

FORESIGHTS

Shaping a better maritime future

HIGHLIGHTS | AUG 2023

- The case of FSO Safer
- Roles and responsibilities of key players
- Timeline of events
- Looking to the future



FSO Safer: Stronger Together

From 2015 until last month, the Yemen-owned FSO Safer remained abandoned in the Red Sea, a casualty of the country's civil war. Deteriorating in condition, with an estimated 1.14 million barrels of crude oil on board, the vessel could have triggered a catastrophe with wide-ranging environmental, humanitarian, and economic impact.

At the end of July, a long-awaited mission led by the United Nations was finally launched. While the vessel remains moored off the coast of Yemen undergoing procedures to make it safe to depart on its final journey to a green salvage yard, the biggest dangers have been successfully averted.

This issue of Foresights aims to delve deeper into this noteworthy case and the roles and responsibilities of the various parties involved, answering key questions that have placed it in the spotlight of the world's media.

THE CASE OF FSO SAFER

How did FSO Safer end up abandoned at sea?

As its name would suggest, FSO Safer was used as a floating storage and offloading (FSO) facility. The vessel was constructed as a supertanker in 1976 and converted into an FSO in 1986, upon which it was purchased by the Yemeni government to store and export oil from the inland Marib oil field via a 24" connected pipeline on the seabed and two 12" oil hoses leading up to a turret facility at its bow.

When civil war broke out in 2015, FSO Safer fell within an area controlled by Houthi forces, which led to the vessel's eventual abandonment. Years later, FSO Safer was flagged a "ticking time bomb", with both oil production interruptions and lack of maintenance taking a toll on its structural integrity.

What would the cost of inaction have been?

FSO Safer was in danger of triggering an explosion or breaking apart, causing one of the largest tanker-related oil spills in history. Inaction had the ability to adversely impact significant tracts of ocean, coral reef and marine life, with fish stocks predicted to take more than 25 years to recover, wiping out 200,000 livelihoods dependent on the sea.

Besides lost livelihoods, an oil spill of that size would disrupt access, including the distribution of aid to a country where this is relied upon by 80% of its population, as well as major shipping lanes all the way up to the Suez Canal - which, lest we forget, cost billions in dollars and delays when it remained blocked by the Ever Given in 2021.

Why did it take so long to tackle the issue?

Despite authorities from both the government of Yemen and Houthi militants acknowledging the risks and having formally requested the United Nations' assistance with the tanker as early as 2018, a formal scope of work and memorandum of understanding (MoU) was only agreed upon in March 2022.





This followed a special meeting of the United Nations Security Council in July 2020, and marked "the culmination of nearly two years of political groundwork, fundraising and project development" according to António Guterres, Secretary-General of the United Nations.

As part of this document, two project phases were outlined, with the United Nations Development Programme (UNDP) being tasked with spearheading the operation. In total USD 121 million was raised from 23 member states, the European Union, the private sector, and through public crowdfunding, with USD 20 million still needed to close out the cost of the operation.



Representatives needed to await approval to inspect the vessel prior to confirming how best to approach the situation and maximise the likelihood of success. Authorities had initially blocked access, with documentation largely filed on board the tanker itself meaning that available data was limited.

Who were the key players that partnered to make this operation a success?

