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Food Security in the Kingdom of Bahrain, 1975–2025: An Island Food System Between Import Dependence, Land Reclamation and Targeted Self-Sufficiency

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Abstract

Bahrain is the smallest Gulf Cooperation Council state, an archipelago of about 780 km² whose agriculture once rested on abundant freshwater springs and extensive date-palm gardens. Over the past fifty years its population grew from roughly a quarter of a million to about 1.6 million. Urban expansion, coastal reclamation and groundwater depletion meanwhile shrank the agricultural area and degraded the shallow aquifer that once fed the springs. Bahrain now imports about 90% of its food. Imports arrive mainly through Khalifa Bin Salman Port and across the King Fahd Causeway to Saudi Arabia, which opened in 1986. Despite this dependence, Bahrain's household food security is high. It ranked 38th of 113 countries in the 2022 Global Food Security Index with a score of 70.3, up from 50th in 2019. This rests on high incomes, subsidies on staples (partly converted into direct cash support from 2015), strategic stockholding and state-supported production of perishable goods. National targets aim to raise vegetable self-sufficiency from about 10% to 20%, fish from about 50% to 62%, and egg output from about 90 million to 120 million per year. Domestic production of dates and fresh poultry is supported through public companies and the Ghitha holding company. This review traces Bahrain's food-security evolution, assesses the land, water and marine constraints, and examines exposure to logistic chokepoints highlighted by the 2026 Hormuz disruption. The main lesson is that, for a small island economy, food security depends less on production volume than on robust logistics, reserves, social protection and protecting the marine and groundwater commons.

Keywords: *Bahrain; food security; small island state; import dependence; date palms; fisheries; poultry; land reclamation; King Fahd Causeway; Strait of Hormuz*

1. Introduction

Historically Bahrain was the greenest part of eastern Arabia. Freshwater springs fed by the Dammam aquifer system rose on land and even from the seabed. They irrigated date gardens

that supported a population of farmers, pearl divers and fishers. Pearling collapsed in the 1930s, and the discovery of oil in 1932 started a transition to a modern economy. That transition accelerated after independence in 1971 and the oil-price rises of the 1970s.

By 1975, Bahrain was already a net food importer. Since then, three structural forces have shaped its food system:

- a growing and largely urban population;
- the loss of agricultural land and spring water;
- deep integration with Saudi Arabia, especially after the King Fahd Causeway opened in 1986.

