

# Israel Turns to the Sea

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*Since the mid-1990s, both the Israeli state and Israeli society have been developing and implementing several separate new policies regarding the country's seas. These include the extraction of offshore hydrocarbons; expansion of the navy; massive desalination projects; and several legislative, planning, and zoning initiatives. Put together, these changes amount to a "turn to the sea" that profoundly affects Israel's economy, foreign policy, and military. This article compares this shift to historical precedents, offering Israel as a template for a new, cumulative model that does not conform to the existing narratives of how politics have turned to the maritime domain.*

Since the mid-1990s, Israel's spatial orientation has shifted toward the maritime domain. In this time, the Israeli state and the country's civil society have been developing and implementing new policies regarding the country's seas. These include producing natural gas from the Mediterranean Sea; significantly expanding the Israeli Navy; erecting several massive sea-water desalination plants; and initiating several legislative, planning, and zoning schemes. Marine-related educational and environmental initiatives have also seen significant development during the same years. This "turn to the sea" affects the foundations of Israel's economy and infrastructure, the development and deployment of its armed forces, and its foreign policy.

The literature offers two main explanations for a maritime turn: a top-down governmental decision and a merchant-class/market evolution. The first, top-down, model is prevalent in centralized states, with a limited role for citizens in the decision-making process. In these cases, the central authority decides that more planning and resources should be directed at the seas. The most common reasons are expected economic gains, national prestige and power projection. The decision by the Yongle Emperor in early 15th century China to build large ships and send them on global voyages was one of the most famous manifestations of this model.<sup>1</sup> The maritime focus was driven by the emperor's desire to expand Chinese influence in the Indian Ocean and to secure legitimacy for his rule. The highly centralized nature of this maritime turn is reflected in the

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1. Robert Finlay, "The Treasure-Ships of Zheng He: Chinese Maritime Imperialism in the Age of Discovery," *Terrae Incognitae* 23, no. 1 (1991): 1–12. doi:10.1179/tin.1991.23.1.1.

fact that once the emperor died, his successors rolled back China's maritime focus.<sup>2</sup> Similarly, the Russian Empire reoriented itself in the early 18th century toward the seas. It built a significant merchant fleet and navy; launched wars to gain access to the Baltic, Caspian, and Black Seas; and built a new capital on the shores of the Baltic — Saint Petersburg.<sup>3</sup> Despite an economic and strategic rationale for this “turn to the sea,” much of this change was the result of a decision made by Tsar Peter the Great, a leader for whom the sea represented his “favorite preoccupation.”<sup>4</sup>

Ken Booth showed that this model can apply to cases where a state's centralized authority believes that maritime development, in particular the creation of a navy, is crucial for the state's rise to the role of a great power. He showed that both Germany in the late 19th century and the Soviet Union in the 20th century followed this approach.<sup>5</sup> Alfred Mahan added ancien régime France to this list.<sup>6</sup>

Recent years have seen a large number of modern top-down blueprints in which national governments set a vision and an action plan aimed at overall maritime development, including social, military, and economic sectors that engage with the seas. The May 2015 Chinese military doctrine, for example, states that “The traditional mentality that land outweighs sea must be abandoned, and great importance has to be attached to managing the seas and oceans and protecting maritime rights and interests.”<sup>7</sup> Similarly, in 2017, Indonesian president Joko Widodo signed Presidential Regulation Number 16 on Maritime Policy,<sup>8</sup> setting a maritime vision for his nation.<sup>9</sup>

The second model is a turn to sea that is driven by a state's society and, in particular, by merchant classes. While the state remains a significant actor, the maritime turn is driven by social actors, rather than initiated by governmental decision. One path in this model suggests that entrepreneurs lead the state to the sea as they develop the maritime sector to support their economic activity. They cause the central authority to deploy more resources toward the sea (e.g., developing ports or strengthening navies) and help finance it. Geoffrey Till depicted a “virtuous maritime circle” in which maritime trade creates private resources that are used to develop a naval force, which in turn safeguards and secures maritime trade.<sup>10</sup>

2. Kuei-Sheng Chang, “The Maritime Scene in China at the Dawn of Great European Discoveries,” *Journal of the American Oriental Society* 94, no. 3 (July–Sep. 1974): 353–54, doi:10.2307/600069.

3. James Cracraft, *The Revolution of Peter the Great* (Cambridge, MA: Harvard University Press, 2006), 29–53, 135–56.

4. Evgenii V. Anisimov, *The Reforms of Peter the Great: Progress through Coercion in Russia*, trans. John T. Alexander (Armonk, NY: M. E. Sharpe, 1993), 67.

5. Ken Booth, *Navies and Foreign Policy* (New York: Helms and Meier, 1979), 113–14.

6. Alfred Thayer Mahan, Alfred Thayer, *The Influence of Sea Power upon History, 1660–1783* (New York: Hill and Wang, 1964), 60.

7. People's Republic of China, State Council Information Office, “China's Military Strategy,” May 2015, available on the website of the US Naval Institute at <https://news.usni.org/2015/05/26/document-chinas-military-strategy>.

8. Republic of Indonesia, Cabinet Secretariat, “President Jokowi Signs Presidential Regulation on Maritime Policy,” March 1, 2017, <http://setkab.go.id/en/president-jokowi-signs-presidential-regulation-on-maritime-policy/>.

9. Evan Lakasmana, “Indonesian Sea Policy: Accelerating Jokowi's Global Maritime Fulcrum?” Center for Strategic and International Studies, Asia Maritime Transparency Initiative, March 23, 2017, <https://amti.csis.org/indonesian-sea-policy-accelerating/>.

10. Geoffrey Till, *Seapower: A Guide for the 21st Century*, third ed. (London: Routledge, 2013), 17.

The British and American cases are perhaps the most obvious cases of this pattern. From as early as the 15th century, merchants aligned with the English monarchy to advance the country's maritime sector. Merchants wanted to secure profit, while the state sought revenues from taxes.<sup>11</sup> Paul Kennedy showed that even popular culture at the time "revealed a strong awareness of the importance of the sea."<sup>12</sup> The same pattern was evident in the early days of the United States, when merchants, through their influence in Congress, affected the maritime and, especially, the naval orientation of a nation. Indeed, the US Navy was initially created by Congress expressly to "protect US shipping."<sup>13</sup>

This model is not limited to the Anglo-American world. Till wrote that the Sultanate of Oman's maritime endeavors were (and still are) the backbone of the nation's economy.<sup>14</sup> Indeed, a book dealing with the issue called Omanis "the people of the dhow" — a sailing vessel common to the Indian Ocean maritime trade for over a millennium.<sup>15</sup>

The following article substantiates the argument that Israel is indeed turning to the sea, placing it in the broader context of past patterns of states that made such a turn. We review recent developments in five major arenas: planning and legislation, the economy, foreign policy, the military, and civil society and academia. In each arena, we show how the sea has emerged as a more significant arena and explore the sources of this change. The article then demonstrates that the Israeli case does not fit into existing models but rather represents a cumulative model of a national turn to the sea.

## PLANNING AND LEGISLATION

The offshore gas discoveries that began in the late 1990s occurred within limited planning, regulation, and legislation frameworks for deep-sea activity. Planning did not go beyond territorial waters, up to 12 nautical miles (22 kilometers) from the coastline, and legislation for the extraction and development of marine resources in the country's exclusive economic zone (EEZ) — an area that extends beyond the maritime border, up to 200 nm (370 km) from the coastline — was inadequate and outdated.<sup>16</sup> The discoveries led to significant development of the legal and planning frameworks pertaining to the sea.

### LEGISLATION

Israel is one of the few coastal states that has not yet signed the 1982 United Nations Convention of the Law of the Sea (UNCLOS). While Israel states that it follows UNCLOS guidelines, not all laws included in the convention were incorporated into

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11. Paul M. Kennedy, *The Rise and Fall of British Naval Mastery* (London: Asfield Press, 1983), 22.

12. Kennedy, *Rise and Fall of British Naval Mastery*, 24.

13. Paul E. Pedisich, *Congress Buys a Navy: Politics, Economics, and Rise of American Naval Power, 1881–1921* (Annapolis, MD: Naval Institute Press, 2016), 9.

14. Till, *Seapower*, 18.

15. Dionisius A. Agius, *Seafaring in the Arabian Gulf and Oman: People of the Dhow* (New York: Routledge, 2005).

16. Michelle E. Portman, "Regulatory Capture by Default: Offshore Exploratory Drilling for Oil and Gas," *Energy Policy* 65 (Feb. 2014): 38, doi:10.1016/j.enpol.2013.10.010.

Israeli maritime laws.<sup>17</sup> Nevertheless, Israel has attempted to uphold international and regional regulation when it comes to maritime issues. It has signed the 1995 Barcelona Convention for the Protection of the Marine Environment and the Coastal Region of the Mediterranean and other marine-related international agreements, such as the International Convention for the Prevention of Pollution from Ships (MARPOL). However, it has not signed all the protocols of these conventions.

After 1999, the Israeli government needed to improve on the existing legislation that affected the development of the offshore natural gas. This became even more necessary a decade later, as gas became a more important part of Israel's economy. The Ministry of Energy used its authority to issue new regulations overriding the existing ones. These worked around the dated 1952 Gas Law, effectively giving de facto power of site approval to the ministry. In April 2012, the ministry issued regulations allowing deviation from the Planning and Building Law of 1965, curtailing the authority of local planning commissions. These changes to the legal framework were intended to expedite approval for offshore natural gas drilling sites but did not make up a comprehensive legal framework for maritime uses, which meant that certain aspects of this activity were overlooked or neglected.<sup>18</sup>

While Israeli laws regarding the marine environment exist, they are often very old, such as the 1953 Submerged Areas Act, the 1952 Oil Law, the 1937 Fishing Directive, and the 1925 Mining Directive (the latter two were both inherited from the former British Mandate of Palestine). Other laws focus on the coastal area and do not regulate areas beyond Israeli territorial waters or are general laws regarding the prevention of pollution and habitat protection.<sup>19</sup>

The past two decades have also seen new marine environmental legislation, the most successful being the 2004 Protection of Coastal Environment Law. However, the legislation and regulations stemming from this effort apply to the state's territorial waters and focus mostly on the coastal area. There were also some efforts to address offshore activities in the Fees on Gas Revenues Law passed in 2011.