UNITED NATIONS	SMIT SALVAGE (SUBSIDIARY OF BOSKALIS)	EURONAV	ANGLO-EASTERN
			
ROLE Project lead	ROLE Salvage experts	ROLE <ul style="list-style-type: none"> Owner of Nautica Ship manager upon name change to Yemen 	ROLE <ul style="list-style-type: none"> Ship manager of Nautica Technical ship manager upon name change to Yemen
KEY RESPONSIBILITIES <ul style="list-style-type: none"> Overall project oversight and implementation Coordination and communication efforts 	KEY RESPONSIBILITIES Overall responsibility for oil removal from FSO Safer to the appointed temporary vessel, including: <ul style="list-style-type: none"> Inspecting and assessing onboard conditions of the entire vessel, in particular cargo equipment Overhauling the required valves and tank cleaning machines, and conducting integrity checks of the tanks Inspecting the ballast tanks and UT gauging of the external hull, upper deck and various compartments, with particular attention to the area where fenders are located Devising a plan for mooring, unmooring, emergency cast-off, firefighting, and spill containment Placing and installing salvage equipment on board 	KEY RESPONSIBILITIES <ul style="list-style-type: none"> Sale of Nautica to the UNDP Retrofitting Nautica for necessary modifications and maintenance Assisting with oil transfer and vessel operations during the transition period 	KEY RESPONSIBILITIES <ul style="list-style-type: none"> Ensuring technical specifications and requirements requested by Euronav and Boskalis are delivered based on our expertise Managing, training, and deploying the crew aboard Nautica (renamed Yemen) Working as part of the project team to remove oil from FSO Safer Managing the handover and training requirements of Yemen to the vessel's new local crew



Anglo-Eastern crew of Nautica/Yemen

LEAD-UP TO OPERATION



Operations aboard FSO Safer are suspended amidst the Yemen civil war, with the eight-year conflict persisting to the present day.

2015

2018

Government of Yemen and Houthi militants formally request UN assistance with FSO Safer, which remains moored in Houthi-claimed territory.

FSO Safer springs a leak in the engine room on May 27th, but official approval to commence salvage operations still not granted by Houthi militants. Greenpeace issues a letter to the UN to make the situation its top priority.

May 2020

15 Jul 2020

A special Security Council meeting dedicated to FSO Safer is held. UN steps in to organise a pre-emptive salvage operation.



Divers from Safer corporation contain the leak with a temporary fix requiring 28 hours of underwater work over five days.

UN estimates the mission team can arrive on site by mid-February, depending on equipment, staff, shipping time, transit weather conditions, and funding availability.

Dec 2020

5 Mar 2022



Memorandum of understanding concluded between relevant parties. UNDP tasked with implementing the agreed two-phase project and the search for a suitable replacement vessel commences.

Sana'a-based authorities, who control the area where the vessel is located, sign a memorandum of understanding with the UN.

Anglo-Eastern officially signs the contract that involves it in the project. Nautica team notified of their involvement in a ship-to-ship (STS) project and conversion of the vessel into a moored oil storage tanker.

Jan 2023

Mar 2023

Routine dry-docking and modifications performed on Nautica in China, including the installation of an emergency towing appliance (ETA) with a quick release system, reverse osmosis plant, new electrical heaters in the engine room for both fuel and lube oil, and a CCTV system.



Nautica completes its third special survey and sails out of Yulian Shipyard.

6 Apr 2023

Purchase agreement signed, confirming Euronav's sale of Nautica to the UN on 9 March 2023, alongside its role in the salvage operation. Hugo De Stoop, CEO of Euronav, states that "the company is proud to be a part of the effort and committed to providing the necessary expertise with its operational staff to support the salvage procedure".

Nautica calls on Singapore to pick up STS equipment, load up on provisions and stores, and perform a full crew change by Anglo-Eastern. The vessel proceeds to Djibouti, where it remains while waiting for arrangements on FSO Safer to be completed.

Apr-May 2023

PHASE 1

Ndeavor arrives at the FSO Safer site with the SMIT Salvage team to inspect the vessel and its cargo. Measures are taken to ensure a safe working environment, with preparations started ahead of the STS operations.

30 May
- 2 Jun
2023

UNDP announces it has successfully obtained insurance coverage for the salvage operation.

12 Jun

Nautica drops anchor off the Ras Isa peninsula and is officially renamed MT Yemen, as the UN takes official ownership of the vessel.

17 Jul

Euronav retains its role as ship manager, with Anglo-Eastern as the subcontracted technical manager.

The UNDP coordinator comes on board to liaise between the various parties involved in the operation and guide the master on day-to-day activities. Security guards also remain on board with a few local officials.



Oil transfer pipes are connected between Yemen and FSO Safer, with hydraulic pumps installed to transfer oil. Pumping commences at 10:45 a.m. local time.

25 Jul

9 Jun

Ndeavor berths alongside FSO Safer.



