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Department:
Forestry, Fisheries and the Environment
REPUBLIC OF SOUTH AFRICA

SALDANHA BAY AQUACULTURE DEVELOPMENT ZONE (ADZ)

ENVIRONMENTAL CONTROL OFFICER (ECO)

MONTHLY SUMMARY REPORT 11



February 2023



SALDANHA BAY AQUACULTURE DEVELOPMENT ZONE (ADZ) ENVIRONMENTAL CONTROL OFFICER (ECO) MONTHLY SUMMARY REPORT 11

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Report prepared for:

Department of Forestry, Fisheries, and the Environment
Branch: Fisheries Management



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LIST OF ABBREVIATIONS

ADZ	Aquaculture Development Zone
AMC	Aquaculture Management Committee
Anchor	Anchor Research & Monitoring (Pty) Ltd
BB	Big Bay
BOM	Blue Ocean Mussels
BSASA	Bivalve Association of South Africa
C	Compliant
CF	Consultative Forum
DFFE	Department of Forestry Fisheries and the Environment
EA	Environmental Authorization
ECO	Environmental Control Officer
EIA	Environmental Impact Assessment
EMP	Environmental Management Plan (for individual farms)
EMPr	Environmental Management Programme
ETP	Endangered, Threatened and Protected species
FMR	Farm Monitoring Report
FSO	Food Safety Office
IR	Incident Report
LST	Lipophilic Shellfish Toxin
MLRF	Marine Living Resources Fund
NC	Non-compliant
OBN	Outer Bay North
OBS	Outer Bay South
PC	Partial Compliance
SAMSA	South African Maritime Safety Authority
SASH	South Atlantic Seafoods Holdings (Pty) Ltd
SB	Small Bay
SBIDZ	Saldanha Bay Industrial Development Zone
SBM	Saldanha Bay Municipality
SBOC	Saldanha Bay Oyster Company
SBWQFT	Saldanha Bay Water Quality Forum Trust
TNPA	Transnet Ports Authority
NRCP	National Residue Control Programme

PROJECT TEAM

Details of the Environmental Control Officer

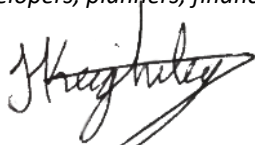
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Details of the Independence in terms of Chapter 5 of the National Environmental Management Act of 1998)

Box 1: Declaration of Independence of Environmental Control Officer

I, Jenna May Keightley hereby declare that I have no conflicts of interest related to the work of this report. Specifically, I declare that I have no personal financial interests in the property and/or development being assessed in this report, and that I have no personal or financial connections to the relevant property owners, developers, planners, financiers or consultants of the development.



24 February 2023

Box 2: Declaration of Independence of Reviewer

I, Amy Grace Wright, hereby declare that I have no conflicts of interest related to the work of this report. Specifically, I declare that I have no personal financial interests in the property and/or development being assessed in this report, and that I have no personal or financial connections to the relevant property owners, developers, planners, financiers or consultants of the development.



27 February 2023

Compliance with Regulation 34 of the EIA Regulations, 2014 (as amended)

The National Environmental Management Act (NEMA, Act 107 of 1998) provides for co-operative environmental governance of South Africa. As promulgated under NEMA (sections 24(5) and 44), the Environmental Impact Assessment (EIA) Regulations, 2014 (as amended) are the key regulatory instrument to manage and mitigate environmental impacts caused by any activities or new developments with the potential to affect the environment. Anchor Research and Monitoring carries out audits in terms of Regulation 34 of the EIA Regulations (as amended) and the following should be noted:

- Anchor Research and Monitoring (Anchor) follows the prescribed format for audit reports listed under Regulation 34 of the amended EIA Regulations (Table 1).
- Anchor will report on compliance achieved and adequacy of the Environmental Management Programme (EMPr).
- Anchor does not assume the responsibility of ensuring compliance to all other prescriptions listed under Regulation 34 of the EIA Regulations (such as seeking amendment to the EMPr or associated licences/permits). Ensuring compliance is the obligation of the proponent.

Table 1. Legal requirements for Audit Reports per Regulation 34 of the EIA Regulations, 2014 (as amended).

Content of an Environmental Audit report	Section of this report
Details and expertise of independent ECO and author of this audit report.	Project Team
Declaration that the independent auditor is independent.	Project Team
Scope and the purpose of environmental audit report.	Section 1
Methodology adopted in preparing the environmental audit report.	Section 3.1
Evaluation of the ability of the EMPr to sufficiently:	
1. provide for continued avoidance, management, and mitigation of environmental impacts and at closure.	Section 7.1
2. Ensure compliance with EA, EMPr and if applicable, closure plan.	
Description of any assumptions, uncertainties or gaps in knowledge.	Section 1.2

1 INTRODUCTION

1.1 Purpose of this report

This Environmental Control Officer (ECO) summary report provides feedback on Saldanha Bay Aquaculture Development Zone (ADZ) compliance with the Environmental Authorisation (EA) and approved Environmental Management Programme (EMPr). This summary report is distributed to Operators, members of the Consultative Forum (CF), members of the ADZ Management Committee (AMC) and the Department of Forestry, Fisheries, and the Environment (DFFE): Compliance Monitoring Directorate. The two primary purposes of this report include:

- Ensuring stakeholders are updated on ADZ activities; and,
- Highlighting areas for improvement in ADZ activities to allow for adaptive management.

This document is intended to highlight significant issues and summarised monthly audits of the ADZ and individual farms (this report is for the February 2023 audit period). The summaries are drawn from the monthly ECO compliance and site inspection reports which are issued to the AMC and individual farms. The monthly ECO compliance and site inspection reports are retained by the DFFE, ECO and AMC for reference as they contain proprietary information.

1.2 Assumptions and limitations of the audit

The audit findings are based on information relayed in documentation, during interviews as well as the observations made during physical site inspections, at a specific point in time. Although the site inspection can reveal evidence of activities carried out during the month for which the audit covers, it cannot fully show the auditor what activities have been carried out on site. The auditor, therefore, must rely on observations made on the day of the audit as well as the information provided by the Operators, proponent, and other relevant stakeholders in order to make conclusions about compliance during the preceding month.

It should be noted that the role of the ADZ ECO is to independently monitor compliance, to implement the Audit Standard, as well as to provide input and guidance to the DFFE Project Management Team on a strategic level. Due to the independent nature of the ADZ ECO role, the ECO appointment is not to enforce compliance but to monitor. Compliance with the provisions contained in the EMPr, EA, Permit or any condition imposed by the environmental approvals shall become the responsibility of DFFE. The following Branches and Directorates of DFFE are considered responsible for compliance for this project including DFFE: Chief Directorate Aquaculture and Economic Development, DFFE: Regulatory Compliance and Sector Monitoring under Chief Directorate Sector Compliance, and Chief Directorate Sector Enforcement.

2 THE SALDANHA BAY AQUACULTURE DEVELOPMENT ZONE

2.1 Introduction and background

Mussel farming has occurred in Saldanha Bay since 1981 and was subsequently followed by oyster farming in the early 2000s. In order to conduct aquaculture activities, potential aquaculture farmers must conduct an Environmental Impact Assessment (EIA) and obtain an Environmental Authorisation (EA) from the Department of Forestry, Fisheries and the Environment (DFFE). As this process can be arduous and costly it presents a barrier to entry to the aquaculture industry. To facilitate investment and development of additional aquaculture in the Bay, the then Department of Agriculture, Forestry and Fisheries (DAFF)¹ proposed the establishment of a sea-based Aquaculture Development Zone (ADZ) in Saldanha Bay.