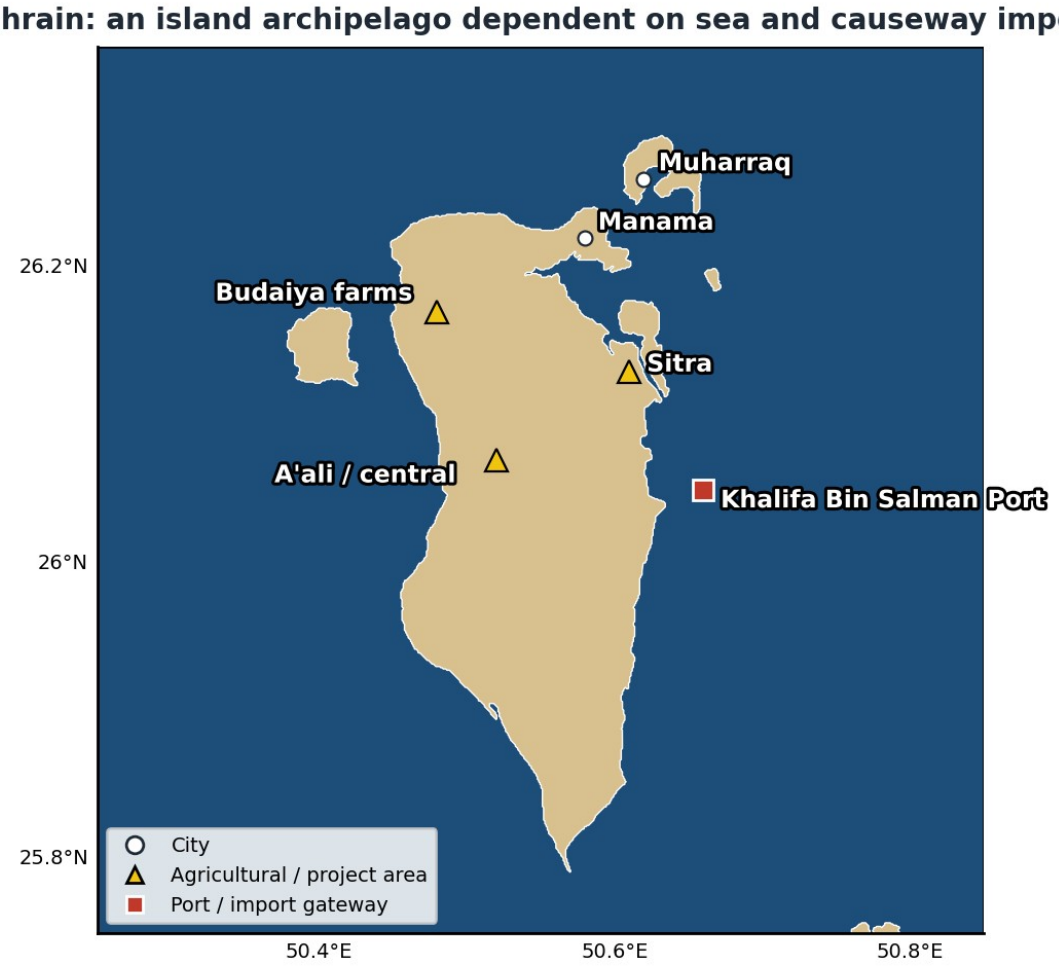


Figure 1. Map of the main island of Bahrain showing Manama, Muharraq, the Sitra industrial zone, the western farming belt around Budaiya and the central villages, and Khalifa Bin Salman Port, the main seaport for food imports. The King Fahd Causeway links the west coast to Saudi Arabia. A cartographic base map is used because the global satellite mosaic is too coarse at this scale.

2. Methods and sources

The review uses:

- government statements and targets reported in national media (Gulf Daily News, Daily Tribune);

- international trade press (FoodNavigator);
- the Global Food Security Index;
- FAO regional analysis;
- broader literature on Gulf food security (Woertz, 2013; Bailey & Willoughby, 2013).

Published self-sufficiency figures for Bahrain are sparse and not always consistent across releases. Where values differ, the review reports the range and its source.

3. Five decades of change in the resource base

3.1 Land

Rapid urbanisation and coastal land reclamation have greatly expanded Bahrain's land area and housing stock. Large reclamation projects for residential and commercial islands transformed the coastline from the 1980s onwards. At the same time:

- date gardens on the northern and western coasts were converted to housing and infrastructure;
- remaining farms are small and often part-time.

Reclamation and dredging also destroyed or degraded seagrass beds, mangroves and fish nursery grounds. Those habitats underpinned the inshore fishery.

3.2 Water

Over-abstraction from the shallow aquifer during the second half of the twentieth century caused the famous natural springs to dry up. It also allowed seawater and brackish water to intrude into the aquifer. Municipal supply now relies overwhelmingly on desalination. Agriculture uses a mix of brackish groundwater and, increasingly, treated sewage effluent.

Water scarcity is therefore the binding constraint on any large expansion of open-field farming.

3.3 Marine resources

Fisheries remain culturally and nutritionally important. However, stocks of several valued species, notably hamour (orange-spotted grouper) and shrimp, have suffered from overfishing and habitat loss. In response the government has introduced:

- seasonal shrimp-trawling bans;
- gear restrictions;
- support for aquaculture, including a national mariculture centre.

