

# Diplomacy in the 21st Century Middle East



American Security Project

Perspective

—  
Patrick Hines, DMA.

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Lieutenant General Kennedy was the first woman to achieve the rank of three-star general in the United States Army.



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John Kerry is a distinguished fellow for global affairs at Yale University. In 2013, Kerry was sworn in as the 68th secretary of state of the United States. Kerry served for more than twenty-five years as a U.S. senator from Massachusetts.



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David Wade is a consultant helping global corporations and organizations with strategic advice, public affairs and thought leadership, crisis communications, political intelligence gathering, and federal and legislative strategy.

## In this Report:

The Middle East has historically grappled with frequent regional conflicts, extremism, and terrorism. Placing attention solely on these events sends the signal to the world that there is only strife in the Middle East North Africa (MENA) region. However, collaboration also exists. It is important to display examples of diplomacy and cooperation in order to tell the world that positive relations occur as well in the Middle East.

This report discusses the Synchrotron-light for Experimental Science and Applications in the Middle East, the Dolphin Gas Project, and the Middle East Cancer Consortium, three examples of endeavors that have come to life through collaboration. Through exploring each project's challenges and future recommendations, perhaps the world can come one step closer to dispelling the myth that the Middle East is a region of the world characterized mostly by violence and conflict.

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## IN BRIEF

- It is important to dispel the myth that there is only violence and conflict in the Middle East; significant collaboration also occurs.
- The Synchrotron-light for Experimental Science and Applications in the Middle East, the Dolphin Gas Project, and the Middle East Cancer Consortium are three examples of endeavors that have come to life through collaboration.
- Lack of talent in addition to the desire to live in regions more economically and politically stable stands in the way of diplomacy reaching its full potential.
- Existing regional differences and conflicts are also common obstacles which prevent collaboration efforts from coming to fruition.
- Increased U.S. presence in Middle Eastern collaboration may not only foster growth in collaboration efforts, but may also increase the chances of stability in the Middle East.

## About the Author

Patrick Hines received his Doctor of Musical Arts degree from the University of Wisconsin-Madison, where he also pursued a doctoral minor in International Relations. He obtained his Bachelor's degree in music from Temple University and his Master's degree in music from Yale University. Patrick has lived in China and has also performed in musical venues across the United States, Puerto Rico, Italy, England, and Austria, among other countries.

## Introduction

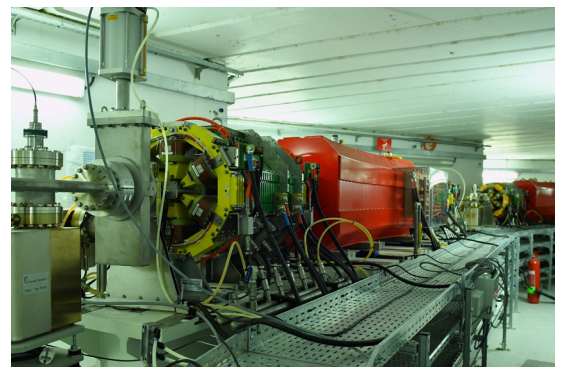
Many people view the Middle East as a region rife with extremism, terrorism, and conflict. Living in a post-9/11 world and witnessing conflicts in Afghanistan, Iraq, Iran, Lebanon, and Syria can understandably give one the impression that the region is contending with constant conflicts. These conflicts can generate the appearance of a general struggle to incorporate Muslim and Arabic practices and beliefs into a modern world sculpted by Western norms and ideologies.

But there are also many Middle Eastern nations collaborating with one another and with other countries around the world in ways that contradict this appearance. The twenty-first century has already become a century of diplomacy for the Middle East North Africa (MENA) region. However, the existing threats and conflicts in the area overshadow the collaborations that are happening or have already taken place. Placing more attention on diplomatic efforts in the Middle East may change many people's first impression of the region.

The goal of this report is to show how diplomacy around practical projects in the Middle East is playing a role in bringing the region together in the pursuit of common interests. Examples include the Synchrotron-light for Experimental Science and Applications in the Middle East (SESAME) particle accelerator, the Dolphin Gas Project, and the Middle East Cancer Consortium (MECC). Each example will act as a case study of countries engaging in diplomacy for the purpose of science, infrastructure, and healthcare, respectively. If effectively nurtured, these successes could not only reinforce the idea that peace and stability is possible in the Middle East, but also inspire similar efforts in other turbulent regions.