The Branch Fisheries Management (formally DAFF now DFFE) conducted and EIA and obtained an EA for the ADZ in Saldanha Bay on 8 January 2018, which (after appeals) was upheld on 7 June 2018. The DFFE: Fisheries Management must appoint an independent Environmental Control Officer (ECO) during the construction and operational phases of the ADZ, in terms of condition 29 of the EA and condition 1 of Table 4-2 of the EMPr (see Table 2 for ADZ ECO appointments to date). The role of the ADZ ECO is to monitor compliance with stipulations in the EA and EMPr for the construction and operational phases of the ADZ.

Table 2. ADZ ECO appointments to date.

Company name	ECO	Period
Ecosense CC	Errol Cerff	September 2018 to August 2019
SRK Consulting (South Africa) (Pty) Ltd.	Kelly Armstrong	September 2019 to February 2020
Errol Cerff	Errol Cerff	March 2020 to September 2020
Errol Cerff	Errol Cerff	October 2020 to September 2021
Errol Cerff	Errol Cerff	October 2021 to March 2022
Anchor Research & Monitoring (ARM)	Jen Keightley	April 2022 to March 2025

The EA and EMPr have undergone several amendments since the inception of the ADZ, which have been incorporated into the ECO audit scope. The audit scope includes the original EA and its amendments and the most recent amendment of the EMPr. The original EA was issued on 8 January 2018 and amendments to the EA were issued on 10 July 2019 and 14 September 2020 (DEA ref. 14/12/16/3/3/1/1728, 14/12/16/3/3/1/1728/AM1 and 14/12/16/3/3/1/1728/AM2, respectively). The original approved EMPr is dated August 2017 and has been amended three times in May 2020, June 2021, and June 2022.

¹ Following a Ministry reshuffle in mid-2019, Fisheries and Forestry has merged with The Branch Environment under the Ministry of Forestry, Fisheries, and the Environment (DFFE).

The Marine Living Resources Fund (MLRF)² under the auspices of DFFE: Fisheries Management has appointed Anchor Research & Monitoring (Pty) Ltd (Anchor) as ADZ ECO for the Saldanha Bay ADZ for a period of three (3) years. This document is intended to highlight significant issues only and summarised monthly audits of the ADZ and individual farms.

2.2 Site and project description

Saldanha Bay is located on the West Coast, approximately 120 km north of Cape Town and supports many economic activities. The Port of Saldanha is South Africa's premier iron ore export port and supports a number of industrial operations in the area. An aquaculture industry predominantly reliant on bivalves was established in Saldanha Bay prior to the establishment of the ADZ. Saldanha Bay is considered an historically important area for fishing activity and multiple fish processing plants are located therein. It is also a tourist destination and caters to various water-based tourism.

When the ADZ was originally proposed the Basic Assessment identified issues of concern including changes to the water quality, visual landscape, and productivity of the Saldanha Bay and Langebaan Lagoon environments. Measures to mitigate such impacts were detailed in the Environmental Management Programme (EMPr) and were made mandatory in the Environmental Authorisation (EA). A phased approach to production was adopted to monitor the impacts of expanding aquaculture before production levels were increased. The phased approach also allowed time to determine whether the mitigation measures had the desired effect of limiting impacts and only if mitigation measures proved effective could production be increased.

The Saldanha Bay ADZ comprises 4 precincts, namely Small Bay (SB), Big Bay (BB), Outer Bay North (OBN), and Outer Bay South (OBS) (Figure 1). The BA Report summarised the scope for expansion in the ADZ and comprised a mix of finfish and bivalve farms (Table 3). Details of each existing lease are depicted in Figure 2 and Figure 3. Note that there are two lease areas in OBN that are unallocated and have been advertised for lease applications by Transnet Ports Authority (TNPA).

Table 3. ADZ precincts in Saldanha Bay and area suitable for cultivation.

Precinct	ADZ Area (ha)	Area suitable for bivalve cultivation (ha)	Area suitable for fish and bivalve cultivation (ha)
Small Bay (SB)	163	163	-
Big Bay (BB)	409	367	42
Outer Bay North (OBN)	216	76	140
Outer Bay South (OBS)	96	-	96
Total	884	606	278

² Schedule 3A Public Entity established in terms of the Public Finance Management Act, 1999 (Act No 1 Of 1999).

Sea-based activities associated with aquaculture in the ADZ include:

- Servicing and maintenance of aquaculture structures (such as rafts, lines, cages).
- Harvesting of cultivated species.
- Initial processing of bivalves, including de-clumping and grading, typically on the raft or support vessel.
- Vessel trips between the shore and aquaculture areas.

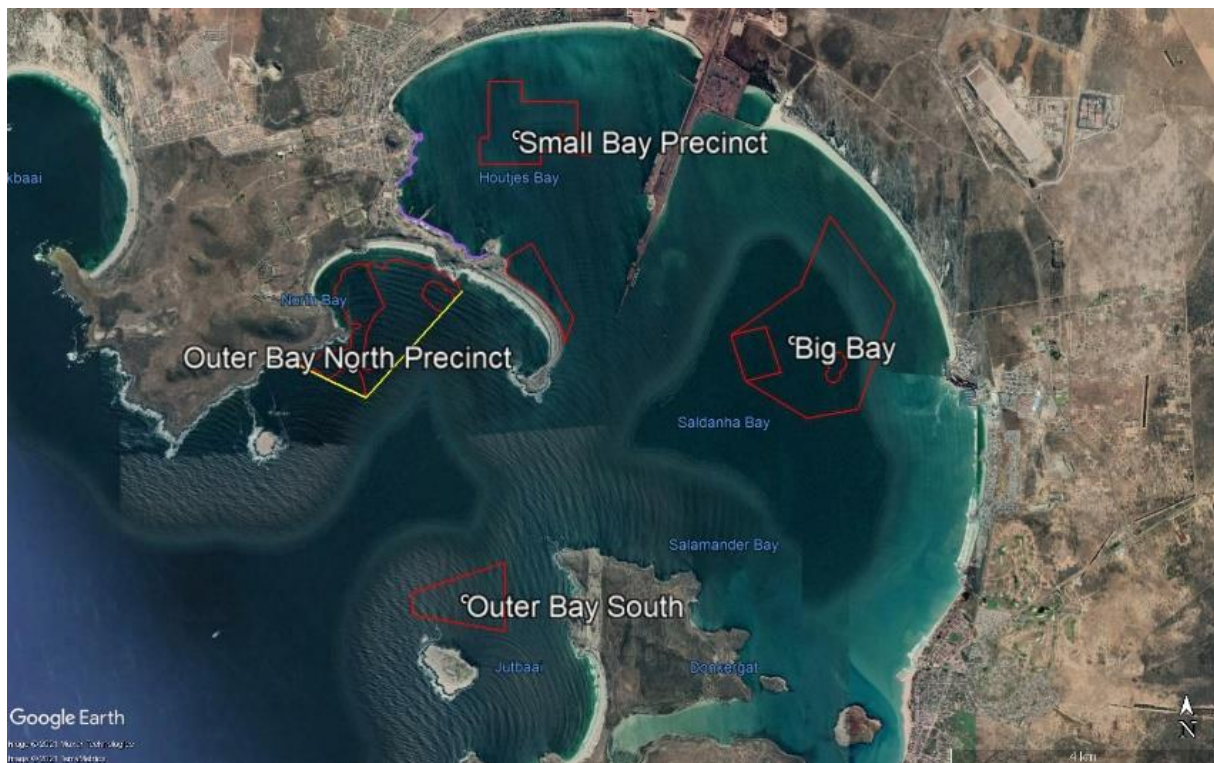


Figure 1. Saldanha Bay ADZ precincts.



Figure 2. (Left) Bivalve culture in SB and (right) mixed bivalve and finfish culture in BB.

