

Jordanian-Israeli Food Security: A Road Map of Potential Collaboration

Dr. Rina Kedem, Dr. Suleiman Halasah and Zafrir Asaf*

Food security has become a critical priority in recent years, driven by the growing impacts of global climate change. As countries develop strategies to ensure stable and sufficient food supplies, they must address key dimensions such as availability, accessibility, utilization, and resilience. At the same time, unprecedented climate and political instability, coupled with multiple human-made and natural crises, underscore the need for communities to strengthen their preparedness and adaptability, especially when national governments cannot provide immediate assistance. This document examines the food security practices of Jordan and Israel, reviews past and present joint initiatives, and outlines a roadmap for future cooperation. It emphasizes the role of communities and the private sector in enhancing collaboration and resilience in the face of ongoing challenges.

A. Conceptual Framework for Food Security

A.1- What is Food Security?

For the purpose of this paper, we use the internationally recognized definition of food security. Food security encompasses the availability, accessibility, utilization, and stability of food for all people at all times. It implies that individuals and households have consistent access to sufficient,

This paper is a shared policy paper between [Mitvim institute for Israel's Regional Foreign Policy](#) and [Arava institute for Environmental Studies](#). It is part of a [series of studies and policy documents analyzing the connections between climate and foreign policy](#).

* Rina Kedem co-directs the Jordan-Israel Center for Community, Environment, and Research at the Arava Institute for Environmental Studies; Dr. Suleiman Halasah the Founder and CEO of Integrated GREEN Solutions and a Research Affiliate at the University of Oxford, where he focuses on the impacts of climate change on water and energy security in Jordan; Zafrir Asaf leads the food security initiative within Mitvim's Climate Political Sustainability project and serves as a senior advisor to GSG-Impact on finance for SMEs.

safe, and nutritious food to meet their dietary needs for a healthy and active life¹. The following categories provide a framework to understand and address food security:

- **Availability** refers to the physical presence of food in sufficient quantities, influenced by factors such as production levels, storage conditions, minimization of food waste and distribution networks.
- **Accessibility** means people have the economic and physical means to obtain food. This includes factors like income levels, market infrastructure, and geographic location.
- **Utilization** is commonly understood as the way the body makes the most of various nutrients in the food. Sufficient energy and nutrient intake by individuals are the result of good care and feeding practices, food preparation, diversity of the diet and intra-household distribution of food. Combined with good biological utilization of food consumed, this determines the nutritional status of individuals.
- **Stability** ensures uninterrupted access to food over time, free from disruptions caused by factors like conflict, economic shocks, or climate change.

As a matter of global priority, Sustainable Development Goal (SDG) 2 aims to achieve a world free of hunger by 2030.

A.2 - The role of Communities in Achieving Food Security

Improved standard of living coupled with rapid urbanization increase global demand for food while depleting available land and water resources required to produce that food. At the same time, about one third of the food produced in the world is lost or wasted, according to FAO estimates.² Significant greenhouse gas (GHG) emissions in food distribution cause irreversible harm to human health and the environment and will ultimately cause food prices to increase, as governments impose ever more stringent regulations on GHG emitters. It is no surprise, therefore, that the FAO has recommended a gradual transition towards more food autonomy or a territorialized approach to food security.³

The focus of central governments on the majority of their population which lives in cities leads to a divergence in interests and considerations between the national food security strategy which

¹ Food and Agriculture Organization of the United Nations. (2003). *Commodity Policy and Projections Service, Commodities and Trade Division*. <https://www.fao.org/4/y4671e/y4671e06.htm>

² Rochefort, G., Lapointe, A., Mercier, A.-P., Parent, G., Provencher, V., & Lamarche, B. (2021). A rapid review of territorialized food systems and their impacts on human health, food security, and the environment. *Nutrients*, 13(10), 3345.

³ Carasso, F. D. y. N. (2019). *Sistema Alimentario Territorializado (SAT)*. F. D. y. N. Carasso. https://www.fondationcarasso.org/wp-content/uploads/2019/01/190618_Cuaderno_Carasso_SAT_ES_Web.pdf

is developed by the central government and sub national and municipal authorities like regional councils and small towns in the geographic periphery.⁴ This structural gap may become more pronounced during emergencies, as food supply chains to rural areas can be disrupted by natural disasters or conflicts. Additionally, such crises often shift the focus of central governments and emergency responders toward aiding densely populated urban centers, leaving remote communities to face the challenges of the emergency largely on their own.⁵

As food prices soar, and logistics become more challenging to handle and transportation more expensive,⁶ food producers may generate extra profit by supplying their immediate surroundings, thus overcoming distribution challenges and reducing operational costs. The proximity between seller and buyer increases the likelihood that supply will not be disrupted in times of crisis and that stronger trust is built between the two.

Local authorities play a key role in making local food ecosystems feasible. On the supply side (of food), local authorities can raise awareness among residents for the opportunities created by changing market conditions such as disruptions to supply chains or available grants and concessional loans.⁷ On the demand side, the local authority can increase awareness for locally produced food and for the environmental benefits of buying from local suppliers, thus strengthening the business resilience of local merchants. In some cases, local authorities can apply financial leverage to support local food manufacturing, processing and distribution, for example by granting municipal tax discounts. Finally, the local authority plays a crucial role in facilitating the relationship with nearby urban centers. First, by making sure that land is allocated properly and in a coordinated manner that ensures that the food security ecosystem can grow. Second, by applying careful planning of infrastructure that enables smooth connectivity between the city and its surroundings and thirdly, by strengthening the social fabric and building trust between rural residents and their urban neighbours. The abovementioned not only increase market size for food in normal times but is crucial in tackling emergencies when they occur.⁸


⁴ Battersby, J., Hatab, A. A., Ambikapathi, R., Chicoma, J. L., Shulang, F., Kimani-Murage, E., Minaker, L., Moragues-Faus, A., & Resnick, D. (2024). *Strengthening urban and peri-urban food systems to achieve food security and nutrition, in the context of urbanization and rural transformation, HLPE Report No. 19.* <https://openknowledge.fao.org/server/api/core/bitstreams/cf8cd142-cceb-4e81-8764-c8fbc291ce1b/content>

