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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 12



March 2023



SALDANHA BAY AQUACULTURE DEVELOPMENT ZONE (ADZ) ENVIRONMENTAL CONTROL OFFICER (ECO) MONTHLY SUMMARY REPORT 12

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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

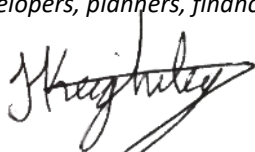
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Details of the Independence in terms of Chapter 5 of the National Environmental Management Act of 1998)

Box 1: Declaration of Independence of Environmental Control Officer

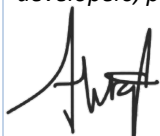
I, Jenna May Keightley hereby declare that I have no conflicts of interest related to the work of this report. Specifically, I declare that I have no personal financial interests in the property and/or development being assessed in this report, and that I have no personal or financial connections to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



28 March 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.



3 April 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. 2. Ensure compliance with EA, EMPr and if applicable, closure plan.	Section 7.1
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 March 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 to the ADZ ECO by Operators, email correspondence, in-person interviews, as well as 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 regarding 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. As the development and expansion of sea-based aquaculture activities comprise a number of Listing Notices in terms of the National Environmental Management Act (NEMA) (No. 107 of 1998, as amended), these activities require that an Environmental Impact Assessment (EIA) process be undertaken to obtain Environmental Authorisation (EA) from the Department of Forestry, Fisheries and the Environment (DFFE). This process can be arduous and costly, which presents a barrier to entry. Therefore, to facilitate investment and development of additional aquaculture in the Bay, the then Department of Agriculture, Forestry and Fisheries (DAFF)¹ undertook the establishment of a sea-based Aquaculture Development Zone (ADZ) in Saldanha Bay.

The Branch Fisheries Management (now DFFE: Fisheries Management) conducted an 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).

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 original approved EMPr is dated August 2017 and has been amended three times in May 2020, June 2021, and June 2022. The next amendment of the EMPr is scheduled for June 2023.

The Marine Living Resources Fund (MLRF)² under the auspices of DFFE: Fisheries Management has appointed Anchor Research & Monitoring (Pty) Ltd (Anchor) as 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

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

Precinct	ADZ Area (ha)	Area suitable for bivalve cultivation (ha)	Area suitable for fish and bivalve cultivation (ha)
Outer Bay South (OBS)	96	-	96
Total	884	606	278

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.