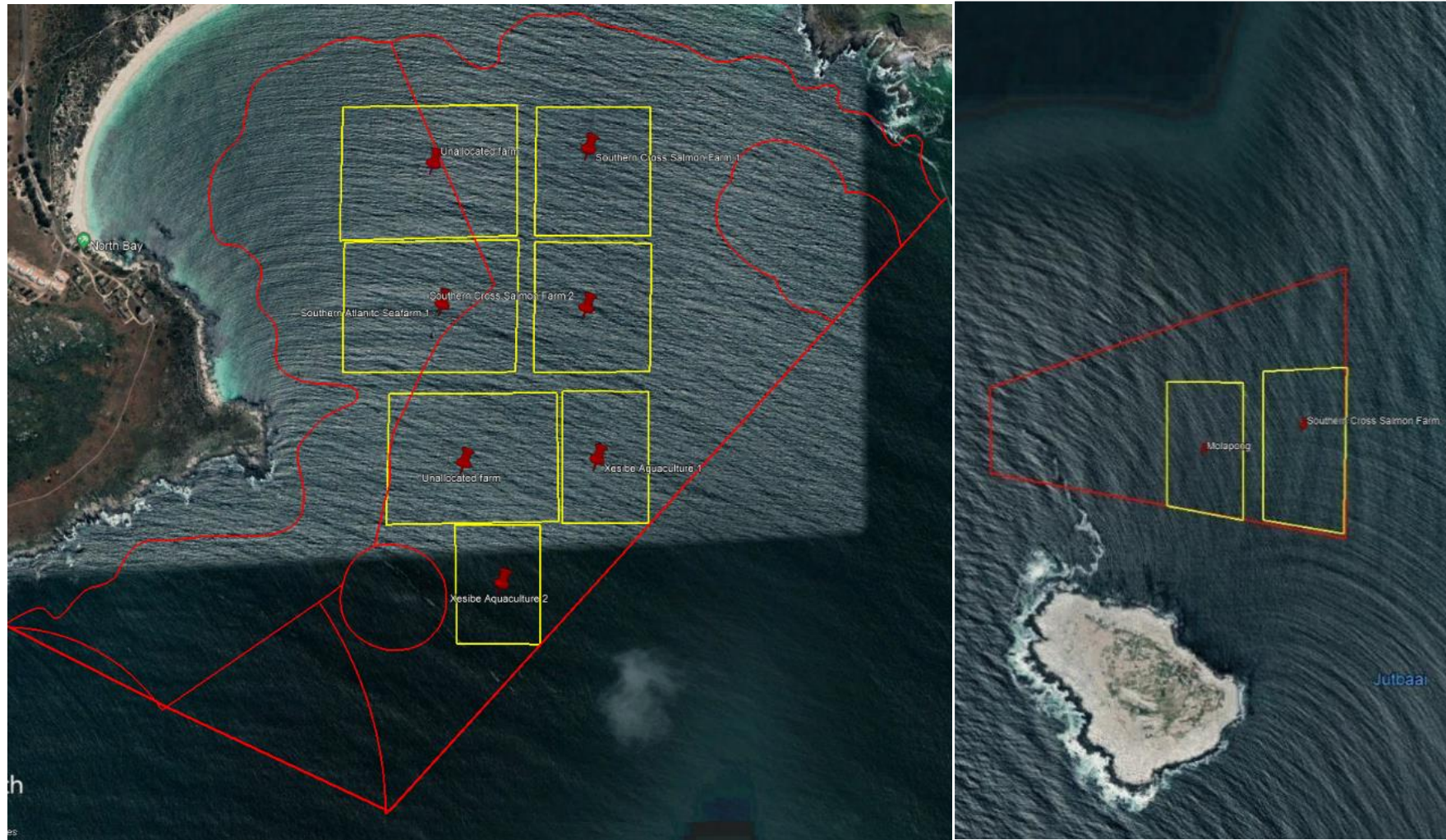


Figure 3. (Left) Bivalve culture in OBN and (right) finfish culture in Outer Bay South.

2.3 Operators in the ADZ

An essential aspect to assessing actual impact and possibility of expanding operations relies on accurate production data received from each farm. Farms submit production figures in the form of a monthly Farm Monitoring Report (FMR) to the ADZ ECO and DFFE. As such all farms are required to submit FMRs in terms of the aquaculture permit. Since this is essential to the monitoring of impacts, tracking compliance with this requirement will form part of the ADZ ECO duties even though this is not specified in the EMPr. A list of Operators in the ADZ as of February 2023 is presented in Table 4.

Table 4. Operators in the Saldanha Bay ADZ.

Farm name	Species	Precinct	Right No. MAQUA
African Olive Trading 232 (Pty) Ltd	Mussels	SB	1027
Aqua Foods SA (Pty) Ltd	Mussels/ oysters	SB & BB	1029
Blue Lagoon Products (Pty) Ltd	Oysters	BB	1057
Blue Ocean Mussels (Pty) Ltd	Mussels/ Oysters	SB	11828 & 0004
Blue Sapphire Pearls CC	Mussels / Oysters	SB	0006
Imbaza Mussels (Pty) Ltd	Oysters	SB	0019
K2019005713 (Pty) Ltd	Mussels	BB	1053
K2019005725 (Pty) Ltd	Mussels	BB	1052
Lagoon Aqua	Oysters	BB	1057
Madima General Agriculture Trading (Pty) Ltd	Mussels	BB	1048
Molapong Aquaculture (Pty) Ltd	Salmon	BB	1033
Mika Growers (Pty) Ltd	Mussels	BB	1047
MMMAgri Consult (Pty) Ltd	Mussels	BB	1045
Pluto Mussels and Trading (Pty) Ltd	Mussels	BB	1051
Requa Enterprises (Pty) Ltd	Mussels	OBN	1035
Saldanha Bay Oyster Company (Pty) Ltd	Oysters	BB	0012 & 0007
Salmar Trading (Pty) Ltd	Oysters	SB	1032
Simunye Mussels (Pty) Ltd	Mussels	BB	1047
Southern Atlantic Sea Farms (Pty) Ltd	Mussels	BB / OBN	1028
Southern Cross Salmon Farming (Pty) Ltd	Mussels	OBN	1037
Ulwazi Kukutya (Pty) Ltd	Mussels	BB	1050
West Coast Aquaculture (Pty) Ltd	Mussels/ oysters	SB & BB	0003
West Coast Oyster Growers CC	Oysters/ Mussels	SB & BB	0013
Xesibe Aquaculture Project (Pty) Ltd	Mussels	OBN	1046

3 ECO AUDITS

3.1 Approach and Methodology

Monthly ECO audits comprise monthly site inspections using the approved checklist and audit standard; rotational compliance audits on individual farms using monthly Farm Monitoring Reports and supporting documentation; and ongoing regular audits of compliance of the ADZ administration as a whole. The monthly ECO audit cycle involves communication with Operators and the AMC as required as well as developing and distributing the following documents:

- Detailed monthly ADZ compliance reports issued to the AMC and Compliance Monitoring Directorate at DFFE.
- ECO site inspection report issued to Operators and the AMC.
- Summary report (this report) submitted to the CF, AMC, and Operators.

3.2 Progress with Partial or Non-Compliances

Although no previous partial-compliances were considered resolved for the February 2023 audit period, progress was made towards improving the status of three partial compliances. Progress has continued with regard to ensuring that the ADZ boundaries are accurately marked with South African Maritime Safety Authority (SAMSA) approved marker buoys (EMPr table 5-1, condition 2). This includes the development of an Aids to Navigation (AtoN) plan and Navigational Risk Assessment (see Section 5.1). Progress has been made on enforcing Operator compliance with maintenance and operational guidelines (EMPr table 5-1, condition 6). However, it should be noted that Requa Enterprises was observed to have sunken infrastructure on their farm at the February 2023 site inspection and urgent attention is required (see Section 3.5.1). Monitoring the shoreline for aquaculture debris has also improved (EMPr table 7-1, condition 2) and is discussed in greater detail in Section 3.5.5.