The most comprehensive piece of legislation regarding Israel's maritime domain, intended to include all forms of marine activity in all of Israel's maritime areas, is the proposed 2013 Marine Areas Bill.<sup>20</sup> The bill attempts to regulate all sea-related activities and provide comprehensive guidelines as to different uses in different maritime zones, including the contiguous zone and the EEZ. However, the bill has not been up for a vote before the Knesset, Israel's parliament, despite ef-

17. Nadya Zimmerman, "הוק ומשפט" ["Law and jurisprudence"] in דו"ח שלב א' [Israel Marine Plan: Stage A Report], Technion-Israel Institute of Technology, Israel Marine Plan, January 2015, 99–105, <https://msp-israel.net.technion.ac.il/files/2015/02/Israel-Marine-Plan-Stage-A-Report4.pdf>. One instance where Israel has not incorporated UNCLOS into its maritime laws is the border dispute mediation process, which it alleged would allow other states to determine its borders. See State of Israel, Knesset, Economics Committee, מזהיר מאישור הצעת חוק, משה שחל, משה שחל, "שר האנרגיה לשעבר, משה שחל, מזהיר מאישור הצעת חוק, האזורים הימיים" ["Former energy minister Moshe Shahal warns against passing the Marine Areas Bill"], June 12, 2018, [https://m.knesset.gov.il/Activity/committees/Economics/News/Pages/pr\\_1206182.aspx](https://m.knesset.gov.il/Activity/committees/Economics/News/Pages/pr_1206182.aspx).

18. Portman, "Regulatory Capture by Default," 40.

19. Zimmerman, "הוק ומשפט" ["Law and jurisprudence"].

20. Nurit Alfasi, "Can Planning Protect the Public Interest? The Challenge of Coastal Planning in Israel," *Geography Research Forum* 29 (2009): 83–102. <http://raphael.geography.ad.bgu.ac.il/ojs/index.php/GRF/article/view/351>; Portman, "Regulatory Capture by Default," 45.

forts to pass it for almost a decade, due to repeated deliberations by governmental and nongovernmental parties. This is despite two official memorandums on the law published by the Ministry of Justice between 2008 and 2013.<sup>21</sup> The most recent objection, in June 2017, was brought forth by Minister of Environmental Protection Ze'ev Elkin, claiming that the law did not sufficiently ensure the protection of marine habitats, offer enough transparency, or give his ministry enough independence regarding marine environmental protection.<sup>22</sup> In parallel, a second Marine Areas Bill was proposed in 2017 by several members of the Knesset (MKs) from the opposition and backed by several environmental organizations. This second bill emphasizes a more ecosystem-based approach and supports a more cautious and sustainable development of Israel's marine areas.<sup>23</sup>

### PLANNING

Israel's marine space, including its EEZ, is approximately 26,000 square km (10,000 square miles) in size, larger than the country's land area.<sup>24</sup> Despite the fact that 70% of Israel's population lives within 15 km (9.3 mi) of the coastline and that the country has made itself dependent on the sea for energy, trade, and water, Israel did not have an official comprehensive marine spatial plan for many years.<sup>25</sup> Even today, it has also had very little planning guidelines for its deep sea and EEZ.<sup>26</sup> This is perhaps not too surprising, since Israel had little interest in its deep sea before 1999. Nevertheless, the offshore gas discoveries of 2010 made the need for a marine spatial plan more pressing, and the government is currently in the process of developing these frameworks. The operative National Outline Plan 13: Mediterranean (1983) does not include submerged areas, and the more recent Coastal Water Policy Paper (1999) is relevant only to Israel's territorial waters and does

21. State of Israel, Ministry of Justice, "תזכיר חוק: חוק האזורים הימיים, התשע"ג-2013" ["Legal memorandum: Marine Areas Bill, 5773/2013"], [www.justice.gov.il/Publications/Articles/Documents/20131216.doc](http://www.justice.gov.il/Publications/Articles/Documents/20131216.doc).

22. Ilana Couriel, "אלקין נגד שקד: המשרד להגנת הסביבה מתנגד לחוק האזורים הימיים" ["Elkin against (Justice Minister Ayelet) Shaked: The Ministry of Environmental Protection opposes the Marine Areas Act"], *YNet* (Israel), July 23, 2017, [www.ynet.co.il/articles/0,7340,L-4993067,00.html](http://www.ynet.co.il/articles/0,7340,L-4993067,00.html).

23. State of Israel, Knesset, National Legislation Archive, "הצעת חוק האזורים הימיים, התשע"ח-2017" ["Marine Areas Bill, 5778/2017"], <https://main.knesset.gov.il/Activity/Legislation/Laws/Pages/Law-Bill.aspx?t=lawsuggestionssearch&lawitemid=2022714>.

24. Technion-Israel Institute of Technology, "תכנית ימית לשרא"ל" ["Israel Marine Plan"] (Nov. 2015), 6, <https://msp-israel.net.technion.ac.il/files/2015/11/Israel-Marine-Plan-.pdf>.

25. Y. Dreizin, A. Tenne, and D. Hoffman, "Integrating Large Scale Seawater Desalination Plants within Israel's Water Supply System," *Desalination* 220, no. 1 (Mar. 2008): 132–49. doi:10.1016/j.desal.2007.01.028; Israel Ports, "סחר החוץ ונתונים סטטיסטיים" ["Foreign trade and Statistical Data"], [www.israports.org.il/he/PortIsrael/Pages/default.aspx](http://www.israports.org.il/he/PortIsrael/Pages/default.aspx); Akiva Lorenz, "The Threat of Maritime Terrorism to Israel," Interdisciplinary Center Herzliya, International Institute for Counter-Terrorism, September 24, 2007, <https://www.ict.org.il/Article.aspx?ID=983>; Portman, "Regulatory Capture by Default;" M. E. Portman, "Marine Spatial Planning in the Middle East: Crossing the Policy-Planning Divide," *Marine Policy* 61 (2015): 8–15. doi:10.1016/j.marpol.2015.06.025; Brenda Shaffer, "Israel: New Natural Gas Producer in the Mediterranean," *Energy Policy* 39, no. 9 (Sept. 2011), 5,379–87. doi:10.1016/j.enpol.2011.05.026.

26. Alfasi, "Can Planning Protect the Public Interest?" 84.

not include all of the country's EEZ. This means that, although natural gas fields have already been developed in the EEZ, there is currently no national plan for this major Israeli maritime activity.<sup>27</sup> National Outline Plan 13 focused on construction near or on the coastline as well as on the public use of beaches. Updates to this plan have maintained the same focus.

However, in 2012, the Ministry of Interior decided to launch its marine planning process, and two years later, a team appointed by the ministry began a marine planning effort through the Israel Planning Administration (IPA). The IPA participated in the European Union's Integrated Maritime Policy in the Mediterranean project, offering support for integrated marine policy and dialogue between Mediterranean littoral countries. The Interior Ministry stated that the current project was a direct continuation of the planning policy that began with National Outline Plan 13 and continued with the Coastal Waters Policy paper and the 2004 Protection of the Coastal Environment Law. The ministry's plans include an overview of the current status and a comparative study of other marine plans (Phase A); producing policy principles for regulation and management of Israel's part of the Mediterranean (Phase B); and, based on the conclusions of Phase B, an examination of the possibility of regulatory planning in the marine space.<sup>28</sup>

The second planning arena that has a new emphasis on the seas is the development of plans to build artificial islands off Israel's coast. While constructing such islands was suggested as early as the 1960s,<sup>29</sup> it is only in the past few years that they have received any governmental support and initiative. The main reason is that Israel is running out of space on its already densely populated coastline. Geographer Arnon Soffer predicted in 2014 that population density near the coastline would more than double to over 800 people per square km (2,070 per sq mi) by 2034.<sup>30</sup>

In 1999, the government issued a recommendation that artificial islands will be used for infrastructure. In 2000, a Dutch-Israeli steering committee suggested that the construction of such islands is feasible, and Israel's National Council for Planning and Construction approved a policy paper on artificial islands in 2007. The report stated that more data and knowledge would be required regarding any island's economic viability and environmental sustainability. The paper adds that small islands have the highest economic value and demand, are advantageous in terms of environmental protection, and are the most suitable for accommodating infrastructure.<sup>31</sup> In June 2012,

27. Eliraz Sas, Itay Fischhendler, and Michelle E. Portman, "The Demarcation of Arbitrary Boundaries for Coastal Zone Management: The Israeli Case," *Journal of Environmental Management* 91, no. 11 (2010): 2,361, doi:10.1016/j.jenvman.2010.06.027; Portman, "Marine Spatial Planning," 9.

28. Israel Planning Administration, "תהליך תכנון מסמך המדיניות" ["The policy document planning process"], [www.ipan.gov.il/Pages/OpenTerritory/merchav-yami/process/tichnun-mismach.aspx](http://www.ipan.gov.il/Pages/OpenTerritory/merchav-yami/process/tichnun-mismach.aspx).

