Replacing FSO SAFER with the used tanker NAUTICA

"A perilous step with grave consequences"

Prepared by:

Dr. Abdul Qadir Al-Kharraz

Associate Professor of Environmental Impact Assessment College of Marine Scienceand Environment, Hodeidah University

Mr. Abdul Wahid Al-Awabli

Economic Researcher

Introduction

Since its announcement, the proposed plan to replace the Floating Storage and Offloading (FSO) vessel, SAFER, with the 15-year-old vessel, NAUTICA, has raised significant concerns regarding its viability, safety, and financial implications. The harsh environmental conditions in the Ras Isa area, coupled with the limited remaining lifespan and suitability of the alternative tanker, render this solution inadequate and questionable in addressing the potential environmental catastrophe posed by the SAFER.

Moreover, the financial constraints faced by the Yemeni government and other parties involved in the situation cast doubt on the decision-making process for allocating resources and funds. Furthermore, recent developments, including the arrival of the NAUTICA vessel at the port of AlHudaydah, the associated procedures, statements from UN agencies in Yemen, and pronouncements by Houthi militia leaders, have added to the complexity of the situation.

This report provides an analysis of the concerns surrounding the replacement of FSO SAFER with NAUTICA, with a focus on technical, financial, and strategic aspects. It also offers recommendations for a more sustainable and secure solution to tackle the challenges posed by FSO SAFER and prevent potential environmental disasters in the future.

Historical background

FSO SAFER has been a source of significant concern for Yemen and the international community due to the potential environmental disaster it poses. This concern prompted the United Nations to propose acquiring an "alternative" tanker, NAUTICA, to replace FSO SAFER. This proposal was imposed on the Yemeni government, which appeared unable to provide any viable solutions or reject the proposition, thus risking another threat by having two vessels under the control of Houthi militias.

Furthermore, this solution raises worries about its potential negative consequences and catastrophic risks, given that the NAUTICA tanker is already 15 years old, and its uncertain ability to withstand the harsh weather conditions in the Gulf region for an extended period.

In addition to that, most countries around the world prohibit ships older than 20 years from entering their ports to protect the environment and port infrastructure, which raises questions about the decision to approve the purchase of a 15-year-old vessel. The background and context of the proposed acquisition of NAUTICA highlight the need to carefully consider alternative solutions and develop a comprehensive, long-term strategy for safe storage and transportation of oil in the region.

Financial constraints

The financial constraints faced by the legitimate Yemeni government and other stakeholders involved in the multi-faceted situation of the FSO SAFER raise concerns about the decision-making process behind purchasing the NAUTICA tanker. A detailed study of these limitations is necessary to understand the potential impacts and consequences of replacing FSO SAFER with NAUTICA. These constraints are as follows:

1. Limited resources: The ongoing conflict and economic instability in the region have left the Yemeni government and other concerned parties with limited resources, making it challenging to allocate the necessary budget for the safe maintenance and operation of FSO SAFER. Despite these financial constraints, the decision to purchase a used tanker like NAUTICA and commit to covering its operational costs raises questions about how resources were allocated and what funding priorities were considered.

2. Misallocation of funds: Investing in a 15-year-old vessel like NAUTICA represents a misallocation of funds since it does not address the root cause of the problem, which is the oil stored in FSO SAFER's tanks that needs to be removed to resolve the issue. The funds allocated for purchasing and operating NAUTICA could have been better used in developing a comprehensive plan to offload the oil from SAFER and transport it to a safer location.

3. Operating costs: Committing to cover the operational expenses of the NAUTICA vessel imposes a significant financial burden on the Yemeni government and other stakeholders. These costs include maintenance, staffing, insurance, and other related expenses, further straining the already limited available resources.

4. Future financial risks: Purchasing NAUTICA, given its limited lifespan and age, brings additional financial risks in the future. As the vessel ages and deteriorates, the cost of maintenance and repairs will increase, placing even greater financial constraints on the Yemeni government and others involved.

5. Opportunity costs: The decision to invest in NAUTICA also entails opportunity costs as it diverts funds and resources away from other urgent needs and initiatives, such as humanitarian aid, infrastructure development, and economic recovery efforts.

6. Mismanagement of funds: In 2021, $12.7 million was allocated for oil offloading from the SAFER vessel through the United Nations Office for Project Services (UNOPS). Unfortunately, no progress has been made on this front, raising concerns that the

current solution may also be subject to mismanagement and misuse of funds by UN agencies.