3.3 ADZ level findings

The DFFE: Food Safety Office (FSO) issued a notice on 29 November 2022 to operators to cease harvesting in Big Bay and Outer Bay North precincts due to non-compliance with management programmes and reporting requirements. On 15 December 2022, DFFE: FSO notified operators that test results for the Bivalve National Residue Control Programme (NRCP) were outstanding for approximately 70% of the Aquaculture farms in Saldanha Bay. This constitutes a non-compliance by the Operators with EMPr Table 5-2, conditions 24 and 106. It should be noted that no action or remediation of this non-compliance is required by the Branch Fisheries Management. The DFFE: FSO further advised Operators that should these biotoxin test results not be provided by the end of 2022 further steps will need to be taken in terms of placing product on the market, which will include closing various clusters of farms. Operators were encouraged by the FSO to ensure compliance with the NRCP to avoid further action being taken and to resume compliance with the EMPr. On 23 February 2023, the DFFE: FSO confirmed that Big Bay had been reopened for harvesting on 8 February 2023, but Outer Bay North remained closed.

During the January 2023 site inspection, the ECO observed extensive aquaculture debris and waste on Spreeuwalle beach (the main receiving beach for the Big Bay precinct). The ECO identified and notified responsible Operators and requested that an Action Plan for waste removal be developed and that Operators commence with waste removal as a matter of urgency (24/01/2023; IR Jan 23-01). It is recommended that DFFE: Compliance and Monitoring follow up with Operators to monitor compliance with removal of aquaculture debris on Spreeuwalle beach. Although a written Action Plan was not provided to the ECO, the Operators communicated their planned clean-up activities telephonically and via email and achieved the desired outcome of removing aquaculture debris from Spreeuwalle beach as required by the EMPr. At the February 2023 inspection of Spreeuwalle Beach (conducted on 9 February 2023), the ECO observed that an intensive beach clean-up effort had occurred and over 100 floats had been removed. Further details on the aquaculture debris and clean-up of Spreeuwalle beach is discussed in Section 3.5.5.

3.4 Summary of ADZ compliance with the EA and EMPr

The ADZ scored an overall compliance of 87% for the audit period of February 2023 indicating **no change** in compliance percentage since the previous audit in January 2023 (Table 5, Figure 4). Although no change in compliance was observed there was progress towards improving the status of three partial compliances (Section 3.2). The ADZ has maintained a high level of compliance (>80%) with the audit standard from January 2022 to February 2023, and the management team and Operators should be commended.

Table 5. Compliance over time, January 2022 to January 2023.

Audit Date	Total applicable Conditions	Compliant	Partially Compliant	Non-compliant	Not applicable	To be confirmed
26/1/2022	23	22	1	0	3	0
24/2/2021	23	22	1	0	3	0
23/3/2022	23	20	3	0	3	0
20/04/2022	23	20	3	0	4	0
31/05/2022	25	22	3	0	2	0
01/06/2022	24	21	2	1	3	0
06/07/2022	24	20	4	0	3	0
15/08/2022	24	20	4	0	3	0
14/09/2022	23	19	4	0	4	0
19/10/2022	23	20	3	0	4	0
08/11/2022	23	20	3	0	3	1
07/12/2022	23	20	3	0	4	0
20/01/2023	23	20	3	0	4	0
10/02/2023	23	20	3	0	4	0

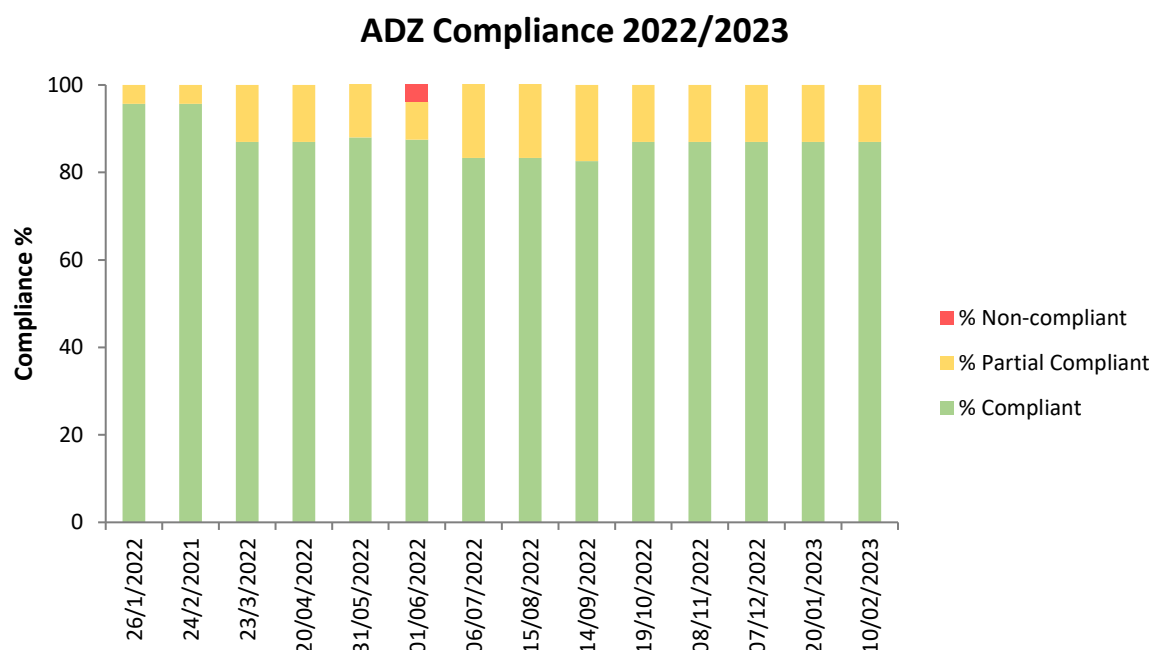


Figure 4. ADZ compliance over time from January 2022 to February 2023.

3.5 Operator level findings

3.5.1 Farm Inspections

On 10 February 2023, the ECO conducted on-water inspections for eight farms in the Saldanha Bay ADZ — one in Small Bay, three in Outer Bay North, and four in Big Bay (Table 6). Seven of the eight farms (Imbaza Mussels, SASF1, Xesibe, MMMAgri, Simunye, Ulwazi, SASF2) were observed to be compliant with the operational guidelines.

All infrastructure on Requa Enterprises' Outer Bay North farm has sunken and extensive maintenance is required to return the farm to compliance with the operational guidelines. Requa should develop and provide a maintenance plan to the ECO by 17 March 2023; the maintenance plan should outline what maintenance will occur and provide a timeline for estimated dates of completion. The required maintenance will include cleaning biofouling from all infrastructure (lines, floats, and risers), and mooring inspections by divers.

Detailed compliance feedback is provided in Table 6 and supporting photographic evidence is presented in Sections 3.5.1.1-3.5.1.8.

Table 6. Farms inspected during the February 2023 ECO site inspection and compliance feedback.

Farm name	Location	Species	Date	Comment
Imbaza Mussels	Small Bay	Oysters	2023/02/10	30 rafts in water, rafts suitably marked, good floatation and have suitable space between rafts (Figure 5).
Requa Enterprises	Outer Bay North	Mussels	2023/02/10	Infrastructure on the farm has sunken and must be cleaned of biofouling, moorings must be inspected by divers. Unique markers must be added to floats on farm (Figure 6).