## Synchrotron-Light for Experimental Science and Applications in the Middle East

Light source particle accelerators are important tools in the scientific community. Known as synchrotrons, the light sources accelerate electrons to nearly the speed of light. The accelerated particles then pass through magnets which bend their trajectories. The result is accelerated particles that create a natural ray of light that is transmitted through beamlines for the purpose of observing molecular structures of almost any kind of sample.<sup>1</sup> The ability to see this fine of a light source has many uses ranging from archaeology to pharmaceutical research to renewable energy. Synchrotron technology has been used for HIV<sup>2</sup> and COVID-19<sup>3</sup> drug research. Archaeologically speaking, the technology has also been utilized to analyze the history of Japanese blades, as an example.<sup>4</sup> With approximately 50 operating synchrotrons around the world, not until a few years ago have Middle Easterners been able to say that they now possess their own light source.<sup>5</sup>



Magnetic equipment at SESAME. IAEA photo.

Based in Allan, Jordan, Synchrotron-light for Experimental Science and Applications in the Middle East (SESAME) was opened in 2017 after nearly twenty years of development. The creation of the light source is a significant effort of science diplomacy, as it involved the collaboration of scientists and governments from Cyprus, Egypt, Iran, Israel, Jordan, Pakistan, Palestine, and Turkey. Additional support comes from Brazil, Canada, the European Organization for Nuclear Research (CERN), China, the European Union (EU), France, Germany, Greece, Italy, Japan, Kuwait, Portugal, Russia, Spain, Sweden, Switzerland, the United Kingdom, and finally the United States.<sup>6</sup>



As the first synchrotron light source in the Middle East, there is a scientific and archaeological cornucopia of research opportunities that could utilize SESAME.<sup>7</sup> For example, there are efforts to use SESAME synchrotron technology to research 2000 year old ink and frankincense used to write the Dead Sea Scrolls.<sup>8</sup> Since SESAME began operations in 2017, there has been a yearly increase in proposals to use the facility for research.<sup>9</sup> SESAME launched with two operational beamlines and the goal of installing seven more in the future. Italy has already offered assistance. The Italian research agency Istituto Nazionale Fisica Nucleare (INFN) collaborated with SESAME in the creation of a fluorescent detector system (XAFS).<sup>10</sup> While the synchrotron light source acts as a high-level microscope, XAFS technology takes the innovation a step further, providing even more detailed information about the chemical and structural make-up of a sample.<sup>11</sup> The inclusion of more specialized beamlines will undoubtedly increase demand, thus making SESAME a competitive location for research.<sup>12</sup>

## Challenges

Construction of SESAME was by no means an easy affair. The facility experienced significant obstacles ranging from the collapse of the roof from a snowstorm in 2013<sup>13</sup> to the assassinations of two Iranian scientists associated with the project.<sup>14</sup> While construction of SESAME was successful, funding remains an ongoing challenge. Sanctions imposed on Iran have made it impossible for the country to pay its share of the project.<sup>15</sup> An increased demand in research along with increased operational and administrative costs will surely become a strain for the facility's operations budget.<sup>16</sup> While the transition to solar power has allowed SESAME to save more than \$100,000 a month, the facility cannot rest on these laurels.<sup>17</sup>

Brain drain poses another challenge for SESAME and the MENA scientific community. While the facility has created a scientific oasis and country-specific efforts<sup>18</sup> exist to reduce the number of people leaving the region, there is still a sizeable portion of the population that prefers to live elsewhere.<sup>19</sup> SESAME already ran into problems in the past with brain drain. Their first attempt at training scientists and engineers at U.S. and European laboratories resulted in the unintended consequence of trainees accepting jobs at the training institutions instead of returning to Jordan.<sup>20</sup>

Regional conflict also acts as a deterrence to potential collaborations. The belief that science trumps politics does not ring true for all. Morocco, Iraq, Saudi Arabia, and Yemen have voiced their unwillingness to join SESAME due to the participation of specific member states.<sup>21</sup> Fear of terrorism, extremist violence, or regional conflicts may prevent countries from wanting to work with SESAME.