⁵ (Rocheffort et al., 2021)

⁶ World Bank. (2024). *Jordan Inclusive, Transparent and Climate Responsive Investments Program.* <https://projects.worldbank.org/en/projects-operations/project-detail/P175662>

⁷ Battersby, J., Hatab, A. A., Ambikapathi, R., Chicoma, J. L., Shulang, F., Kimani-Murage, E., Minaker, L., Moragues-Faus, A., & Resnick, D. (2024). *Strengthening urban and peri-urban food systems to achieve food security and nutrition, in the context of urbanization and rural transformation, HLPE Report No. 19.* <https://openknowledge.fao.org/server/api/core/bitstreams/cf8cd142-cceb-4e81-8764-c8fbc291ce1b/content>

⁸ Rouillé, M., Overå, R., & Atter, A. (2024). When borders close: Social networks, resilience and food security among informal cross-border fish traders on the Ghana-Togo border. *Maritime Studies*, 23(3), 36. <https://doi.org/10.1007/s40152-024-00378-w>



When communities are located along both sides of an international border, easing the freedom of movement of people and goods are essential to leveraging the full scope of this cross border “market”.

A.3- Benefits of Regional Cooperation in Food Security

The rationale for stronger cooperation on food security lies in other important considerations. First, constant demand for local produce is key to preserving land and sources of livelihood for local communities. Food producers compete with global suppliers and consumer demand can reduce food prices. Hence, ensuring demand in the geographic proximity may help in mitigating price shocks, changing customer preferences, and prevent hostile takeover of land.

Second, preserving agriculture means preserving local cultures and traditions and strengthening the resiliency of the community.⁹ By presenting a solid business case for food production that enjoys constant demand and minimizes operational risks, local communities can strengthen the foundations upon which they were formed, and better address future challenges.

While there is some evidence that local food systems are able to offer consumers foodstuffs that are fresher and produced more sustainably, there is no evidence that such an approach would grant local residents a more nutritious diet.¹⁰ An explanation of that gap may be the limited types of food that can be produced in a given region. However, a holistic approach to food systems, which includes industrial food manufacturers and interlinks between rural areas and nearby cities, may create an ecosystem which is not only more sustainable and resilient to crises, but also provides local residents with additional nutritional value.

A.4 - Global Examples and Frameworks

Cooperation between countries and communities about shared environmental concerns has been part of international governance for a few decades.¹¹ Such cooperation also takes place between countries with a history of conflict or current conflict. Environmental cooperation is relevant before, during, and after conflict and is part of a young and fast-growing field called *environmental peacebuilding*. Awareness of global climate change has emphasized the

⁹ ICLEI USA. (2024). *How Local Governments Support Community-Led Food Systems Transformation*. ICLEI USA. <https://icleiusa.org/how-local-governments-support-community-led-food-systems-transformation/>

¹⁰ (Rochefort et al., 2021)

¹¹ Ide, T., Bruch, C., Carius, A., Conca, K., Dabelko, G. D., Matthew, R., & Weinthal, E. (2021). The past and future (s) of environmental peacebuilding. *International Affairs*, 97(1), 1-16.

relationship between conflict, security, development, and cooperation and has induced transboundary environmental cooperation practices.

Environmental peacebuilding is dedicated to the practice and research of cooperation in the various stages of the conflict life cycle. Evidence demonstrating the role of environmental cooperation in ending violent conflict is scarce and includes the notable example of the Cordillera De Paz between Peru and Ecuador. The environmental cooperation between the two countries, via the establishment of an ecological corridor and nature reserve between both countries, led to the end of a violent and deadly conflict in that particular border region. The cooperation was so successful that it was one of the incentives for the presidents of the two countries to sign a peace treaty.¹² Yet, more empirical data exists in demonstrating the capacity of post-conflict environmental cooperation, namely natural resource management, in decreasing the likelihood of relapsing into conflict¹³ and creating tangible peacebuilding outputs and dividends, crucial to sustaining peace.¹⁴ Despite the political tensions, India and Pakistan collaborate on food security matters through the Indus Treaty which they signed in the 1960's. The treaty depicts the distribution of the Indus River's water which is the main irrigation source of crops in both countries, therefore ensuring the capacity of each country to grow food and sustain its population.

Moreover, environmental conflict and cooperation is not binary. Conflict and cooperation can and do co-exist and are seen in various cases around the world including the Palestinian-Israeli case study.¹⁵ During the past 50 years Palestinians and Israelis have been clashing periodically. At the same time, numerous frameworks for cooperation between Palestinians and Israelis on food security take place. They include agricultural training, trade in agricultural produce and foodstuffs (though volumes are modest),¹⁶ improved irrigation practices such as water meters and precision irrigation, and through off-grid environmental systems such as water harvesting from roof tops for irrigation of crops and domestic use and grey water systems. Most of the


¹² Ali, S. H. (2019). A Casualty of Peace? Lessons on De-militarizing Conservation in the Cordillera del Condor Corridor. In T. R. Lookingbill & P. D. Smallwood (Eds.), *Collateral Values: The Natural Capital Created by Landscapes of War* (pp. 177-188). Springer International Publishing. https://doi.org/10.1007/978-3-030-18991-4_8

¹³ Ratner, B. D., Meinen-Dick, R., May, C., & Haglund, E. (2013). Resource conflict, collective action, and resilience: an analytical framework. *International Journal of the Commons*, 7(1).

¹⁴ Ide, T. (2018). The Impact of Environmental Cooperation on Peacemaking: Definitions, Mechanisms, and Empirical Evidence. *International Studies Review*, 21(3), 327-346. <https://doi.org/10.1093/isr/viy014>

¹⁵ Martin, A., Rutagarama, E., Cascão, A., Gray, M., & Chhotray, V. (2011). Understanding the co-existence of conflict and cooperation: Transboundary ecosystem management in the Virunga Massif. *Journal of Peace Research*, 48(5), 621-635. <http://www.jstor.org/stable/23035499>

¹⁶ According to Israel's Ministry of Agriculture, between 2014 and 2023 the annual balance of trade in agricultural fresh produce between Israel, the PA and Gaza was at around 120\$M- 200\$M ענף החקלאות בישראל תמונת מצב כלכלית לשנת 2023



Israeli- Palestinian cooperation, at least until October 7th, 2023, was led by NGOs and the private sector.

