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The Gaza Marine Gas Field: A Vehicle for Palestinian Autonomy and Israeli-Palestinian Cooperation

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Abstract

This article explores the reasons that the Gaza Marine gas field, off the coast of the Gaza Strip, has remained undeveloped for over twenty years and how it presents an opportunity for cooperation between Israel and Palestine. Analysis demonstrates the potential that the development of the gas field would have for both enabling Palestinian economic and energy independence, as well as fostering diplomatic ties between Israel and Palestine. It draws upon models of Israeli economic interdependence and conflict, analyses of regional dynamics, and decades of observation charting the progression of gas field development plans. The causes of stagnation around the project, including Palestinian factionalism, Israeli security fears, and the necessity for external investment, are identified and proposed solutions to overcome these obstacles are offered. The paper concludes that Gaza Marine ultimately holds the key to a more economically prosperous and interdependent region. This paper concludes that an agreement regarding the Gaza Marine has critical implications for future agreements between Israel and Palestine.

keywords: Israel; Palestine; Gaza Marine Gas Field; infrastructure; Middle East Peace Process; energy

Palestine lies on several fault lines of geopolitical conflict. In the past decade alone, its relationship with Israel has entailed chronic tension and bursts of violence. Within its borders, the Fatah-led West Bank, under the control of the Palestinian National Authority's (PNA) President Mahmoud Abbas, has struggled with dissenters from Hamas-ruled Gaza, revealing the challenges of Palestinian factionalism. Within this context, the Gaza Marine gas field, a natural gas field in the eastern Mediterranean Sea off the Gaza coast, offers an opportunity for historic cooperation between Israel and Palestine through the bolstering of economic stability and peacebuilding. It also presents a case study that illustrates the harm that these tensions are exerting on Palestine's capacity for economic development and energy security. Despite holding a large supply of natural gas that would guarantee Palestine—and neighboring Israel—a source of energy for many years, the Gaza Marine gas field has remained undeveloped twenty years after its discovery. Halted development is largely due to political obstacles, mostly from Israel, even though its exploitation has the potential to benefit Israeli markets as well.

Palestine stands to be the major beneficiary of the development of the Gaza Marine. As Israel continues to increase its natural gas exports in a quest to extend its regional influence, the Gaza Marine gas field represents an opportunity for Palestine to translate hydrocarbon exports into its own source geopolitical influence. Development of Gaza Marine would also ensure Palestine's own energy independence. However, the hostility between Israel and Palestine has prevented the development of Gaza Marine and any potential economic and diplomatic benefits that would result from its exploitation. The failure to move forward with the Gaza Marine project perpetuates the financial turmoil of Palestine and maintains Palestinian dependence on Israel.

The following sections begin by providing a brief overview of the history of the conflict between Israel and Palestine as well as the tensions between Gaza and the West Bank. A background regarding the Gaza Marine gas field and previous development proposals will also be included. This paper continues by examining the significance of the Gaza Marine as a vehicle for Palestinian autonomy in the form of economic and energy independence from Israel. Here, an analysis of the empirical and theoretical backing for the relationship between increased economic interdependence and reduced conflict will be used to support an argument for potential Israeli-Palestinian cooperation and diplomatic progress stemming from joint development of the gas field. The last main section will explain opposition to the field's development and survey the remaining barriers to exploitation of the Gaza Marine. This study will draw upon contemporary analyses of the Israeli-Palestinian conflict and the tensions between Gaza and the West Bank. It will also rely on reports analyzing the region's economy and energy dynamics, examining Israel's natural gas exports and the degree to which Palestine is reliant on Israeli resources and support. Statements that apply to both regions of the Palestinian Territories (Gaza and the West Bank) will refer to "Palestine"; where the distinction is relevant, statements will cite Gaza and the West Bank separately.

Setting the Stage: Palestine's History and the Gaza Marine

For the purposes of this paper, background regarding the relationship between Israel and Palestine will begin with 1947, when

UN Resolution 181, the Partition Plan, divided the British Mandate of Palestine into two states—one Arab (Palestine) and one Jewish (Israel). The proclamation of the State of Israel in May 1948 sparked the first Arab-Israeli War.[1] When Israel won the war in 1949, the territory was divided into three parts: Israel, the West Bank (controlled by Jordan), and the Gaza Strip. This resolution resulted in the displacement of 750,000 Palestinians, over half of the entire population.[2] After a thirty-year territorial dispute between regional powers, Israel and Egypt signed the 1979 Camp David Accords. Israel asserted control over the Gaza Strip, the West Bank, Golan Heights, and East Jerusalem. While the Camp David Accords improved relations between Israel and its neighbors, the issue of Palestinian self-governance and self- determination remained. In 1987, the first Palestinian uprising, or intifada, occurred. By 1995, the Oslo Accords had put an official end to the conflict, mandated Israeli withdrawal from the West Bank, and set up a system of Palestinian self-governance.