## Recommendations

Gaining commitment from the Gulf Cooperation Council (GCC) states would ensure SESAME's financial stability in the future. No GCC state played a role in the creation of the light source. Cooperation from these wealthier countries would benefit both parties; SESAME would get the financial stability and exposure that comes from collaborating with the wealthier nations. Several GCC states, such as Saudi Arabia, Kuwait, and the United Arab Emirates (U.A.E.) would benefit because the countries already have universities which are contributing to the greater scientific community.<sup>22</sup> An example of the scientific knowledge in the GCC is Saudi Arabia's technologically advanced King Abdullah University of Science and Technology (KAUST), a university which has the potential to revolutionize scientific higher education on a global scale.<sup>23</sup>

U.S. commitment and financial assistance to SESAME will not only ease the facility's financial burden, but will also send the signal that America is truly invested in building a more prosperous Middle East in the twenty-first century without the use of military intervention. While the U.S. provided the facility with beamlines and equipment, no money has been given for construction or operations.<sup>24</sup> In July 2019, Rep. Bill Foster, an Illinois physicist, proposed legislation including \$10 million for SESAME. However, this did not come to fruition and was defeated



The SESAME building in Allan, Jordan. IAEA photo.

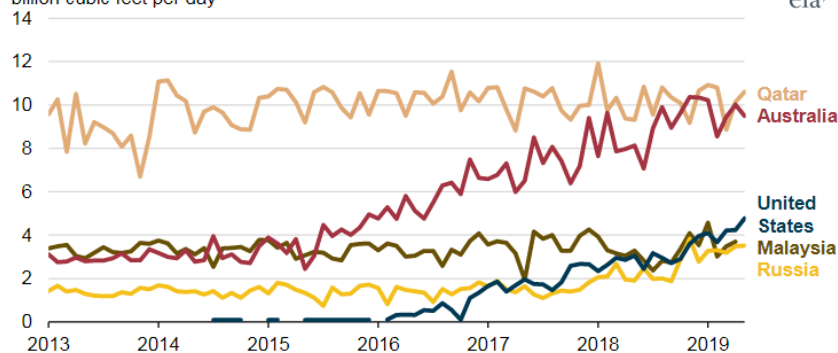
upon arrival in the Senate.<sup>25</sup> Increased exposure of SESAME will also bolster its image. Currently using two beamlines with a third expected to be operational in 2020, SESAME is a small operation compared to the Brazilian Synchrotron Light Laboratory (LNLS) which contains 15 beamlines<sup>26</sup>, or the Stanford Synchrotron Radiation Lightsource (SSRL), which contains 24 beamlines.<sup>27</sup> While the receipt of 151 proposals for its round of requests ending in January 2020 is an admirable number, it still pales in comparison to other light sources around the globe, whose rounds of proposal applications may number into the thousands.<sup>28</sup> Out of the 151 proposal requests, Italy submitted four, while the U.K. submitted one (the U.S. submitted zero). Both of these countries have their own light sources. U.S. participation in research at SESAME will not only give another necessary signal of the importance of science diplomacy, but will also spur other nations to perform research at Jordan's light source.

## The Dolphin Gas Project

The collaboration required to construct and operate the Dolphin Gas Project is an incredible feat which cost approximately \$3.5 billion to complete. Established in 1999 and launched in 2007, the pipeline delivers liquefied natural gas (LNG) from Qatar to customers in the U.A.E. and Oman. The project's creation was a response to an increasing need for natural gas in the U.A.E., a location where domestic production of the resource has not historically met its demands.<sup>29</sup> One of the largest LNG distribution operations on Earth and in the Middle East, at the time of launch, the project's goal was to transport up to "two billion cubic feet of Qatar natural gas a day to the U.A.E. for the next 25 years."<sup>30</sup> While impressive on its own, Qatar is looking to expand its LNG production even more given the vast supply of LNG and the desire to compete with Australian LNG exports.<sup>31</sup>

The LNG comes from the Qatari North Field region of the Khuff reservoir.<sup>32</sup> Qatar shares this space with Iran, which also extracts LNG from an area known as South Pars. From there, the raw gas is then transported to Ras Laffan Industrial City, Qatar, where condensates, liquefied petroleum gas (LPG), ethane, and sulphur by-products are extracted and then sold to international customers. The processed gas is then delivered to ADWEC (Abu Dhabi Water and Electricity Company), UWEC (Union Water and Electricity Company), DUSUP (Dubai Supply Authority), and OOC (Oman Oil Company). Each consumer has agreed to be long term customers for 25 years from the launch of the endeavor.

Liquefied natural gas exports from selected countries (Jan 2013-May 2019)  
billion cubic feet per day



Source: U.S. Energy Information Administration, CEDIGAZ, Global Trade Tracker

U.S. Energy Information Administration graphic.

