazakhstan to its north and Uzbekistan to its south, which began shrinking in the 1960s and had largely dried up into desert by 2007 following the diversion of the rivers that fed it by Soviet irrigation projects. The same is true to Lake Urmia in Iran, which was once the largest lake in the Middle East and the sixth largest saltwater lake in the world. By 2017, it had largely dried up due to persistent drought in Iran, the damming of the rivers that flow into it, and the pumping of groundwater from the surrounding area.

HISTORICAL AND GEOGRAPHICAL PERSPECTIVES OF ENVIRONMENTAL SECURITY FROM THE MIDDLE EAST, AFRICA AND INDIA

Drawing on the above-mentioned examples, this special issue's title, *Environmental Security – Historical and Geographical Perspectives*, implies that the concept of environmental security, its definition, and its perspectives requires deeper exploration. The articles presented here discuss two main perspectives of the concept of environmental security as shown in the abovementioned examples. One perspective is the militarization of the environment and its connection to national, human and ecological security. The other perspective is the preservation of ecological resilience. It includes one article explaining what environmental security is, and six others dealing with historical and current aspects of environmental security in Africa, the Middle East and India.

WHAT IS ENVIRONMENTAL SECURITY?

The article by Peter Hough describes how the concept of environmental security is highly contentious and the different ways by which the environment has been securitized within the frameworks of national, human and ecological security since the 1980s. Hough also discusses the arguments against securitization raised by environmental sceptics and political ecologists.

Yet, Hough contends that these differences of opinion stand on the way of building a consensus on how best to address urgent environmental problems, since environmental problems require complex, holistic, multi-faceted and consensual political responses. Therefore, he argues that it is both necessary and possible to overcome some of these differences and the key is the common ground between human security approaches and political ecological thought. This common ground is based on human security rather than militaristic national security, the understanding of human security as being part of a global biosphere, the concern about framing environmental resource scarcity as a military security issue and a conceptualization of environmental security centered on clear facts about human vulnerability in the face of ecological changes. Environmental security needs to be defined based on this common ground.

HISTORICAL PERSPECTIVES OF ENVIRONMENTAL SECURITY ISSUES

The historical perspectives of environmental issues in general and environmental security issues in particular takes us back first to the Middle East in the Middle Ages between 915 and 1517. Yehoshua Frenkel describes medieval Arabic accounts of landscape, geographical descriptions, water supply, nature, living organisms and natural hazards as well as the efforts to make use of natural resources and the reactions to calamities.

According to these accounts, the Eastern Mediterranean basin supported an agricultural way of life in the Middle Ages. The Nile Valley was characterized by an irrigated intensive farming. Egyptian chroniclers would regularly report on the level of the Nile River. Yet, Bilad al-Sham is a dry farming region, which was based on winter rains. Artificially irrigated farming was restricted to vegetable gardens and beds. Disruption of the agricultural way of life was caused by draughts and floods. Water engineering demonstrates environmental knowledge. Open canals had to be dredged, and tunnels dug regularly throughout to keep irrigated water flowing in the countryside and consumed by inhabitants of urban centers. In villages pipes supplied water to gardens. Additionally, civic projects to supply water to humans and animals was regarded as a fulfilment of religious duty. Along the roads and streets fountains supplied water. Water was used also as a source of energy. Woods were another natural resource that was widely utilized by all. They were prime source of energy and manufacture. Caliphs and Sultans invested in gardening in the cities.

Most of these accounts narrate various negative aspects of natural hazards impact on society. These accounts describe destructive forces, such as flash flooding, droughts, bitter winter, snow, epidemics, earthquakes, tsunami, fires, pest etc., which exacted heavy toll. Muslims regarded natural disasters as divine will. Shortage in supply and rising food prices instigated reaction by Muslim jurists, who debated the potential intervention in the market and fixing of prices.