B. The Israeli-Jordanian Case Study - Regional Food Security Cooperation

Jordan and Israel are situated in an arid region with limited natural water resources, and a growing population, making food production and resource management pressing challenges. The water resources in the region are scarce and include aquifers of which some are fossil. The scarcity is met, in part, by technological solutions of desalination and sewage treatment facilities which rely on high energy consumption. Poor soil quality, amplified by overuse, and high temperatures are additional challenges, more present in the southern regions of both countries, which are hyper-arid and have low socio-economic indices. While they are both rated low on a national level, there are many differences and uneven development on both sides of the border.¹⁷

Due to global climate change, both countries are increasingly prone to extreme weather events, including floods and heat waves. Food security is deeply linked to social stability, and ensuring a reliable food supply reduces the risk of political unrest. Therefore, building food resilience in these conditions requires multidisciplinary approaches. As both countries acknowledge the food security challenge that they are facing, each of them has published a national food security strategy which we briefly outline here. Interestingly, neither Jordan nor Israel makes any reference to its neighbour in the national strategy. This is, we believe, a clear indication for the missed opportunities that lie in enhancing regional food security cooperation.

It would be logical at this point to introduce the Palestinian territories in the West Bank as a third leg to a regional food security strategic discussion, however the current political conflict and the ongoing uncertainty makes inclusion of the Palestinian context at this stage untenable. Research attempts are being made to map the Jordan Valley water, energy, food security and environment nexus to encourage a Jordan, Palestine and Israel planning response to climate change (Nikolaidis et al. 2025). The authors of this paper have chosen to focus on the Jordan-Israel axis, particularly in the southern parts of both countries for cross-border cooperation initiatives.

Following the analysis of Jordan's and Israel's national strategies, we discuss lessons learned from existing joint food security projects and propose a fresh framework for cooperation that puts

¹⁷ Kedem, R., Feitelson, E., Halasah, S., & Teff-Seker, Y. (2024). Toward a Typology of Environmental Cooperation in Postconflict Settings: The Case of Jordan and Israel. *Global Environmental Politics*, 24(1), 138-154.

local communities at the center while offering significant advantages for other stakeholders: the Gulf neighbouring countries, the private sector, and development finance institutions.

B.1 Israel's National Food Security Strategy

Israel does not yet have a comprehensive and approved national food security strategy though a governmental committee was formed in mid-2024 to draft one.¹⁸ The committee defined Israel's food security strategy as ensuring both local production and on-going supply of healthy and affordable food in the mid and long term, and ensuring sufficient quantity, appropriate quality, and easy financial and physical access to this food. The strategy aims to achieve this while promoting the local agriculture and food industries that are sustainable.¹⁹ However, it is expected that such a comprehensive work would take time to materialize, and given the current political uncertainty, its adoption and implementation is uncertain.

At the same time, it is safe to say that a couple of clear characteristics would affect Israel's national strategy and are relevant to our research question:

1. Israel imports the vast majority of its food, in any way one measures it (calories, quantities, varieties etc). It does not aim to be fully self-sufficient.
2. Population growth, climate change risks, and multiple policies that favour other goals such as food price reduction and affordable housing over agriculture, constantly diminish the available resources for production of fresh food.
3. Israel sees itself as an island economy, almost totally disconnected from its neighbours, and assumes it cannot rely on them for supply of food in times of escalated geopolitical tensions. Currently, Israel's emergency plan is founded on preserving a determined quantity of emergency supplies of basic staples, and on an assumption that the local agriculture would supply its outputs to meet the domestic demand. There is no clear plan as to how that is supposed to work in a time of emergency.²⁰
4. To date, Israel has been able to maintain its high rank in most food security indexes.²¹ However, widening socio-economic gaps in Israel result in growing concern for the ability of Israel's poor to have access to a constant supply of healthy food at appropriate quantities. According to the Ministry of Health, obesity and type 2 diabetes prevalence

¹⁸ Government of Israel. (2024b). *Formulating a National Food Security Plan 2050*. <https://www.gov.il/he/pages/firststepformulatingnationalfoodsecurityplan2050>

¹⁹ Government of Israel. (2024a). *Briefing by inter-ministerial committee*.

²⁰ Youth Futures Program. (July 2020). בייר מדיניות | בטחון מזון לאומי בישראל. <https://www.yfpp.org.il/article/69>

²¹ Economist Impact. (2024). *Global Food Security Index: Israel*. <https://impact.economist.com/sustainability/project/food-security-index/explore-countries/israel>

are on the rise, especially among low-income population groups which are the fastest growing groups in Israel (predominantly ultra-orthodox and Arab- Israeli).²²

B.2- Jordan's National Food Security Strategy

In 2021, Jordan unveiled its National Food Security Strategy (NFSS) 2021-2030,²³ a comprehensive framework aimed at enhancing the country's resilience to food insecurity. The strategy focuses on four core pillars: availability, accessibility, utilization, and stability of food resources. It represents a proactive response to a range of interconnected challenges, including regional instability, climate change, water scarcity, and the socioeconomic impacts of the COVID-19 pandemic.

The NFSS envisions achieving food security for all Jordanians by 2030, ensuring access to safe, nutritious, and affordable food while fostering a sustainable and resilient food system. It also acknowledges Jordan's structural vulnerabilities, including severe water scarcity, a heavy reliance on imported food commodities, and the compounded effects of regional crises, such as the Syrian refugee influx. Furthermore, climate change poses significant risks to agricultural productivity, underscoring the urgent need for adaptive measures, including water-efficient irrigation systems and the cultivation of drought-tolerant crops.