Farm name	Location	Species	Date	Comment
Southern Atlantic Sea Farms 1 (SASF1)	Outer Bay North	Mussels	2023/02/10	All top lines have been removed from water per requirement of the Section 28 issued by DFFE Aquaculture Authorisations. Floats demarcating mooring blocks remain in water and are suitable marked with unique identifiers (Figure 7).
Xesibe Aquaculture	Outer Bay North	Mussels	2023/02/10	6 lines in the water, all lines straight, taugt, suitable space between longlines, floats marked with unique identifiers and lines not sinking (Figure 8).
Mmmagri Consult	Big Bay	Mussels	2023/02/10	7 lines in the water, all lines straight, taugt, suitable space between longlines, floats marked with unique identifiers and lines not sinking (Figure 9).
Simunye Mussels	Big Bay	Mussels	2023/02/10	6 lines in water, all lines straight, taugt, suitable space between longlines, floats marked with unique identifiers and lines not sinking (Figure 10).
Ulwazi Kukutya	Big Bay	Mussels	2023/02/10	4 lines in water, lines empty of product, all lines straight, taugt, suitable space between longlines, floats marked with unique identifiers and lines not sinking (Figure 11).
Southern Atlantic Sea Farms 2 (SASF2)	Big Bay	Mussels	2023/02/10	All top lines have been removed from water per requirement of the Section 28 issued by DFFE Aquaculture Authorisations. Floats demarcating mooring blocks remain in water and are suitable marked with unique identifiers (Figure 12).

3.5.1.1 Imbaza Mussels compliance photographs



Figure 5. (Top left) Live Google Earth pin of location of compliance photograph in relation to Imbaza Mussels, Small Bay licence area (yellow boundaries). (Top right) raft in good condition and displaying Imbaza unique marker. (Bottom) Imbaza rafts are in good condition, laid out with suitable space between them, and have good floatation.

3.5.1.2 Requa Enterprises compliance photographs



Figure 6. (Left) Live Google Earth pin of location of compliance photograph in relation to Requa, Outer Bay North licence area (yellow boundaries). (Right) Infrastructure has sunken on the farm and none is visible on the surface of the water.

3.5.1.3 SASF 1 (OBN) compliance photographs



Figure 7. (Left) Live Google Earth pin of location of compliance photograph in relation to SASF1, Outer Bay North licence area (yellow boundaries). (Right) Toplines removed from SASF1 as required by the Section 28 issued against SASF. Floats attached to mooring blocks remain and are suitably marked with unique identifiers.

3.5.1.4 Xesibe Aquaculture compliance photographs



Figure 8. (Left) Live Google Earth pin of location of compliance photograph in relation to Xesibe, Outer Bay North licence area (yellow boundaries). (Right) Xesibe farm showing lines are taught, straight, suitably marked with unique identifiers, and lines are not sinking.

3.5.1.5 *MMMAgri Consult compliance photographs*



Figure 9. (Left) Live Google Earth pin of location of compliance photograph in relation to MMMAgri, Big Bay licence area (yellow boundaries). (Right) MMMAgri farm showing lines are taught, straight, suitably marked with unique identifiers, and lines are not sinking.

3.5.1.6 *Simunye Mussels compliance photographs*

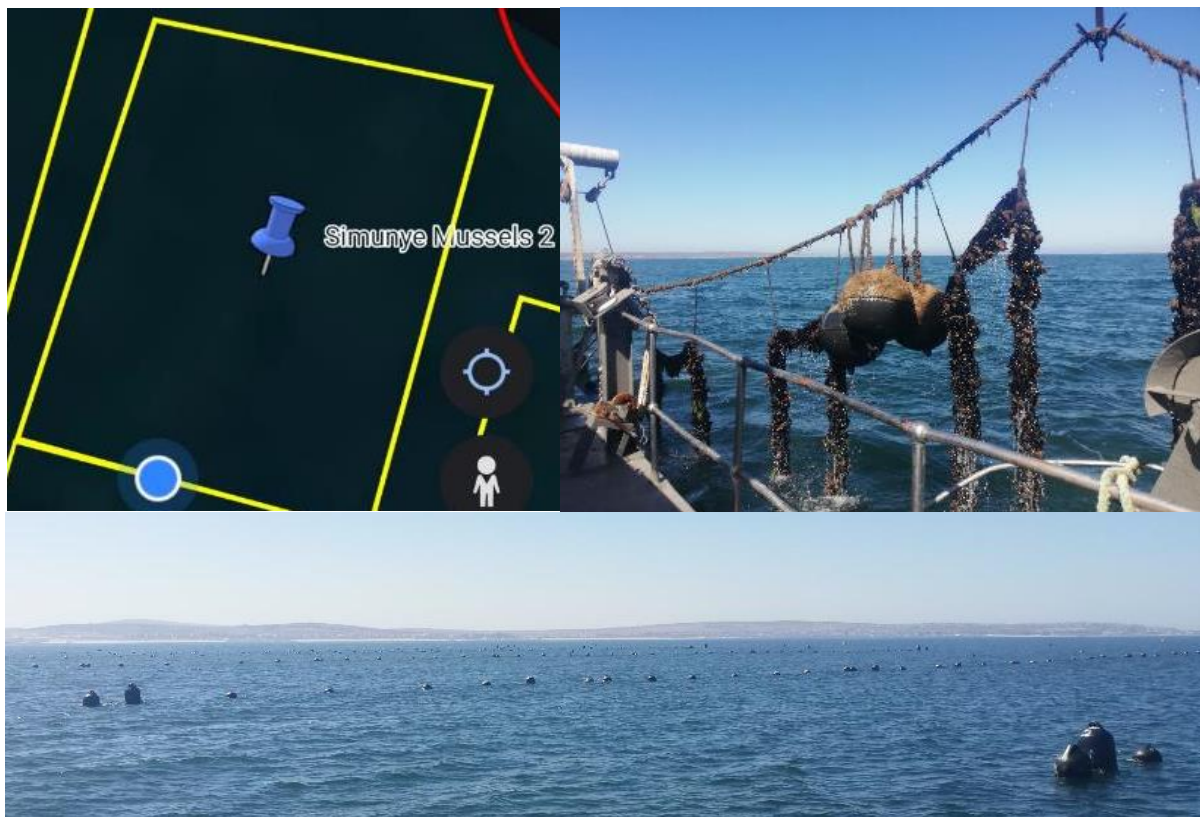


Figure 10. (Top left) Live Google Earth pin of location of compliance photograph in relation to Simunye Mussels, Big Bay licence area (yellow boundaries). (Top right) Mussel production line with varying sizes of mussels. (Bottom) Simunye farm showing lines are taught, straight, suitably marked with unique identifiers, and lines are not sinking.

3.5.1.7 *Ulwazi Kukutya compliance photographs*



Figure 11. (Left) Live Google Earth pin of location of compliance photograph in relation to Ulwazi, Big Bay licence area (yellow boundaries). (Right) Ulwazi farm showing lines empty of product, all lines straight, taught, suitable space between longlines, floats marked with unique identifiers and lines not sinking.

3.5.1.8 *SASF2 compliance photographs*



Figure 12. (Left) Live Google Earth pin of location of compliance photograph in relation to SASF2, Big Bay licence area (yellow boundaries). (Right) Toplines removed from SASF2, floats attached to mooring blocks remain and are suitably marked with unique identifiers.

3.5.2 **Farm maintenance plan feedback**

Due to non-compliances with the infrastructure guidelines reported during the July 2022 audit period, the ADZ ECO requested farm maintenance plans from Blue Ocean Mussels (BOM) and Saldanha Bay Oyster Company (SBOC). These maintenance plans were provided on 20 July 2022 and reviewed by the ADZ ECO and AMC. Comments from that review were incorporated into maintenance plans. The relevant operators have subsequently implemented these plans. Maintenance to clean and remove lines, to repair and rebuild dilapidated rafts, and to put each raft on its own mooring (per the operational guidelines) was ongoing during the February 2023 audit. Detailed feedback for progress made up to 28 February 2023 with maintenance plans are given under Section 3.5.2.1 (for SBOC) and Section 3.5.2.2 (for BOM).