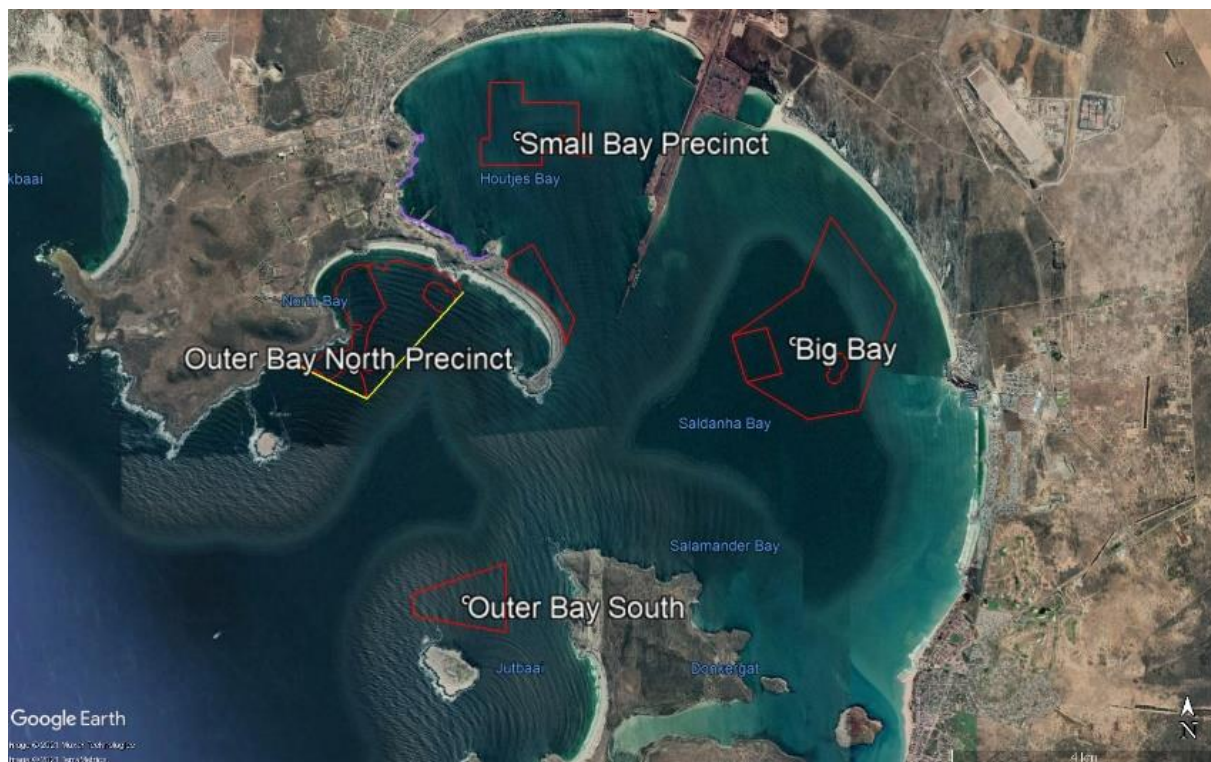


Figure 1. Saldanha Bay ADZ precincts.