Strategic Objectives:

1. Ensure Food Availability:

- Enhance agricultural productivity through improved practices and sustainable resource management, particularly in water-scarce regions.
- Increase self-sufficiency in key commodities like vegetables, poultry, and dairy while maintaining strategic reserves of imported staples.
- Develop regional collaboration to position Jordan as a food security hub for the region.

2. Improve Access to Food:

- Strengthen social protection programs to support vulnerable populations, including refugees.

²² Siegl-Itzkovich, J. (2024). *Quarter of Israelis will be overweight by 2030 - especially the economically deprived*. Jerusalem Post. <https://www.jpost.com/health-and-wellness/article-794921>

²³ The Government of the Hashemite Kingdom of Jordan. (2021). *National Food Security Strategy 2021 - 2030*.

- 
- Create economic opportunities, particularly in rural areas, through job creation and support for home-based food production.
 - Focus on improving household resilience to economic shocks.
3. Promote Sustainable Food Utilization:
- Reduce food loss and waste through awareness campaigns and improved supply chain practices.
 - Enhance food safety standards and fortification programs to improve nutrition, especially among children and pregnant women.
4. Strengthen Food Security Governance:
- Establish a central institutional body for coordinating food security efforts across sectors.
 - Enhance data collection and monitoring systems for better policy decisions and program effectiveness.
 - Align with global goals, particularly the Sustainable Development Goals (SDGs) 2 and 13, focusing on zero hunger and climate action.

The NFSS emphasizes partnerships with international organizations such as the FAO and WFP, as well as neighbouring countries, to foster regional cooperation. The strategy aims to position Jordan as a strategic hub for food storage, logistics, and technology transfer in the region.

B.3 - Mapping the stakeholders

While the main purpose of this paper is to develop a conceptual framework for cross-border collaboration between local communities, other stakeholders that are not the Israeli and Jordanian governments may have an interest in supporting such a framework. In this section we will map those actors - The Israeli and Jordanian governments, the private sector, development finance institutions, and Gulf countries. In the recommendations section we will delve into how Jordanian-Israeli collaboration may interest them and what they can contribute to it.

B.3.1 - Development Finance Institutions

Development Finance Institutions (DFIs) are public organizations, either multilateral or national (i.e. owned by national governments) that apply different financial instruments towards achieving the “triple bottom line”- positive social impact, environmental sustainability and market or close to market rates of return. Numerous DFIs put global food security high on their agenda, while a couple of them have been working in Jordan for years.

The European Investment Bank (EIB) has invested over 2 Billion Euros in Jordan since 2019, about 60% of this amount went to water and climate related projects,²⁴ The European Bank for Reconstruction and Development (EBRD) has an investment portfolio of over 2 Billion Euro, though it currently does not invest in food security projects in the country.

The World Bank has committed 500\$ Million (out of a 1.2\$ Billion project) to foster the regulatory and financial conditions towards increasing private investment in climate-related projects.²⁵ IFC, the World Bank's arm to the private sector, has an investment portfolio of over 500\$ Million in the Kingdom and made Amman its regional hub in 2023. At the same time, the Multilateral Investment Guarantee Agency, (the bank's guarantees provider), has had an exposure to projects in Jordan in the range of 100\$M- 400\$M over the last decade.

Among bilateral donors, the US, Germany and France top a long list of countries who cooperate with Jordan to enhance its economic development, create jobs, improve capacity of the private sector, and build climate change resilience. While not all of this bilateral cooperation goes to food security, the large number of donors who invest significant sums in the Kingdom indicates the interest of the international community in achieving the triple bottom line.

B.3.2 - Regional Powers- UAE and Saudi Arabia

Gulf countries, primarily Saudi Arabia and the UAE have vested interest in the region. Following the Covid-19 pandemic, which caused shocks to the food supply chains, both countries embarked on a mission to develop a comprehensive food security strategy.²⁶

The UAE is currently importing over 90% of its food.²⁷ As harsh desert climate makes it challenging to develop significant local agro-industries, diversifying import sources has become a key pillar of the Emirati strategy. While the strategy is primarily government-led, the UAE

²⁴ European Investment Bank. (2019-2024). *European Investment Bank Loan Projects (Jordan, 2019–2024)*.

<https://www.eib.org/en/projects/loans/index.htm?q=&sortColumn=loanParts.loanPartStatus.statusDate&sortDir=desc&pageNumber=0&itemPerPage=25&pageable=true&la=EN&deLa=EN&loanPartYearFrom=2019&orLoanPartYearFrom=true&loanPartYearTo=2024&orLoanPartYearTo=true&orCountries.region=true&countries=JO&orCountries=true§ors=6000§ors=2030&orSectors=true>

²⁵ The World Bank, (2024), Development Projects: Jordan Inclusive, Transparent and Climate Responsive Investments Program. <https://projects.worldbank.org/en/projects-operations/project-detail/P175662>

²⁶ UAE Government. (2024). *National Food Security Strategy 2051*. <https://u.ae/en/about-the-uae/strategies-initiatives-and-awards/strategies-plans-and-visions/environment-and-energy/national-food-security-strategy-2051>

²⁷ Fathallah, H. (2024). *Ensuring the UAE's food security in an unstable region*. Atlantic Council. <https://www.atlanticcouncil.org/blogs/menasource/uae-food-security/>

encourages private agricultural companies like Al Dahra²⁸ and Elite Agro to play a key role in making sure the country has enough to eat.

Jordan has been a key partner of the UAE for years. Emirati investment in the Kingdom is estimated at 22\$ Billion to date. Furthermore, in October 2024 the two countries signed a Comprehensive Economic Partnership Agreement (CEPA), aiming to boost trade and investment in multiple sectors, including food security.²⁹

Saudi Arabia, by far the largest economy in the Gulf, has embarked on a similar path. Over the past 20 years the country has transitioned away from a government-led, centrally planned food sector to something that resembles more of a market economy, aiming to encourage local and foreign companies to invest along the food supply value chains³⁰ while tapping into its young, affluent and growing population. Despite these above-mentioned improvements, Saudi currently imports over 80% of its food, but has achieved self-sufficiency in some products including fresh milk and egg.³¹ As a result, diversifying import sources and improving import and distribution logistics has been a key objective of the Saudi strategy as well.