7. Financial resources for continued maintenance: If the NAUTICA vessel remains in place and does not depart with the oil cargo, this will result in additional financial burdens in the future. Statements from the Houthi militia indicating that the NAUTICA will remain at the site signal a potential cycle of seeking funding for its maintenance, given the limited resources, some donor countries might be reluctant to provide further financial support due to concerns surrounding the handover of the vessel to the militia and its continued presence, indicating the persistence of the catastrophe.

In light of these financial constraints, it is of utmost importance for the Yemeni government, the United Nations, and other stakeholders to reassess the decision to replace FSO SAFER with NAUTICA and explore alternative solutions that address the root cause of the problem and make better use of the limited available resources.

Finding a comprehensive and long-term solution that prioritizes the safety of the environment and people in the region is crucial. Any approach that merely delays the problem and puts people's lives at risk is an inappropriate use of aid funds and unacceptable. The problem lies not with FSO SAFER itself but with the oil in its tanks. The only feasible solution is to offload FSO SAFER from crude oil and transport it elsewhere. The United Nations' proposed solution merely postpones the issue and does not resolve it.

Technical limitations

There are numerous technical constraints associated with replacing FSO SAFER with the NAUTICA vessel, which require comprehensive understanding and addressing of the challenges posed by the harsh environment of the Ras Isa region. Some of these constraints include:

1. Material limitations: The old tanker, FSO SAFER, is constructed with thick steel and has additional cathodic protection, allowing it to withstand the harsh conditions of the Ras Isa area. In contrast, modern vessels like NAUTICA have thinner steel structures and less robust cathodic protection systems. This difference in materials and protection may make it challenging for NAUTICA to endure the same environmental conditions as vessels like FSO SAFER.

2. Adaptation to local conditions: FSO SAFER underwent significant modifications, such as Single Point Mooring (SPM) systems and Side-by-Side (SBS) loading systems, to adapt to the specific conditions of the region. Additionally, its ballast tanks were modified to be

filled with crude oil instead of seawater to prevent corrosion. While NAUTICA requires similar modifications, they may be costly and challenging to implement due to limited available resources.

3. Protection and reinforcement systems: The harsh environmental conditions in the Ras Isa region, such as extreme heat, high humidity, dense sand, and saltwater, necessitate robust protection and reinforcement systems for any vessel operating in the area. While these systems can be added to NAUTICA, it remains unclear if they will be sufficient to effectively withstand the harsh conditions as FSO SAFER does.
4. Labor force limitations: The unavailability of local labor may require hiring foreign workers to operate and maintain NAUTICA, adding a financial burden on the Yemeni government and other stakeholders. This challenge may also hinder effective management and maintenance of the vessel, leading to quicker deterioration, increased risks, and a return to the same situation that FSO SAFER posed.

Given the aforementioned technical constraints, it is crucial to reevaluate the feasibility of replacing FSO SAFER with NAUTICA. The focus should be on finding a comprehensive and long-term solution that addresses the root cause of the problem, which is the oil stored in FSO SAFER's tanks. Due to the severe intentional neglect and immense damage to the Safer-Ras Isa pipeline and its associated pump stations, re-exporting from Ras Isa has become challenging. Therefore, "NAUTICA" could be utilized to assist the government in exporting oil by serving in the Al-Rodhum Port on the Arabian Sea for a period of two to three years at most. Exporting oil through Al-Rodhum Port is done via a pipeline and floating hoses, with a number of ground tanks at the port where oil is pumped from the production sites through the pipeline extending from West Ayaad sector. However, these tanks are in poor condition and require maintenance, and additional tanks need to be built.

Another alternative solution is to prioritize completing the onshore facility, which would cost significantly less than acquiring NAUTICA and would have a longer and more sustainable lifespan. Afterward, the funds saved from this approach could be allocated to address other urgent needs in the region, such as humanitarian aid, infrastructure development, and economic recovery efforts.

Additional considerations

In addition to the presented recommendations, the following considerations should be taken into account when addressing concerns related to replacing FSO SAFER with the NAUTICA

vessel, as well as the challenges of oil export through Ras Issa and the potential role of NAUTICA in assisting the government with oil export through the Ras Issa port:

1. Environmental Impact Assessment: Conduct a comprehensive environmental impact assessment to evaluate the potential consequences of implementing the proposed solution and identify alternative strategies that may be more effective in mitigating the risks associated with FSO SAFER and the NAUTICA vessel.
2. Technical Expertise: Engage Yemeni experts in the fields of marine engineering, environmental protection, and disaster risk management to provide guidance and technical support throughout the decision-making process. This will ensure that the chosen solution is based on sound technical advice and best practices.
3. Collaboration with International Organizations: Strengthen partnerships with international organizations, such as the United Nations and the International Maritime Organization (IMO), and other relevant bodies to benefit from their expertise, resources, and support in addressing the challenges posed by FSO SAFER, the NAUTICA vessel, and the situation in Ras Issa.
4. Capacity Building: Invest in capacity-building initiatives to enhance the skills and knowledge of local authorities, communities, and other stakeholders involved in the management and operation of oil storage and transportation facilities in the region. This will improve their ability to implement sustainable and safe solutions and maintain them in the future.
5. Monitoring and Evaluation: Establish a robust monitoring and evaluation system to track the progress and effectiveness of the chosen solution and identify any emerging issues or challenges that may require adjustments or modifications to the strategy.