29. Michael Burt, "האופציה הימית: השדרה הכחולה" ["The marine option: The blue boulevard"], University of Haifa, Chaikin Chair of Geostrategy, February 2014, [https://meyda.education.gov.il/files/Mazkirut\\_Pedagogit%5CGeographya/mamar.pdf](https://meyda.education.gov.il/files/Mazkirut_Pedagogit%5CGeographya/mamar.pdf).

30. "ישראל מתקרבת לגבול כושר הנשיאה שלה: הקמת איים מלאכותיים נחוצה" ["Israel is nearing the limit of its carrying capacity: Building artificial islands is necessary"], *Hayadan* (Israel), March 28, 2014, [www.hayadan.org.il/israel-need-artificial-islands1903146](http://www.hayadan.org.il/israel-need-artificial-islands1903146).

31. Barak Katz, "תכנית ימית לישראל: דו"ח שלב א'" ["Artificial Islands"] in "מסמך מדיניות לאיים מלאכותיים לתשתיות": [Israel Marine Plan: Stage A Report], 93–98; Israel Planning Administration, "תכנית ימית לישראל: דו"ח שלב א'":

the Ministry of Science and Technology established a committee for the study of the feasibility of artificial islands to solve the need for space for the construction of large infrastructural facilities — either for processing natural gas or for water desalination and waste treatment.<sup>32</sup> National Outline Plan 37H, which was approved in 2014 and outlines Israel's natural gas policies, includes guidelines for establishing marine installations (and where) as part of the infrastructure needed for the treatment of offshore energy. The plan also recommends creating clusters of offshore infrastructure due to convenience and to the need to relocate hazardous or land-consuming uses currently placed on land or on the coast.<sup>33</sup>

The first actual plan to be submitted following National Outline Plan 37H was that presented in February 2016 by a US-based company, Noble Energy, which included an offshore rig to treat part of the gas from the Leviathan gas field in the Mediterranean and connect via pipeline to the Israeli mainland, with production beginning by 2019.<sup>34</sup> In October that year, the Tel Aviv–Yafo Municipality submitted a plan that included building a road from land extending into the sea to accommodate a potential artificial island where there would be an alternate airfield to the city's small Sde Dov Airport.<sup>35</sup>

Artificial islands have also been proposed as a solution for land scarcity in the Gaza Strip, as part of a potential Israeli-Palestinian final status agreement ever since the early 2000s.<sup>36</sup> This culminated in a 2016 plan by Israeli transport minister Yisra'el Katz to build a three-square-mile artificial island off the coast of the Gaza Strip, linked to land via bridge, and intended to include a seaport and an airport. Katz maintained that this would essentially lift the blockade on Gaza and improve quality of life for Palestinians, while still allowing Israel to oversee certain security aspects. However, this plan has not been endorsed by the Israeli government as of yet.<sup>37</sup>

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“2007 יולי מסכם, יולי 2007” [“Artificial islands for infrastructure policy paper: Summary report, July 2007”], [www.iplan.gov.il/SiteAssets/Pages/OpenTerritory/SurroundingsCoastal/valchof\\_url/valhof\\_yam/Artificial\\_islands\\_Policy\\_Document\\_July\\_2007.pdf](http://www.iplan.gov.il/SiteAssets/Pages/OpenTerritory/SurroundingsCoastal/valchof_url/valhof_yam/Artificial_islands_Policy_Document_July_2007.pdf).

32. Avi Blizovsky, “משרד המדע וטכנולוגיה יקים צוות לבדיקת הקמת איים מלאכותיים” [“The Ministry of Science and Technology will create a team to examine the construction of artificial islands”], *Hayadan*, July 18, 2012, [www.hayadan.org.il/artifisial-islands-180612](http://www.hayadan.org.il/artifisial-islands-180612).

33. Katz, “איים מלאכותיים” [“Artificial Islands”]; State of Israel, Ministry of Interior, Planning Administration, “תכנית תמא/73-ח” [NOP (National Outline Plan) plan 37H], available on the official list of NOPs at <http://mavat.moin.gov.il/MavatPS/Forms/SV9.aspx?tid=91&esid=10>.

34. Eran Azran, “התכנית: גז מלוייתן ב-2019” [“The plan: Gas from Leviathan by 2019”], *The Marker* (Israel), [www.themarker.com/markets/1.2863171](http://www.themarker.com/markets/1.2863171).

35. Amitai Gazit, “ת”א: העיריה מתקדמת בתוכניות לאי המלאכותי מול חופיה” [“TA (Tel Aviv): The municipality is moving forward with plans for an offshore artificial island”], *Calcalist* (Israel), January 7, 2016, [www.calcalist.co.il/real\\_estate/articles/0,7340,L-3677869,00.html](http://www.calcalist.co.il/real_estate/articles/0,7340,L-3677869,00.html).

36. Shmuel Even, Shlomo Gartner, and Dov Kahat, “רעיון להקמת איים מלאכותיים מול חופי עזה” [“A proposal to erect artificial islands off the Gaza shore”], *Adkan Astrategi* 5, no. 4 (Feb. 2003): 22–25. [www.inss.org.il/he/wp-content/uploads/sites/2/systemfiles/\(FILE\)1194247949.pdf](http://www.inss.org.il/he/wp-content/uploads/sites/2/systemfiles/(FILE)1194247949.pdf).

37. Herb Keinon, “Transportation Minister Plans to Build Artificial Island off Gaza Coast,” *Jerusalem Post*, January 23, 2017, [www.jpost.com/Israel-News/Transportation-minister-plans-to-build-artificial-island-off-Gaza-coast-479312](http://www.jpost.com/Israel-News/Transportation-minister-plans-to-build-artificial-island-off-Gaza-coast-479312).

## ECONOMY AND INFRASTRUCTURE

### ENERGY

In the past two decades, large deposits of natural gas have been found in Israel's exclusive economic zone in the Mediterranean. These have led to a revolution in Israel's energy markets in three ways: Israel became self-sufficient when it came to energy, transformed its energy sources from oil and coal to natural gas, and began allowing non-Israeli corporations to handle crucial aspects of its energy production.

In 1999, two gas fields were discovered in Israel's EEZ and named Noa and Mary B — jointly known as Yam Tethys. The two fields had 30 billion cubic meters of gas (7.9 trillion gallons) and were explored and utilized by a partnership between Noble Energy and an Israeli company, Delek Energy. This was followed by the discovery of two major fields in 2009: Tamar, with 246 billion cubic m (65.0 trillion gal), and Dalit, with 7–14 billion cubic m (1.8–3.7 trillion gal). Both fields were similarly developed by the Noble-Delek partnership with some other smaller local partners. In late 2010, the Noble-Delek partnership discovered the Leviathan field, estimated at over 600 billion cubic m (160 trillion gal) — the world's largest discovery in the first half of the decade.<sup>38</sup> It was followed by a 2012 discovery of two other fields, Karish and Tanin — a combined 80 billion cubic m (21 trillion gal). At the time of this article's publication, Israel is estimated to have discovered gas reserves valued at approximately 1 trillion cubic m (264 trillion gal) in total.<sup>39</sup>

Israel began to use natural gas from deposits in its EEZ for its energy needs in 2004. By 2015, about 50% of Israel's electricity needs were met by its natural gas supplies. This capability is constantly growing, and it is estimated that, by 2020, almost 80% of the potential output of Israeli power stations will be based on offshore natural gas.<sup>40</sup> The costs of energy declined dramatically, and between 2004 and 2015, Israel was able to save 43 billion shekels (some \$11 billion) as a result of the use of natural gas. From complete energy dependency until the 2000s, Israel became all but energy independent. Israel signed an agreement to export gas to Jordan in 2016.<sup>41</sup> Currently, Israel is exploring the possibility of exporting gas to the Palestinian Authority, Egypt, Turkey, and Cyprus via pipeline (the latter two being possible hubs to Europe) as well as possibly exporting liquefied natural gas

38. Oded Eran, Dan Vardi, and Itamar Cohen, "Political Feasibility of Israeli Natural Gas Exports to Turkey," Tel Aviv University, Institute for National Security Studies, Memorandum no. 144 (Nov. 2014). [www.inss.org.il/publication/political-feasibility-of-israeli-natural-gas-exports-to-turkey/](http://www.inss.org.il/publication/political-feasibility-of-israeli-natural-gas-exports-to-turkey/); Itay Fischhendler and Daniel Nathan, "In the Name of Energy Security: The Struggle over the Exportation of Israeli Natural Gas," *Energy Policy* 70 (July 2014): 155, doi:10.1016/j.enpol.2014.03.020; Shaffer, "Israel: New Natural Gas Producer."

39. Technion-Israel Institute of Technology, "תכנית ימית לשרא"ל" ["Israel Marine Plan"], 7.

40. State of Israel, Electricity Authority, "2015 מצב משק החשמל לשנת 2015" ["A report on the situation of the electricity market for 2015"], [https://pua.gov.il/publications/pressreleases/documents/doch\\_reslut\\_2015.pdf](https://pua.gov.il/publications/pressreleases/documents/doch_reslut_2015.pdf).

41. Nikos Tsafos, "Israeli Gas: Too Soon to Declare Victory," German Marshall Fund, Policy Brief P-100 (Jan. 2016), [www.gmfus.org/file/7297/download](http://www.gmfus.org/file/7297/download); "Israel's Leviathan Signs \$10bn Gas Deal with Jordan's Nepco," *Financial Times* (UK), September 26, 2016, <https://on.ft.com/2CLPmbU>.



