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Dear Mr. Bohigian, Mr. Boehler and Ms. Boomgard:

Friends of the Earth U.S., Justiça Ambiental (Friends of the Earth Mozambique), and the Center for Biological Diversity write to provide comments on OPIC's potential support for the Rovuma Liquefied Natural Gas (LNG) project in Cabo Delgado, Mozambique. We submit these comments in light of OPIC's environmental and social policies, and based on a review of the project Environmental Impact Assessment (EIA),<sup>1</sup> information from local partners, and past experience with U.S. Government-financed LNG projects. We raise the following concerns about the project:

### **No Beneficial Development Impact**

OPIC and its successor, the U.S. International Development Finance Corporation (DFC), aim to provide finance in order to alleviate poverty, but it remains unclear how Rovuma LNG will actually accomplish this. OPIC's purpose is to support the "economic and social development of less developed countries and areas."<sup>2</sup> Similarly, the DFC aims to support "sustainable, broad-based economic growth, poverty reduction, and development."<sup>3</sup> Serious concerns exist that instead of stimulating broad-based poverty alleviation, multinational corporations and a small group of elite Mozambicans will reap all the reward, widening income disparity and leaving local communities in even more dire poverty.<sup>4</sup>

### *Local Communities Worse off*

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<sup>1</sup> OPIC's EIA includes an EIA conducted for Anadarko and ENI in 2014, as well as a 2019 update conducted for ExxonMobil.

<sup>2</sup> Foreign Assistance Act of 1961, P.L. 87-195, sec. 231, <https://www.opic.gov/sites/default/files/statute1.pdf>.

<sup>3</sup> 22 U.S.C. 9611, <https://www.congress.gov/115/plaws/publ254/PLAW-115publ254.pdf>.

<sup>4</sup> Joe Brock, *Mozambique Gas Projects Raise Risk of Resource "Curse"*, REUTERS, Oct. 26, 2015, <https://www.reuters.com/article/mozambique-gas/refile-insight-mozambique-gas-projects-raise-risk-of-resource-curse-idUSL8N12N3E120151026>; Ed Stoddard, *Mozambique's \$20bn Gas Project: A Boom that Heralds a Resource Curse Bust?*, BUSINESS MAVERICK, Jun. 29, 2019, <https://www.dailymaverick.co.za/article/2019-06-24-mozambiques-20bn-gas-project-a-boom-that-heralds-a-resource-curse-bust/>.

This project will require a huge investment by the Mozambican government beyond the project itself, which would be better spent on social programs and renewable energy development. The project itself will require an investment of up to US\$ 30 billion. As the assessment states, this large investment could make this project the single largest investment project in Mozambique, a country where the overall literacy rate is 47 percent and a mere 28 percent for females.<sup>5</sup> This project will divert funds that should be going to education and other social necessities to build and maintain needed infrastructure for this project. When these projects occur, governments always have to spend huge amounts of money beyond what private investors provide.

Very few, if any, of the jobs that are created through this project will go to local communities. As the assessment states, most of the people who live in the district surrounding the project have received no formal education and much of the population is illiterate. In addition, the local population generally has little to no experience with the private sector. Therefore, few will have the skills or education level to perform the jobs that this project will create, and there are no plans to upskill the communities.

Not only will the LNG project provide a minimal number of local jobs, if any, it will also remove the sources of income that local communities depend on. The assessment finds that the majority of the local communities are “highly dependent” on fishing, small scale agriculture, and other natural resources to make a living. Since the project will have devastating impacts on local resources, displaced local communities will no longer be able to access these resources that they depend on, including forests and areas for fishing. In addition, as the assessment states, local communities will lose income they currently get from tourism.<sup>6</sup> In 2018, the sector generated 8.1 percent of the total economy.<sup>7</sup> That same year, travel and tourism supported over 727,000 jobs directly, which was 7.3 percent of total employment. With that in mind, the Government opted to ensure that all future development projects in tourism have a strong component of social responsibility. The province of Cabo Delgado, as one of the country’s priority areas for the development of tourism sector, has been receiving considerable investment in tourism. Yet, the project will greatly hinder those economic impacts by driving tourists away through high levels of noise, vessel traffic, and pollution, as well as the destruction of the pristine local reef. Therefore, the tourism income created from snorkeling and diving, as well as beachgoers will be reduced if not eliminated.

Moreover, the construction of LNG plants relies on the influx of thousands of workers, often male, who are typically paid far more than others in the community, which typically causes hyper inflation of housing, food, and other basic necessities. Other than the relatively few local people lucky enough to get a job on the project, this hyper inflation will result in most local

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<sup>5</sup> USAID, Where We Work: Mozambique – Education, <https://www.usaid.gov/mozambique/education> (last updated Aug. 19, 2019).

<sup>6</sup> Impacto & ERM, Environmental Impact Assessment (EIA) Report for the Liquefied Natural Gas Project in Cabo Delgado: Final EIA Report – Volume II Impact assessment, Management, Implementation and Conclusions, Ch. 13 Socio-economic Impact Assessment and Mitigation, sec. 13.3 (Feb. 2014), [https://www3.opic.gov/Environment/EIA/rovuma/Volume\\_2/Chapter\\_13\\_LNG\\_Final\\_EIA\\_Sept\\_2014\\_Eng.pdf](https://www3.opic.gov/Environment/EIA/rovuma/Volume_2/Chapter_13_LNG_Final_EIA_Sept_2014_Eng.pdf).