Despite international support for the Oslo Accords, Israel maintained military occupation of more than 82 percent of Palestinian territories. Between 1993 and the beginning of the second intifada in 2000, Israel had constructed 90,000 new housing units in occupied territories, doubled the number of Israeli settlers living in the West Bank and Gaza Strip, and demolished hundreds of Palestinian homes.[3] Ramped up Israeli settlement building and the failure to withdraw the military sparked the second intifada, lasting from 2000 to 2005. During this period, Israel constructed a barrier wall around the West Bank despite opposition from the International Court of Justice. From 2014 to 2018, thousands died and thousands more were injured in a series of clashes between the two sides.[4] Today, mediators struggle to ease tensions as both sides continue to escalate the conflict through use of rocket launches and air strikes. Alongside these tensions, resource scarcity has resulted in a history of disputes over resource rights and control. For example, water for both Israel and Palestine is largely controlled by an Israeli national company called Mekorot, and Palestine receives water per cross-border water sharing agreements skewed in Israel's favor. This has allowed for Israeli planning and development that has prevented Palestinians from developing their own independent infrastructure.[5]

Meanwhile, Palestine has its own ongoing internal struggle between two political factions: Hamas and Fatah. Since 2007, Hamas has ruled the Gaza Strip while the Fatah party, led by President Mahmoud Abbas and the PNA, controlled the West Bank. Each group maintains opposing beliefs: Hamas is Islamist while Fatah is secular, Hamas prefers armed resistance against Israel while Fatah engages in negotiations, and Hamas doesn't recognize Israel while Fatah does. While both groups want to create a Palestinian state, differing response strategies and a lack of coordination have fractured attempts at a unity government.[6]

Against this backdrop, BG Group, a British oil and gas company, uncovered the Gaza Marine natural gas field. Discovered in 2000, it lies in waters that are legally controlled by Palestine (according to the Oslo Accords) and is located roughly twenty two miles off the coast of the Gaza Strip at a depth of two thousand feet.[7] The field is estimated to hold over a trillion cubic feet of natural gas, enough to last Palestine fifteen years.[8] Despite BG's original interest in developing the Gaza Marine, it later withdrew from the project due to a breakdown in negotiations.[9] The root of the

breakdown stemmed from Palestinian fears that Israel would cut Gaza off from gas supplies and Israeli concern about revenues from the project flowing to Hamas, designated by many, including the United States, as a terrorist organization.[10] Given this ongoing tension and lack of cooperation, the gas field has remained undeveloped in the past twenty years.

Power to Palestine: Money, Energy, and Politics

The key advantages of developing the Gaza Marine are threefold—economic growth, energy security, and political progress. The Palestinian territories are almost entirely dependent on the Israel Electric Corporation for a supply of electricity; 88 percent of Palestinian power consumption is supplied by Israel.[11] If Palestine had free access to drill in its fields, it would reduce reliance on foreign aid and Israeli energy, allowing it to build self-sufficiency in both Gaza and the West Bank and begin to free itself from Israeli control.

Evidence shows that economically interdependent countries in the Middle East tend to cooperate more and engage in less armed conflict. Three least squares regression models, using conflict as the dependent variable and analyzing Israel's relationship with its neighbors, find this to be true specifically for Israel. The model demonstrates a lower probability of conflict between Israel and countries it has greater economic ties with.[12] Other comparative analyses also indicate that economic factors and interdependence can spur political settlements. For example, the Japanese financing of South Korean industrialization in the 1950s and 60s helped diffuse the hostilities between the two nations via increased investment and trade. When applied to Israel and Palestine, increased Israeli financing of Palestinian infrastructure and the advent of Palestinian exports to developing countries could create tens or even hundreds of thousands of new jobs, leading to a more economically prosperous and interdependent region.[13] The Gaza Marine presents an opportunity for bilateral cooperation and Palestinian development, with potential to pave the way for lasting peace.

Economic Benefits

The massive natural gas reserves held in the field provide an avenue for Palestinian economic growth and independence. While capital investment in the project would cost somewhere between a quarter of a billion to just over one billion dollars, it would generate almost three billion in fiscal revenues over two and a half decades of production.[14] Some sources even indicate that the exploitation of the Gaza Marine would produce revenues of up to seven billion dollars (largely dependent on regional gas prices at the time of development).[15] Utilizing the revenue from natural gas production can better Palestine's public finances, raising their GDP per capita (currently one twentieth that of the United States), helping to eliminate the threat of supply disruptions, and accelerating agricultural development.[16]