3.5.2.1 Saldanha Bay Oyster Company (SBOC)

As reported in July 2022, sunken infrastructure was present on SBOC Big Bay (BB) site which posed an entanglement risk to marine life and could contribute to eutrophication of the marine environment in the Bay. The maintenance plan provided by SBOC includes removing longlines, cleaning biofouling from buoys, conducting subsurface inspections, and mooring inspections (Table 7). SBOC initially aimed to complete this maintenance by the end of October 2022. However, unfavourable weather conditions and limitations to service provider availability resulted in a delay in the completion date, which is now anticipated for end March 2023. SBOC communicated to the ECO that further maintenance had occurred on their Big Bay site through the February 2023 audit period, but updated values had not been provided at the time of drafting this report (maintenance progress as of January 2023 is presented in Table 7). The SBOC maintenance plan was 12% complete in October 2022, 82% complete in December 2022, and 92% complete in January 2023.

Table 7. Maintenance progress for SBOC, January 2023.

Maintenance item	Initial number	Number addressed this cycle	Total remaining
Longlines for removal	11	9	2
Buoys to be cleaned of biofouling	32	30	2
Subsurface inspection and cleaning of biofouling (shackles, mooring lines and chains)	32	30	2
Divers inspect moorings to ensure that they have not moved and are in place	24	22	2

3.5.2.2 Blue Ocean Mussels (BOM)

As reported in July 2022, there were multiple sinking lines and dilapidated infrastructure on BOM's site that required extensive maintenance to restore. Some rafts were lashed together and attached to the same mooring blocks, while several rafts were also perpendicular to the prevailing current and swell. This layout reduces production capacity, risks further damage to rafts, as well as presenting an increased risk of rafts breaking free and potentially causing environmental incidents.

From July to February 2023, BOM have restored 15 rafts to seeding condition, rebuilt 3, moved 7 onto their own moorings, and conducted regular maintenance on 20 rafts (Table 8). All other major repairs and rebuilding of rafts (except raft 14) have been completed. Nineteen rafts remain lashed to one another in groups of two or three.

Table 8. Maintenance progress for BOM, February 2023.

Maintenance item	Initial number	Number addressed this cycle	Total remaining
Restore raft	15	15	0
Maintain raft	20	20	0

Maintenance item	Initial number	Number addressed this cycle	Total remaining
Rebuild raft	4	3	1
Move to separate mooring	26	7	19

In order to separate rafts lashed to one another mooring blocks need to be moved and repositioned. However, the mooring blocks are currently embedded on the ocean floor, which represents a challenge to repositioning. As such, nineteen rafts (in groups of two) remain lashed together and attached to the same mooring blocks. However, 25 litre blue drums have been placed between the rafts to act as fenders, buffering impact between rafts, preventing further damage, and reducing risk of environmental incident.

Rafts lashed together include:

- 15 and 18
- 46 and 34
- 34 and 45
- 39 and 40
- 20 and 44
- 22 and 41
- 8 and 14
- 43 and 47
- 34 and 10
- 17 and 6
- 30 and 37
- 24 and 35

3.5.3 Farm Management

All operators are required to complete and submit Farm Monitoring Reports (FMRs) prior to the 15th of the following month along with verification documentation (such as invoices or other means of tracking production). Each farm must submit a separate FMR for each farmed product and precinct in which they farm. Therefore, the feedback given below reports on the number of FMRs submitted.

A high level of compliance was maintained during the February 2023 audit period for meeting the FMR submission deadline. Out of a possible 24 FMRs, 23 were submitted on time and two were outstanding at the time of drafting this report (Blue Lagoon Products). Note that Blue Lagoon Products is no longer actively farming. All farms with sales provided supporting documents (Table 9). Operators are to be commended for maintaining a high level of compliance.

Table 9. FMR Submission status, supporting production verification documents and visual inspection logs. Late submissions, lack of supporting documents and not providing visual logs are highlighted in red.

Farm name	Location	Species	Date	Supporting docs	Visual Inspection Log
African Olive Trading	Small Bay	Mussels	10/02/2023	Yes	yes
Aqua Foods SA	Small Bay	Mussels/ oysters	15/02/2023	Yes	Yes
Aqua Foods SA	Big Bay				
Blue Lagoon Products	Big Bay	Oysters	Not received at the time of drafting this report		
Blue Ocean Mussels	Small Bay	Mussels	15/02/2023	yes	yes
Blue Sapphire Pearls	Big Bay	Mussels	15/02/2023	no sales	yes
Blue Sapphire Pearls	Small Bay	Oysters	15/02/2023	yes	yes
Cex Enterprises	Big Bay	Mussels	N/A - not operational		
Imbaza Mussels	Small Bay	Oysters	14/02/2023	yes	yes
K2019005713	Big Bay	Mussels	14/02/2023	no sales	yes
K2019005725	Big Bay	Mussels	14/02/2023	no sales	yes
Lagoon Aqua Farm	Big Bay	Mussels	No aquaculture permit		
Madima General Agriculture Trading	Big Bay	Mussels	14/02/2023	no sales	yes
Mika Growers	Big Bay	Mussels	14/02/2023	no sales	yes
Mmmagri Consult	Big Bay	Mussels	14/02/2023	no sales	yes
Pluto Mussels and Trading	Big Bay	Mussels	14/02/2023	no sales	yes
Requa Enterprises	North Bay	Mussels	N/A – no active farming		
Saldanha Bay Oyster Company	Small Bay	Oysters	14/02/2023	yes	yes
Saldanha Bay Oyster Company	Big Bay	Oysters	N/A – no active farming		
Salmar Trading	Small Bay	Oysters	14/02/2023	yes	yes
Simunye Mussels	Big Bay	Mussels	14/02/2023	no sales	yes
Southern Atlantic Sea Farms 1	Big Bay	Mussels	14/02/2023	no sales	yes
Southern Atlantic Sea Farms 2	North Bay	Mussels	14/02/2023	no sales	yes
Southern Cross Salmon Farm	North Bay	Mussels	14/02/2023	no sales	yes
Ulwazi Kukutya	Big Bay	Mussels	14/02/2023	no sales	yes
Wada Projects	Big Bay	Mussels	N/A - not operational		
Well Done Works	Big Bay	Mussels	N/A - not operational		
West Coast Aquaculture	Small Bay, Big Bay	Mussels/ oysters	14/02/2023	yes	yes
West Coast Oyster Growers	Big Bay	Mussels/ oysters	14/02/2023	no sales	yes
West Coast Oyster Growers	Small Bay	Oysters/ mussels	08/02/2023	Yes	yes
Xesibe Aquaculture	North Bay	Mussels	14/02/2023	no sales	yes

3.5.4 Beach monitoring by operators

In September 2022, the Bivalve Shellfish Association of South Africa (BSASA) provided names of three members of the Aquaculture Industry who have committed to monitoring and cleaning beaches (Table 10). The ECO provided a feedback template to the volunteer operators to record waste volume estimates, dominant waste type and percentage of collected waste that comprises aquaculture debris (see Table 11). Beach clean-up feedback is provided the following month to ensure data for the entire month is captured. Waste data has been provided for beach clean-ups for Small Bay for September-December 2022 and January 2023, and for Big Bay from September-November 2022 (Table 11). Detailed feedback has not been provided for the Outer Bay North precinct or Marcus Island to date. Although no waste data has been provided, some photographic evidence of beach clean-ups at Marcus Island were provided in September 2022. Beach clean-up data should be provided for September-December 2022 and January 2023 for Outer Bay North as a matter of urgency. Although no beach clean-up data were provided for Big Bay for January 2023, beach clean-ups were conducted for Spreeuwalle beach and evidence of this clean-up has been provided under Section 3.5.5 of this report.

Table 10. Members of Aquaculture Industry committed to beach monitoring and clean-up as required by EMP conditions 1 and 2 of Table 7-1.