<sup>7</sup> World Travel & Tourism Council, Mozambique – 2019 Annual Research: Key Highlights, <https://www.wttc.org/-/media/files/reports/economic-impact-research/countries-2019/mozambique2019.pdf>.

people being relatively worse off financially, even with (and indeed because of) the large influx of investment into the construction project. The local communities will be further harmed by the increased strain on health care facilities and water resources, greater crime, and more sexually transmitted diseases.<sup>8</sup> This strain will put local populations at greater risk of health problems from tainted water and sanitation issues.

### *No Improvement to Energy Access for Local Communities*

The Rovuma LNG project does not even pretend to help Mozambique and its people economically benefit from its energy production. Over 70 percent of the country lacks access to electricity.<sup>9</sup> In rural Mozambique, access to electricity is basically nonexistent at two percent.<sup>10</sup> Even for the 27.5 percent that is considered to have access, many of those people cannot actually afford the electricity, leading to millions more Mozambicans without electricity. Despite this incredibly low electricity rate, the project does not even attempt to improve that dismal figure. The stated purpose of the project is to “gather, process, and export natural gas in liquid form known as LNG . . . [to] be used as a fuel source *in other countries*” [emphasis added].<sup>11</sup> While this project will heavily damage the natural resources that local communities depend on, they will receive none of the benefit of the gas. The LNG will be exported to other countries, most likely markets in Asia, which have already agreed to purchase LNG from northern Mozambique.<sup>12</sup>

Moreover, natural gas does not even make sense to improve energy access in Mozambique. About two thirds of the population in Mozambique lives in rural areas far from the centralized grid. Therefore, any theoretical increase in the production of natural gas, which requires large centralized power stations, would not help to improve the country’s access to electricity. Furthermore, Mozambique lacks the pipeline infrastructure that would be needed to transport natural gas from the very north of the country where the natural gas deposits are to Maputo in the south or any other part of the country. To build such a pipeline network is prohibitively expensive, and if it were accomplished would cement dependence on fossil fuels for decades to come. To increase access to electricity, the country would need to invest in small distributed systems. Small solar systems would make the most sense in a country like Mozambique, which has abundant solar resources.

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<sup>8</sup> E.g., John Eligon, *An Oil Town Where Men Are Many, and Women Are Hounded*, N.Y. TIMES, Jan. 13, 2013.

<sup>9</sup> The World Bank, Access to electricity (% of population) – Mozambique, <https://data.worldbank.org/indicator/EG.ELC.ACCS.ZS?locations=MZ> (last visited Oct. 22, 2019).

<sup>10</sup> The World Bank, Access to electricity, rural (% of rural population) – Mozambique, <https://data.worldbank.org/indicator/EG.ELC.ACCS.RU.ZS?locations=MZ> (last visited Oct. 22, 2019).

<sup>11</sup> Impacto & ERM, Environmental Impact Assessment (EIA) Report for the Liquefied Natural Gas Project in Cabo Delgado: Final EIA Report – Volume 1, p. 3 (Feb. 2014), [https://www3.opic.gov/Environment/EIA/rovuma/ESIA/EIA\\_NonTechnical\\_Summary\\_Sept\\_2014\\_Eng.pdf](https://www3.opic.gov/Environment/EIA/rovuma/ESIA/EIA_NonTechnical_Summary_Sept_2014_Eng.pdf).

<sup>12</sup> Matthew Hill & Borges Nhamire, *Mozambique Approves Anadarko’s \$20 Billion Natural-Gas Plan*, BLOOMBERG (Feb. 6, 2018), <https://www.bloomberg.com/news/articles/2018-02-06/mozambique-approves-anadarko-s-gas-project-development-plan> (citing Japan’s Tohoku Electric Power Co. as a purchaser); *Anadarko Announces LNG Sale to China, Financing Inches Forward*, ZITAMAR, Feb. 1, 2019, <https://zitamar.com/anadarko-announces-lng-sale-china-financing-inches-forward/>; *PTT Signs Mozambique LNG Deal*, THE NATION THAILAND, Jun. 16, 2018, <https://www.nationthailand.com/Corporate/30347927> (discussing the Thai company PTT’s agreement to purchase a portion of the gas).

### *This Project Has Already Resulted in Land Grabs*

Discussions with local communities and Justiça Ambiental, Friends of the Earth U.S., Centro Terra Viva (CTV), Centro Integridade Publica (CIP), Associação do Meio Ambiente (AMA), and Provincial Unions of Peasants (UPC) of Cabo Delgado have revealed that communities have not been properly consulted or compensated for their lost land and livelihoods.<sup>13</sup> Consultations with the communities have not been done properly. During the first consultations, civil society organizations were expelled or inhibited in their participation, community members felt intimidated and did not understand well enough what was discussed. In one community (Senga) there was no participation of women. There are no complete minutes of all the consultations for the communities.

Many of the existing agreements with communities have not been implemented. Compensation has not been fully paid as promised, resettlements have been postponed, and fishermen have lost access to their fishing grounds. The compensation processes are unclear to many of the inhabitants of the villages that will be resettled. The fact that people get individual compensation for their fields and houses creates tension within families. Also, some individuals received compensation money before they received new land, and spent money on direct needs, resulting in a lack of funds to invest in the new land. Others were promised to receive compensation, but did not yet receive anything. Furthermore, an increase of armed attacks increases the pressure on land and hampers the availability for land compensation. One of the communities that was supposed to yield land to the company for resettlement now refuses to do so, as it is the only land that people feel safe enough to work on.