While achieving long-term food security has been the prime consideration for the Saudis and Emiratis, they are also actively working towards strengthening regional stability. Jordan is viewed as a strategic partner in a moderate Suni alliance in the Middle East. Both Gulf leaders have been investing significant sums to support the Hashemite regime. In parallel, the UAE signed the Abraham Accords with Israel, which it maintains to date, despite the on-going war in Gaza. Saudi Arabia was fully engaged in discussions about normalization with Israel until October 7, 2023, and has repeatedly expressed its view that Israel, alongside a Palestinian state, are both a part of a stable Middle East in the future.

B.3.3 - The Opportunity for Private Sector in Regional Food Security Cooperation


²⁸ Aldahra. (2024). *Al Dahra – Sustainably Feeding A Growing World | Leading Vertically Integrated Agriculture Company*. <https://aldahra.com/>

²⁹ Sarmad Khan. (October 7, 2024). *UAE-Jordan Ceps set to boost bilateral trade to \$8bn within a decade*. <https://www.thenationalnews.com/business/economy/2024/10/07/uae-jordan-cepa-set-to-boost-bilateral-trade-to-8bn-within-a-decade/>

Dr. Moran Zaga (February 2025) The UAE's Foreign Policy Anchors and Their Influence on Israel and the Region <https://mitvim.org.il/en/publication/the-uaes-foreign-policy-anchors-and-their-influence-on-israel-and-the-region/>

³⁰ Fast Company Middle East. (November 26, 2024). *Saudi Arabia eyes \$5.3 billion investment for Jeddah Food Cluster*. <https://fastcompany.com/news/saudi-arabia-eyes-5-3-billion-investment-for-jeddah-food-cluster/>

³¹ Young, K. E. (May 13, 2024). *Saudi Arabia's 60-Year Battle for Food Security*. Arab Gulf States Institute in Washington (AGSIW). <https://agsiw.org/saudi-arabias-60-year-battle-for-food-security/>



Private sector entities, whether they are Jordanian, Israeli or international, aim, initially, to maximize profit. In recent years, many corporations aim to create positive social or environmental impact, whether because they see the broad value in this effort or because they are obliged to do so by regulation or by their clients' demands.

The Jordanian-Israeli border is approximately 300 km and the longest border Israel shares with a neighbouring country. While the border is sparsely populated, it may offer quite a few interesting business opportunities for entrepreneurs in the food security sector.

Firstly, agriculture has been a main source of economic activity in the region for thousands of years, to date. Increasing food prices and stronger demand for fresh produce and ingredients from unique sources may open an opportunity for companies who would be able to invest in increasing yield per unit of land.

Further down the value chain, the Jordan Valley offers businesses some clear advantages, namely proximity to cities that are expected to grow - Beit Shean and Irbid in the North, Eilat and Aqaba in the south, the port of Aqaba and Ramon airport in the Arava - and gradually improving access to the growing markets in Saudi Arabia and other Gulf countries.

The growing population is attractive for two reasons: first, it creates a solid consumer base for food retailers who can enjoy constant demand in normal times while being the first to provide food in times of emergency; secondly, the growing population may offer the required workforce necessary for a growing food security ecosystem, either in food production or in its processing and distribution. It should be recognized that the West Bank of the Jordan River has high agricultural potential with fertile soil, mild climate and proximity to fresh water, but due to the ongoing Israeli military occupation, Palestinian farmer's lack of access to agricultural water, limited access to land, weak PA governance of natural resources and periods of violence the Palestinian side, the Jordan Valley is an underutilized agricultural resource for the region. Were these challenges to be overcome, the Palestinian side of the Jordan Valley could be a breadbasket for the region and contribute to food security in Israel, Jordan and Palestine. A separate food security analysis of this situation is called for, which could explore the barriers to agricultural development in the West Bank and how to remove them. This paper does not delve into food security opportunities and challenges related to the Palestinian Authority and Palestinian communities along the Jordan River. While acknowledging their impact on the regional ecosystem, a further analysis is required in order to draw valuable recommendations and to create a substantial regional approach.

B.4 - Assessment of Jordanian-Israeli Food Security Initiatives

Jordanian and Israeli cooperation regarding food security has been taking place since the signing of the peace agreement (1994). In our review of primary and secondary resources we found approximately 80 initiatives relating to food security, of which we analysed 70.

A closer examination of these 70 initiatives highlights significant contributions from various sectors, including 18 NGOs, 8 government entities, and 14 research institutions. These initiatives collectively address key dimensions of food security: availability (68 initiatives), utilization (23 initiatives), accessibility (7 initiatives), and stability (16 initiatives). The geographical distribution of the initiatives is diverse, yet there is a notable concentration of initiatives in the border regions and in the southern rural areas (Wadi Araba/ Arava Valley) of both countries.³² Most of the initiatives entailed research (including applied research) and training rather than tangible financial and agricultural food security schemes. Projects have been supported mainly by the United States Agency for International Development (USAID), the European Union, the Israeli Ministry of Regional Cooperation, and other international research and development entities and governments.

The analysis reveals a spectrum of approaches, ranging from direct to indirect engagement on the issue. Clear food security initiatives, such as those under the Abraham Accords Peace Institute, focus on enhancing food security through agricultural technology transfer, water desalination and management, sustainable agricultural practices, commercial agricultural ventures, and collaborative research and innovation, including Morocco-Israel cooperation.³³ These efforts emphasize the availability and stability of food resources, leveraging Israel's expertise in desert and water technologies to develop sustainable agricultural solutions. Another initiative, supported by the Middle East Regional Cooperation (MERC-USAID), aims to rediscover and develop neglected edible plants suited to arid and desert environments in Israel and Jordan. This project seeks to identify and propagate locally significant species under environmentally stressful conditions, evaluate their physiological responses and nutritional qualities, and promote their cultivation and integration into traditional diets through community engagement, particularly by women. The initiative is on hold due to the current pause in USAID funding.