The project is also an effort of considerable global collaboration. Dolphin Energy Limited was established under the authority of the Government of Abu Dhabi to spearhead the creation of the pipeline.<sup>33</sup> The ownership of the gas company is split three ways; the Mubadala Company of Abu Dhabi owns 51%, while U.S.-based hydrocarbon exploration oil company Occidental Petroleum and France-based petroleum and natural gas company Total each own 24.5%. Other examples of global collaboration on the project include the Japan-based JGC Corporation winning the contract of engineering, procurement, and construction (EPC) of the Ras Laffan processing plant. The gas turbines in the plant are maintained by Germany-based Siemens company, the result of an acquisition of the British Rolls-Royce Energy Systems and the German Dresser-Rand Group.

The project's pipelines were also the result of considerable collaborations. For example, Saipem, a subsidiary of the Italian firm Eni Group won the contract for construction of the pipeline from the Qatar North Field to the Ras Laffan plant. Japan's Mitsui Company won the bid for pipeline from the plant to U.A.E., while Russia's JSC Stroytransgaz won the bid for pipeline from the Taweelah plant to Fujairah, the U.A.E. city home to UWEC.<sup>34</sup> While the Dolphin pipeline does benefit the U.A.E., there still exists the issue of demand exceeding supply.<sup>35</sup> However, had the pipeline not existed, the nation's increasing industrialization would have cost billions of dollars in alternative fuels.<sup>36</sup> The pipeline is also a sign of what is to come in the future. The sheer scale of the project, including the Ras Laffan processing plant, which is the largest plant of its kind in the world, acts as proof that mega projects are possible in the Middle East.



Gas pipelines at Ras Laffan Industrial City, Qatar. Photo credit: Stefano Campolo / Flickr. CC BY-NC-SA 2.0.

## Challenges

From the construction phase to this day, regional conflicts concerning Middle East sovereignty have stood as obstacles to the project. Consequences of the conflicts typically play out in halting manners where one party turns their back on the other, thus diminishing the endeavor's splendor. The regional friction around the project has thrust the GCC further into the spotlight than past conflicts. The GCC is an alliance of the governments of Bahrain, Kuwait, Oman, Qatar, Saudi Arabia, and the U.A.E.; countries that are all Arab states on the Persian Gulf. The goals of the council are to use cooperation to eliminate terrorism and improve the safety, economy, and governance of the region.<sup>37</sup> However, disagreements between member countries during and outside of project activities have raised questions about GCC's efficacy.<sup>38</sup> For instance, regional friction occurred in the pipeline planning phase of the project, and in 2006, Saudi Arabia claimed that pipeline for the project was being placed in Saudi territory without prior agreement.<sup>39</sup> However, construction went on as planned.

More significant conflicts happened in 2017, when Bahrain, Egypt, Saudi Arabia, and the U.A.E. accused Qatar of a variety of offenses, including supporting the Muslim Brotherhood, a Sunni Islamist organization deemed a terrorist threat. Qatar was quick to deny this claim. These four countries severed diplomatic and trade ties, imposing an economic blockade on Qatar<sup>40</sup> that lasted until January 2021.<sup>41</sup> The blockade caused Qatari citizens living and working in the four Arab nations to return to their country. Qatar stood resilient; its economy overcame challenges and LNG exports did not cease.<sup>42</sup>

Though the blockade has ended, it illustrated potential challenges in the future when it comes to states asserting regional hegemony. Qatar's newfound wealth and status as one of the richest countries in the world is of concern to Saudi Arabia, a country that has historically been the most powerful Arab nation.

## Recommendations

The Dolphin pipeline is the only international LNG network in the gulf region.<sup>43</sup> Increasing the interconnectedness of energy infrastructure in the Persian Gulf will help reduce the chances of economic catastrophe if regional conflicts with harsher consequences resurface in the future.

Furthermore, stronger ties between the U.S. and the GCC can minimize the chances of conflicts affecting LNG exports. Such language is codified in the U.S./GCC Trade and Investment Framework Agreement (TIFA).<sup>44</sup> The U.S. has always seen the GCC as an important ally in the quest for peace and stability in the Arab world. However, familiarity and faith in the alliance has looked different with each U.S. presidential administration.<sup>45</sup> America's sudden accusations,<sup>46</sup> but eventual praise,<sup>47</sup> of Qatar's handling of extremism and terrorism only perpetuates instability and mistrust in the region as U.S. policy appears unpredictable and inconsistent.