Then, Glen Segell takes us to four regions in Africa from the beginning of the nineteenth century to contemporary times and discusses factors of natural and human environment used by Islamic Jihadist groups in Africa in recruitment. This comes naturally, for environmental concerns are part and parcel of Islamic religion, military strategy, and politics. He contends that people under stress who have nowhere to turn to, arising from situations resulting from environmental stress, are the targets for militant recruitment.

Segell illustrates first the Caliphate of Sokoto in pre-colonial West Africa (ca. 1800-1840) where daily life was solely agrarian and so the recruitment process focused on land and animals. The Jihadists used land management and promises to get rid of arbitrary taxation suffered by local peasantries to recruitment. In this process they used civilization-wilderness divides across intellectual and colloquial discourses of common soldiers and political leaders that included glorification of horses and camels as a recruitment moto associated with authentic Islamic warfare in the style of Prophet Muhammad.

In contrast, in the Sahel, recruitment efforts by current Islamic Jihjadist groups applied the symbiotic relationship of environmental shocks, insecurity, chronic hunger, malnutrition, and violent extremist organizations, taking into account that most of the population have no professions and rely on subsistence farming including semi-nomadic cattle herders. These struggles for daily existence as the region is struck by global climate change. Jihadists influenced how the population perceived climate change and how it could be addressed through belonging to a Jihadist movement, using it as a means of recruitment.

In Mali, Nigeria and Somalia the current recruitment to Islamic Jihadist groups is analyzed under a materialist political ecology approach. It details Jihadist groups in Mali in their peasant/ pastoral logics for recruitment, compared to the devolution of natural resources and security governance in Nigeria and the specific means applied by Al Shabab in Somalia who has banned single-use plastic bags projecting an environmental friendly image.

For the recruitment in North Africa and the Lake Chad Basin, Islamic Jihadist groups exploit natural crises such as water shortages in the analogy of life and death and also in the context of suicide acts for the Jihadist cause. Once recruited they are placed under further stress to fight for the Jihadists or return to a life of water shortages. That makes climate change a multiplier in recruitment efforts. Jihadists emphasized that climate change resulting in water shortages and so agricultural failure could not be resolved by humans such as political bodies and leaders.

GEOGRAPHICAL PERSPECTIVES

Turning to the subject of geographical perspectives, two articles are focused on the Middle East. The first one, by Gideon Behar, shows climate change as a threat to national and regional security. It describes how climate change has been emerging

as one of the most significant forces shaping the Middle East, with temperatures rising at twice the global average rate. Its impacts are characterized by sea level rise, heat waves, an increase in extreme weather events, desertification, droughts, and locust threat, with far-reaching implications for agriculture, economic stability, public health, tourism, and natural ecosystems. Rapid population growth increases pressure on the already depleted resources, exacerbating internal tensions and inter-state conflict potential. In addition, the Middle Eastern oil and gas-producing countries will most probably face enormous economic challenges due to the global shift towards renewable energy, expected to result in a significant reduction in their income, while the challenges they face because of the climate crisis only intensify. These challenges are already leading to a wide range of problems causing social unrest and severely undermined regional security, strengthened terrorist organizations and crime, and evolvement of centers of instability, with the export of terrorism and refugees on a global scale as happened in the Syrian Civil War. The increasing water scarcity, coupled with the growing population, is already causing tensions between countries that share water sources, such as the Nile Basin countries and the Euphrates and Tigris River basins.

In terms of climate preparedness Middle Eastern countries can be categorized into three groups: countries with resources and comprehensive climate strategies, such as the Gulf states and Morocco; countries with limited resources and partial preparedness, such as Egypt and Jordan; and fragile or failed states, such as Yemen, Syria, Lebanon, Sudan and Libya, which lack climate preparedness.

In Behar's opinion, addressing this challenge demands both national and regional preparedness and strengthening climate resilience, developing regional cooperation mechanisms, and international coordination. Israel has promoted and actively participated in several such regional and international initiatives.

