



PROJECT SHEET

GULHIFALHU PHASE 2

DREDGING, RECLAMATION AND REVETMENT WORKS

BOSKALIS

Boskalis is a leading global marine contractor and services provider. With safety as our core value, we offer a wide variety of specialist activities to the oil & gas and renewables sectors. These activities include marine installation and decommissioning, seabed intervention, marine transport and services, subsea services and marine survey. In addition, Boskalis is a global dredging contractor, provides towage and terminal services across the globe and delivers marine salvage solutions.

By understanding what drives our clients we are able to provide the solutions that enable them to meet their specific business goals. For this reason we are constantly looking for new ways to broaden and optimize our offering and are committed to expanding our proposition, supported by our financial strength. With our committed professionals in engineering, project management and operations, 500 specialized vessels and an unprecedented breadth of activities in 90 countries across six continents we help our clients push boundaries and create new horizons.

INTRODUCTION

The Gulhifalhu project, located approximately 2.5 kilometers from the capital Malé, is part of a strategic plan by the Government of the Republic of Maldives to create land for residential purposes and provide climate-adaptive solutions to combat rising sea levels. This project concerns the second phase of the expansion of the island of Gulhifalhu, for which Boskalis also executed the first phase in 2019 - 2020.

The contract for the second phase of the island expansion was awarded to Boskalis in 2021, to reclaim new land using approximately 18 million cubic meters of sand. Boskalis' activities also included rock revetment work for shoreline protection. After a preparation phase to complete an Environmental and Social Impact Assessment (ESIA) to secure international project financing, construction commenced in early 2023 and was completed at the end of 2024.

FEATURES

Client	Government of the Republic of Maldives, represented by the Ministry of Construction and Infrastructure
Location	Gulhifalhu Lagoon, North Malé Atoll, Republic of the Maldives
Period	2023 - 2024
Contractor	Boskalis Westminster Contracting Limited



A

A Gulhifalhu south east corner

B Revetment installation

During the construction phase, Boskalis undertook the dredging and reclamation scope, the supply of rock for the revetment construction, as well as environmental monitoring activities. The construction of a containment bund and the installation of the rock revetment were subcontracted.

INTERNATIONAL ENVIRONMENTAL & SOCIAL STANDARDS

As the project was financed by international lending banks, the project needed to comply with the International Finance Cooperation (IFC) Environmental and Social (E&S) Performance Standards and Equator Principles 4 - the highest benchmark of industry E&S standards.

An ESIA process to meet these standards and as a prerequisite to secure project financing started in 2021. Boskalis managed the preparation of an ESIA on behalf of the Client, and worked closely with the Client during the lenders' E&S due diligence phase to secure the loan arrangement for the Client.

During project execution, Boskalis continued to provide support to the Client including capacity building on E&S issues and requirements to ensure the project complied with the standards. Several audits were undertaken during construction by independent E&S consultants appointed by the lenders, who commented positively on Boskalis' role in developing a robust E&S management system for the project.



B



DREDGING AND RECLAMATION WORKS

Works began in February 2023 with the construction of a 2.2 km long containment bund to the south of the reclamation site which was established to minimize impacts of turbidity and sedimentation on the Hans Hass Place protected area located immediately to the south of the site. The dredging and reclamation campaign started in June 2023 and was concluded in April 2024. Boskalis deployed the trailing suction hopper dredgers (TSHDs) Oranje, Willem van Oranje, Prins Der Nederlanden and Queen of the Netherlands at various stages to undertake the dredging and transportation of sand from the marine borrow areas to the project site. The sand discharged by the TSHD's was pumped via floating and land based pipelines to the reclamation area.

Revetment works along the 2.7 km southern shoreline began in April 2024 and were completed in October 2024. For the construction of the rock revetments close to 100,000 tons of filter and armour rock and 45,000 m² of geotextile were used. The rock was procured and transported from the UAE. For the installation of the revetment special long reach excavators were used, equipped with a crane monitoring system to enhance the accuracy of the works.



One of the main objectives achieved was executing the project efficiently whilst adhering to the high E&S standards.



ENVIRONMENTAL AND SOCIAL MANAGEMENT

As part of its own CSR initiative, Boskalis voluntarily relocated 8 pyramids and 5,500 massive coral colonies from Gulhifalhu lagoon to other coral nurseries in the Maldives prior to the start of dredging works. This formed part of the wider project biodiversity offset scheme, with Boskalis acting as an advisor to the Client who was responsible for implementation. Boskalis also removed more than 50 m³ of waste as part of regular beach clean-up initiatives.

Through a project specific Environmental Management and Monitoring Program, Boskalis was able to control and mitigate the environmental risks. Great effort was made to prevent and anticipate on potential exceedance of environmental limits. Predefined triggers were put in place in order to respond before any impact occurred. Boskalis had controls in place to adapt or temporarily cease dredging activities in the event of coral spawning or coral bleaching periods. One of the main challenges encountered was that the project was one of several ongoing in the area at the time, so Boskalis had to be even more vigilant to adapt activities to avoid the risk of cumulative environmental impacts from occurring.

Boskalis supported the Client's ongoing stakeholder engagement program through developing and helping to maintain the dedicated project website, issuing regular project updates to keep stakeholders informed about activities, attending stakeholder meetings, setting up participatory environmental monitoring, and participating in the project feedback and grievance committee.

NO INJURIES AND NO ACCIDENTS

The complexities of working in a dynamic environment with various nationalities, differing cultures and the strong influence of local stakeholders provided significant initial challenges to create the desired safety culture on the project.

With commitment to its NINA (No injuries, no accidents) safety program, Boskalis successfully achieved over 420,000 manhours without a single lost time injury and positively impacted the safety consciousness of the local vendors and suppliers used on the project.