As similar projects have shown, these projects result in the destruction of communities with insufficient compensation. For instance, the OPIC-supported Azura Edo natural gas power plant in Nigeria has resulted in local communities losing their land in order for the project to be built.<sup>14</sup> Some communities received insufficient compensation, while others, as of the timing of a recent report, had not received any compensation. These kind of land grabs are unacceptable as they allow large multinational corporations to take away peoples' homes with little care about the impacts.

### *The Gas Development Has Caused an Increase in Violence and Militarization in the Region*

Over the last two years, there have been many attacks on communities in the gas region that have left over 200 people dead.<sup>15</sup> While the Mozambican government has classified these attacks as

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<sup>13</sup> Kate DeAngelis, *Report from the Field: Perspectives and Experiences of Mozambican Communities and Civil Society on Liquefied Natural Gas Exploitation* (Sept. 2016); Both ENDS, *Analysis Environmental Impact Assessment and Resettlement Plan Mozambique LNG* (Mar. 2019) (on file with author).

<sup>14</sup> Nosa Tokunbor, Osayande Omokaro, & Godwin Ojo, Environmental Rights Action/Friends of the Earth Nigeria, *Azura Edo IPP, Field Report #352*, Apr. 2014 (on file with author).

<sup>15</sup> Ilya Arkhipov, Matthew Hill & Borges Nhamire, *Russia Denies It Has Any Troops Stationed in Mozambique*, BLOOMBERG (Oct. 9, 2019), <https://www.bloomberg.com/news/articles/2019-10-08/russia-denies-it-has-any-troops-stationed-in-mozambique>.

Islamic terrorism, the reality is more complex. Communities in the area have highlighted how the government's action of disrespecting peoples' rights, neglecting communities' needs, stealing farmers' lands and fisherfolk access to the sea have created a breeding ground for extremism and created conditions that have led to these attacks. This is all further aided by the extreme levels of corruption and flaunting of wealth by Mozambican political elites in the midst of poverty. Some community members even believe that these attacks are linked to the gas industry, as they only began once the industry players became present in the area and have facilitated some of the gas companies progress like the resettlement, where some communities left the project area due to the attacks. All this has led to a large military presence, although communities have said that soldiers focus more on protecting the gas investments than the people, and their presence itself is increasing the atmosphere of fear and causing issues to the local community.

This situation has also opened the doors for a new private security industry to enter the region – most recently, the Russian military company, the Wagner Group, which has links to Russian President Vladimir Putin.<sup>16</sup> Yevgeny Prigozhin, who the U.S. has sanctioned for his attempts to influence the 2018 midterm elections, is believed to finance the Wagner Group.<sup>17</sup> These and other private security companies have entered the country, and their presence has raised numerous questions around the legality, as their very entrance and import of foreign arms has strict legal requirements that some believe have not been met. In response, the Mozambican government has yet again diverted funds away from social services to the military and security in the region.

## **Rovuma LNG and Associated LNG Projects Will Have Devastating Impacts on the Environment**

### *This Project Will Release Massive Amounts of Greenhouse Gas Emissions, Contributing to Climate Change*

This project has the potential to result in a huge release of greenhouse gas emissions, especially methane, not just over the next few years, but for decades to come over the lifespan of the project. Not only will this shift investment from renewables to natural gas, as happened in the United States, but it will also disincentive future renewable opportunities.<sup>18</sup> In a country that is

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<sup>16</sup> Jane Flanagan, *Mozambique Calls on Russian Firepower*, THE TIMES, Oct. 2, 2019, <https://www.thetimes.co.uk/article/mozambique-calls-on-russian-firepower-t2205dxh9>; Russia has been increasing its role in Mozambique – both with regards to debt relief and military involvement. Jasmine Opperman, *An Expanded Russian Interest in Northern Mozambique Could Be a New Game Changer*, DAILY MAVERICK, Oct. 14, 2019, <https://www.dailymaverick.co.za/article/2019-10-14-an-expanded-russian-interest-in-northern-mozambique-could-be-a-new-game-changer/>.

<sup>17</sup> Donna Borak & Nicole Gaouette, *US Sanctions Putin's 'Chef' for Attempting to Influence 2018 Midterm Elections*, CNN, Sept. 30, 2019, <https://www.cnn.com/2019/09/30/politics/us-yevgeniv-prigozhin-sanctions/index.html>.

<sup>18</sup> Haewon McJeon et al., *Limited Impact on Decadal-Scale Climate Change from Increased Use of Natural Gas*, 514 NATURE 482 (2014), <http://www.nature.com/nature/journal/v514/n7523/full/nature13837.html>; Steven J. Davis & Christine Shearer, *Climate change: A Crack in the Natural-Gas Bridge*, 514 NATURE 436 (2014), <http://www.nature.com/nature/journal/v514/n7523/full/nature13927.html#close>; Seth Borenstein, *Abundant Natural Gas Won't Slow Climate Change, Study Says*, ASSOC. PRESS, Oct. 15, 2014, [http://www.huffingtonpost.com/2014/10/15/natural-gas-climate-change\\_n\\_5990888.html](http://www.huffingtonpost.com/2014/10/15/natural-gas-climate-change_n_5990888.html).

largely rural and has significant renewable resources, including solar, this is a major lost opportunity to increased electricity access to clean and sustainable forms of electricity.