4. Availability and access: an import-based model

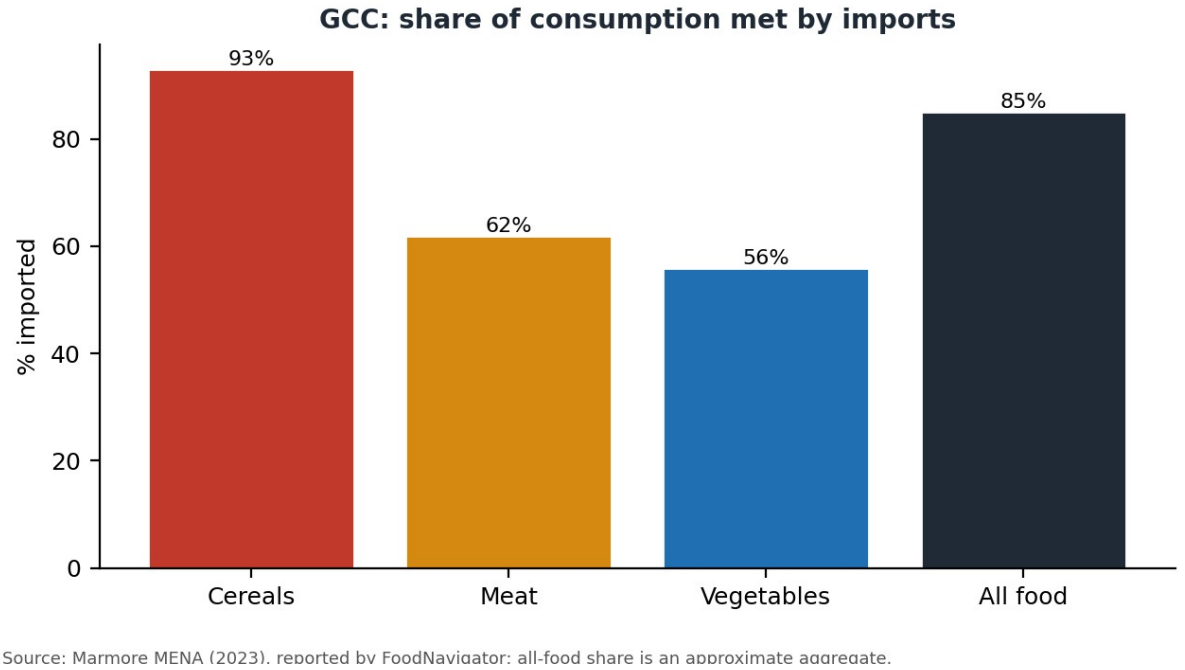
Bahrain imports about 90% of its food, according to the Deputy Prime Minister in 2021. Other estimates reach about 94% (FoodNavigator, 2020). This is broadly in line with the GCC average, where imports meet about 85% of food needs, including about 93% of cereals (Marmore, 2023).

Most imports arrive through two routes:

- **Khalifa Bin Salman Port,** opened in 2009 at Hidd;

- **Road freight across the King Fahd Causeway.**

The causeway turned Bahrain's food system into an extension of the Saudi distribution network. That brought efficiency but also exposure to a single land link.



Source: Marmore MENA (2023), reported by FoodNavigator; all-food share is an approximate aggregate.

Figure 2. Share of GCC consumption met by imports for major food groups. Bahrain's dependence is at or above the regional average for most categories.

Household access is high. For decades the state subsidised meat, poultry and flour through regulated prices. In 2015 subsidies for meat and poultry were replaced by direct cash support to eligible citizen households. This reduced fiscal costs while protecting lower-income Bahrainis (Bailey & Willoughby, 2013, discuss the regional context of such subsidies). Flour and bread remain subsidised through the Bahrain Flour Mills Company.