By taking these additional considerations into account, the Yemeni government, the United Nations, and other stakeholders can address the concerns related to replacing FSO SAFER with the NAUTICA vessel more effectively, as well as the challenges of oil export through Ras Issa. They can work towards a more sustainable and secure solution that prioritizes the safety of the environment and people in the region and prevents any political or military exploitation of such issues.

Some of the imbalances that appeared in the UN plan:

Some of the imbalances that have arisen in the United Nations' plan are raising several initial questions that highlight the imbalances in addressing the FSO SAFER crisis, demanding answers from the United Nations:

1. Why is the alternative vessel NAUTICA not immediately leaving after the oil transfer, thereby resolving the problem? Is there a desire to prolong the catastrophe and empower the Houthi militia, known for violating agreements?
2. Why was the alternative vessel handed over to the Houthi militias, and what were the terms of the agreement signed on the vessel's deck?
3. As the United Nations claims transparency and good governance and works to promote and enforce it globally, why hasn't the detailed assessment of the FSO SAFER situation been made public? For example:

   a) What are the details of the emergency plan and preparations to combat any pollution that may occur during the oil discharge? Sharing such plans with experts and concerned individuals is crucial, given the global magnitude of the disaster, to reassure the public.

   b) Regarding the quantity of oil present on the FSO SAFER, is it the same as previously announced, 1,140,000 barrels, or has it changed? If there are changes, what are the reasons behind them? Does it imply that the Houthi militia might have siphoned off some of the oil or that there were unreported leaks, resulting in oil contamination? If so, what is the assessment of the marine environment and marine life, and has such an assessment been conducted? The presence of the Dutch-owned vessel on-site since April 2023 was meant for assessing and maintaining FSO SAFER.

   c) How will the existing and sedimented oil sludge in the FSO SAFER's tanks be managed, considering its high concentration of toxic elements that pose significant risks?

Addressing these questions and ensuring transparency and comprehensive evaluations are essential for the United Nations, the Yemeni government, and other stakeholders involved in tackling the FSO SAFER situation. It is crucial to prioritize the safety of the marine environment, communities, and marine life and prevent any exploitation of the crisis for political or military gain.

Conclusion

In conclusion, given that the floating FSO SAFER port is a priority in the ceasefire agreement, and with the aim of resolving the crisis and avoiding resource wastage, there are concerns

surrounding the port's current state. Holding over a million barrels of Marib's oil in its tanks poses an explosion risk due to the absence of inert gas and its location in a conflict zone, coupled with years of idleness and corrosion.

Instead of merely emptying FSO SAFER of its oil and selling the quantity on the global market – an operation that could be easily and safely carried out by several companies in the Middle East region – a replacement vessel, NAUTICA, has been acquired and prepared in dry dock. However, this vessel is not ideally suitable as an alternative floating storage unit due to its size and high operating costs. The United Nations is responsible for transferring the crude oil from FSO SAFER to NAUTICA and managing it for a maximum of 18 months, according to the memorandum of understanding signed in 2022. The goal is to sell the oil or extend the management period until the oil is disposed of. This is a lengthy period for oil discharge from the vessel, and recent developments suggest that the mooring of NAUTICA as a replacement for SAFER may be extended beyond the initially agreed period, which has political implications. This extension could be exploited by the Houthi militia, using NAUTICA as an additional bargaining chip alongside FSO SAFER.

Considering the difficulties in exporting oil through Ras Isa, even if the war were to end, due to deliberate neglect and extensive sabotage of the SAFER-Ras Isa pipeline and its associated pressure stations, NAUTICA could be employed to assist the government in oil exports. It could serve in the Port of AlRodhum on the Arabian Sea for up to two or three years, as rehabilitating the SAFER-Ras Isa pipeline may take an extended period, likely exceeding a year, and would be a costly endeavor, possibly surpassing a billion dollars. Moreover, it might not be economically viable due to the severity of the damages incurred.