The assessment underestimates the impact of the methane that will be released during the extraction, processing, and transportation of the natural gas off the coast of Mozambique. The assessment states that it uses the same global warming potential figures as used in the IPIECA Petroleum industry guidelines for reporting greenhouse gas emissions and the American Petroleum Institute's 2009 Compendium of Greenhouse Gas Emissions.<sup>19</sup> These two documents use a global warming potential for methane of 25 times as potent as carbon dioxide, based on the outdated 2007 Intergovernmental Panel on Climate Change (IPCC).<sup>20</sup> According to the most recent report from the IPCC, methane is a greenhouse gas that is 87 times as potent as carbon dioxide over a 20 year timeframe.<sup>21</sup> The assessment estimated direct emissions from the project at 12.9 million tons of CO<sub>2</sub> equivalent emissions per year, starting in 2022, the first full year of operation.<sup>22</sup> Therefore, this project's direct emissions will be closer to 44.9 million metric tons when using the more accurate IPCC global warming potential.

Unfortunately, this assessment is not alone in underestimating the methane from a project. Methane emissions are a major problem for the oil and gas sector; some estimates put methane leakage from oil and gas production at 17 percent.<sup>23</sup> Studies have found that regulators in the United States are not properly estimating these emissions for natural gas fields in parts of the country.<sup>24</sup> In part because a device commonly used to measure the methane that leaks from industrial sources may greatly underestimate those emissions.<sup>25</sup> The release of large amounts of methane led to a Cornell University review of the scientific research that found conventional

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<sup>19</sup> Impacto & ERM, *Annex C: Baseline Methodologies*, sec. C3.2.1 (2014), [https://www3.opic.gov/Environment/EIA/rovuma/Volume\\_3/Annex\\_C\\_LNG\\_Final\\_EIA\\_Sept\\_2014\\_Eng.pdf](https://www3.opic.gov/Environment/EIA/rovuma/Volume_3/Annex_C_LNG_Final_EIA_Sept_2014_Eng.pdf).

<sup>20</sup> American Petroleum Institute (API), *Compendium of Greenhouse Gas Emissions Methodologies for the Oil and Natural Gas Industry*, tbl. 3-1 (2009), [http://www.api.org/~media/Files/EHS/climate-change/2009\\_GHG\\_COMPENDIUM.pdf](http://www.api.org/~media/Files/EHS/climate-change/2009_GHG_COMPENDIUM.pdf); International Petroleum Industry Environmental Conservation Association (IPIECA) & API, *Petroleum Industry Guidelines for Reporting Greenhouse Gas Emissions*, tbl. 5-1 (2d ed. 2009), <http://www.ipieca.org/publication/guidelines-greenhouse-gas-reporting-2011>.

<sup>21</sup> IPCC, CLIMATE CHANGE 2014: MITIGATION OF CLIMATE CHANGE (2014), <http://mitigation2014.org/report/publication/>. Some calculations of methane's impact look at the longer timeframe of 100 years, but the shorter 20-year timeframe is more appropriate to properly reflect methane's stronger impact in the short-term due to its atmospheric lifespan of about 12 years. Considering that scientists have concluded that significant reductions must take place in the next decade in order to limit the worst impacts of climate change, it is imperative to take into account this warming impact of methane in the short-term.

<sup>22</sup> Impacto & ERM, *Chapter 12: Onshore Environmental Impact Assessment and Mitigation*, tbl. 12.7 (2014), [https://www3.opic.gov/Environment/EIA/rovuma/Volume\\_2/Chapter\\_12\\_LNG\\_Final\\_EIA\\_Sept\\_2014\\_Eng.pdf](https://www3.opic.gov/Environment/EIA/rovuma/Volume_2/Chapter_12_LNG_Final_EIA_Sept_2014_Eng.pdf).

<sup>23</sup> Oliver Schneising et al., *Remote Sensing of Fugitive Methane Emissions from Oil and Gas Production in North American Tight Geologic Formations*, 2 EARTH'S FUTURE 548 (2014), <http://onlinelibrary.wiley.com/doi/10.1002/2014EF000265/pdf>

<sup>24</sup> Gabrielle Pétron et al., *A New Look at Methane and Nonmethane Hydrocarbon Emissions from Oil and Natural Gas Operations in the Colorado Denver-Julesburg Basin*, 119 J. GEOPHYSICAL RESEARCH: ATMOSPHERES 6836 (2014), <http://onlinelibrary.wiley.com/doi/10.1002/2013JD021272/full>.

<sup>25</sup> Touché Howard, *University of Texas Study Underestimates National Methane Emissions at Natural Gas Production Sites Due to Instrument Sensor Failure*, 3 ENERGY SCI. & ENG'G 443 (2015), <https://onlinelibrary.wiley.com/doi/full/10.1002/ese3.81>.

natural gas has a greater climate impact than coal.<sup>26</sup> Contrary to what one might think, the newer the gas well, the more likely the well is to leak methane.<sup>27</sup> These wells will continue to leak methane long after Exxon and other energy companies have stopped using them to extract natural gas.<sup>28</sup>

This project does not just involve the extraction and burning of natural gas, it also involves liquefying it for export. The LNG project lifecycle processes of production, transport, liquification, shipping, regassification, and power plant combustion is incredibly energy intensive. The U.S. Department of Energy estimates that the liquefaction, transport, and regasification process increases the total lifecycle of greenhouse gas emissions from the natural gas industry by 15 percent.<sup>29</sup> Another study by the Center for American Progress found the liquefaction stage of a typical U.S. LNG project is a mere 10 percent of the project's total lifecycle emissions.<sup>30</sup> Yet, the assessment only considers the direct emissions of the Mozambique liquefaction plant, estimated at 12.9 million tons of CO<sub>2</sub> equivalent emissions per year.<sup>31</sup> If this is 10 percent of total lifecycle emissions, then this project will be over 120 million tons of CO<sub>2</sub> equivalent per year.