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

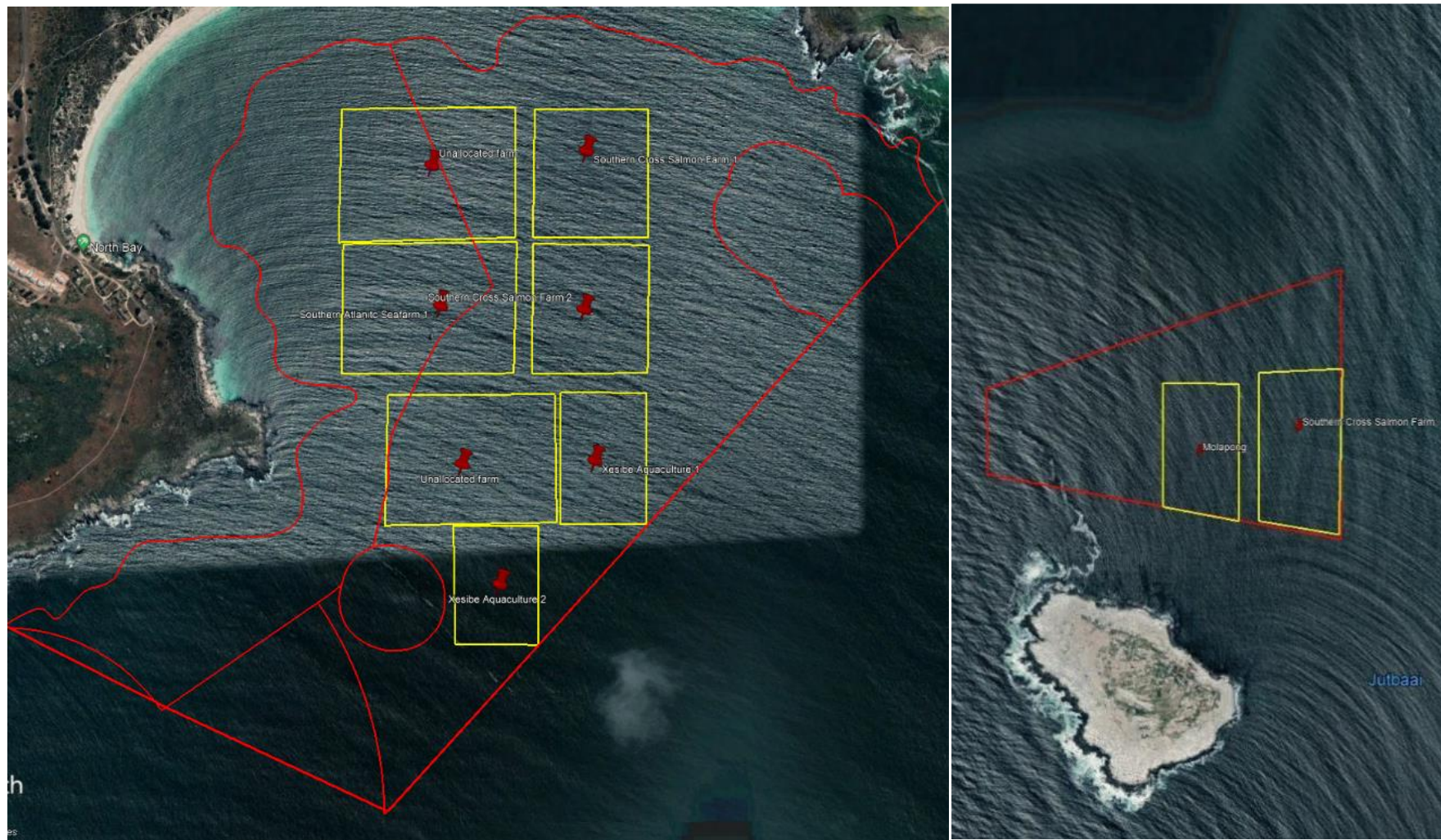


Figure 3. (Left) Bivalve culture in OBN and (right) finfish culture in Outer Bay South.

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 March 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 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 March 2023 audit period, progress was made towards improving the status of three partial compliances. These partial compliances relate to demarcation of the ADZ, enforcing maintenance and operational guidelines, and monitoring the shoreline for aquaculture debris. The ADZ must be accurately demarcated with South African Maritime Safety Authority (SAMSA) approved marker buoys (EMPr table 5-1, condition 2). Progress on demarcating the ADZ is discussed under Section 5.1. Operators must remain compliant with maintenance and operational guidelines (EMPr table 5-1, condition 6). Progress with farm maintenance is discussed in detail under Section 3.5.4. Ensure that the shoreline of the bay is monitored for aquaculture equipment washed ashore (EMPr table 7-1, condition 2). Progress has also been made with operators monitoring the shoreline and removing aquaculture debris, which is discussed in Sections 3.5.6 and 3.5.7.

3.3 Activities in the ADZ — March 2023

While for the March 2023 audit period, all farms in the Big Bay and Small Bay precinct were open for harvesting, no harvesting currently allowed from farms in Outer Bay North, due to non-compliances with reporting requirements of DFFE: Food Safety Office (FSO).

Various infrastructure increase requests were granted by the AMC in December 2022. Farm expansions are now anticipated, and operators should keep the ADZ ECO apprised of expansion activities (a two-week notice period is required prior to the commencement of any construction and/or expansion activities).

To remove the fouling organisms from in-water infrastructure, operators use pressure sprayers to wash equipment on Pepper Bay Jetty. This results in fouling organisms being discarded back into the marine environment. The soft tissues of these organisms do not pose much of an environmental concern, but the hard tissue (or shell waste) has resulted in sedimentation next to Pepper Bay Jetty. This sedimentation has decreased the depth of the water next to the Jetty and vessels cannot come

alongside the Jetty at low tide which restricts aquaculture activities (such as offloading harvested product).

3.4 Summary of ADZ compliance with the EA and EMPr

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

Table 5. Compliance over time, January 2022 to March 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
08/03/2023	23	20	3	0	4	0

