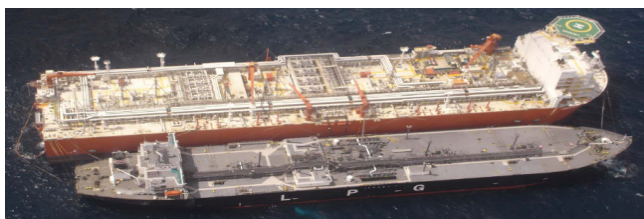


Operational feedback for design, engineering and nautical training

Offloading Operations; monitoring turret moored FPSO

Background

The Offloading Operability JIP provided significant insight into offloading operations through model tests and numerical simulations. Software tool SHUTTLE was developed. This tool enables the simulation of the offloading behaviour of hawser-moored shuttle tankers and their approach to FPSO or offloading buoy. SHUTTLE is extensively being applied to study tandem and side-by-side offloading scenarios on existing platforms and new developments. Workability criteria are key parameters in this type of analysis. In reality operational offloading procedures are not only based on the design/engineering and nautical training but also take the actual operational experiences on site in the first two years of operation. It is important to monitor the actual operations to quantify the actual workability criteria and to provide feedback to design as well as to nautical training simulators.



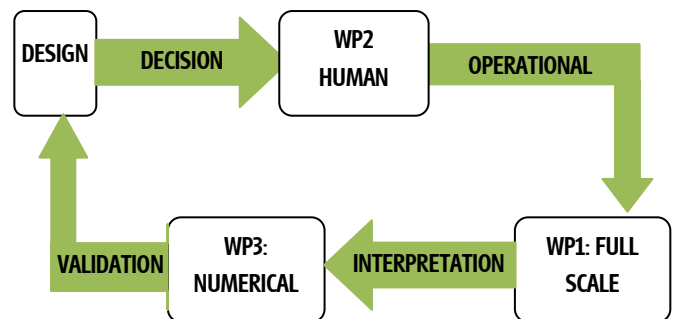
Objective

This project aims to increase safety of offloading operations and help designers maximise terminal availability, through analysis of full-scale measurements and study of operational experience and human factors

Scope of Work

The work which will be conducted in this JIP comprise the following work packages:

1. Full-scale monitoring campaign
2. Operational experience
3. Verification of numerical tools



Monitoring Campaign

Extensive full-scale measurements will be conducted on board the Liberdade FSO located in Timor Sea and/or the Sanha FSO operating in the Congo River Estuary West Africa. The measurements comprise:

FSO	Motions & heading
	Line & fender loads
	Thrusters power and angle
	Wave elevation between vessels
Tanker	Approach track, heading & speed
	Tug positions & line loads
	Motions & gap while berthed
Environment	3D Wave, Wind and Current conditions



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