### *Rovuma LNG Will Destroy Important Ecosystems and Species*

This project will have a huge impact on the local environment. The sheer area of the project is massive; the assessment calculates that the footprint of the project is “approximately 3,600 ha, within the allocated approximately 7,000 ha DUAT area.”<sup>32</sup> The assessment incorrectly finds that most of the impacts will be either minor or reduced to minor with mitigation measures. There is no way that such a massive energy extraction project will not result in many major negative environmental impacts. The EIA's suggestion otherwise minimizes and brushes over the true impacts that this project will have – impacts that will never be undone.

The zone where the three parts of the projects are located encompasses an area inhabited by a large number of flora and fauna species, as well as special ecosystems. The coastline of eastern

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<sup>26</sup> Robert W. Howarth, *A Bridge to Nowhere: Methane Emissions and the Greenhouse Gas Footprint of Natural Gas*, ENERGY SCI. & ENG'G (2014),

[http://www.eeb.cornell.edu/howarth/publications/Howarth\\_2014\\_ESE\\_methane\\_emissions.pdf](http://www.eeb.cornell.edu/howarth/publications/Howarth_2014_ESE_methane_emissions.pdf).

<sup>27</sup> Anthony R. Ingraffea et al., *Assessment and Risk Analysis of Casing and Cement Impairment in Oil and Gas Wells in Pennsylvania, 2000–2012*, PROC. NATURAL ACAD. SCI. (2014), <http://www.pnas.org/content/111/30/10955> (study of onshore conventional and unconventional gas wells in Pennsylvania).

<sup>28</sup> Mary Kang et al., *Direct Measurements of Methane Emissions from Abandoned Oil and Gas Wells in Pennsylvania*, PROC. NATURAL ACAD. SCI., <http://www.pnas.org/content/111/51/18173.abstract> (finding some abandoned oil and gas wells that were emitting significant amounts of methane).

<sup>29</sup> U.S. Department of Energy, National Energy Technology Laboratory. *Life Cycle Greenhouse Gas Perspective on Exporting Liquefied Natural Gas from the United States*, DOE/NETL-2014/1649, (2014)

<http://www.energy.gov/sites/prod/files/2014/05/f16/Life%20Cycle%20GHG%20Perspective%20Report.pdf>.

<sup>30</sup> GWYNNE TARASKA & DARRYL BANKS, THE CLIMATE IMPLICATIONS OF U.S. LIQUID NATURAL GAS, OR LNG, EXPORTS (2014), [https://cdn.americanprogress.org/wp-content/uploads/2014/08/TaraskaLNG\\_report.pdf](https://cdn.americanprogress.org/wp-content/uploads/2014/08/TaraskaLNG_report.pdf).

<sup>31</sup> Impacto & ERM, *Chapter 12: Onshore Environmental Impact Assessment and Mitigation*, tbl. 12.7, [https://www3.epic.gov/Environment/EIA/rovuma/Volume\\_2/Chapter\\_12\\_LNG\\_Final\\_EIA\\_Sept\\_2014\\_Eng.pdf](https://www3.epic.gov/Environment/EIA/rovuma/Volume_2/Chapter_12_LNG_Final_EIA_Sept_2014_Eng.pdf).

<sup>32</sup> Impacto & ERM, Environmental Impact Assessment (EIA) Report for the Liquefied Natural Gas Project in Cabo Delgado: Final EIA Report – Volume 1, p. 6 (Feb. 2014),

[https://www3.epic.gov/Environment/EIA/rovuma/ESIA/EIA\\_NonTechnical\\_Summary\\_Sept\\_2014\\_Eng.pdf](https://www3.epic.gov/Environment/EIA/rovuma/ESIA/EIA_NonTechnical_Summary_Sept_2014_Eng.pdf).

Africa, including particularly the northern coast of Mozambique, is home to incredible biodiversity. Roughly 60 percent of eastern Africa’s remaining mangrove forests are in Mozambique, providing excellent habitat and tremendous ecosystem services.<sup>33</sup> Northern Mozambique’s coral reefs are also largely intact and are some of the most species-diverse coral reefs in the region, particularly in the Quirimbas Archipelago of Cabo Delgado Province where the Project will occur.<sup>34</sup> The area’s particularly productive sea grass beds also provide nursery grounds and foraging habitat for fish and turtles.<sup>35</sup> Recognizing these ecological attributes, as well as the area’s cultural history, UNESCO designated the Quirimbas Archipelago as a Biosphere Reserve.<sup>36</sup>

The project area particularly has a wide diversity of animals including whales, dolphins, turtles, sea birds, and fish.<sup>37</sup> Furthermore, the environmental impact statement indicates that the nearshore and offshore areas include a number of species that are considered imperiled by the IUCN, including sei whales, Indian yellow nosed albatross, loggerhead, green turtles, leatherback, and hawksbill turtles. The EIA also notes that “a number of fish and benthic species [that] have been observed appear to be new to science and have not previously been taxonomically described.”<sup>38</sup> The project will destroy areas of pristine coral reefs, mangroves, and sea grass beds. Fewer and fewer places in the world contain these ecosystems, so protecting them is more important than ever. This project will require dredging, disposal of waste materials, and the construction of subsea, near shore, and on shore structures and infrastructure that will devastate these ecosystems. This will also harm the species through habitat degradation, noise and ship strikes and force species to leave the area. Moreover, if there is a spill or gas accident, which has become prevalent at energy extraction sites, the impacts will be even more catastrophic.<sup>39</sup> None of the impacts are fully considered, assessed, or mitigated in the EIA.