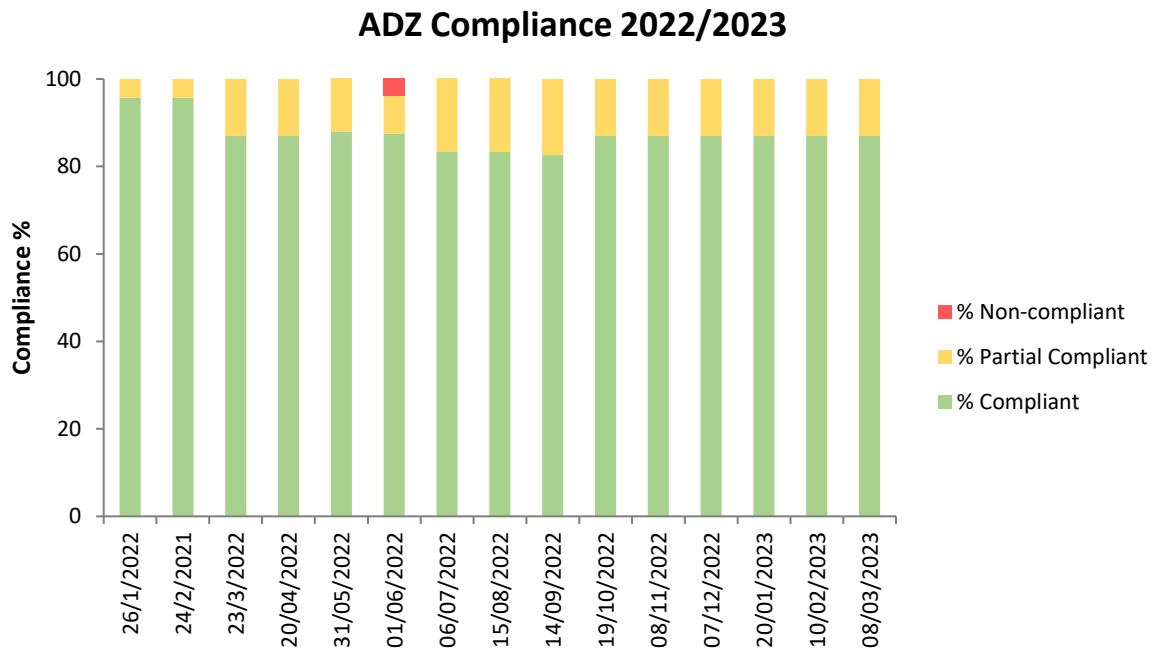


Figure 4. ADZ compliance over time from January 2022 to March 2023.

3.5 Operator level findings

3.5.1 Farm Inspections

On 8 March 2023, the ECO conducted on-water inspections for two farms in the Saldanha Bay ADZ, one in Small Bay and one with infrastructure in both Small and Big Bay (Table 6). Both farms, Blue Ocean Mussels (BOM) and Blue Sapphire Pearls (BSP), were observed to be partially compliant with the maintenance and operational guidelines. Sixteen rafts on BOM remained lashed together for floatation and not on their own moorings. However, these concerns were identified in June 2022 and BOM has been following a maintenance plan to return the farm to operational guideline standards. Good progress has been made with the maintenance plan for BOM (see Section 3.5.4.2). Some floats on BSP Small Bay site do not conform to the unique identifiers for BSP, but it was communicated that these are being rotated out to be replaced with muted floats that do conform. Some sunken infrastructure (managed by Saldanha Bay Oyster Company - SBOC) was observed on BSP Big Bay site. Within one day of the site inspection BSP sent an instruction to SBOC to remedy the sunken lines and floats on Big Bay site. Detailed compliance feedback is provided in Table 6 and supporting photographic evidence is presented in Sections 3.5.2-3.5.3.

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

Farm name	Location	Species	Date	Comment
Blue Ocean Mussels (BOM)	Small Bay	Oysters	08/03/2023	44 rafts in water. 16 rafts are still lashed together and not on their own moorings. Drums have been placed between these rafts to buffer against damage. Rafts are marked with unique identifiers. No excess or loose equipment was observed on rafts. The majority of rafts were correctly oriented, facing into the prevailing swell and current (Figure 5).

Farm name	Location	Species	Date	Comment
				Raft 14 remained half sunken and is awaiting a rebuild. Raft 16 was seen to be half sunken, which may have been from a recent impact from a vessel. Minor litter was observed to have been discarded into the water by workers (Figure 6).
Blue Sapphire Pearls (BSP)	Small Bay	Mussels & Oysters	08/03/2023	13 lines and 1 raft. Floats predominantly conform with the unique identifiers for BSP, but some red and yellow floats are still in use and must be phased out. It was communicated that the floats are being rotated out and older floats are being replaced with new floats that conform to the unique identifiers. Lines were observed to be taught, straight and suitably loaded (Figure 7).
Blue Sapphire Pearls (BSP)	Big Bay	Mussels & Oysters	08/03/2023	5 lines were counted on BSP Big Bay farm (4 mussel lines and 1 oyster line). The 4 mussel lines were taught, straight and marked with unique identifiers of Southern Atlantic Seafood Holdings (SASH) as they are managing the mussel lines in Big Bay. Floats are a muted colour (black). The oyster line that was visible had a sunken end float and the other line was not visible and had sunken entirely. Unique floats for Saldanha Bay Oyster Company (SBOC) were present (as SBOC are managing the oyster lines on BSP site). While on site SBOC was notified of the sunken infrastructure and instructed by BSP to resolve the sunken floats and lines (Figure 8).

3.5.2 Blue Ocean Mussels — Compliance photographs



Figure 5. (Top left) BOM rafts in good condition but lashed together while awaiting their own moorings; green drums placed between rafts to reduce damage by rafts buffeting against one another. (Top right) Live Google Earth pin of location of compliance photograph in relation to BOM, Small Bay licence area (red boundaries). (Bottom left) Operators seeding droppers with mussels. (Bottom right) Raft 17 in good condition, facing the prevailing current and swell, suitably marked, and on its own moorings.