Additionally, frequent power outages and energy shortages hinder economic progress and adversely affect the daily lives of Palestinians. With new fuel sources, previously unmet energy demand could be fulfilled, and the Gaza Power Plant could be converted from diesel fuel to natural gas, increasing the efficiency of power generation.[17] This conversion would also save an additional billion dollars in the cost of producing electricity during the lifetime of the project.[18] The resulting

prosperity could better relations between Israel and Palestine as well by fostering collaboration and interdependence on an infrastructure project, something that has historically lessened conflict between Israel and its neighbors, such as the gas export project from Israel to Jordan.[19].[20]

Furthermore, reducing Palestine's debt owed to the Israel Electric Corporation can help avoid the current overcharging of Palestinian customers, as Palestinians are forced to pay for not only their energy consumption, but also Palestine's national debt. Revenues from an independent Palestinian electrical system combined with new infrastructure could not only alleviate these debts, but also aid the construction of the Hebron and Jenin power plants in the West Bank. Together, these plants would improve energy efficiency and cut down on wasted power.[21]

Political Gains

Advancing exploitation of the Gaza Marine holds great diplomatic potential. Striking a balance between the PNA and Hamas would benefit both parties economically and energy-wise and serves Israel's interest in preventing the strengthening of Islamist Hamas at the expense of secular Fatah.[22] This is especially true because Hamas thrives on discontent—its strident Islamist message resonates with the grievances of many impoverished Palestinians, who would be uplifted by economic growth. Developing the field would thus help overcome internal Palestinian factionalism stemming from the two parties by uniting them in an achievable common goal of economic betterment, while tempering the efficacy of more radical messages on an impoverished audience.

The development of an independent Palestinian energy source would heavily aid Palestine, and it would also be beneficial to Israel. The financial stability of the PNA is in Israel's interest as well because faster repayment of its debts by Palestine would let the Israel Electric Corporation produce more electricity to sell to Israelis (and Palestinians). Production from the Gaza Marine would also ease the diplomatic tensions between Israel and its neighbors by demonstrating goodwill towards Palestine, assuaging Arab nations' fears of Palestinian repression, and reducing their reluctance in dealing with Israel. This would occur without significantly altering the supply of gas to Israel since there is a sufficient quantity of gas in the Leviathan and Tamar gas fields that remain under Israel's control. Increased cooperation between the PNA, Hamas, and Israel also minimizes security risks since Palestinian militants are less likely to act against their own interests and attack the infrastructure built to extract Palestinian natural gas for their own consumption. As a result, Israel's fear of resources and funds being captured by Hamas' militant groups would be mitigated, lessening Israel's perceived need to defend itself against attack.[23] Building and maintaining these energy connections would thus reinforce any efforts or breakthroughs regarding Israeli-Palestinian relations, and potentially for larger regional relations between Israel and Jordan or Egypt, moving along a broader Middle East peace process.[24]

Energy and Resources

Energy cooperation between Israel and Palestine is a necessary step towards regional energy security. An agreement to develop the Gaza Marine would also include Israel, and linked energy infrastructure can help overcome regional energy shortages, especially given that Israeli energy stability would allow for steady exports to Jordan

and Egypt.25 Jordan has already signed a letter of intent to import gas from the Gaza Marine field.26 Using natural resources wisely could generate a basis for stability and cooperation, aiding long-term sustainability and renewable energy objectives, and ensuring future energy needs are met.[27]

Furthermore, a total 80 percent of regional water resources are allocated to a prosperous Israel. The Western Aquifer Basin is the main source of water shared between Israel and the West Bank; however, 94 percent of this water is utilized by Israel, depriving Palestinian territories. The barrier wall and settlement construction have also separated many Palestinian villages from the wells they once relied on.[28] An influx of natural gas from the Gaza Marine would provide power for energy intensive wastewater desalination plants, purifying water of dissolved salts and minerals. Powering wastewater treatment plants in Israel has helped address the nation's water shortage.[29] With sufficient electricity, Palestine could also better combat an acute water shortage and significantly increase the quality of life for Palestinians while also accelerating agricultural development, bolstering the economy writ large.

Independently, alleviating water shortages would ease the effect of drought on violence affecting the West Bank and surrounding Israeli territory. The worsening water conditions could otherwise translate to violent retribution by insurgent groups and locals. Models have shown that areas experiencing drought were 31% more likely to see violence given a drop of 1 in the Standardized Precipitation Index (significant at the 0.05 level).[30] Intergovernmental Panel on Climate Change (IPCC)31 studies projecting a 30 percent or more decrease in annual rainfall by the end of the century due to anthropogenic global warming, water allocation will become increasingly relevant in the context of the Israeli-Palestinian conflict and in preventing future resource wars. Cost-efficient, sustainable electricity would thus improve living conditions and placate unrest, ultimately working to solve energy security challenges.[32]