Finally, the Dolphin pipeline is an effective case study on the importance of economic interdependence. The common belief is that increased international trading will reduce the likelihood of war or military intervention when conflict arises. When conflict does occur, international relationships can help not only dilute the severity of the issue at hand, but can also provide avenues of redirecting modes of trade. Increased infrastructure collaboration among countries will lessen the blows that come from conflicts. That the blockade didn't lead to war and Qatar's decision not to cut LNG exports is evidence that increased economic interdependence between countries decreases the chances of military intervention.<sup>48</sup>

Economic interdependence can also help nations with less wealth. The MENA countries vary widely on characteristics such as wealth, infrastructure knowledge, and supply chains, among others. Less well-off countries can benefit from collaboration with more powerful regions. For example, Israel has become a world leader in water management technology.<sup>49</sup> The country is putting its privilege to use by providing Palestine and Jordan with desalinated water. Infrastructure has even been embedded into official accords. The 1994 Israel-Jordan Peace Treaty stipulates that both countries will assist and contribute to water management.<sup>50</sup>

## The Middle East Cancer Consortium

Limited and inconsistent health care options in addition to differing cultural beliefs have led to critical statistics concerning cancer and chronic diseases in the Middle East. 50-60% percent of cancer patients in the Middle East seek medical advice for the first time when the tumor has reached the typically incurable stage 3 or 4.<sup>51</sup> The Middle East Cancer Consortium (MECC) is seeking to reverse this.

MECC was established in 1996 and is a collaboration of the U.S. and the Ministries of Health of Cyprus, Egypt, Israel, Jordan, Palestine, and Turkey. For training purposes, Pakistan, the U.A.E., Lebanon, Morocco, Iraq, Sudan, Qatar, and Oman are also involved with the Consortium.<sup>52</sup> While the ultimate, ideal goal would be to have fewer cancer diagnoses, MECC aims to use cooperation between nations as a tool to advocate for the use of palliative care, a form of treatment that has been historically seldom utilized in the MENA. The Consortium believes that physical, psychological, and spiritual treatment is essential for cancer patients at such a critical stage in order to ensure quality of life.



MECC is especially invested in promoting palliative care in pediatric oncology.<sup>53</sup> Late stage cancer diagnosis is an especially dire situation for children in the Middle East. In developed countries, 80% of childhood cancer cases are treated. This statistic is only 20% in developing countries. In the MENA, childhood diagnosis of cancer unfortunately comes too late.<sup>54</sup>

Knowledge of cancer incidences in the Middle East was sparse before the creation of MECC. The consortium seeks to change this by also engaging in active research and the construction of cancer registries in order to note trends in cancer occurrences in member countries. Trends and rates are then compared to those of Western nations, typically the United States. The diplomacy occurs in the construction of the reports. Hospitals willingly let MECC use their own individual cancer registries in order to construct a larger compendium. For example, a 2016 analysis of cancer incidences in Cyprus, Jordan, Israel, and Izmir (Turkey) revealed that, among the researched countries, Turkish men and women have the highest and second highest rates of lung cancer respectively and Israeli Jews and Cyprus have the highest rates of prostate cancer, among other findings. On a more general note, the report also reveals that, of the member countries studied, cancer rates tend to be higher in Izmir and for Israeli Jews.<sup>55</sup> Such scholarly statistics are a necessity for the MENA; perhaps now work can begin to track down possible epidemiological causes of cancer occurrences. Examples of other such publications include a 2017 survey of breast cancer incidents in the Middle East and the United States, a 2009 analysis of bladder cancer in the Nile delta region of Egypt,<sup>56</sup> and a 2018 report of patterns of colorectal cancer in Cyprus, Jordan, Israel, and Izmir.<sup>57</sup>



The Egyptian Ministry of Health's Strategic Health Operation Center. Egypt is a member of MECC. CDC photo.

It is through these efforts that MECC is striving to use people-to-people engagement to draw attention away from the many regional conflicts and crises that not only plague the region, but also dictate the narrative of the current state of the Middle East.

## Challenges

Perhaps the greatest challenge that MECC is contending with stems from differences between Middle Eastern and Western culture. In the West, it is common practice to reveal a cancer diagnosis to the patient. However, in the Middle East, it is not uncommon for incurable disease diagnoses to be told to families rather than the patient.<sup>58</sup> Furthermore, unlike the West, where medical practices align towards avoiding death by any means necessary, many Middle East populations see a cancer diagnosis as a next step or trial in their life; the transition to the afterlife is seen as a part of the person's life path.<sup>59</sup> The symptoms a patient may experience during cancer are then seen as trials a person must endure, rather than a treatable malady. The result of this conservative tradition is self-fulfilling. While the dynamics are slowly changing, cancer is still considered an illness limited to populations of industrialized societies. Cancer patients who reside outside of this locale are more likely to be of older age and thus more likely to have more conservative beliefs. Not directly learning of cancer presence and then waiting until an irreversible stage to consult a physician naturally leads to the common belief in the Middle East that cancer is a death sentence.<sup>60</sup>