Conversely, many initiatives address food security more indirectly. A significant number focus on improving water quality for agricultural irrigation, which is crucial for enhancing crop yields and resilience but only indirectly relates to food security. Similarly, a variety of projects have dealt with pest control, supporting agricultural productivity without directly framing their impact

³² Kedem, R. (2016). *Patterns and Characteristics of Environmental Cooperation Between Jordan and Israel, Since 1994* MA thesis, Department of Geography, Hebrew University of Jerusalem.

³³ Abraham Accords Peace Institute. (2024). *Abraham Accords*. <https://www.aapeaceinstitute.org/>

within the context of food security. Initiatives like the Prosperity³⁴ Water-Energy Nexus broadens this scope further, emphasizing water desalination and supply, renewable energy production (e.g., solar power), and regional interdependence in energy and water resources. This initiative addresses multiple dimensions of food security: availability, through resources such as desalinated water and renewable energy; accessibility, via a regional framework for water and energy access; utilization, by ensuring desalinated water is used for domestic purposes and transforming wastewater for reuse in agriculture; and stability, by fostering long-term geopolitical and environmental resilience through sustainable energy-water cooperation.

While the diversity of approaches reflects the complexity of food security challenges, the indirect initiatives underscore the need for clearer alignment with food security objectives. This analysis highlights the interconnected nature of agricultural and environmental challenges, as well as the opportunities for more targeted efforts to strengthen food security between Israel and Jordan.

At the same time, the absence of private sector stakeholders is notable. Regional actors such as Gulf countries have not been partners to any of the examined initiatives, despite the fact that over 4 years have passed since the signing of the Abraham Accord. Furthermore, USAID and the EU's on-going support for the initiatives did not translate into more financially robust involvement of global development finance institutions.

C. A road map for Jordanian-Israeli food security collaboration

Due to the complex political relationship between Jordan and Israel, and since food security is an urgent matter that cannot wait for top-down initiatives, we chose to focus our analysis on cooperation that is feasible and achievable through efforts by non-government actors. In addition, during the recent war (2023-2025), the diplomatic and governmental relations between Jordan and Israel are limited. An official in governmental ministry also suggests that cooperation between the private sector and local authorities has a higher feasibility.

In assessing the different collaboration potentials, we found the Jordanian and Israeli communities living by the shared border to be a unique point of interest. The border communities share high vulnerability to climate and political emergencies due to their distance from the centers of both countries. These regions depend on a functioning system of delivery of most food supplies (except the communities that grow food in the Jordan Valley), and in cases of emergency

³⁴ The Jordan Times. (2022). *Jordan, UAE, Israel sign MoU on blue-green prosperity feasibility studies*. The Jordan Times. <https://jordantimes.com/news/local/jordan-uae-israel-sign-mou-blue-green-prosperity-feasibility-studies>

can be disconnected from such supplies. Moreover, in most cases, the border region communities are not only geographical peripheries of both countries but also social and economic peripheries. The southern regions of both countries are especially vulnerable to food-insecurity due to their hyper-arid climate. Extreme temperatures, low rain fall and poor soil quality limits the variety of food crops. Quantity and quality of irrigation water is another limiting factor. In times of high political and climate risk these communities are also further away from medical and social welfare services. Beyond the shared high vulnerability, the southern regions also have a rich history of cooperation between border communities.³⁵

There are several efforts that can increase the resilience of border communities to food insecurity that require collaboration between both countries. We will elaborate on two examples:

A Shared Food Security Emergency Supply/Bank in the Border Regions

A tangible project can include developing a shared storage space along the border for dry goods that will reduce transportation costs for food suppliers in normal times (since most dry goods arrive from the central regions of both countries which are an average of 300 km away from the southernmost regions) and will have designated inventory maintained for emergency supply on either side of the border. The location can include the border buffer zone or two parallel locations on land that will be granted by both countries for this purpose. Another potential location can include the 'Al Ghamr' area in Jordan, close to Tzofar on the Israeli side, which was rented by Israel from Jordan until 2022/2023. This specific area already has the infrastructure to be a shared land, and the experience of the military and authorities in operating it as such.

Creating such a dry storage space requires high investment to adhere to health and environmental conditions and therefore economies of scale might make a shared endeavour financially feasible.


Protocols of operating the shared food bank will be created in collaboration between the local authorities which will also have the administration capacity in time of need.

Systematic Agricultural Collaboration

There has been sporadic and spontaneous cooperation in the field of agriculture based mainly on the interest and the capacity of small businesses and communities.³⁶ Such cooperation should

³⁵ Arieli, T., & Cohen, N. (2013). Policy entrepreneurs and post-conflict cross-border cooperation: a conceptual framework and the Israeli–Jordanian case. *Policy Sciences*, 46(3), 237-256. <https://doi.org/10.1007/s11077-012-9171-9>

³⁶ Kedem, R. (2016). *Patterns and Characteristics of Environmental Cooperation Between Jordan and Israel, Since 1994* MA thesis, Department of Geography, Hebrew University of Jerusalem].




be leveraged and based on a market analysis of crops that can grow best on each side according to the availability of knowledge, soil, and water conditions. Policies that allow the transport of produce across the border are needed as well.

In 2024, the disruptions to the Israeli supply chain caused by the ongoing war created a significant shift in regional agricultural trade dynamics. Jordanian private businesses seized the opportunity to expand their supply of various agricultural products to Israel, driven primarily by the profit-maximization motives inherent to the private sector. This increased involvement of private enterprises effectively alleviated some of the burden on the Jordanian government, sparing it the need to advocate for collaborative trade measures during a politically sensitive period. Notably, public opinion during the conflict strongly demanded government action to exert pressure on ending the hostilities, making any overt governmental trade partnerships potentially controversial. By stepping into the void, the private sector provided a pragmatic solution that maintained supply chains while allowing the government to focus on diplomatic and political responses without escalating public dissent. This dynamic underscores the pivotal role of private businesses in ensuring economic continuity during periods of regional instability.