5. Domestic production and targeted self-sufficiency

5.1 Current production

Domestic output is concentrated in a few product lines:

- **Poultry:** production of around 85,600 tonnes, with the General Poultry Company supplying about 44% of the market.
- **Eggs:** about 92 million eggs per year.
- **Dates:** self-sufficiency of roughly 96%.
- **Fish:** supply is reported at about 90% in some sources (Daily Tribune). Government planning documents, however, use a lower baseline of about 50% for fish self-sufficiency, and the difference reflects definitions such as fresh fish only versus total seafood.
- **Vegetables:** about 10% self-sufficiency.

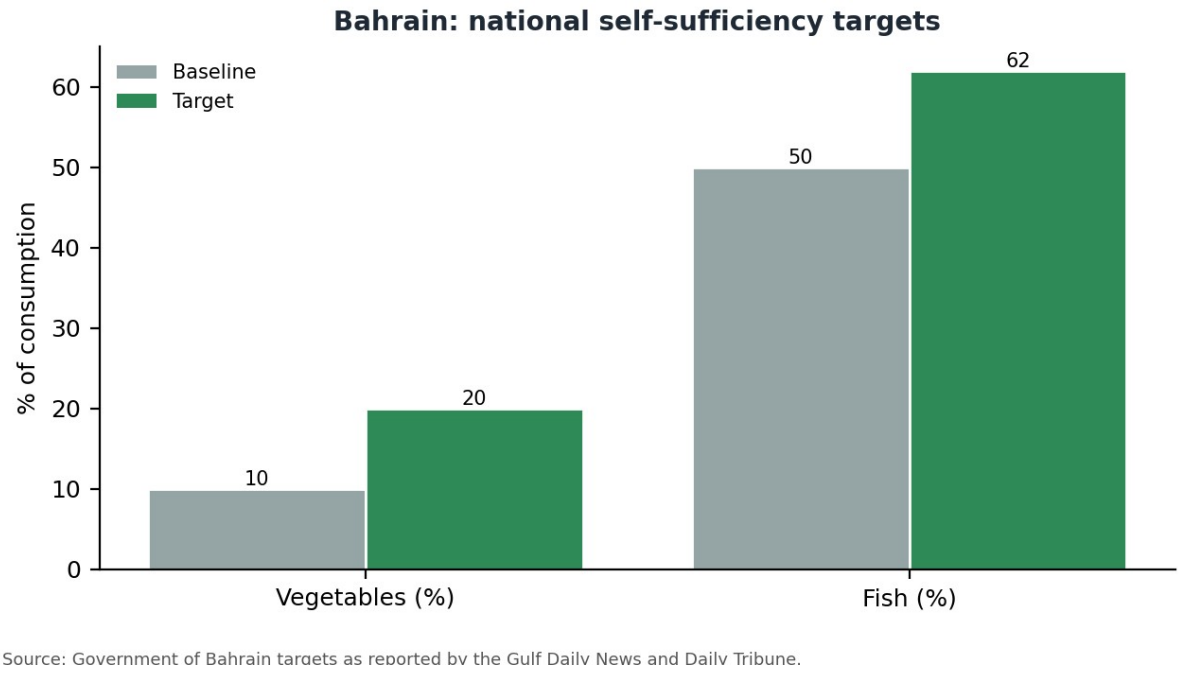
5.2 National targets

The government, through the Ministry of Municipalities Affairs and Agriculture and the Ghitha holding company, has set targets to:

- raise vegetable self-sufficiency from about 10% to 20%;
- raise fish self-sufficiency from about 50% to 62%;
- increase egg production from about 90 million to 120 million per year.

The tools include:

- hydroponic and greenhouse projects;
- fish farming and hatcheries;
- support for private poultry investment;
- agricultural markets, including the weekly farmers' market at Budaiya.



Source: Government of Bahrain targets as reported by the Gulf Daily News and Daily Tribune.

Figure 3. Bahrain's national self-sufficiency baselines and targets for vegetables and fish. Egg output is targeted to rise from about 90 million to 120 million per year.