## **OPIC Has Failed to Comply with NEPA and the ESA**

### *Funding of Rovuma LNG Requires Evaluation of Impacts Pursuant to the National Environmental Policy Act*

The National Environmental Policy Act (“NEPA”) requires each federal agency, including OPIC, to produce an “environmental impact statement” to evaluate “every . . . major Federal action[ ] significantly affecting the quality of the human environment.” 42 U.S.C. § 4332(2)(C). “Major federal actions” include “projects or programs entirely or *partly financed*, assisted, . . . or approved by federal agencies.” 40 C.F.R. § 1508.18(a) (emphasis added). Further, NEPA applies

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<sup>33</sup> M. Samoilyls at al., *Resilience of Coastal Systems and Their Human Partners in the Western Indian Ocean*. Nairobi, Kenya: IUCN ESARO, WIOMSA, CORDIO and UNEP Nairobi Convention (2015).

<sup>34</sup> *Id.*

<sup>35</sup> *Id.*

<sup>36</sup> UNESCO, Quirimbas Biosphere Reserve, Mozambique, <https://en.unesco.org/biosphere/africa/quirimbas>.

<sup>37</sup> Impacto & ERM, Chapter 7: Environmental Baseline - Offshore and Near Shore, pp. 7-95, 7-32, [https://www3.opic.gov/Environment/EIA/rovuma/ESIA/Chapter\\_7\\_LNG\\_Final\\_EIA\\_Feb\\_2014\\_Eng.pdf](https://www3.opic.gov/Environment/EIA/rovuma/ESIA/Chapter_7_LNG_Final_EIA_Feb_2014_Eng.pdf).

<sup>38</sup> Impacto & ERM, *Chapter 7: Environmental Baseline - Offshore and Near Shore*, p. 7-1 (2014), [https://www3.opic.gov/Environment/EIA/rovuma/ESIA/Chapter\\_7\\_LNG\\_Final\\_EIA\\_Feb\\_2014\\_Eng.pdf](https://www3.opic.gov/Environment/EIA/rovuma/ESIA/Chapter_7_LNG_Final_EIA_Feb_2014_Eng.pdf).

<sup>39</sup> For an example of the types of harm caused by oil and gas drilling, see the Center for Biological Diversity and its partners’ NEPA comments on a recently proposed oil and gas facility off Alaska. On file with the authors. While the Alaskan and Mozambique ecosystems are very different, the types of harm (GHG emissions, noise disturbance, risk of oil spill, etc.) are similar.

to agency conduct, such as financing, that “occurs within the United States . . . , [e]ven where the significant effects of the regulated conduct are felt outside U.S. borders.” *Env’tl Def. Fund v. Massey*, 986 F.2d 528, 532 (D.C. Cir. 1993). Additionally, because the project’s substantial greenhouse gases emissions will mix in the atmosphere, climate change impacts from the Projects will be felt not only in Eastern Africa, but also in the United States. *See Friends of the Earth v. Mosbacher*, 488 F. Supp. 2d 889 (N.D. Cal. 2007) (finding climate impacts of foreign project occur within the U.S., triggering NEPA). Before financing the project, OPIC must fully evaluate the project’s impacts as required by NEPA.<sup>40</sup> OPIC’s financing, which will likely represent a considerable portion of the overall investment for each project, constitutes a “major Federal action,” and the Projects “significantly [e]ffect[ ]” the environment, including rare habitats, ESA-listed species, water resources, and the global climate. 40 C.F.R. § 1508.18(a).

*Funding Rovuma LNG Requires Consultation Regarding Impacts on Endangered and Threatened Species, pursuant to the Endangered Species Act*

Section 7 of the Endangered Species Act (“ESA”) requires all federal agencies to “consult” with the Fish & Wildlife Service (“FWS”) or the National Marine Fisheries Service (“NMFS,” or collectively, “the Services”) to “insure that *any action* authorized, *funded*, or carried out” by an agency “is not likely to jeopardize the continued existence” of any listed species. 16 U.S.C. § 1536(a)(2) (emphasis added); 50 C.F.R. § 402.02 (defining “agency action” to mean “all activities or programs of any kind authorized, funded . . . in whole or in part”).

To facilitate compliance with Section 7, an “agency shall . . . request” from the Services information regarding whether any listed species “may be present” in a proposed action area, and if so, the “agency shall conduct a biological assessment” to identify species likely to be affected. 16 U.S.C. § 1536(c); *see also* 50 C.F.R. § 402.12(b) (requiring preparation of a BA for “major construction activities”). An agency must then initiate formal consultation with the Services if a proposed action “may affect” a listed species. 50 C.F.R. § 402.14(a). The “may affect” threshold is extremely low; consultation is triggered by “[a]ny possible effect, whether beneficial, benign, adverse or of an undetermined character.” 51 Fed. Reg. 19,926 (June 3, 1986). After formal consultation, the Services issue a biological opinion to determine whether the agency action is likely to “jeopardize” any species’ existence. If so, the opinion may specify reasonable and prudent alternatives to avoid jeopardy. 16 U.S.C. § 1536(b). Even if jeopardy will not occur, the Services may “suggest modifications” to the action to “avoid the likelihood of adverse effects.” 50 C.F.R. § 402.13.