Figure 6. (Top) Raft 14 sinking and half of the cross beams are missing. (Bottom left) Some litter observed to be discarded by operators. (Bottom right) Raft 16 sinking.

3.5.3 Blue Sapphire Pearls — Compliance photographs



Figure 7. (Top and bottom left) oyster lines on BSP Small Bay site are suitably loaded, but not all floats conform to the unique identifiers for BSP (red and yellow floats to be removed). (Top right) Mussel lines on BSP Small Bay site are taught, straight and suitably loaded. (Bottom right) Live Google Earth pin of location of compliance photograph in relation to BSP, Small Bay licence area (yellow boundaries).

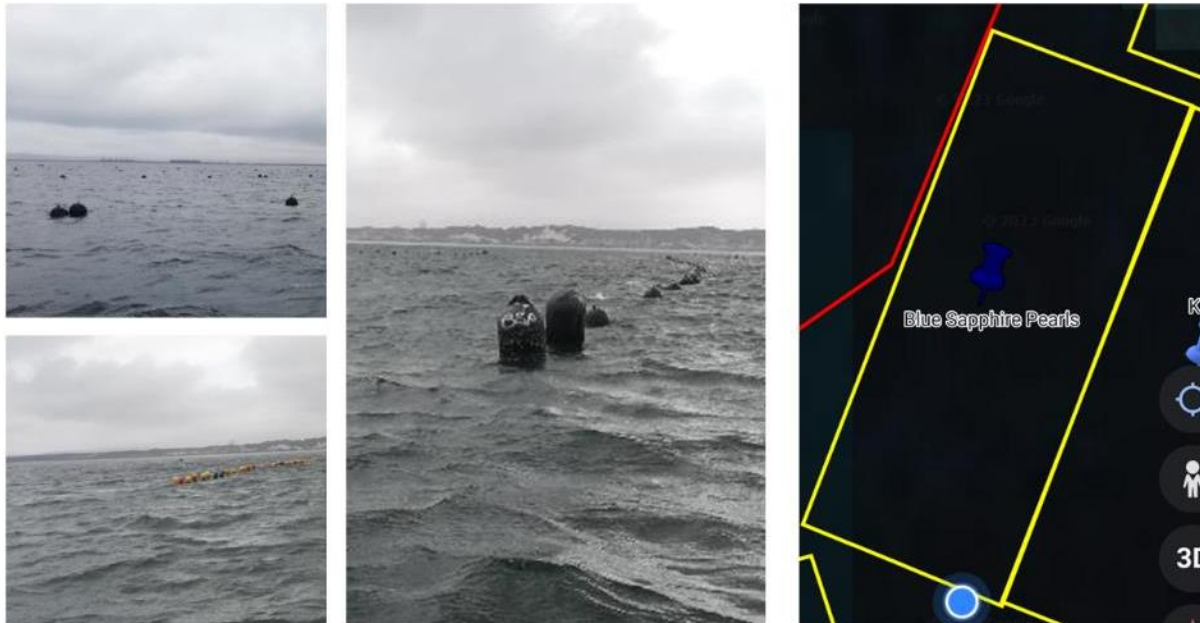


Figure 8. (Top left) BSP Small Bay mussel lines in water, lines not overloaded or sinking. (Bottom left) Oyster line in water, end floats are sunken, and one line has completely sunken. (Middle) Mussel lines, end floats suitably marked, lines are taught, straight and not overloaded. (Right) Live Google Earth pin of location of compliance photograph in relation to BOM, Small Bay licence area (yellow boundaries).

3.5.4 Farm maintenance plan feedback

Blue Ocean Mussels (BOM) and Saldanha Bay Oyster Company (SBOC) provided farm maintenance plans on 20 July 2022 as requested by the ADZ ECO in response to non-compliances with the infrastructure guidelines reported during the July 2022 audit period. These plans were reviewed by the ADZ ECO and AMC and implemented by the relevant operators. Progress as per these plans has continued during the March 2023 audit period, and included 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). Detailed feedback for progress made up to 28 March 2023 with maintenance plans are given under Section 3.5.4.1 (for SBOC) and Section 3.5.4.2 (for BOM).