The southern regions of both countries hold a wealth of knowledge about life in hyper-arid zones. The knowledge of the communities is both ancient and innovative. Bedouin communities have survived in the desert for centuries and can create shelter, track animals, use local plants for food and medicine, and harvest seasonal water. Precision irrigation, crops adapted to heat and high salinity, and desert architecture have been developed by Israeli communities. Such cooperation would be based on the assets and capacities of the local communities and harness their experience and leadership of living in extreme desert environments.

Collaboration between Jordan and Israel on such essential topics as food security requires trust. Trust is a scarce resource in the Middle East, and some would say the scarcest. Lack of trust is a common trait in conflict and post-conflict areas and therefore any collaborative efforts require a conflict-sensitive approach which integrates these notions as well as the asymmetry of power and uneven development and capacities between the parties.

The examples shared above should be supported by respective authorities in each country and require cooperation on multiple levels. Economic, health, and transport regulations will need to support the suggested collaboration in agriculture. Economic incentives and preferential economic mechanisms should be created to support communities and the private sector in the agricultural efforts, potentially by creating a dedicated fund. Additional foreign investments will be needed to jumpstart shared businesses. The potential facets for such investments and the role of the private sector are further explained in the following sections.



Developing cooperation between Jordan and Israel on food security will be a continuation of previous and existing small-scale efforts and ought to include policies to facilitate and support food security as well as cooperation between the private sector, research institutes and communities. Policies can be drafted by relevant governmental ministries to both acknowledge the necessity in collaboration and to allocate resources for such efforts. Collaborative endeavours will require communication and collaboration between the ministries of Agriculture and Foreign Affairs in both countries as well as the Ministry of Regional Cooperation in Israel (which has a mandate for such tangible cooperation between Israel and its neighbouring countries).

As one of the next steps, we propose the establishment of a *Jordanian-Israeli Food Security Council/Forum*, bringing together representatives from diverse sectors, including civil society, the private sector, local authorities, and relevant governmental ministries. This council would serve as a collaborative platform to prioritize, design, and implement proposed food security projects while exploring additional initiatives to address shared challenges. The council will have access to the analysis of previous initiatives and leverage the lessons learned from the experience accumulated thus far. The council will help fulfil the coordination and communication gaps between different efforts and sectors and will support science-policy interactions.

Arava Institute experience of creating cross-sectoral collaboration in matters of transboundary environmental cooperation has been positive and productive. It has worked with professional staff at governmental ministries as well as staff of international development agencies for many years. With time, and once trust has been established, it managed to co-create policies and programs based on the experience of its projects on the ground. Governmental staff were able to integrate feedback from Arava's experiences and change conditions and procedures of grants as well as produce new funding opportunities in the fields of eco-tourism, desert agriculture, environmental innovation, and transboundary scientific collaboration.

The council will focus on fostering dialogue and cooperation across multiple dimensions, such as social, environmental, cultural, economic, and policy aspects, ensuring that the collaboration is both inclusive and sustainable. By regularly convening, the forum would not only facilitate the exchange of ideas and expertise but also provide a mechanism for monitoring and evaluating the progress of joint initiatives. Furthermore, this council could serve as a model for cross-border collaboration, promoting mutual trust and resilience in addressing food security challenges in the region. Through its efforts, the council would aim to align short-term actions with long-term strategies that enhance regional stability, sustainability, and the well-being of all communities involved.

While governments can play a key role in supporting the proposed cooperation, other stakeholders may also benefit, and contribute, tremendously from such cooperation. Active

involvement by the private sector, DFIs, and Gulf governments may also reduce political concerns by both governments and enhance their support. We therefore recommend allocating significant time and attention to an open dialogue with these stakeholders and include them in the decision-making process as well as in planning and implementation.

C.1- The Role of Private Sector in Driving Regional Food Security

While reaping the benefits of business opportunities, the private sector can play a crucial role in advancing food security on both sides of the Jordan river. The private sector is the main investor in agriculture research and development (R&D) in the world.³⁷ As they strive to create and sustain competitive advantage, private companies push food growers to improve quality, durability, and traceability of produce. At the same time, companies invest to increase demand and to solve distribution challenges to connect demand and supply (The USAID Private Sector Engagement Hub, 2023).³⁸ Such initiatives can go beyond solving food distribution challenges, to introducing innovative payment technologies and offering farmers appropriate insurance. Such investments as mentioned, and others, in infrastructure, innovation, and training might attract private companies who, perhaps, deem the Jordan Valley as rather risky from a business perspective. DFIs, which will be discussed in the next section, as well as venture philanthropy, can offer financial products that mitigate risk while advancing social impact and enhancing environmental sustainability.

C.2- DFIs and Food Security along the Jordan-Israel Border

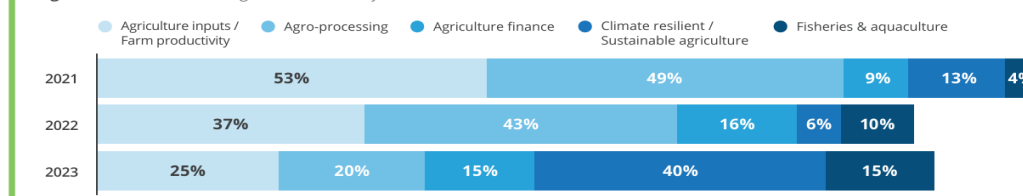
As we aim to enhance food security along the Jordan Valley, by strengthening cooperation among non-state actors, DFIs can play a pivotal role by providing crucial technical assistance, hedging financial risks, and leveraging grants and concessional loans with private capital.

According to Convergence, a research firm, blended finance deals in agriculture account for 21% of total deals (2024 figures), with a small average deal size of roughly 20\$ Million. Though agriculture is not the only food security related activity, it is a significant one and the small ticket size may point to the high-risk profile of agri-food deals and the need for patient capital that DFIs provide.