(LNG) produced from Israeli reserves.<sup>42</sup>

The last decade has also seen an active public debate regarding the taxation of the gains gleaned from these findings. As the gas fields found in Israel's EEZ contained much more gas than initially expected by the government, there was much public outcry regarding the beneficial terms determined before the offshore discoveries and received by private developers who then had rights to Israel's natural gas reserves. This led to Israel changing its taxes on future gas profits — with a gradual raise from 20% to 50% after Noble-Delek has returned 150% of expenditure, and a royalty rate of 12.5%, as recommended by a 2010 committee appointed by the Ministry of Finance. This and other steps were taken by the Israeli government to avoid a Noble-Delek monopoly and ensure Israel receives more compensation for its gas by developers. These steps, as well as delays in approving the government's gas legislation regulating rights and obligations of natural gas exploration companies, led Noble and Delek to delay plans for bringing Leviathan online.<sup>43</sup> However, the government approved a plan by Delek to develop the Leviathan gas field by 2019, and, as of this article's publication, it is more than halfway done.<sup>44</sup>

The current gas legislation proposed by the government still receives much public criticism, with parts of the public opposing what they perceive as leniency toward gas developing companies. Some civil organizations and Knesset members have even turned to the Supreme Court to fight certain aspects of the framework that they see as detrimental to public rights over the country's natural resources.<sup>45</sup>

## PORTS

By 2010, much of Israel's economy had become dependent on its access to the sea. It is estimated that 98% or 99% of Israel's exports and imports (in tonnage) are transported by sea,<sup>46</sup> as Israel does not have substantial trade with its immediate land neighbors. These shipments pass mostly through the Mediterranean commercial ports of Haifa and Ashdod, the two energy ports of Ashkelon and Hadera, and the Red Sea port of Eilat.

42. Gawdat Bahgat, "Israel's Energy Security: Regional Implications," *Middle East Policy* 18, no. 3 (Fall 2011): 25–34. doi:10.1111/j.1475-4967.2011.00495.x; Einar Wigen, "Pipe Dreams or Dream Pipe? Turkey's Hopes of Becoming an Energy Hub," *The Middle East Journal* 66, no. 4 (Autumn 2012): 598–612. doi:10.3751/66.4.12; Fischendler and Nathan, "In the Name of Energy Security"; State of Israel, Ministry of Energy, "Areas of Responsibility: The Natural Gas Sector in Israel," <http://archive.energy.gov.il/English/Subjects/Natural%20Gas/Pages/GxmsMniNGEconomy.aspx>; Steven Scheer, "Insight: How Israel Turned a Gas Bonanza into an Antitrust Headache," Reuters, October 1, 2015, <https://reut.rs/2pWigOg>; Tsafos "Israeli Gas."

43. Michael Ratner, "Israel's Offshore Natural Gas Discoveries Enhance Its Economic and Energy Outlook," Congressional Research Service, Report no. 41618 (January 31, 2011), <https://fas.org/sgp/crs/mideast/R41618.pdf>; Scheer, "Insight: How Israel Turned a Gas Bonanza."

44. Kobi Yeshayahou, "Delek: 60% of Leviathan Development Completed," *Globes* (Israel), August 30, 2018, <https://en.globes.co.il/en/article-delek-60-of-leviathan-development-completed-1001251931>.

45. State of Israel, High Court of Justice 4374/15, Movement for Quality Government in Israel v. Prime Minister of Israel (March 27, 2016), <http://elyon1.court.gov.il/files/15/740/043/t63/15043740.t63.pdf>.

46. Israel Ports, "סחר החוץ ונתונים סטטיסטיים" ["Foreign trade and statistical data"]. These statistics exclude military trade or trade with the Palestinian Authority.

In terms of financial value, 61.2% of goods imported to Israel and 29.5% of its exported goods are transferred by sea (the discrepancy from the figure in tonnage is mostly due to the relatively high value of Israel's diamond trade, which is responsible for 25.9% of the country's export profits and relies mostly on air transport). While air imports (37.7%) and exports (69.5%) are also substantial in terms of financial value, this is not so in regard to trade by land, which comprises less than 1.2% of imports and less than 1% of exports in terms of value.<sup>47</sup>

Indeed, in geostrategic and economic terms, Israel may be conceived as an island, receiving and exporting most of its goods either by air or sea. It is therefore not surprising that the growth in volume of goods imported and exported by sea led, among other things, to the massive seaport development that began in the first decade of the 21st century.

Over the last decade and a half, Israel has undertaken significant reforms in its ports and port-related institutional frameworks, well beyond regular maintenance. These reforms included a new, less centralized structural scheme that allows more privatization. The 2005 Ports and Shipping Authority Law orchestrated the division of the state-run Port Authority into three separate corporations that today run the three major commercial ports (Haifa, Ashdod, and Eilat) and a fourth company, Israel Ports Development and Assets Ltd., that supports port development. The reform prescribed that each of Israel's commercial ports become a competitive business with administrative independence.<sup>48</sup>

Moreover, in 2007, the Israeli government approved a 50-year strategic development master plan. This was necessary because of growing shoreline use, limited coastline space, and considerable container traffic, expected to double every 10 years. The master plan provides a vision for the development of Haifa and Ashdod ports and intends to produce competition and private sector involvement.<sup>49</sup>

Two major short-term projects were completed in the past 10 years by the Israel Ports Development and Assets Company: Haifa's Carmel container terminal in 2009 and the Eitan terminal in Ashdod, which was turned over to the Ashdod Port Company to install a new security entrance and railway terminal.<sup>50</sup> According to the plan, both terminals are intended to accommodate large Suez Canal-capable ships holding up to 9,000 twenty-foot equivalent units (one of which can carry cargo up to 23.8 tons). Road and rail improvements are also planned for cargo delivery needs.<sup>51</sup>

## DESALINATION

The third arena in which the seas have become significant is the production of drinking water through desalination. Along with other countries in the region, the scarcity of drinking water has been a national problem in Israel since the country's inde-

47. State of Israel, Central Bureau of Statistics, "יבוא ויציא סחורות לפי סוג הובלה 2016" ["Imports and Exports of Goods by Mode of Transport"], May 17, 2017, [www.cbs.gov.il/reader/newhodaot/hodaa\\_template.html?hodaa=201716136](http://www.cbs.gov.il/reader/newhodaot/hodaa_template.html?hodaa=201716136).

48. Yehuda Hayot, "ספנות, תחבורה ימית ונמלים" ["Shipping, marine transportation, and ports"] in 'א שלב א' תכנית ימית לישראל: דו"ח שלב א' [Israel Marine Plan: Stage A Report], 84–87.

49. Israel Ports, "About Us," [www.israports.org.il/en/IsraelPortCompany/Pages/default.aspx](http://www.israports.org.il/en/IsraelPortCompany/Pages/default.aspx).

50. See Israel Ports' pages for the Carmel project ([www.israports.org.il/en/PortDevelopment/Pages/Hacarmel.aspx](http://www.israports.org.il/en/PortDevelopment/Pages/Hacarmel.aspx)) and the Eitan terminal ([www.israports.org.il/en/PortDevelopment/Pages/Eitan.aspx](http://www.israports.org.il/en/PortDevelopment/Pages/Eitan.aspx)).

51. Israel Ports, "About Us."

pendence, and it has been a constant source of conflict for Israel and its surrounding neighbors. In the 1970s, Israel erected a desalination plant in the southern city of Eilat, but the facility produced water in relatively small amounts, catering only to Eilat and the vicinity. However, in the 1990s, the increasingly modernized state had growing water demands, and factors such as droughts, increased population size, and difficulties in water production from other sources caused Israel to significantly enhance desalination efforts. Improved scientific and technological knowledge have aided these endeavors to become more economically feasible.<sup>52</sup>

The 2003 National Outline Plan 43/B/2 called for the development of eight desalination plants along Israel's Mediterranean coast to join the existing plant in Eilat. This was followed by Government Decision No. 2789 of 2011, which assisted in moving the project forward.<sup>53</sup> All the plants are privately owned, although Israel's Water Desalination Authority controls and monitors their construction and the operation. The state will gain control of these (barring one) 25 years after they start operations.

While, before 2006, Israel produced approximately 30 million cubic m (7.9 billion gal) of desalinated water annually, out of more than 1.5 billion cubic m (400 billion gal) consumed each year on average,<sup>54</sup> since then five new desalination plants have become operational and supply approximately half of the state's potable water.<sup>55</sup> The national plan is to reach over 600 million cubic m (160 billion gal) by 2020.<sup>56</sup>

## FOREIGN POLICY

Since its founding, Israel has fought six major wars (1948, 1956, 1967, 1973, 1982, and 2006), and its borders have changed several times. However, maritime boundaries were never the main reason for any conflict. That is, until recently. Following the gas discoveries in the Mediterranean Sea, Israel's maritime boundaries have emerged as an independent focus of attention for Israeli decision-makers.

On July 10, 2011, the Israeli government announced the country's exclusive economic zone boundaries in the form of Decision No. 3452, which was submitted to the United Nations. In addition, since 2010, Israel has attempted to form bilateral agree-

52. J. A. Allan, "Hydro-Peace in the Middle East: Why No Water Wars? A Case Study of the Jordan River Basin," *SAIS Review* 22, no. 2 (Summer–Fall 2002): 255–72. doi:10.1353/sais.2002.0027; Arnon Soffer, *נהרות של אש: המאבק על המים במזרח התיכון* [*Rivers of Fire: The Conflict over Water in the Middle East*] (Tel Aviv: 'Am 'Oved, 1992); Varda Spier, "השתתית כוח, התפלה ותקשורת" ["Power infrastructure, desalination, and communications"] in *דו"ח שלב א' [Israel Marine Plan: Stage A Report]*, 90–92; Naama Teschner, Yaakov Garb, and Jouni Paavola, "The Role of Technology in Policy Dynamics: The Case of Desalination in Israel," *Environmental Policy and Governance* 23, no. 2 (Mar./Apr. 2013): 91–103. doi:10.1002/et.1607.