Before committing to funding Rovuma LNG, OPIC must consult with the Services regarding the project’s impacts on any ESA-listed species that “may” be affected by this enormous industrial development taking place inside a pristine and ecologically significant area. OPIC’s funding of the project will clearly constitute an “agency action” triggering consultation. 16 U.S.C. § 1536(a)(2); 50 C.F.R. § 402.02. Further, the Project, which includes major construction, clearly “may affect” ESA-listed species. *Id.* § 402.14(a). Several ESA-listed species inhabit the area, including endangered sperm, humpback, and sei whales; endangered green, hawksbill, and

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<sup>40</sup> While each proponent produced an “Environmental Impact Statement” for the Projects, these documents do not meet NEPA’s environmental review requirements, as they are not issued by OPIC and fail to provide sufficient detail or opportunity for public input. *See, e.g.*, 40 C.F.R. §§ 1502.15; 1502.16; 1503.1.

leatherback sea turtles; as well as threatened loggerhead and olive ridley sea turtles,<sup>41</sup> and possibly endangered dugong. In fact, green and hawksbill sea turtles have been documented nesting on Vamizi, Rongui and Macaloe islands, within and immediately south of Project area.<sup>42</sup> Endangered humpback whales calve in the area and have been sighted within Palma Bay, where the LNG facility will be located.<sup>43</sup>

Proponents of the project frankly acknowledge substantial short- and long-term impacts, including noise disturbance, habitat destruction, vessel strikes, and lighting impacts from the various aspects of the project, including offshore drilling, cutting trenches for pipelines and shipping channels, construction of the LNG facility and associated shipping terminal, and operation of the facility.<sup>44</sup> Accordingly, OPIC is required to consult with both FWS and NMFS regarding the projects' impacts on listed species.<sup>45</sup>

OPIC is required to consult, despite the project's location. While the Services' consultation regulations purport to limit Section 7's applicability to agency actions "in the United States or upon the high seas," the regulation clearly conflicts with the ESA's plain language and is therefore unlawful. 50 C.F.R. §§ 402.01(a); 402.02; *see Defenders of Wildlife v. Lujan*, 911 F.2d 117, 125 (8th Cir. 1990) (rejecting the regulation because "Congress intended for the consultation obligation to extend to all agency actions affecting endangered species, whether within the United States or abroad"), *rev'd on other grounds by Lujan v. Defenders of Wildlife*, 504 U.S. 555 (1992). Accordingly, OPIC cannot rely on the Services' regulation to avoid consultation, as Section 7 clearly applies to federal agency actions in foreign countries. Additionally, even if the Service's regulatory limitation were valid, OPIC is still required to consult regarding the project's impacts. Specifically, OPIC's deliberation and ultimate decision to fund the projects has occurred or will occur within the United States, and thus the ESA applies. *See Env'tl Def. Fund v. Massey*, 986 F.2d 528, 532 (D.C. Cir. 1993) (finding NEPA applies to agency project in Antarctica because "the decisionmaking processes of federal agencies take place almost exclusively in this country").

Further, portions of the project occur on the "high seas," triggering the Service's consultation regulation. The drilling and pipeline construction associated with the project appear to occur outside of Mozambique's 12nm territorial sea, in addition to increased international shipping and seismic activities.<sup>46</sup> 50 C.F.R. § 402.01(a). Accordingly, the ESA required OPIC to consult regarding the project's impacts.

Finally, if the project continues, Exxon, a U.S. company headquartered in Texas, is liable for "take" of ESA-listed species, which could result in substantial penalties. Specifically, Section 9 of the ESA prohibits "any person subject to the jurisdiction of the United States" from "tak[ing]

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<sup>41</sup> *Id.* ch. 7.

<sup>42</sup> *Id.* ch. 7 at 7-96.

<sup>43</sup> *Id.*

<sup>44</sup> *Id.* ch. 11.

<sup>45</sup> We note further that, during consultation, OPIC is prohibited from "mak[ing] any irreversible or irretrievable commitment of resources" toward a project that would "foreclos[e] the formulation or implementation of any reasonable and prudent alternative measures." 16 U.S.C. § 1536(d).

<sup>46</sup> Impacto & ERM, *Chapter 4: Project Description* (2014),

[https://www3.opic.gov/Environment/EIA/rovuma/ESIA/Chapter\\_4\\_LNG\\_Final\\_EIA\\_Sept\\_2014\\_Eng.pdf](https://www3.opic.gov/Environment/EIA/rovuma/ESIA/Chapter_4_LNG_Final_EIA_Sept_2014_Eng.pdf).

any [ESA-listed] species upon the high seas.” 16 U.S.C. § 1538(a)(1)(B). The term “person” includes any “corporation, partnership, trust, association, or any other private entity . . . or any other entity subject to the jurisdiction of the United States.” *Id.* § 1532(13). “Take” is defined to mean “to harass, harm, pursue, . . . wound, kill, . . . or to attempt to engage in any such conduct,” including through habitat destruction. *Id.* § 1532(19). Because portions of the project will occur on the high seas (more than 12nm offshore) and because the project will no doubt “harm,” “harass,” and even potentially “kill” ESA-listed species through noise, vessel strike, and habitat destruction, Exxon will violate the ESA. Such violations are actionable pursuant to citizen suit. *Id.* § 1540(g).