³⁷ Fuglie, K. (2016). The growing role of the private sector in agricultural research and development world-wide. *Global Food Security*, 10, 29-38. <https://doi.org/10.1016/j.gfs.2016.07.005>

³⁸ The USAID Private Sector Engagement (PSE) Hub. (2023). *3 Ways the Private Sector is Stepping Up to Address Global Food Insecurity*. Medium. <https://medium.com/usaid-2030/3-ways-the-private-sector-is-stepping-up-to-address-global-food-insecurity-dd3befbda2e7>

Figure 14: Breakdown of agriculture deals by sub-sector, 2021-2023



Source: (Convergence Blended Finance, 2024)

Interestingly, Convergence’s data shows that only a mere 2% of blended finance deals between 2018 and 2023 were made in the Middle East,³⁹ an enormous gap from Sub Saharan Africa and Latin America. This figure indicates a lack of bankable food-related projects in the region as a whole and along the Jordan-Israel border in particular.

When comprehensively examining the business potential of food security related projects in the region, along with the clear commitment of development finance institutions to investing in Jordan and the gloomy record of blended finance deals in the Middle East, we can identify a yet to be addressed opportunity to develop food security initiatives that have a sound business rationale and would also serve to enhance Israeli-Jordanian cooperation while strengthening the Jordan Valley communities’ resilience to climate and political shocks.

C.3- Gulf States role in advancing food security along the Jordan-Israel Border

Saudi Arabia and the UAE can both support and benefit from enhanced Jordanian-Israeli cooperation in food security. Their support can come in the form of opening their vast consumer markets to products originated in the Jordan Valley by reducing tariffs, non-tariff barriers to trade (NTBs), and improving the infrastructure that connects Israel and Jordan to the Gulf. In addition, they can encourage and even incentivize their companies to invest in the Jordan Valley by providing credit guarantees and concessional loans. Similar to the Qualified Industrial Zones areas that are VAT exempt, the Jordan Valley could be defined as a “free trade agricultural zone” by the Gulf states and other players, so that products of Israeli-Jordanian cooperation would receive better trade conditions and international players would receive economic incentives.

It is important to note that such support for food security business along the border may offer significant advantages for Saudi Arabia and UAE. First, developing agriculture in the region may help them achieve the strategic goal of further diversification of food resources and supply chains. Second, such engagement can enhance regional stability, security, and resilience amidst shock and, last but not least, investment in the region does have a sound business logic.

³⁹ Convergence Blended Finance (2024). *The State of Blended Finance 2024*. <https://www.convergence.finance/resource/state-of-blended-finance-2024/view>

D. Summary and conclusions

Our analysis demonstrates a clear opportunity to address food insecurity through bi-national cooperation and depicts an initial plan to achieve it. Food security cooperation between Jordanians and Israelis derives from shared needs and geographical characteristics (i.e. low rainfall, high temperatures and poor soil quality) but also entails potential shared benefits. Cooperation has the potential to drive economic growth, foster technological innovation, strengthen the resilience of peripheral-border communities, and enhance regional stability. Even though the two countries share a complex history, they have managed to maintain cooperation on shared environmental and scientific issues since the signing of the peace agreement in 1994. In addition, management of transboundary natural resources requires coordination and collaboration. Improved management of shared resources for drinking water and irrigation such as the Jordan River, Disi Aquifer and the Red Sea, is essential.

Working together on food security initiatives can help both countries reduce reliance on imported food, lower costs, and protect them from global market fluctuations. A regional food market based on shared needs and interests will boost the resilience of both nations and create a stronger, more stable regional framework. Collaboration between Jordan and Israel could also serve as a model for wider regional partnerships, promoting stability and cooperative development across neighbouring countries.

The role of various stakeholders will be instrumental in promoting the collaboration. We invite the business sector, public service, financial institutions, and civil society organizations to come together and foster tangible projects following the guidelines and recommendations discussed in this analysis.


Acknowledgments

The authors thank the Mitvim team (Bar Rappaport and Roe Kibrik) for their insights and comments. As well as the AIES team (David Lehrer and Gavriella Roitberg) for their contributions to this paper.

**** About the Authors of this paper:**

Dr. Rina Kedem

Rina Kedem is an environmental cooperation entrepreneur with over two decades of experience fostering cross-border collaborations among Israelis, Palestinians, and Jordanians. She co-directs the Jordan-Israel Center for Community, Environment, and Research at the Arava Institute for Environmental Studies. Dr. Kedem holds a Ph.D. from the Department of Geography and the



Advanced School for Environmental Studies at the Hebrew University of Jerusalem, where she also teaches in the International Development MA program. Her research and practice encompass environmental policy, conflict-sensitive international development, and transboundary natural resource management. She develops and directs cross-sectoral projects through participatory leadership with governmental officials, local authorities, private sector and civil society.

Dr. Suleiman Halasah

Suleiman Halasah is a seasoned environmental sustainability and resource management professional with a PhD in Desert Studies from Ben-Gurion University of the Negev. Over the past decade, he has been at the forefront of water and energy management projects in Jordan, Israel, and Palestine. Currently, he is a Research Affiliate at the University of Oxford, where he focuses on the impacts of climate change on water and energy security in Jordan. Suleiman is the Founder and CEO of Integrated GREEN Solutions, where he leads initiatives in renewable energy and sustainable development across the Middle East. Additionally, he serves as Co-director of the Jordan-Israel Centre for Community Environment and Research (JICCER) at the Arava Institute for Environmental Studies. In this role, he drives sustainable community development and fosters cross-border collaboration between Jordan and Israel. Suleiman has published extensively in his field, contributing to international conferences and leading research on transboundary resource management.

Mr. Zafir Asaf

Mr. Zafir Asaf, leads the food security initiative within Mitvim's Climate Political Sustainability project. Zafir has extensive experience in international development and the impact economy, with a primary focus on business opportunities in emerging markets. Currently Zafir serves as a senior advisor to GSG-Impact on finance for SMEs following 4 years as a partner at Blue-Laurel Advisors, a strategic advisory firm focused on fostering complex business opportunities throughout the Middle East. As Director of Emerging Markets and Development Finance Department at Israel's Ministry of Economy and Industry, Zafir played a crucial role in shaping the Government's development finance strategy, collaborating with numerous global Development Finance Institutions (DFIs) and the private sector to unearth innovative solutions for achieving the Sustainable Development Goals. From 2011 to 2016, Zafir served as the Head of Israel's Economic & Trade Mission in Vietnam.