53. Spier, "השתתית כוח, התפלה ותקשורת" ["Power infrastructure, desalination, and communications"].

54. Nir Becker, Doron Lavee, and David Katz, "Desalination and Alternative Water-Shortage Mitigation Options in Israel: A Comparative Cost Analysis," *Journal of Water Resource and Protection* 2, no. 12 (Dec. 2010): 1,042. doi:10.4236/jwarp.2010.212124.

55. State of Israel, Water Authority, "מתקני התפלה בישראל" ["Desalination facilities in Israel"], [www.water.gov.il/Hebrew/Planning-and-Development/Desalination/Pages/desalination-%20structures.aspx](http://www.water.gov.il/Hebrew/Planning-and-Development/Desalination/Pages/desalination-%20structures.aspx).

56. State of Israel, Water Authority, "מתווה התפלת מי ים (מלמק"ש) עד לשנת 2030" ["Framework for desalinating sea water (in million cubic meters) through 2030"], [www.water.gov.il/Hebrew/Planning-and-Development/Desalination/DocLib/sea-water-mitve-2030.jpg](http://www.water.gov.il/Hebrew/Planning-and-Development/Desalination/DocLib/sea-water-mitve-2030.jpg).

ments to resolve some of the aforementioned ambiguity regarding maritime border delimitation. These included agreements with Cyprus and Greece as well as the promotion of Cypriot-Lebanese and Cypriot-Egyptian agreements.<sup>57</sup> However, since the agreement between Israel and Cyprus, which also involved an agreed-upon maritime border, is not recognized by Lebanon, Egypt, or the Palestinian Authority, uncertainty and controversy continue regarding Israel's maritime borders.<sup>58</sup>

## LEBANON

Lebanon, which has been in a formal state of war with Israel since 1948, perceived Israel's announcement of its exclusive economic zone in 2011 as a hostile act. While Israel drew the northern limit of its EEZ with reference to its and Lebanon's maritime border agreements with Cyprus, Lebanon has claimed its EEZ extends further south based on common international maritime delineation practices, saying it was not obliged to recognize Cyprus's agreement with Israel (which it does not recognize).<sup>59</sup> As such, an area of approximately 850 sq km (330 sq mi), assumed to have natural gas deposits, has been the focus of the controversy, with both Israel and Lebanon objecting to the other's efforts to explore the area for fossil fuels. Israel's discovery of gas near the area in 2013 even led to Lebanese claims that Israel had violated its EEZ rights, and Lebanon argued that extraction of gas by Israel in the area would be treated as an act of aggression. So far, Israel has refrained from drilling in this particular contested area, but Lebanon published a tender in 2017 for drilling companies to explore an area defined by Israel's Marine Areas Act as part of Israel's EEZ.<sup>60</sup>

The Mediterranean was the location of another event that caused relations between Israel and Lebanon to further deteriorate in 2006. During the war between Israel and the Lebanese Shi'i organization Hizbullah, the Israeli Air Force launched two air-strikes on July 13 and 15 that severely damaged storage tanks located 30 km (19 mi) south of Beirut. This caused the burning of 55,000 tons of oil and an oil spill of 15,000 tons into the Mediterranean Sea, contaminating 150 km (93 mi) — approximately 65% — of Lebanon's coastline and reaching the Syrian coast. Israel did not allow any

57. Zimmerman, "חוק ומשפט" ["Law and jurisprudence"].

58. Haifa Research Center for Marine Strategy, "הערכת המצב אסטרטגית ימית לישראל: דוח שנתי 2015" ["Israel Marine Plan strategic status report: Annual report, 2015"], 39–41, <https://hms.haifa.ac.il/images/publications/2015.pdf>; Bahgat, "Israel's Energy Security."

59. Yolande Knell, "Israel-Lebanon Sea Border Dispute Looms over Gas Fields," *BBC*, July 11, 2011, <https://bbc.in/2yA9dY7>.

60. Barak Ravid, "U.S. Backs Lebanon on Maritime Border Dispute with Israel," *Haaretz*, July 10, 2011, [www.haaretz.com/1.372377](http://www.haaretz.com/1.372377); Zimmerman, "חוק ומשפט" ["Law and jurisprudence"]; Karen Ayat, "Lebanon Pushes for Resumption of US Efforts to Solve Lebanon-Israel Maritime Border Dispute," *Natural Gas World*, July 9, 2015, [www.naturalgasworld.com/lebanon-pushes-resumption-us-efforts-lebanon-israel-maritime-border-dispute-24550](http://www.naturalgasworld.com/lebanon-pushes-resumption-us-efforts-lebanon-israel-maritime-border-dispute-24550); Amir Ben-David, "מזיזים את הגבול" ["Moving the border"], *Yediot Aharonot* (Israel), March 20, 2017, [www.yediot.co.il/articles/0,7340,L-4937757,00.html](http://www.yediot.co.il/articles/0,7340,L-4937757,00.html); Bethan McKernan, "Israeli Bill Redefining Maritime Border with Lebanon Labelled a 'Declaration of war,'" *The Independent* (UK), March 24, 2017, available on the Internet Archive Wayback Machine at <https://web.archive.org/web/20180804101329/https://www.independent.co.uk/news/world/middle-east/israel-lebanon-maritime-border-bill-redefine-move-declaration-war-parliament-annex-860-square-km-a7648476.html> (August 4, 2018).

Lebanese maritime activity until September of that year, thus preventing measures to mitigate the damage. Although the United Nations concluded that Israel should take responsibility and compensate Lebanon for the damage sustained due to the airstrikes, Israel has not yet done either.<sup>61</sup>

### EGYPT

Unlike Lebanon, Israel actually has a peace agreement with Egypt. While the 1979 treaty clearly delineated land borders, there remains a small disagreement regarding several square kilometers at sea dubbed “the marine triangle,” which both Egypt and Israel view as its territory.<sup>62</sup> While this dispute lay dormant for many years, off-shore gas discoveries have led to tensions between the two countries, especially after Israel’s 2010 agreement with Cyprus. Nevertheless, now that Egypt has discovered a gas field named Zohr, which is even larger than Leviathan and nowhere near the maritime border with Israel, this tension has somewhat subsided.<sup>63</sup>

### THE GAZA STRIP

The 1994 Gaza-Jericho Agreement between Israel and the Palestine Liberation Organization ceded control of most of the Gaza Strip and the West Bank city of Jericho to the newly created Palestinian Authority. The agreement included a special maritime zone for Gaza. However, the exact size and rights of this zone have changed several times since the agreement was signed. Originally, economic rights over the so-called Gaza Marine Activity Zone, an area extending up to 20 nautical miles (37 km) from the coastline, were to be given to the Palestinians, while Israel would maintain control over security. However, this arrangement was not upheld. Since the outbreak of the Second Intifada (uprising) in 2000 and especially after Hamas began to assert power over Gaza in 2006 (it would take full control of the strip the following year), Israel has curtailed fishing rights. Moreover, Israel has refused to let British Gas develop a gas field in the area, which is estimated at approximately 30 billion cubic m (8 trillion gal).<sup>64</sup> During the Second Intifada, fishing and sailing rights were revoked and then only allowed out to 12 nm (22 km) off the coast due to security considerations. Israel limited this further — to 10 nm (19 km) in August 2006, then 6 nm (11 km) that December, and down to

61. United Nations Development Programme–Lebanon, “Report on the Measurement and Quantification of the Environmental Damage of the Oil Spill on Lebanon,” July 2014, 3–4, [www.lb.undp.org/content/dam/lebanon/docs/Energy%20and%20Environment/Projects/222.pdf](http://www.lb.undp.org/content/dam/lebanon/docs/Energy%20and%20Environment/Projects/222.pdf).

62. Shaya Egozi, “הוחלט: המשולש הימי בגבול מצרים — שטח ישראלי” [“Decided: The ‘marine triangle on the Egyptian border — Israeli territory”], *Ynet*, March 7, 2003, [www.ynet.co.il/articles/1,7340,L-2476034,00.html](http://www.ynet.co.il/articles/1,7340,L-2476034,00.html).

63. Walaa Hussein, “New Gas Fields Add More Heat to Already Simmering Mediterranean,” *Al-Monitor* (Lebanon), October 6, 2015, [www.al-monitor.com/pulse/originals/2015/10/mediterranean-gas-discoveries-egypt-turkey-israel.html](http://www.al-monitor.com/pulse/originals/2015/10/mediterranean-gas-discoveries-egypt-turkey-israel.html); “מצרים מפתחת את מאגר הגז ‘זוהר’ ב-21 מיליארד דולר” [“Egypt develops the Zohr gas field for 12 billion dollars”], *Globes*, December 27, 2015. [www.globes.co.il/news/article.aspx?did=1001091200](http://www.globes.co.il/news/article.aspx?did=1001091200).

64. Israel, Ministry of Energy, “Areas of Responsibility: The Natural Gas Sector in Israel;” James Stocker, “No EEZ Solution: The Politics of Oil and Gas in the Eastern Mediterranean,” *The Middle East Journal* 66, no. 4 (Autumn 2012): 587–88, doi:10.3751/66.4.11.