Along these lines, the article of Maoz Fine, Rina Kedem, Suleiman Halasah and Ali Al-Sawalmih is focused on trans-boundary efforts to conserve and protect the coral reefs in the Gulf of Aqaba, which demonstrate remarkable resistance to thermal stress. However, this resilience to warming will only translate into long-term survival if local pressures are stringently managed. Therefore, effective conservation in this region transcends national boundaries of countries sharing interconnected marine ecosystems.

Given these circumstances, the authors stress that Transboundary Environmental Cooperation (TEC) is not just desirable but essential. It involves neighboring states working together to manage and protect shared natural resources and ecosystems. TEC does not ignore harsh political realities, such as the current war in the Middle East, but rather seeks opportunities in which cooperation can happen also during active conflict to mitigate dire environmental concerns. They describe past and present transboundary initiatives in the Red Sea, and chronic challenges – from regional conflicts (e.g. the war in Gaza) to shifts in international support that have left cooperation projects in limbo. They conclude by suggesting pathways to bolster regional environmental security.

SECURITIZING FOOD AND OCEAN RESOURCES

Two articles deal with two separate issues. In the first article, Sigal Tepper and Nimrod Luz examine the specific obstacles to achieving food security and sustainable nutrition in Israel. Israel has unique food security vulnerabilities ranging from policy, demography, socioeconomic disparities; and limited arable land, water scarcity, and dependence on imports. In recent years, there have been a growing recognition of these challenges and the emergence of various initiatives, primarily within civil society and the third sector, aimed at promoting food security and sustainability in Israel. They argue that for a successful food security policy to be implemented, it must transform the current predominantly linear economic logic in food systems and move toward more equitable, resilient and sustainable food paradigms through various complementary approaches.

Indeed, the focus has shifted from a narrow emphasis on food security to broader concepts of food sovereignty, sustainable nutrition, and a circular economy. This evolution reflects a growing recognition of the complex interplay between food production, distribution, consumption, and their impact on human health, social justice, and environmental sustainability. For Israel, with its limited agricultural land and water resources, adopting sustainable nutrition principles is not merely environmental but existential. Jannifer Clapp's framework of six key principles for integration is particularly valuable given the complex challenges the country faces.

Lauren Dagan Amos describes how since 2014, when Narendra Modi assumed office as the Indian Prime Minister, India has actively leveraged the blue economy to strengthen its strategic position in the Indo-Pacific, reflecting a shift from a traditional maritime economy to a comprehensive geopolitical tool. India has an Exclusive Economic Zone (EEZ), covering 2.3 million square kilometers. It offers immense potential for economic exploitation and resource management. Dagan-Amos examines how India's blue economy policies evolved under Modi's leadership underscoring India's ambition to not only harness marine resources for economic growth but also to enhance regional stability and maritime governance.

India's approach to the blue economy presents several strategic opportunities that align with its broader economic and geopolitical objectives. These include expansion of the shipping industry, offshore renewable energy development, investments in marine aquaculture and biotechnology and marine tourism.

Yet, the development of the blue economy in India has faced significant environmental and geopolitical challenges, requiring India to balance economic aspirations with security concerns. Thus, India's blue economy remains a work in progress, facing significant hurdles. While notable progress has been made, it remains too early to determine the overall success of these efforts. Ultimately, India's maritime strategy stands at a pivotal juncture, where its ability to balance economic growth, environmental sustainability, and regional stability will be crucial amid shifting geopolitical dynamic.

In conclusion, the articles in this special issue show time and again that environmental issues and climate change are very significant factors by themselves or as multipliers to existing political and socioeconomic factors that have impacted national security, regional security, human security and ecological resilience throughout history in different geographical settings. Today, in the age of a collapse of one world order and the transition to the next one, of greater insecurity for political entities, humans and ecological systems and of climate change, there is need for a new perspective that integrates security in its different forms, climate change and the environment politically, socioeconomically, culturally, environmentally and security wise. This is one of the main challenges of the 21st century.

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