During the February 2023 site inspection non-compliances with the infrastructure and operational guidelines were observed on Requa Enterprises Outer Bay North farm. Progress with maintenance and the development of the maintenance plan are provided in Section 3.5.4.3.

3.5.4.1 Saldanha Bay Oyster Company (SBOC)

As reported in July 2022, sunken infrastructure was present on SBOC Big Bay 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). While SBOC initially aimed to complete this maintenance by the end of October 2022, unfavourable weather conditions, limitations to service provider availability, and discovering that some lines were buried in sand resulted in a delay in the completion date, which is now anticipated for end April 2023. The SBOC

maintenance plan was 12% complete in October 2022, 82% complete in December 2022, 92% complete in January 2023 and remained 92% completed through February and March 2023 (Table 7).

The February 2023 report (Anchor Research & Monitoring Report No. 2014/11_3b) incorrectly stated that only 2 lines needed to be removed from SBOC; 4 lines need to be removed. Two of these lines are accessible, but the other two are buried in sand which poses an additional challenge and cost to removal. The Operator is in discussions with their service provider to find the best way forward.

Table 7. Maintenance progress for SBOC, March 2023.

Maintenance item	Initial number	Number addressed	Total remaining
Longlines for removal	11	7	4
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

3.5.4.2 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 March 2023, BOM have restored 15 rafts to seeding condition, rebuilt 3, moved 10 onto their own moorings, and conducted regular maintenance on 20 rafts (Table 8). Regular maintenance of rafts is ongoing, and all major repairs and raft rebuilds (except raft 14) have been completed. Six rafts were recently separated and placed on their own moorings; sixteen rafts remain lashed to one another in groups of two.

Table 8. Maintenance progress for BOM, March 2023.

Maintenance item	Initial number	Number addressed	Total remaining
Restore raft	15	15	0
Maintain raft	20	20	0
Rebuild raft	4	3	1
Move to separate mooring	26	10	16

At the March 2023 site inspection, raft 16 was observed to be sinking. The level to which the raft had sunken overnight suggests a vessel or some other external force impacting the raft resulting in its state, rather than wear and tear (which would result in the raft slowly sinking over time). The BOM team are investigating the matter and raft 16 will need to be rebuilt.

To separate rafts lashed to one another, mooring blocks need to be moved and repositioned. The existing mooring blocks are embedded to the ocean floor, which represents a challenge to repositioning. However, new mooring blocks have been sourced. Procuring the chain required to attach rafts to the mooring blocks is the current challenge as new chain is very costly but, BOM are investigating their options. To reduce buffeting impact between rafts, prevent further damage, and reduce the risk of environmental incident, 25 litre drums have been placed between the rafts to act as fenders.

Rafts remaining lashed together include:

- 14 & 8
- 30 & 37
- 47 & 43
- 17 & 6
- 34 & 46
- 22 & 41
- 20 & 44
- 39 & 40

3.5.4.3 Requa Enterprises

On 9 February 2023, the ECO observed that all infrastructure on Requa Enterprise Outer Bay North Farm was sunken. The ADZ ECO requested that Requa develop and provide a maintenance plan by 17 March 2023 which 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. Requa contacted the ECO on 17 March 2023 to describe the progress that they have made towards developing the maintenance plan. Requa has engaged a service provider to conduct an underwater visual inspection to determine what maintenance will need to occur (number of lines, buoys, and moorings to clean, number of moorings to inspect). Once the service provider has issued their report, Requa will be able to establish a timeline and provide a maintenance plan to the ECO.