3 nm (6 km) in 2009.<sup>65</sup> In 2015, the Palestinian Authority signed UNCLOS and began negotiations with Egypt regarding their future shared maritime border, indicating a Palestinian interest in claiming an EEZ and the rights attached to it according to international law.<sup>66</sup>

### CYPRUS

Over the past few years, Israel and the Republic of Cyprus have agreed to seek collaboration regarding the exploration for gas in areas near their joint border, as well as regarding the export of Israeli gas and Israel's connection to the Greek electricity network through submarine cables stretching between Israel and Cyprus.<sup>67</sup> Israel, Cyprus, and Greece have also begun to pursue military and security cooperation, including what are now routine joint naval and air exercises. Security and diplomatic ties strengthened particularly after Israeli-Turkish relations deteriorated following the Gaza flotilla incident of 2010, in which Israeli military forces forcefully took over the *Mavi Marmara*, a Turkish vessel carrying supplies to Gaza (which Israel alleged included weapons), killing nine Turks and one Turkish-American.<sup>68</sup> Israel's budding ties with Cyprus and Greece, however, have caused further friction between the three countries and Turkey. Not being party to the negotiations between the Republic of Cyprus and Israel, the Turkish Republic of North Cyprus has also claimed that the border agreements with Israel have no legal standing.<sup>69</sup>

### JORDAN

Jordan's shortage of energy for electricity and drinking water as well as regional instability decreasing the reliability of importing them from other neighboring states have made the Hashemite kingdom more open to collaborating with Israel on these two critical issues. A 2016 agreement between the two countries stipulated that Israel would supply a substantial part of the natural gas required for Jordan's electricity needs. The necessary pipes had already been laid on both sides of the border in 2016, and gas transfer from Israel to Jordan had begun, as of 2017. Planned quantities are between 3

65. Sharat G. Lin, "Gaza's Shrinking Borders: 16 Years of the Oslo Process" *Countercurrents* (India), December 26, 2009, [www.countercurrents.org/lin271209A.htm](http://www.countercurrents.org/lin271209A.htm); Stocker, "No EEZ Solution."

66. "Palestinians Begin Sea Border Talks with Egypt," *Al Arabiya English* (UAE), June 17, 2016, <https://english.alarabiya.net/en/News/2016/06/17/Palestinians-begin-sea-border-talks-with-Egypt-.html>; Haifa Research Center for Marine Strategy, "2015 דוח שנתי ימית לישראל: דוח שנתי 2015" ["Israel Marine Plan strategic status report: Annual report, 2015"].

67. "Cyprus Seeks to Import Israeli Gas by 2015", *Globes*, September 4, 2012, [www.globes.co.il/en/article-1000782346](http://www.globes.co.il/en/article-1000782346); Yoel Guzansky, "Israel's Periphery Doctrine 2.0: The Mediterranean Plus," *Mediterranean Politics* 19, no. 1 (2014): 99–116. doi:10.1080/13629395.2013.870365; Zenonas Tziarras, "Israel-Cyprus-Greece: A 'Comfortable' Quasi-Alliance," *Mediterranean Politics* 21, no. 3 (2016): 407–27. doi:10.1080/13629395.2015.1131450.

68. Guzansky, "Israel's Periphery Doctrine 2.0," 104–5.

69. Christopher Coats, "Eastern Mediterranean Gas Race Finds a Referee in Cyprus," *Forbes*, December 4, 2012, [www.forbes.com/sites/christophercoats/2012/12/04/eastern-mediterranean-gas-race-finds-a-referee-in-cyprus/](http://www.forbes.com/sites/christophercoats/2012/12/04/eastern-mediterranean-gas-race-finds-a-referee-in-cyprus/); "Cypriot Speaker Urges Reinforcement of Bilateral Ties with Lebanon," *Naharnet* (Lebanon), December 5, 2012, [www.naharnet.com/stories/en/63393](http://www.naharnet.com/stories/en/63393).

and 3.5 billion cubic m (790–920 billion gal) per year. Due to negative public opinion regarding deals with Israel, Jordan has refrained from a government-to-government agreement and has opted to make the agreement, at least officially, between a Jordanian company, NBL Jordan Marketing, and Israel's Leviathan partnership.<sup>70</sup>

Nevertheless, this is a significant change in the trade relations between the two countries, which, despite signing a peace agreement in 1994, still have a tense relationship as a result of the ongoing Israeli-Palestinian conflict. The only other area where we see such a high level of collaboration is in regard to drinking water. Substantial efforts to collaborate on the issue of water desalination and water transfer are also relevant to Israel's turn to the sea and its potential to influence the Israeli-Jordanian relationship. Israel has been exporting fresh water to Jordan in the past 20 years as part of the peace accord between the countries and signed an agreement in 2016 to double that amount, due to Jordan's growing water needs that stem from hosting growing numbers of refugees from Syria<sup>71</sup> — an amount Israel can afford to allocate to Jordan from the Sea of Galilee due to the water sources it now has from new desalination plants. Preparations are also underway for Jordan to begin producing and transporting desalinated water from a plant in the port city of 'Aqaba to the desert. This project was in part the result of an Israeli-Jordanian initiative, the Red Sea–Dead Sea Canal, which was meant to take water from the Red Sea and transfer it to Jordanian and Israeli desert communities and dispose of the brine in the Dead Sea. However, apart from agreements between the countries to sell desalinated water from the plant, Israel has largely pulled out of the project. Now considered a wholly Jordanian venture, the development of the facility — originally planned to begin in 2018 and to be completed by 2020, eventually providing 100 million cubic m (260 billion gal) of desalinated water to Jordan, the West Bank, and Israel — is now on hold.<sup>72</sup>

To summarize, Israel's turn to the sea influenced the country's foreign relations and has repercussions for regional dynamics. It has exacerbated Israel's conflict with some of its neighbors but also created opportunities for cooperation. Israel's energy and water independence, as well as its new status as an energy (and, to a lesser extent, water) exporter, has gained it regional leverage, which has primarily improved its relations with Cyprus, Greece, and Jordan. The proposition of an artificial island off the coast of Gaza, including an airport and seaport, is potentially another maritime option for enlarging the pie in what was previously considered a zero-sum game.

70. Avi Bar-Eli, "ישראל הבטיחה לירדן 'פסקת יציבות' — כדי לייצא גז ממאגר לווייתן" ["Israel promised Jordan a 'stability clause' — in order to export gas from the Leviathan reservoir"], *The Marker*, February 12, 2017, [www.themarker.com/dynamo/1.3848384](http://www.themarker.com/dynamo/1.3848384); Hezi Sternlicht, "ישראל החלה לייצא גז" ["Israel began exporting natural gas to Jordan"], *Israel Hayom*, March 2, 2017, [www.israelhayom.co.il/article/456687](http://www.israelhayom.co.il/article/456687).

71. Daniel Dotan, "Israel to Double Water Supply to Jordan," *Globes*, April 21, 2016, [www.globes.co.il/en/article-israel-to-expand-water-supply-to-jordan-1001119521](http://www.globes.co.il/en/article-israel-to-expand-water-supply-to-jordan-1001119521).

72. Moti Basuk, "כ-400 מיליון דולר נאספו לפרויקט תעלת הימים בין ים סוף לים המלח," ["Approximately \$400 million collected for Red Sea–Dead Sea canal project"], *The Marker*, December 1, 2016, [www.themarker.com/markets/1.3140035](http://www.themarker.com/markets/1.3140035); Hani Namrouqa, "Jordan to Go Ahead with Red–Dead Water Project Despite Israel Withdrawal," *Jerusalem Post*, February 12, 2018, [www.jpost.com/Arab-Israeli-Conflict/Jordan-to-go-ahead-with-Red-Sea-Dead-Sea-project-542417](http://www.jpost.com/Arab-Israeli-Conflict/Jordan-to-go-ahead-with-Red-Sea-Dead-Sea-project-542417); "הירדנים הוששים: ישראל מנסה להתחמק מפרויקט תעלת הימים המשותף" ["The Jordanians fret: Israel tries to withdraw from the joint inter-sea canal project"], *News 10 (Israel)*, July 26, 2018, [www.10.tv/news/168859](http://www.10.tv/news/168859).

## THE NAVY

Historically, the navy was the least significant branch in Israel's armed forces. A chief of staff of the Israel Defense Forces (IDF) told the navy's leaders in the late 1950s that their branch was simply "not the first priority."<sup>73</sup> Likewise, a former chief of naval operations admitted that "Although the State of Israel has always been threatened from the sea, preparing for the threat was not an important priority for the state's leaders, as reflected by the resources that were allocated to the navy."<sup>74</sup> Although the navy underwent a slow process of modernization beginning in the 1960s,<sup>75</sup> it remained a secondary element in the IDF until the 1990s.

In the 1990s, Israel's navy increasingly became a more significant player in the national security apparatus in terms of its missions, areas of operations, and the platforms it used. Until then, the navy operated a limited number of platforms, which, for the first two decades of Israel's independence, had consisted mostly of vessels that were retired from the British and were forced on the navy by the government.<sup>76</sup> The navy's traditional tasks were focused, for the most part, on defending Israel's coastline. Although the navy later secured the responsibility of defending incoming trade during wars, this was not perceived as a significant task by the military's leaders, as Israel's security strategy called for brief wars that would be determined by decisive victories long before a slowing of trade would have any impact.<sup>77</sup>

However, Israel's security posture has been transforming and with it, the navy and its role. At the time, instead of the traditional threat of states and their navies, Israel was concerned mostly by the potential threat of military nuclear programs in Iraq (until 2003) and Iran. Peace agreements with Egypt (1979) and Jordan (1994) contributed to the decline of traditional state-based threats, although Syria remained a significant threat. For most of the 1990s, however, Syria was not of great concern to Israeli military leaders. This, to a large extent, was due to the collapse of the Syrians' great power backer, the Soviet Union, as well as the fact that Syria was intermittently negotiating a possible peace agreement with Israel for much of the decade.