Natural gas is also cleaner than other nonrenewable energy sources like oil or coal. *Table 1* indicates the relative environmental safety of natural gas. Smog and air quality are ongoing problems that can cause health problems ranging from temporary irritation to long-term lung damage. Natural gas, however, emits low levels of nitrogen oxide and virtually no sulfur dioxide or particulate matter, like ash, heavily cutting back on contributions to smog. This shift in the energy sector from diesel fuel, primarily oil, could further improve public health and living conditions across the region.[33]

Pollutant	Natural Gas	Oil	Coal
Carbon Dioxide	117,000	164,000	208,000
Carbon Monoxide	40	33	208
Nitrogen Oxides	92	448	457
Sulfur Dioxide	1	1,122	2,591
Particulates	7	84	2,744
Mercury	0.000	0.007	0.016

Table 1: Fossil Fuel Emission Levels - Pounds per Billion Btu of Energy Input

Competing Claims and Opposition

Despite all the benefits developing the Gaza Marine could bring, it has remained undeveloped for twenty years now, largely due to competing claims over the gas field and Israeli opposition. Per the United Nations Convention on the Law of the Sea,

every state has the right to explore natural resources in its own economic zone (including waters it has legal jurisdiction over).34 However, neither the PNA nor the Hamas authorities have complete control over the area of the Mediterranean Sea above the Gaza Marine gas field. While the Oslo Accords indicate that the waters are legally controlled by Palestine, the Israeli navy has expanded its control over offshore areas, effectively cutting Palestine off from the area.[35] An official at the Palestinian Ministry of Foreign Affairs also recently pointed out that Israel has been using many gas fields in Palestinian waters while barring Palestinians from extracting gas from the Gaza Marine.[36] If an agreement is reached, it must include a maritime border between the two entities that allows for Palestinian access to the gas field.

Additionally, the Gaza Marine is off the coast of the Gaza Strip, controlled by Hamas. This presents two issues—the PNA doesn't recognize Hamas' authority, and many international entities, like the United States and European Union, regard Hamas as a terrorist organization. This legally constrains most international entities from negotiating or cooperating with Hamas. Given that Hamas also encourages armed resistance against Israel, Israel refuses to negotiate with Hamas' leaders. While there is a possibility of a balance being struck, there is also potential for the exploration of a ceasefire agreement wherein Hamas gives up its claim on the natural gas field to the PNA, which could allow negotiations to proceed.[37] Barring Hamas' unlikely forfeiture of its claim to the Gaza Marine, it still has an incentive to reduce violence and provide political stability to attract potential investors that could provide capital for development. The resulting economic gain for Hamas and say in Palestinian governance, through input on energy supplies and resource allocation, remains an attractive option. Israel has also prioritized its own interests over the development of the gas field. The nation has entered large and profitable agreements with Egypt and Jordan to supply them with about 130 billion cubic meters of gas (from the Leviathan and Tamar gas fields) for the next ten to fifteen years. Israel sees potential revenues for Hamas as a security threat because that income could be used to fund Hamas' militia and attacks on Israeli Defense Forces. As a result, Israel's desire as an occupying power to prevent Palestinian economic independence and sovereignty while boosting its own strength and regional influence has led to the prevention of PNA exploitation of the gas field. However, the flow of natural gas from Israel to neighboring countries has been frustrating for Palestinians, who have been denied the right to drill and extract gas from the Gaza Marine for over twenty years. In retaliation to Israeli opposition, the Chairman of the PNA's Investment Fund has declared that there is no plan to develop the gas field in cooperation with Israel, pointing out that Israel stands in the way of development by controlling Palestinian territorial waters. Traversing these tensions will require a good faith effort from both sides to work towards developing the Gaza Marine.

Even if these political barriers are lowered, there remains a gap in physical infrastructure that will require external investment from a buyer. New offshore infrastructure, such as pipelines and well heads, must be constructed in addition to onshore pipelines and processing facilities. While these pipelines are a relatively small part of total capital costs, Palestine must attract a buyer to secure the funding necessary to begin construction. Without first resolving political barriers, though, most prospective buyers will follow the decision of BG to withdraw from the project.

Conclusion

The development of the Gaza Marine gas field is a necessary first step towards Palestinian

autonomy and Israeli-Palestinian cooperation. The natural gas field is an avenue for economic progress and energy security on both sides of the conflict, while easing political tensions between Palestine and Israel. Its exploration could provide the necessary baseline for regional progress and security. It is necessary that Israel, Hamas, and the Palestinian National Authority work to overcome barriers and accelerate diplomatic moves to reach a negotiated arrangement. Benefits may even flow to other parties in the Middle East and North Africa, such as Jordan and Egypt. The resulting energy cooperation, infrastructure building, resource expansion, fiscal stability, and de-escalation in militant aggression are vital to improving security and prosperity in the Palestinian territories and laying the groundwork for future agreements between Israel and Palestine.

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