27 Jun

Inspections and oil transfer preparations are almost completed, including the inspection and reinstatement of equipment on board FSO Safer, plus underwater inspections of the hull by a team of divers.



23 Jul

Yemen is moored alongside FSO Safer with support from two SMIT Lamnalco tugs (SL Aden and SL Manakin); oil screens are installed as a precaution.



Ndeavor remains alongside Safer on port side to keep the heading direction of Safer in position during mooring operations.

11 Aug
2023

Boskalis announces that SMIT Salvage has removed all oil from FSO Safer after 2.5 weeks, amounting to over 1.1 million barrels.

PHASE 2

Ongoing

Cleaning of FSO Safer tanks (approximately 1-3 weeks) by SMIT Salvage via a mobile spray tank cleaning machine to remove the thick layer of oil adhering to the insides.

Transport of FSO Safer to a green salvage yard for dismantling, recycling, and responsible disposal. Yard to be confirmed.

Replacement of the existing FSO Safer arrangement with the installation of a catenary anchor leg mooring (CALM) buoy to which Yemen will be securely connected. Yemen is expected to be attached to the pipeline by September.

Training of new handlers as part of the transfer process.

Discussions on the sale of the oil.





What were some of the procedures put in place to contain pollution?

Besides placing a containment boom around the vessels, Ndeavor and other vessels are equipped with various pollution prevention equipment. An aerial dispersant aircraft (OSRL 727) was brought to Djibouti and kept on standby in case of emergency. A Yemeni national contingency plan was also developed for this operation.

What is the current status of the salvage operation and what are the next steps?

On 11 August 2023, Peter Berdowski, CEO of Boskalis, confirmed that the oil from FSO Safer had been removed and transferred to Yemen, thereby "successfully executing this complex operation on behalf of the United Nations" and "averting a potential environmental disaster of unprecedented proportions".

The UN Resident and Humanitarian Coordinator for Yemen, David Gressly, also remarked on this milestone with the issuance of a statement: "A remarkable global coalition came together under the UN umbrella to prevent the worst-case scenario of a catastrophic oil spill in the Red Sea. We need to finish the work the UN started. The installation of a CALM buoy to which the replacement vessel will be safely tethered is the next crucial step."

As mentioned in the above timeline, Phase 2 is still in progress and there are still a series of items

that need to be completed before the operation can be marked a full success.

Anglo-Eastern's crew will also remain on hand to enable the safe transfer of Yemen to its new owner and Yemini crew. We will continue to carry out operations until the threat from FSO Safer is mitigated and Safer undertakes its last journey to a green salvage yard. Yemen will then be moved to a different location where it will be moored for STS operations under the technical and crew management of the vessel's new owners.

Final remarks

Like the rest of the world, we are awaiting news from the team on the ground and the UN coordinators' next steps. The operations continue to progress well, and we look forward to being able to see this project through to its successful conclusion.

Once again, we would like to acknowledge the partnership and guidance across the project team. From the United Nations to Boskalis and Euronav, as well as our own experts, the parties and individuals involved have managed this case with the priority and respect required in an incredibly challenging, time-sensitive situation.

People come together in aid, and we hope to build on these efforts as we continue to shape a better maritime future, together.

"This effort fully embodies what we are capable of when we collaborate and critically examine how to approach a wide range of potential scenarios across overlapping, yet differing areas of expertise.

Furthermore, it reiterates the critical role our industry plays in minimising harm to our oceans - in special cases, but also as part of our day-to-day, where safety and sustainability measures are prioritised to prevent these types of event from occurring altogether.

I would like to congratulate all involved in this project on the success of the initial phase and thank them for the hard work that has been put in by the United Nations, Boskalis, Euronav, and Anglo-Eastern."

Bjorn Hojgaard
CEO, Anglo-Eastern

LEARN MORE

If you would like to learn more about this or other topics and explore how Anglo-Eastern can partner with you, email us at foresights@angloeastern.com

Photo credit: All drone, FSO Safer and Ndeavor photos courtesy of Boskalis