Responsible party	Group/affiliation	Precinct	Beach	Frequency
Ernie Malan	South Atlantic Seafood Holdings (SASH)	Big Bay (BB)	Spreeuwalle – Paradise beach	Twice a month
Ernie Malan	SASH	Outer Bay North (OBN)	West and Eastern Beach	Monthly
Vos Pienaar	Imbaza Mussels	Small Bay (SB)	Small Bay Northern beaches – Hoedjies Bay to Mossgas	Weekly
SJ Poggenpoel	Blue Ocean Mussels (BOM)	Small Bay (SB)	Marcus Island – SB side	Monthly

Table 11. Aquaculture industry waste collection data, September to December 2022 and January 2023.

Date	Location	Waste collected (kgs / volume / number of units)	Waste collected		
			Majority waste type (litter, aquaculture debris, etc.)	Aquaculture debris collected (floats, rope offcuts, PVC pipes, chestos, crates, etc.)	Estimated waste % aquaculture debris
Sep-22	SB - Northern Beach	± 30 refuse bags	Litter	Rope offcuts	< 5 %
Sep-22	BB - Spreeuwalle to Paradise beach	± 3 refuse bags and 10 floats	Aquaculture debris and litter	Broken cages, ropes, pvc pipes, floats	~ 100%
Sep-22	OBN - West and Eastern Beach	-	-	-	-
Sep-22	SB - Marcus Island	-	-	-	-
Oct-22	SB - Northern Beach	± 33 refuse bags	Litter	Rope offcuts, 4 longline buoys	< 5 %
Oct-22	BB - Spreeuwalle to Paradise beach	± 3 refuse bags and 25 floats	Aquaculture debris and litter	Floats	~100%
Oct-22	OBN - West and Eastern Beach	-	-	-	-
Oct-22	SB - Marcus Island	-	-	-	-

Date	Location	Waste collected (kgs / volume / number of units)	Waste collected		
			Majority waste type (litter, aquaculture debris, etc.)	Aquaculture debris collected (floats, rope offcuts, PVC pipes, chestos, crates, etc.)	Estimated waste % aquaculture debris
Nov-22	SB - Northern Beach	± 40 refuse bags	Litter	Rope offcuts	< 5 %
Nov-22	BB - Spreeuwalle to Paradise beach	18 Floats	Aquaculture debris	Floats	100%
Nov-22	OBN - West and Eastern Beach	-	-	-	-
Nov-22	SB - Marcus Island	-	-	-	-
Dec-22	SB - Northern Beach	± 30 refuse bags	Litter	some rope offcuts	< 5 %
Dec-22	BB - Spreeuwalle to Paradise beach				
Dec-22	OBN - West and Eastern Beach	-	-	-	-
Jan-23	SB - Northern Beach	about 50 refuse bags	Litter	some rope offcuts, 4 longline buoys	< 5 %
Jan-23	-	-	-	-	-
Jan-23	-	-	-	-	-
Jan-23	-	-	-	-	-

3.5.5 Beach inspection by ECO

During the January 2023 audit period, extensive aquaculture debris was observed on main receiving beach of Big Bay (Spreeuwalle beach) (see Table 12, Section 3.5.5.1, and Figure 13 to Figure 16). Eight operators were identified as being responsible for the aquaculture debris on the beach (three from the oyster industry and five from the mussel industry). Operators are responsible for removing aquaculture debris that enters the environment in accordance with the EMPr (table 5-2: sections 29, 31 and 32). The ECO provided Operators an opportunity to rectify the matter and avoid being issued with a notice of non-compliance. Operators were notified of the aquaculture debris on 24 January 2023 and the ECO requested that an Action Plan for removing the debris be developed and sent to the ECO within 1 business week (on 31 January 2023). Furthermore, the ECO requested that Operators commence clean-up activities so that progress may be seen by 9 February 2023 (3.5 business weeks from date of notification). SASH volunteered to conduct beach inspections and clean-ups in September 2022 as they have majority interest in Big Bay, and because SASH were responsible for the majority of the waste observed on Spreeuwalle beach. The ECO therefore recommended that Ernie Malan (of SASH group) co-ordinate the development of the Action Plan with the other responsible farmers and in consultation with Vos Pienaar (in his capacity as co-chairperson of BSASA).

Although a written Action Plan was not provided to the ECO, the Operators communicated their planned clean-up activities telephonically and via email and achieved the desired outcome of removing aquaculture debris from Spreeuwalle beach as required by the EMPr. At the February 2023 inspection of Spreeuwalle Beach (conducted on 9 February 2023), the ECO observed that an intensive beach clean-up effort had occurred and over 100 floats had been removed (see Table 12, Section

3.5.5.2, and Figure 17 and Figure 18). The eight Operators responsible for contributing to the waste observed in January 2023, their waste contribution in January, and their new waste contribution in February 2023 after clean-up efforts are presented in Table 12. Spreeuwalle beach is challenging to clean as the beach can only be cleaned at spring low tide (once every 2 weeks), and with no access roads, primary access is through the surf. Operators are to be commended for the clean-up efforts and are encouraged to continue monitoring Spreeuwalle and removing aquaculture debris.

Although clean-ups occurred between January and February 2023 site inspections, some aquaculture debris and waste remained on Spreeuwalle beach and should be removed as soon as reasonably possible (see Table 12 and Section 3.5.5.3).

Table 12. Responsible farmers and waste contribution.

Responsible Party	Industry	Debris type	Jan-23 Quantity	Feb-23 Quantity	Feb-23 Photo reference
SASH	Mussels	Floats	113	35	Figure 20
K13	Mussels	Float	1	-	
K25	Mussels	Float	1	-	
Mika	Mussels	Floats	1	-	
Pluto	Mussels	Float	1	-	
Xesibe	Mussels	Float	1	-	
Blue Lagoon Products or Lagoon Aqua	Oysters	Floats	24	22	Figure 21
WCOG	Oysters	Crates	7	12	Figure 23
		Floats/drums	9	6	
SBOC	Oysters	Floats	9	8	Figure 22
		End floats	2	1	
		Oyster stacks	1	-	

3.5.5.1 Aquaculture debris on Spreeuwalle beach in January 2023

Floats from the mussel industry were the main contributor to aquaculture debris, observed on Spreeuwalle beach in January 2023. These floats were observed along the beach, in between the rocks and trapped under rocky over-hangs (Figure 13 and Figure 14). Floats and crates from the oyster industry also contributed to the total volume of aquaculture debris on Spreeuwalle beach (Figure 15 and Figure 16). An entire mussel longline with droppers was also observed on Spreeuwalle beach (bottom left Figure 16).



Figure 13. Aquaculture debris consisting of floats and ropes from SASH group, observed under rocks and on the beach at Spreeuwalle in January 2023.



Figure 14. Floats and crates washed ashore from mussel and oyster industries on Spreeuwalle beach observed in January 2023.



Figure 15. Ropes, crates, floats, and other aquaculture debris belonging to the oyster industry on Spreeuwalle beach in January 2023. This debris was observed on the beach as well as trapped under rocks and in crevices.



Figure 16. Aquaculture debris on Spreeuwalle beach including ropes, floats, and crates from the mussel and oyster industry observed in January 2023.

3.5.5.2 After clean-up, pictures taken February 2023

Clean-up activities occurred on Spreeuwalle beach between January and February 2023 and aquaculture debris was removed from both beaches and from under rocks and rocky over-hangs (Figure 17 and Figure 18).



Figure 17. Rocky areas had been predominantly cleared of floats and other aquaculture debris in February 2023.



Figure 18. Beaches were observed to be mostly free of floats, ropes, and other aquaculture debris in February 2023.

3.5.5.3 Aquaculture debris observed in February 2023



Figure 19. Various ropes and aquaculture debris from Mussel and Oyster industry.



Figure 20. Floats from SASH group remaining on Spreeuwalle beach in February 2023.