Five threats dating from the 1980s created space for the navy's emergence. The first was related to several purchases of large naval vessels by the Egyptian navy in the 1980s and a perception that a future naval battle between Israel and its adversaries might take place in the deep sea rather than close to the coast. In response, the Israeli navy purchased three US-manufactured, 1,300-ton Sa'ar 5-class corvettes —

73. Quoted in Tsadok Eshel, שמואל טנקוס: מהירקון עד חיל הים [Shmu'el Tankus: From the Yarkon (River) to the Israeli Navy] (Tel Aviv: Ministry of Defense Press, 2003), 91.

74. Zeev Almog, "Israeli Naval Power: An Essential Factor in the Operational Battlefield," *Military and Strategic Affairs* 3, no. 1 (May 2011): 29, [www.inss.org.il/he/wp-content/uploads/sites/2/systemfiles/\(FILE\)1308129507.pdf](http://www.inss.org.il/he/wp-content/uploads/sites/2/systemfiles/(FILE)1308129507.pdf).

75. Dov S. Zakheim, "The United States Navy and Israeli Navy: Background, Current Issues, Scenarios, and Prospects," Center for Naval Analyses, COP D0026727.A1/Final (Feb. 2012): 53, [www.cna.org/cna\\_files/pdf/D0026727.A1.pdf](http://www.cna.org/cna_files/pdf/D0026727.A1.pdf).

76. Shlomo Erell, לפניך הים: סיפורו של ימאי, מפקד ולוחם, מפקד, ומלחם [Facing the sea: The story of a sailor, commander, and fighter] (Tel Aviv: Ministry of Defense Press, 1998), 186–87.

77. Dalit Caspi-Shachner, "האיום: מצור ימי" ["The threat: A maritime blockade"], *Maarachot* 410 (Apr. 2010): 15, <http://maarachot.idf.il/PDF/FILES/6/112436.pdf>.



much bigger than the 250-ton 1-, 2-, and 3-classes and the 450-ton 4- and 4.5-classes. The Sa'ar 5 ships were a significant addition: they were versatile and offered improved long-distance reach and command-and-control capabilities.<sup>78</sup>

Second, Israeli security officials were deeply concerned by the potential military aspects of the Iranian nuclear program and, until 2003, by the Iraqi program.<sup>79</sup> The response to the threats was for Israel to purchase six new submarines from Germany. Though Israel never admitted it publicly, many reports indicated that the submarines were intended to carry nuclear warheads and provide Israel with a “second strike” capability, should any of its foes acquire a military nuclear capability.<sup>80</sup> The submarines further allow Israel to operate near the Iranian coast.<sup>81</sup>

The third challenge that propelled the navy was the discovery of large gas deposits in Israel's exclusive economic zone. In November 2013, the Israeli government decided that the navy would deploy to defend the gas platforms and infrastructure from any potential threat. This became increasingly necessary as gas was now a major source of energy for Israel. The navy devised a plan to defend Israeli gas facilities and acquired four 2,000-ton German-made corvettes for this task. The navy was also set to operate a number of other systems able to assist this endeavor, including unmanned aviation vehicles and advanced sensors.<sup>82</sup>

The fourth challenge that elevated the navy to a more significant role was Israel's effort to prevent the supply of arms to its non-state foes: Hamas, Islamic Jihad, Hizbullah, and, for a brief period, the Palestinian Authority. As the supply routes to these organizations often go by sea, Israeli naval vessels can effectively weaken their foes through raids, as they have been doing since 2002, seizing large amounts of materiel.<sup>83</sup>

Finally, the Israeli Navy has been engaged since 2006 in an ongoing blockade of the Hamas-controlled Gaza Strip. The blockade is intended to limit the import of materiel that could be directed against Israel as well as goods that could be used to strengthen Hamas's military infrastructure. The strategic significance of the blockade became clear in the case of the Israeli naval effort to block a Turkish ship, the *Mavi Marmara*, from entering Gaza. As mentioned above, the incident escalated, resulting in 10 dead and leading to a major crisis in Israeli-Turkish relations.<sup>84</sup>

78. Almog, “Israeli Naval Power,” 31–32.

79. Ehud Eiran and Martin B. Malin, “The Sum of All Fears: Israel's Perception of a Nuclear-Armed Iran,” *Washington Quarterly* 36, no. 3 (2013): 77–89. doi:10.1080/0163660X.2013.825551; Reuven Pedatzur, “שימוש מזיק באיום הגרעיני” [“A harmful use of the nuclear threat”], *Haaretz*, August 25, 2002, www.haaretz.co.il/1.819661.

80. Yossi Melman, “דיווח: ישראל משפרת יכולות הנשק הגרעיני שלה” [“Report: Israel is improving its nuclear weapons capabilities”], *Haaretz*, October 31, 2011, www.haaretz.co.il/1.1535685.

81. Uzi Mahnaimi, “Israel Stations Nuclear Missile Submarines off Iran,” *The Times* (UK), May 30, 2010, www.thetimes.co.uk/article/israel-stations-nuclear-missile-submarines-off-iran-5z7ncrs7wpj.

82. Amos Harel, “עסקת ספינות הקרב הגרמניות: לא בטוח שהגנדיבות תימשך לנצח” [“The German battleship deal: It is not certain that the generosity will continue forever”], *Haaretz*, May 12, 2015, www.haaretz.co.il/news/1.2634439.

83. Or Heller, “מהמודיעין ועד השתלטות בלב ים: כך התנהל מבצע ‘השיפה מלאה’” [“From the Intelligence (Corps) to gaining control in the heart of the sea: Thus Operation Full Exposure was conducted”], *Ma'ariv* (Israel), March 8, 2014, www.maariv.co.il/ArticleArchive/ListArticleArchive.aspx?date=8/3/2014#.

84. Carol Migdalovitz, “Israel's Blockade on Gaza, the *Mavi Marmara* Incident, and its Aftermath,” Congressional Research Service, Report no. 41275 (June 23, 2010). <https://fas.org/sgp/crs/mideast/R41275.pdf>.

The rising significance of the navy is also evident in the broader reach of its leaders in the Israeli national security establishment. Traditionally, navy leaders remained within their branch. However, beginning in the 1990s, they were able to break their proverbial glass ceiling and affect other, non-naval security sectors. These included heading other institutions such as the Atomic Energy Commission and the Israel Security Agency (widely known as the Shin Bet),<sup>85</sup> as well as senior positions in the National Security Council,<sup>86</sup> and regional commands.<sup>87</sup> Until recently, former naval officers also served as executives of the Administration for the Development of Weapons and Technological Infrastructure (Mafat) and Rafael Advance Defense Systems, two key government-owned military industries. In 2010, a senior navy officer who had branched out to the ground forces a few years earlier was nominated to serve as IDF chief of staff, though the appointment did not materialize in the end.<sup>88</sup>

## CIVIL SOCIETY AND ACADEMIA

### ENVIRONMENTAL PROTECTION

While Israel has had highly visible and effective environmental groups almost since its founding, there has been significant growth, both in the scope of activity and in the number of these organizations since the 1990s.<sup>89</sup> Since 1999, Israeli civil society actors turned their attention to the protection of the marine environment. One of the main reasons for the attention given to this particular domain was the debate over cage fishing, considered damaging to the precious coral reefs in the Gulf of Eilat (or the Gulf of 'Aqaba, as it is known internationally). This was also the official reason for the establishment that year of Zalul, the first sea- and water-focused environmental organization in Israel. Zalul's marine campaigns also included attempts to stop land-based pollution of the Mediterranean and Red Seas and calling for regulation of offshore gas and oil development.<sup>90</sup> In the past few decades, Israel's Mediterranean Sea has also seen a massive invasion of species from the Red Sea that threaten various organisms and have influenced Israel's marine ecosystems. These factors, alongside Israel's continued overfishing

85. State of Israel, Israel Security Agency, "Ami Ayalon," [www.shabak.gov.il/english/heritage/heads/Pages/ayalon.aspx](http://www.shabak.gov.il/english/heritage/heads/Pages/ayalon.aspx).

86. State of Israel, Prime Minister's Office, אשר, אבריאל בר יוסף, אר ("במיל") ("Prime Minister Netanyahu bids farewell to Brigadier General (reserves) Avri'el Bar Yosef, who once served as deputy to the head of the National Security Council"), July 5, 2015, [www.gov.il/he/Departments/news/spikeavriel050715](http://www.gov.il/he/Departments/news/spikeavriel050715).

87. Yoav Zitun, "מינויים בצה"ל: המג"ד שישוב לפקד על גולני," *Ynet*, August 7, 2017, [www.ynet.co.il/articles/0,7340,L-4999856,00.html](http://www.ynet.co.il/articles/0,7340,L-4999856,00.html).

88. Hanan Greenberg, "1st Chief of Staff from Naval Commando," *Ynet*, August 22, 2010, [www.ynetnews.com/articles/0,7340,L-3941582,00.html](http://www.ynetnews.com/articles/0,7340,L-3941582,00.html); "Netanyahu, Barak Announce Galant No Longer New IDF Chief," *Haaretz*, February 1, 2011, [www.haaretz.com/1.5116305](http://www.haaretz.com/1.5116305).

89. Alon Tal et al., "Israel's Environmental Movement: Strategic Challenges," *Environmental Politics* 22, no. 5 (2013): 779–91. doi:10.1080/09644016.2013.825139.