3.5.5 Farm Management – Monitoring reports

Monitoring Reports (FMRs) are completed and submitted by all operators 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 March 2023 audit period for meeting the FMR submission deadline. Out of a possible 24 FMRs, 23 were submitted on time and one was 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	10/03/2023	yes	yes
Aqua Foods SA	Small Bay	Mussels/oysters	15/03/2023	yes	yes
Aqua Foods SA	Big Bay	Mussels/oysters	N/A – no active farming		
Blue Lagoon Products	Big Bay	Oysters	Not received at the time of drafting this report		
Blue Ocean Mussels	Small Bay	Mussels	15/03/2023	yes	yes
Blue Sapphire Pearls	Big Bay	Mussels	14/03/2023	no	yes
Blue Sapphire Pearls	Small Bay	Oysters	14/03/2023	yes	yes
Cex Enterprises	Big Bay	Mussels	N/A - not operational		
Imbaza Mussels	Small Bay	Oysters	14/03/2023	yes	yes
K2019005713	Big Bay	Mussels	14/03/2023	no	yes
K2019005725	Big Bay	Mussels	14/03/2023	no	yes
Lagoon Aqua Farm	Big Bay	Mussels	No aquaculture permit		
Madima General Agriculture Trading	Big Bay	Mussels	14/03/2023	no	yes
Mika Growers	Big Bay	Mussels	14/03/2023	no	yes
Mmmagri Consult	Big Bay	Mussels	14/03/2023	yes	yes
Pluto Mussels and Trading	Big Bay	Mussels	14/03/2023	yes	yes
Requa Enterprises	North Bay	Mussels	N/A – no active farming		
Saldanha Bay Oyster Company	Small Bay	Oysters	15/03/2023	yes	yes
Saldanha Bay Oyster Company	Big Bay	Oysters	N/A – no active farming		
Salmar Trading	Small Bay	Oysters	11/03/2023	yes	yes
Simunye Mussels	Big Bay	Mussels	14/03/2023	yes	yes
Southern Atlantic Sea Farms 1	Big Bay	Mussels	14/03/2023	no	yes
Southern Atlantic Sea Farms 2	North Bay	Mussels	14/03/2023	no	yes
Southern Cross Salmon Farm	North Bay	Mussels	14/03/2023	no	yes
Ulwazi Kukutya	Big Bay	Mussels	14/03/2023	no	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	14/03/2023	yes	yes

Farm name	Location	Species	Date	Supporting docs	Visual Inspection Log
West Coast Oyster Growers	Big Bay	Mussels/oysters	14/03/2023	yes	yes
West Coast Oyster Growers	Small Bay	Oysters/mussels	14/03/2023	no	yes
Xesibe Aquaculture	North Bay	Mussels	14/03/2023	no	yes

3.5.6 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. 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 and Big Bay. Detailed feedback has not been provided for the Outer Bay North precinct or Marcus Island to date. Although no waste data has been provided for Marcus Island, some photographic evidence of beach clean-ups were provided in September 2022. Beach clean-up data should be provided for Outer Bay North as a matter of urgency. Most waste collected from Small Bay is litter and general waste that is collected in refuse bags, with a small portion of the waste coming from the aquaculture industry (Figure 9). In October 2022, and January and February 2023 some floats were collected from Small Bay beaches (Figure 10). Aquaculture floats constitute the majority of waste collected from Big Bay beaches (Figure 10) and a smaller portion of the waste is made up of rope offcuts that is collected in refuse bags (Figure 9). All the waste collected in refuse bags from Big Bay comes from the aquaculture industry (Figure 9).

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 Moss gas	Weekly
SJ Poggenpoel	Blue Ocean Mussels (BOM)	Small Bay (SB)	Marcus Island – SB side	Monthly



Figure 9. Waste collected in refuse bags from beaches in the various precincts. Total waste collected and portion of waste constituting aquaculture debris is presented.

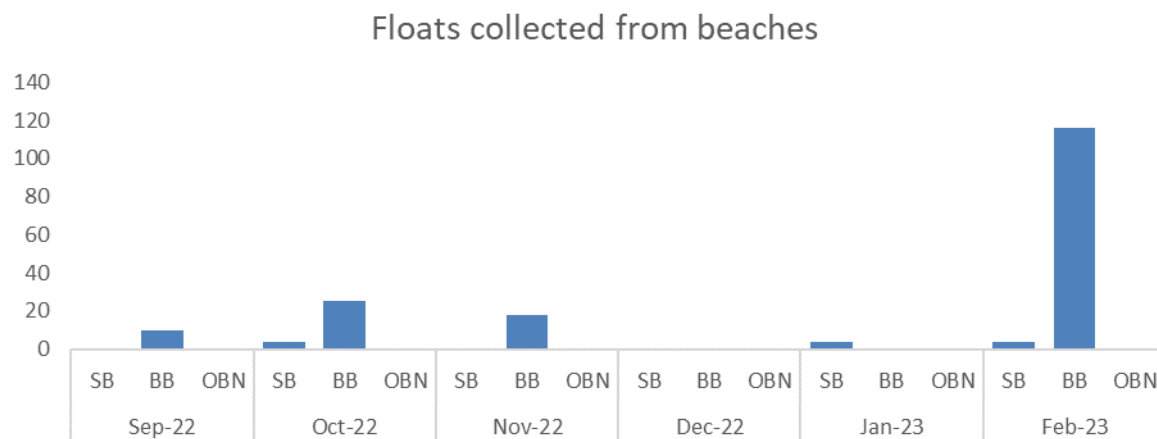


Figure 10. Floats collected from beaches in the various precincts from September 2022 to February 2023.