Figure 21. Floats from either BLP or Lagoon Aqua on Spreuwalle beach in February 2023.



Figure 22. Floats from SBOC on Spreuwalle beach in February 2023.



Figure 23. Floats and crates from WCOG on Spreeuwalle beach in February 2023.

4 INCIDENTS DURING THE LAST MONTH

Three incidents were reported in the February 2023 audit period. A riser on line 6 of Simunye mussel farm broke free (IR Feb 23-01). The cause of the broken riser is likely due to chafing on the line and it is recommended that mooring inspections and cleaning of biofouling occur more frequently. The top line on line 10 of MMMAgri farm was cut by a boat propeller, the line was empty of product and the environmental impact was negligible (IR Feb 23-02). Cut-line incidents are a result of the ADZ not being suitably demarcated with SAMSA approved marker buoys and it is recommended that the Aids to Navigation Plan be implemented as soon as reasonably possible. The top line of line 1 of Madima mussel farm came free from the risers (IR Feb 23-03). The cause is being investigated by the operator but, given the common causes of broken or cut lines, it is likely that the line was either cut by a boat propeller or chaffed through. The above recommendations are reiterated here, namely the prioritisation of the implementation of the that the Aids to Navigation Plan. It is also recommended that the cleaning of biofouling occur more frequently to reduce the risk of lines chaffing and breaking.

5 ADZ MANAGEMENT

5.1 Bay user safety

To ensure that the Saldanha Bay ADZ boundaries accurately demarcated with SAMSA approved marker buoys (EMPr table 5-1, condition 2), the DFFE Branch Fisheries Management have been in consultation with SAMSA to develop an AtoN plan. During this process, and after issuing the fifth draft of the AtoN plan, SAMSA identified that a Navigational Risk Assessment must be conducted for Saldanha Bay before the AtoN plan may be finalised and implemented. Stakeholder engagement is required as part of developing the Risk Assessment and to this end a workshop is planned for

May/June 2023. Internal meetings to discuss the Risk Assessment and related workshops were held on 24 January 2023 and 27 February 2023.

5.2 External Audit

The annual external audit of the Saldanha Bay ADZ for 2023 (Year 4) is currently underway. The audit team from NCC Environmental Services (Nick Gates and Julia Booysen) accompanied the ECO during the February 2023 site inspection and have been provided with all requested documentation. It is anticipated that the draft of the Year 4 Annual Audit Report will be presented to the ADZ Project Management Team in early March 2023. Once the report has been finalised it will be distributed to the AMC, CF, Operators, and DFFE: Director of Compliance.

5.3 Bivalve production threshold

In 2022, the AMC took a decision to increase the ungraded bivalve production threshold from 10 000 tons per annum (TPA) to 15 000 tpa. This decision was made in compliance with condition 49 of the EA (DEA 2018) and Table 3-1, condition 4 of the amended EMPr (EMPr 2022). Operators were invited to request an increase in their infrastructure allowance and were notified of the AMC's decision on each increase request on 14 December 2022. It is anticipated that Operators will commence with farm expansions over the course of 2023, and it is recommended that Branch Fisheries Management monitor these expansions and compliance thereof with the EMPr. Prior to any expansions Operators must do the following:

- Fill out the Farm Expansion form,
- Provide an updated mooring plan (included in Farm Expansion form),
- Provide an updated site map,
- Provide an updated site specific EMPr to include mitigations for environmental impacts that may be caused by the expansion/construction activities (see ADZ EMPr table 4-2 for mitigation measures required during construction), and
- Notify the ECO 2 weeks prior to placement or moving of infrastructure.

5.4 Bivalve production volumes

Graded production volumes in the ADZ are recoded monthly. Production volumes for January 2023 and cumulative production to date supplied by the Branch: Fisheries Management using the approved formula to calculate total ungraded production are presented in Table 13. Production is below the current limit of 15 000 tpa ungraded shellfish (7 500 tpa graded) (see Section 5.3 for details on the current production limit). Per the EA bivalve production may be increased by an additional 5 000 tons annually but only if monitoring results indicate that the environment health has been maintained and impacts remain manageable. To ensure sustainable development, the Saldanha Bay Aquaculture Development Zone Management Committee (AMC) must consider the results and reports from environmental monitoring as well scientific recommendations, which will inform the possible increase in production.

Table 13. ADZ bivalve production (tons). The Approximate ungraded production is based on the conservative assumption that the ratio of ungraded to graded shellfish volume is ~2:1.

ADZ Precinct	Monthly graded production January 2023	Graded production Feb 2019-Jan 2020 (Year 1 prod)	Graded production Feb 2020-Jan 2021 (Year 2 prod)	Graded production Feb 2021 - Jan 2022 (Year 3 prod)	Graded production Feb 2022 – Jan 2023 (Year 4 prod)
Small Bay	282	2847	1936	2921	2621
Big Bay	0	189	240	480	700
Outer North Bay	0	433	297	330	175
Outer South Bay	-	-	-	-	-
Total graded	282	3 468	2473	3731	3496
Approximate ungraded production	514	6 497	4 707	7 228	6664

5.5 Environmental Monitoring

None to report.

6 CONSULTATIONS AND COMMUNICATIONS

6.1 Consultations

- Interviews
 - SASH (on behalf of Xesibe, MMMAgri, Ulwazi, Southern Atlantic Sea Farms) – Ernie Malan & Alma Vermeulen
 - Imbaza Mussels – Vos Pienaar
- Information requested by the competent authority:
 - None.

6.2 Communications

Communications received by the ADZ ECO during the February 2023 audit period included:

- Progress with clean-up of aquaculture debris on Spreeuwalle beach.
- Communications with DFFE: Monitoring and Compliance regarding aquaculture debris on Spreeuwalle beach.
- DFFE planned audit of the Environmental Authorisation for the ADZ.
- External annual audit of the ADZ.
- Notification of Lead pollution observed in October 2022 (DFFE: Pollution Sector).
- ECO notified of incidents on farms.
- Progress with maintenance plans for BOM and SBOC.

- TNPA dredging programme and queries regarding whether aquaculture stakeholders have been provided with any updated feedback.

7 RECOMMENDATIONS

The following recommendations are made by the ECO for the consideration of Branch Fisheries Management.

- Once the Navigational Risk Assessment is concluded, the AtoN Plan should be finalised, and the responsible parties should ensure implementation and execution of this plan as soon as reasonably possible.
- Any evidence of non-compliance with infrastructure and maintenance guidelines observed by DFFE: Compliance and Monitoring should be reported to the ADZ ECO.
- DFFE: Compliance and Monitoring should follow up with Operators to monitor compliance with removal of aquaculture debris on Spreeuwalle beach.

The following recommendations are made by the ECO for the consideration of Operators:

- Frequent cleaning of biofouling from lines and infrastructure should occur to reduce the risk of lines chaffing and breaking.
- Beach monitoring and removal of aquaculture debris should occur twice a month to ensure that beaches are free of aquaculture debris.
- Monitoring and gathering data on Endangered, Threatened, and Protected (ETP) species should be considered a priority as it is a requirement for Marine Stewardship Council (MSC) accreditation which will aid in accessing European markets.
- Operators are to be commended for the beach clean-up efforts that continue to occur in Small Bay and the massive effort to clean Spreeuwalle beach between January and February 2023.

The following recommendations are made by the ECO for the consideration of Requa Enterprises:

- Develop a maintenance plan,
- Urgently commence with mooring inspections and removing biofouling from infrastructure to return the farm to compliance with the operational guidelines.

7.1 Evaluation of the suitability of the EMPr

In the opinion of the ECO no changes should be made to the EMPr to ensure continued avoidance, management, and mitigation of environmental impacts. Furthermore, the ECO does not recommend changes to the EMPr to ensure compliance with the EA.



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