*The Project Does Not Conform with OPIC’s Environmental and Social Policy Statement and IFC Performance Standards for Biodiversity and Sustainability.*

We have serious concerns that this project does not comply with OPIC standards for biodiversity protection and mitigation. First, under OPIC’s Environmental and Social Policy Statement, OPIC must “ensure through its processes that projects receiving OPIC support: [1] Are environmentally . . . sustainable, [2] Are compatible with low and no-carbon economic development.”<sup>47</sup> It is unclear how developing a massive and carbon-polluting industrial facility in an otherwise relatively pristine environment could be deemed either “sustainable” or “low [or] no-carbon.”

Further, a project must comply with all IFC Environmental and Social Performance Standards, including particularly Performance Standard 6 regarding protection of endangered species and avoidance of critical habitat for those species. This standard establishes different requirements, depending on whether the project area is “modified,” “natural,” or “critical” habitat. It is unclear from the EIA which category the project proponents believe the area’s habitat should be considered; however, the area’s habitat is “critical” habitat.

As the Mozambique government has stated when it proposed the Quirimbas Archipelago as a World Heritage site:

the Quirimbas Archipelago is considered a key biodiversity site (seascapes) of global importance . . . From its extensive complex of reefs with high coral diversity (> 48 genera), diverse range of habitats including mangroves, seagrasses, sandy and rocky shores, the site is considered to be of outstanding universal value in terms of its terrestrial and marine biodiversity. The Quirimbas Archipelago is important feeding area for turtle, crab plovers and migratory birds. The site is also known to be important nursery area for bottlenose and humpback dolphins and whales. The Quirimbas Archipelago is clearly a significant habitat for a significant diversity of African biota.<sup>48</sup>

Another assessment produced pursuant to the Convention on Biological Diversity found the area has “the highest diversity of corals recorded” in the Western Indian Ocean (WIO), “with almost

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<sup>47</sup> OPIC, Environmental and Social Policy Statement, sec. 1.3 (Jan. 2017), [https://www.opic.gov/sites/default/files/files/final%20revised%20ESPS%2001132017\(1\).pdf](https://www.opic.gov/sites/default/files/files/final%20revised%20ESPS%2001132017(1).pdf).

<sup>48</sup> UNESCO, The Quirimbas Archipelago, <https://whc.unesco.org/en/tentativelists/5380/> (last visited Oct. 22, 2019).

300 species in 60 genera.”<sup>49</sup> The area has the “highest fish diversity in the WIO,” “notable” sea turtle nesting and foraging sites, and an “important humpback mother/calf nursing zone.” The report further concluded to area to have “high” levels of biodiversity, uniqueness and rarity, and vulnerability.<sup>50</sup>

These characteristics strongly suggest the area qualifies as “critical habitat” under IFC standards: habitat that has “high biodiversity value, including (i) habitat of significant importance to Critically Endangered and/or Endangered species; (ii) habitat of significant importance to endemic and/or restricted-range species; (iii) habitat supporting globally significant concentrations of migratory species . . . species; (iv) highly threatened and/or unique ecosystems; and/or (v) areas associated with key evolutionary processes.”<sup>51</sup>

Because the area should be deemed critical habitat, the strictest standards apply: the proponent “will not implement any project activities unless,” inter alia:” (1) there are no viable alternative locations, (2) the project will “not lead to measurable adverse impacts” on the area’s biodiversity values,” (3) the project will not cause regional-level population decline of endangered species, and (4) there a “robust” monitoring program.<sup>52</sup> This project simply does not meet these standards and must be rejected.

#### *The EIA’s Alternatives Assessment Is Flawed*

While the project considers a few different alternatives, there is no mention of the option to pursue cleaner forms of energy development.<sup>53</sup> Considering the amount of investment and infrastructure that will be required for this project, this assessment should have considered the potential impacts of investing in renewables instead and how that would better benefit the country. Investing in small renewable projects, such as small solar installations, would be able to bring real energy access to communities throughout Mozambique. Rather than investing in projects that will merely benefits other countries, investment in renewables would bring benefit to local communities in a way that they desperately need. Electricity will also improve health care access, as well as education opportunities.

In light of the concerns raised in this letter, we urge OPIC to reject financing for the Rovuma LNG project.

Sincerely,

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<sup>49</sup> The Clearing-House Mechanism of the Convention on Biological Diversity Information Submission Service (CHM), Ecologically or Biologically Significant Areas (EBSAs): Pemba Bay - Mtwara (part of the Mozambique Channel), Jun. 12, 2015, <https://chm.cbd.int/database/record?documentID=204003>.

<sup>50</sup> *Id.*

<sup>51</sup> IFC, Performance Standard 6: Biodiversity Conservation and Sustainable Management of Living Natural Resources, Jan. 1, 2012, [https://www.ifc.org/wps/wcm/connect/3baf2a6a-2bc5-4174-96c5-ee8085c455f/PS6\\_English\\_2012.pdf?MOD=AJPERES&CVID=jxNbLC0](https://www.ifc.org/wps/wcm/connect/3baf2a6a-2bc5-4174-96c5-ee8085c455f/PS6_English_2012.pdf?MOD=AJPERES&CVID=jxNbLC0).

<sup>52</sup> *Id.*

<sup>53</sup> Impacto & ERM, *Chapter 5: Consideration of Alternatives* (2014), [https://www3.opic.gov/Environment/EIA/rovuma/ESIA/Chapter\\_5\\_LNG\\_Final\\_EIA\\_Sept\\_2014\\_Eng.pdf](https://www3.opic.gov/Environment/EIA/rovuma/ESIA/Chapter_5_LNG_Final_EIA_Sept_2014_Eng.pdf).

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