90. Zalul, "מי אנהונו?" [*"Who are we?"*], [www.zalul.org.il/?page\\_id=12](http://www.zalul.org.il/?page_id=12).

and marine waste problems, have caused the public and environmental groups to call for more effective legislation.<sup>91</sup>

In recent years, several environmental organizations have led campaigns regarding issues, such as marine litter, harmful fishing practices, and pollution. In 2016, one organization, Adam Teva V'Din (literally “man, nature, and law”), proposed a marine management bill, suggesting an ecosystem-based management approach for Israel’s Mediterranean Sea.<sup>92</sup> Meanwhile, Zalul began leading a campaign for the establishment of a ministry dealing with sea-related issues to oversee planning, legislation, and enforcement in the marine environment.<sup>93</sup>

By 2014, Israel had approved seven marine reserves that comprise less than 1% of its territorial waters (despite the 10% required in the Barcelona Convention signed by Israel). Since 2015, two large marine reserves, Carmel and Rosh Hanikra, have been in the process of receiving governmental approval, and four other large reserves are also part of the same plan suggested by the Parks and Nature Authority.<sup>94</sup>

## ACADEMIA

In the last few years, Israeli academia has buttressed marine-related higher-education infrastructure partially due to the needs arising from offshore industry. In 2011, the state launched an emergency academic plan that will assist the growing offshore gas and oil industry.<sup>95</sup> A cross-university effort developed in the past decade to promote marine research.<sup>96</sup>

The Mediterranean Sea Research Center of Israel (MERCİ) was established in 2012,<sup>97</sup> joining two existing national centers for marine research established under the patronage of the Hebrew University of Jerusalem.<sup>98</sup> Since opening, MERCİ

91. Elik Adler and Orit Barnea, “סיכום אינטגרטיבי: מצב הסביבה הימית של ישראל,” [“Integrated summary: The status of Israel’s marine environment”], Israel Marine Plan (2015), <https://msp-israel.net.technion.ac.il/files/2015/12/סיכום-אינטגרטיבי-של-ישראל-סיכום-הסביבה-הימית-של-ישראל-סיכום-אינטגרטיבי-2015.pdf>; Portman, “Regulatory Capture by Default.”

92. Adam Teva V'Din, “What We’re Doing Now: The Mediterranean,” [www.adamteva.org.il/?CategoryID=1113&ArticleID=1781](http://www.adamteva.org.il/?CategoryID=1113&ArticleID=1781).

93. Rotem Starkman, “העיר היחידה שמזרימה לנהל חיתולים, טמפונים, מוצרים היגייניים — ועוד הרבה לכולך” [“The only city that dumps diapers, tampons, hygienic products — and much more waste”], *The Marker*, October 9, 2015, [www.themarker.com/1.2747553](http://www.themarker.com/1.2747553).

94. Adler and Barnea, “Status of Israel’s Marine Environment.”

95. Amos Nur et al., “Report on an Academic Infrastructure for the Mediterranean EEZ and Oil and Gas Related Research and Education in Israel,” Israel Academy of Sciences and Humanities Special Committee, April 6, 2011, [www.academy.ac.il/Index3/Entry.aspx?nodeId=842&entryId=18797](http://www.academy.ac.il/Index3/Entry.aspx?nodeId=842&entryId=18797).

96. Council for Higher Education (Israel). Planning and Budgeting Committee (PBC), “התקציב” [“Regular PBC budget for the 5774 (2013/14) academic year”], <https://che.org.il/wp-content/uploads/2016/12/2013-תשעד-תשעז-התקציב-תשעז-2013.pdf>.

97. University of Haifa, Mediterranean Sea Research Center of Israel (MERCİ), “דיווח פעילות לשנת תשע”ד” [“Activities report for 5774 (2013/14)”], [http://merci.haifa.ac.il/images/report\\_2014.pdf](http://merci.haifa.ac.il/images/report_2014.pdf).

98. The other two national centers are the Interuniversity Institute for Marine Sciences in Eilat (IUI), which was established in 1968 and turned into a national facility for all public universities, and the Marine College of Israel, which was established in 1997 and eventually incorporated into the Ruppın Academic Center as its School of Marine Sciences. For more, see: IUI, “A Brief History,” [www.iui-eilat.ac.il/Info/History.aspx](http://www.iui-eilat.ac.il/Info/History.aspx); Ruppın Academic Center, “About Ruppın,” [www.ruppın.ac.il/en/About-Ruppın/Pages/default.aspx](http://www.ruppın.ac.il/en/About-Ruppın/Pages/default.aspx).

has hired staff and researchers who specialize in marine-related fields, developed new academic programs, built a research infrastructure (including vessels), and worked with the government.<sup>99</sup>

Meanwhile, the University of Haifa's Leon H. Charney School for Marine Science (MARSCI), which was founded in 2007, has established several academic maritime centers and programs. These include academic programs for marine biology, maritime law, maritime civilizations, and marine geosciences. Additionally, in 2014, the University of Haifa established the Haifa Research Center for Maritime Strategy (HMS).<sup>100</sup>

The Technion–Israel Institute of Technology has been leading a parallel marine planning initiative to that of the Israel Planning Administration since 2013. The team presented its “Marine Plan for Israel” in hopes that it would lead to the viable and sustainable development and management of marine natural resources. Alongside academic data on Israel's Mediterranean Sea, the Marine Plan includes a spatial plan and recommendations for marine policy.<sup>101</sup>

It is still uncertain if and how the Marine Plan and its suggestions will be adopted by the government. However, the fact that it has already presented a final product that includes science-based policy and spatial recommendations, while the IPA has only presented an initial-phase report, could be to its advantage. Additionally, the IPA and Interior Ministry representatives attended Marine Plan workshops, presenting their work side by side with the Marine Plan team in academic conferences and IPA stakeholder events. It follows that both the Marine Plan team and IPA planners have had ample opportunity to learn about the other's process, materials, and suggestions,<sup>102</sup> giving the Marine Plan at least some influence over marine governmental policy and planning.

### *ISRAEL'S TURN TO THE SEA: A CUMULATIVE MODEL*

This article has noted that, historically, states' “turning to the sea” have been driven traditionally by either a top-down decision or by the merchant class. At first glance, Israel's turn to the sea could fall into the first category, the top-down model. The State of Israel has a long tradition of top-down decision making, especially in the areas of security and energy. Senior government officials, with little public participation, traditionally decided issues of war and peace, military build-up, and energy acquisition. Indeed, in Israel's formative period, much of the planning and development of most maritime elements — such as ports, the navy, and maritime education — were all a result of top-down decisions. For example, the main driver for the creation of Israel's largest shipping company, Zim, was the Jewish Agency for Palestine, the de facto government for Jews in the British Mandate.<sup>103</sup>

99. University of Haifa, MERCI, “דיווח פעילות” [“Activities report”].

100. University of Haifa, MARSCI, “Research Centers and Partners,” <https://marsci.haifa.ac.il/index.php/en/research/centers>.

101. Adler and Barnea, “סיכום אינטגרטיבי,” [“Integrated summary”]; Israel Planning Administration, “תהליך תכנון מסמך המדיניות” [“The policy document planning process”].

102. Technion–Israel Institute of Technology, “The Israel Marine Plan” (2015), [https://msp-israel.net.technion.ac.il/files/2015/12/MSP\\_plan.compressed.pdf](https://msp-israel.net.technion.ac.il/files/2015/12/MSP_plan.compressed.pdf); Israel Planning Administration, “תהליך תכנון מסמך המדיניות” [“The policy document planning process”].

103. Zim, “Once Upon a Time: The Story of ZIM,” [www.zim.com/about-zim/history](http://www.zim.com/about-zim/history).

The ongoing turn to the sea that began in the 1990s has not been, however, a result of a government blueprint. To date, the Israeli government has never issued a single, clear, unified vision about the nation's turn to the sea. The government has merely reacted to the discovery of offshore gas reservoirs, and its difficulties with taxing gas companies demonstrate that there was no clear vision of how to respond. Similarly, the evolution of the navy was part of a broader Israeli response to the threat of a potential nuclear threat from Iran, and desalination evolved in response to concerns about water supply. At least in these two cases, the bottom-up model does not fully explain Israel's situation either. Although gas depots are privately owned,<sup>104</sup> Israel does not have an effective merchant class that pushed it to the sea in all frontiers, and the limited number of corporations that operate there do not have enough political power to drastically affect policy.

The Israeli model should be understood as cumulative and responsive: a set of external developments led Israel to engage with the seas. One major driver, gas discoveries in the deep sea, accounts for part of the turn to the sea: the changing energy market, the navy's expansion, the new regulatory efforts, the academic interest in the sea, and some planning initiatives. The second big driver is the perceived threat of a nuclear Iran. This accounts for the expansion of the navy and rise of navy officers in the national security establishment. Secondary drivers include growing awareness among nongovernmental organizations to the pollution in the sea, and a global framework in which the sea is further regulated, mostly through the United Nations Convention on the Law of the Sea. This growing awareness of the sea also highlighted areas in which Israel was already dependent on the sea in some way, such as its maritime trade and water desalination. There are synergies between these different drivers: the gas discoveries forced a discussion on the legal framework of the marine environment, and this was provided by new global norms. Developments in marine technology enabled and supported Israel's turn to the sea. New methods of marine mapping and monitoring as well as deepwater drilling led the way to the gas discoveries. New and cheaper desalination technology allowed for their massive developments, and Israeli access to naval technology provided the rationale for the expansion of its submarine fleet.

The cumulative nature of Israel's turn to the sea and the centrality of technology in it suggest that this trend will continue, at least for the foreseeable future. The different sources of the change, the significance of the sea as an energy source, and the continued developments in marine technology all suggest that even if one driver of the turn will weaken, other sources will propel it forward. Moreover, the trend is now broad enough to support a feedback effect that will further secure the longevity of the move toward the sea.



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104. Shaffer, "Israel: New Natural Gas Producer," 5,381.