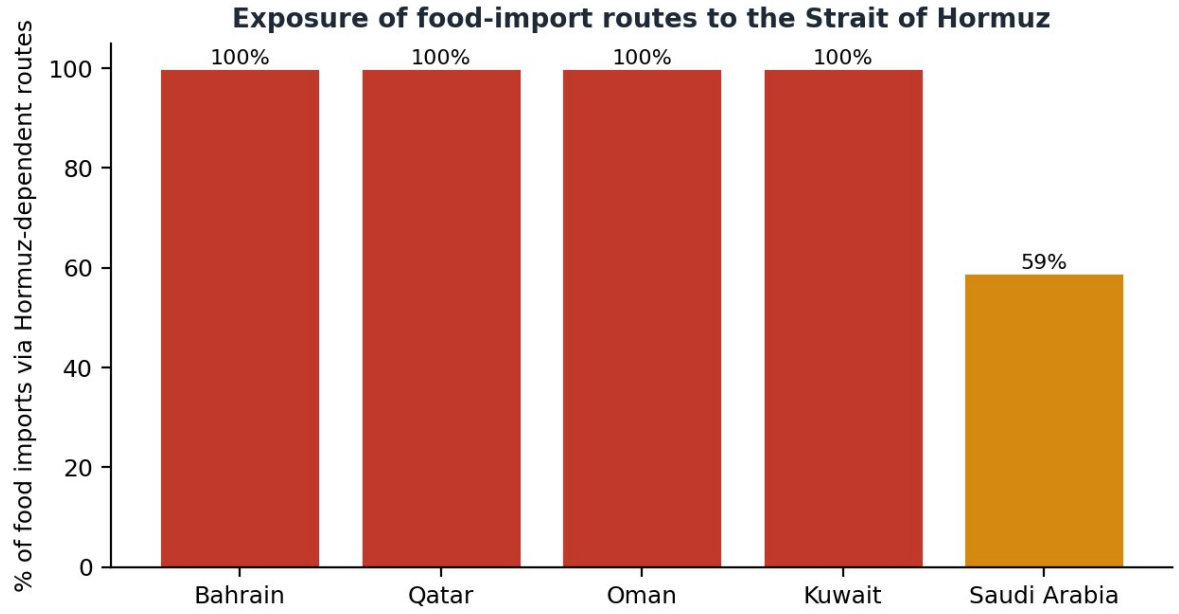
Table 1. Bahrain food-security profile: main indicators reported in the sources reviewed

Indicator	Value	Source
Share of food imported	~90% (official, 2021); ~94% (2020 estimate)	Gulf Daily News; FoodNavigator
Poultry production	~85,617 t; General Poultry Co. ~44% of market	Daily Tribune
Egg production	~92 million per year; target 120 million	Government targets
Dates self-sufficiency	~96%	Daily Tribune
Vegetables self-sufficiency	~10%; target 20%	Government targets
Fish self-sufficiency	~50% baseline (target 62%); ~90% in other reporting	Government targets; Daily Tribune
GFSI rank	50th (2019); 38th, score 70.3 (2022)	Economist Impact

6. Stability: chokepoints and shocks

Bahrain's food supply has two physical arteries: the causeway and the Gulf sea lanes. Both pass through vulnerabilities:

- **COVID-19 (2020):** border closures and congestion at the causeway, together with global shipping disruptions, tested supply chains. Strategic reserves and government coordination with retailers kept shelves stocked.
- **The 2017 Gulf rift:** Bahrain was on the blockading side, but the episode showed how quickly politics can close food routes in the region.
- **The 2026 Hormuz disruption:** FAO estimated that 100% of Bahrain's food imports were exposed to routes through the strait. Only land imports via Saudi Arabia, and from there via Red Sea ports, offered an alternative. This made the causeway a lifeline rather than merely a convenience (FAO Regional Office for the Near East and North Africa, 2026).