For MECC, advocacy of palliative care goes hand in hand with advocacy of opioid use for pain relief. Research has revealed that while there is increasing opioid use in the Middle East,<sup>61</sup> the region's rates still pale those of the West.<sup>62</sup> There is an effort to increase use of the pain relief in MENA countries. However, the false belief that cancer is a death sentence and fear of opioid addiction prevent patients in the Middle East from using the already few opioids available.<sup>63</sup> Given that the U.S. and the developed world are currently amidst an opioid overdose crisis, it will be a challenge to persuade MENA governments that this form of pain management is essential in late stage cancer treatment.<sup>64</sup>

A shortage of healthcare workers in the Middle East is also standing in the way of MECC achieving its goals of reduced cancer rates and increased palliative care. Frequent inter-regional conflicts and risks, matched with a lack of resources and opportunity, lead to brain drain, most notably healthcare migration from poorer nations to GCC states.<sup>65</sup> The scarce amount of healthcare workers in the Middle East are then faced with heavy workloads, a situation that ultimately leads to high rates of burnout.<sup>66</sup>

## Recommendations

While MECC's focus is predominately on the palliative treatment stage of cancer, increased efforts in training local healthcare providers and physicians could improve the chances of achieving MECC's goals. Advocating for physician consultations to detect early signs of cancer would eliminate the possibility of conflicting perspectives come late stage cancer diagnoses. MECC frequently holds palliative care, cancer registries, and epidemiology training workshops for researchers and healthcare workers on a yearly basis in locations of the member countries.<sup>67</sup> Since the United States is a member of the Consortium, increased education can be given to both healthcare workers and Middle East populations on the importance of regular physician visits.

Increased education for healthcare workers as well as citizens can occur with MENA nations as well. The wealthier nations naturally have better healthcare facilities and knowledge. According to the 2020 Legatum Prosperity Index, out of the five MENA nations with the best healthcare, Bahrain and Kuwait are not involved in MECC.<sup>68</sup> Nevertheless, each country can share its wealth and knowledge with MENA nations that are less well-off. This trickle-down education strategy could help with early cancer detection and lower the chances of patients reaching the incurable stage.

## Conclusion

SESAME, the Dolphin Gas Project, and MECC are three examples of what can be accomplished when diplomacy meets science, infrastructure, and healthcare. The three case studies also exemplify the obstacles that come with collaborating in the Middle East; namely talent shortage and regional differences. Increased attention on what is going right will greatly benefit each case study and the countless other acts of diplomacy, collaboration, and innovation in the MENA. Too much focus on what is going wrong is understandable, given that the consequences may involve injury and loss of life. However, frequent spotlighting of the negatives will give the impression that there exist no positives. Qatar National Vision 2030<sup>69</sup> and Saudi Vision 2030<sup>70</sup> are two examples of the lofty goals Qatar and Saudi Arabia have for themselves economically, technologically, and sociologically. While not collaborative efforts, the two visions successfully represent the potential that exists for MENA to become a global center. Compared to goals in the West, the scale and magnitude of these projects are unmatched. It would be a shame if these important projects are stymied by regional conflicts and/or lack of talent.

It is also a certain possibility that increased attention on positive relationships in the Middle East will lead to more collaboration. Diplomacy begets diplomacy. While the Middle Eastern cooperation found with SESAME, the Dolphin Gas Project, and MECC is admirable, it is not enough for the MENA countries to primarily collaborate with themselves. Out of the three case study examples, the Dolphin pipeline is perhaps the most international diplomatic effort. SESAME and MECC, like many other regional collaborations, need global help in order to achieve their goals. The myth that there is only violence and conflict in the Middle East must no longer stand in the way of the region striving to become a member of the global twenty-first century.

## Endnotes

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We believe that America must lead in the pursuit of our common goals and shared security. We must confront international challenges with our partners and with all the tools at our disposal and address emerging problems before they become security crises. And to do this we must forge a bipartisan consensus here at home.

ASP brings together prominent American business leaders, former members of Congress, retired military flag officers, and prominent former government officials. ASP conducts research on a broad range of issues and engages and empowers the American public by taking its findings directly to them via events, traditional & new media, meetings, and publications.

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