South Africa Saldanha Bay mussels - rope grown

Overview

FIP Description

Fish for Good is a Pathway Project funded by the Dutch Postcode Lottery, facilitated by the Marine Stewardship Council (MSC) and with WWF South Africa (WWF-SA) as the implementing partner in the project. The Fish for Good Project aims are to contribute to the building of fisheries sustainability infrastructure in South Africa, Indonesia, and Mexico to improve environmental sustainability and bring about socio-economic benefits for fishing communities.

The project uses the Pathway Project model which involves a country-specific analysis of fisheries as a way of introducing the MSC programme to small-scale fisheries, coastal fishers, and other types of hard-to-engage fisheries. The MSC has shown that its fishery certification and the eco-labelling programme can drive improvements amongst fisheries leading to healthier oceans by leveraging market incentives on offer by the MSC programme.

So far in South Africa, the Fish for Good Project has mapped 15 fisheries, conducted nine pre-assessments and selected five fisheries to go for the development of action plans and implementation through Fishery Improvement Projects (FIP). One of the fisheries chosen for the FIP stage is the Saldanha Bay Rope Grown Mussels fishery.

Mussel farming in South Africa is principally situated in Saldanha Bay in the Western Cape where raft culture techniques have been established since 1985. The species cultured are the non-native Mediterranean mussel (Mytilus galloprovincialis) and the indigenous black mussel (Choromytilus meridionalis). The mussel sub-sector is the highest contributor to aquaculture production in South Africa. There are currently 26 mussel operations active in Saldanha Bay engaged in mussel aquaculture.

Saldanha Bay is a prime existing site for aquaculture due to the sheltered conditions and high primary productivity. South Africa’s rocky coastline, particularly in the Western Cape province, is devoid of sheltered bays and therefore Saldanha Bay holds high importance for aquatic development along with other industries. Saldanha Bay is one of nine new Aquaculture Development Zones (ADZ) identified by the South African Government through the Operation Phakisa Blue Economy initiative, with the specific purpose of exclusive use of bay areas for aquaculture and development of a sustainable aquaculture industry.

The MSC define rope-grown cultures as Catch and Growth (CAG) fisheries, in which fishery production systems involve wild harvest followed by a grown-out phase. Rope grown mussel farming in Saldanha Bay utilise stock collected from the wild spat-fall on seed rope. The settled spat is relayed onto grown on ropes suspended from longlines on the same lease plots for on-growing approximately 4-6 weeks after settlement. After approximately 12 months, the mussels are harvested with smaller individuals resocked and relayed for further on-growing. The type of rope grown system (raft/longline), method of harvest (vessel configuration), and location of the lease vary between operators.

The two longline systems for bivalve culture, comprising surface ropes with floats which are moored at each end to fix the lines in position. The production ropes for mussels are then suspended from the surface rope. In the continuous longline system, the drop rope is continuous and hung in loops running the length of the surface line, while in the dropper longline system each drop rope is a separate line. Currently, the continuous longline is only used in North Outer Bay at Saldanha Bay. Longlines are robust and can be used in depths up to 100 m, though in this fishery the maximum depth is ~20 m with 8 m lines. The currently recommended spacing from government reports is 10 m between longlines and 40 m between lease areas.

Rafts for bivalve culture consist of a floating top structure from which mussel ropes are suspended. The raft system is anchored to the bottom via concrete blocks as per the longline system. A raft provides a stable surface structure for the initial processing of mussels and reduces dependence on larger support vessels for harvesting and processing. The government recommended density is one raft per hectare, which equates to 20 to 30 tonnes of marketable mussels per ha.

All three methods are similar enough for them to be considered as single fishery methods under the MSC program.

The aim of the Saldanha Bay Rope Grown Mussel FIP is to obtain an unconditional pass against the MSC Fisheries Standard. The Rope grown Mussel sector is aiming to pursue MSC certification after completing the FIP.

How is this FIP Doing?

Current Status:

Actions Progress This shows the proportion of actions in the workplan that the FIP has completed.

Actions Overview This shows the proportion of actions that are behind schedule, on track,completed, or not yet started.

Behind	On Track	Complete	Future
50%	0%	50%	0%

FIP Progress Rating

D - Some Past Progress

FIP Objective(s)

This FIP seeks to achieve the following objectives:

• Develop an endangered, threatened and protected species (ETP) management strategy for all active bivalve production sites in the Saldanha Bay Aquaculture Development Zone (ADZ) by drafting Environmental Management Programmes (EMP) for existing farms in historical sites in Small Bay by December 2024. This is to be coupled with the development of detailed ETP mitigation procedures and reporting on environmental impacts annually which will also be included in the ETP management strategy.

• Produce baseline and monitoring information on potential risks and ETP species susceptibility and thereby ensuring that data is collected, analysed and shared at the site level by December 2024. This will be accompanied by the setting up of training materials, sightings report forms, a site-level training plan and the training of all site managers/staff on ETP sightings and reporting procedures. Moreover, the Environmental Control Officer (ECO) reports will also be used to publish an annual summary analysis of quantitative information on ETP species interactions.

• Baseline and monitoring information on the potential risks on the benthic habitat will be collected, analysed and shared at the site level by completing all surveys and sampling as well as generating summary reports which will be included in Aquaculture yearbook by June 2022 - **Completed.**

• Devise a biofouling management (disposal) strategy aimed at minimising potential ecosystem impacts, enabling the subsequent regular monitoring of biofouling cleaning events and the development of a water column box model to estimate biofouling-linked oxygen deficit by December 2025.

• Strengthen ADZ-specific management system by generating awareness material, conducting roadshows, completing a desktop review on compliance with EMP and generate reports to be included in Aquaculture yearbook by June 2022 - **Completed**.

• Demonstrate monitoring, control and surveillance (MCS) system effectiveness by developing a compliance strategy and producing compliance reports annually by June 2022 - **Completed**.

• Achieve an unconditional pass against the MSC standard by December 2025

FIP Type

Comprehensive

FIP Stage

Stage 4: Improvements in Fishing Practices or Fishery Management

Start and Projected End Dates
July, 2020 -
December, 2024

Species

Common Name
Black Mussels
Scientific Name
Choromytilus meridionalis

Common Name
Mediterranean Mussels
Scientific Name
Mytilus galloprovincialis
Buying Guide Link Image

Mediterranean Mussels
Buying Guide

Gear Type
Rope Grown

Location

FAO Major Fishing Area
Area 47 (Atlantic, Southeast)

Exclusive Economic Zones

Country
South Africa

Geographic Scope
Saldanha Bay, Western Cape Province

Country Flag of Vessel

South Africa

Estimated Total FIP Landings
2357 metric tons

FIP Leads

Organization Name
WWF South Africa

Organization Type
NGO

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