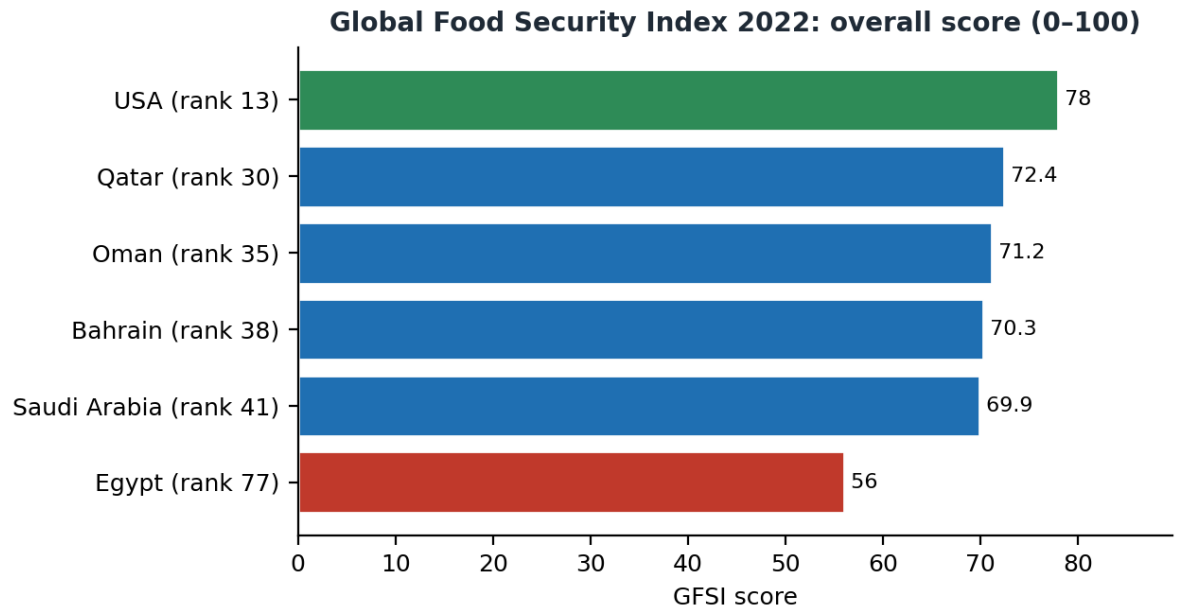


Source: FAO Regional Office for the Near East and North Africa (April 2026), as reported by Goumbook.

Figure 4. Exposure of GCC food imports to routes through the Strait of Hormuz in 2026. Bahrain's sea imports are fully exposed; the King Fahd Causeway provides the main alternative.

7. International comparison

Bahrain's GFSI ranking improved from 50th in 2019 to 38th in 2022, with a score of 70.3. The improvement reflects strong affordability and food-safety scores, as well as better recognition of national food-security planning. Natural-resource and resilience scores remain low, as for all Gulf states.



Source: Economist Impact, Global Food Security Index 2022 (113 countries).

Figure 5. Global Food Security Index 2022 overall scores for the six countries in this series.

8. Conclusions

For Bahrain, food security has never been about matching national consumption with national production. Its foundations are:

- income and social protection that guarantee access;
- logistics that keep the island connected to world markets;
- reserves that buy time in a crisis;
- carefully targeted production of perishables.

Over fifty years, the island's original advantages of springs, palm gardens and rich inshore waters have been largely eroded by urban growth, reclamation and over-abstraction. The most valuable investments for the coming decades are likely to be:

- protecting and restoring marine habitats and fish stocks;
- expanding treated-wastewater and controlled-environment agriculture;
- sizing strategic reserves to multi-month chokepoint scenarios;
- developing redundant land and sea routes, in partnership with Saudi Arabia, via Red Sea ports.

Declarations

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Data availability: No new primary data were generated. All values shown in figures and tables are taken from the cited sources. Satellite base maps use the NASA Blue Marble composite (public domain) rendered with the Basemap library.

Use of generative AI: The author used Claude (Anthropic) to assist with literature searching, drafting and figure preparation. The author reviewed and edited all content, verified the references and takes full responsibility for the published article.

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