3.5.7 Beach inspection by ECO

Aquaculture debris was observed on Spreeuwalle beach in January 2023. Responsible operators were notified and requested that they remove this waste. At the February 2023 site inspection, a marked improvement could be seen and over 100 floats were removed from the beach. Operators are to be commended for the clean-up efforts and are encouraged to continue monitoring Spreeuwalle and removing aquaculture debris. Operators are encouraged to continue with beach monitoring and waste removal. No beaches were inspected during the March 2023 site inspection, but the ECO will be inspecting these beaches periodically to monitor compliance.

4 INCIDENTS DURING THE LAST MONTH

Four incidents were reported in the March 2023 audit period. A top line on Pluto was found floating and had either broken or been cut by a propeller (IR Mar 23-01). The cause is being investigated. Two reports of aquaculture debris washing ashore at Paradise beach (Big Bay) and Blouwaterbaai (Small Bay) were received (IR Mar 23-02 and IR Mar 23-04). The responsible aquaculture operators were notified and collected the floats. During the ECO site inspection, raft 16 on BOM site was observed to be partially sunken (IR Mar 23-03). The rate at which the raft sank suggests an external impact to the raft and the BOM team are investigating. The position of this raft on the farm exposes it to general vessel traffic. The cut lines and sunken raft 16 highlight the necessity for the ADZ being demarcated with approved marker buoys and implementation of the Aids to Navigation (AtoN) Plan. It should be noted that a Navigational Risk Assessment of Saldanha Bay needs to be developed before the AtoN plan can be implemented. A workshop for this Risk Assessment is planned for June 2023.

5 ADZ MANAGEMENT

5.1 Bay user safety

The ADZ must be accurately demarcated with South African Maritime Safety Authority (SAMSA) approved marker buoys (EMPr table 5-1, condition 2). To identify the required marker buoys for the ADZ, an Aids to Navigation (AtoN) Plan was developed (final draft submitted to AMC on 27 November 2022). Before the AtoN plan can be implemented, a Navigational Risk Assessment needs to be conducted for Saldanha Bay. The first workshop for stakeholder engagement on this Risk Assessment has been scheduled for mid-June 2023. Internal meetings to discuss the Risk Assessment and related workshops were held on 24 January, 27 February, and 13 March 2023.

5.2 External Audit

The Year 4 annual external audit of the ADZ was conducted on 9 and 10 February 2023 by the audit team from NCC Environmental Services (Nick Gates and Julia Booysen), who accompanied the ECO for a site inspection during the February 2023 ECO audit. The draft Year 4 Annual External Audit Report was submitted on 18 March 2023 for comment by the ADZ ECO and DFFE: Fisheries Management. This report has been finalised and was distributed to the AMC and DFFE: Director of Compliance on 30 March 2023, and to the CF and Operators on 3 April 2023.

5.3 Bivalve production volumes

Graded production volumes in the ADZ are recoded monthly. Production volumes for February 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 11. Production is below the current limit of 15 000 tpa ungraded shellfish (7 500 tpa graded). 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 11. 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 February 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)	Graded production Feb 2023 – Jan 2024 (Year 5 prod)
Small Bay	284	2847	1936	2921	2621	566
Big Bay	22	189	240	480	700	22
Outer North Bay	0	433	297	330	175	0
Outer South Bay	-	-	-	-	-	-
Total graded	306	3 468	2473	3731	3496	587
Approximate ungraded production	567	6 497	4 707	7 228	6664	1081

5.4 Environmental Monitoring

None to report.

6 CONSULTATIONS AND COMMUNICATIONS

6.1 Consultations

1. Copies of comments received:
 - Communications register March 2023.
 - Documents register March 2023.
2. Information requested by the competent authority:
 - None.
3. Interviews, discussions, and other communications (see Table 12).

6.2 Communications

Communications received by the ADZ ECO during the March 2023 audit period (Table 12).

Table 12. Individual, organization, and purpose of consultation during the March 2023 audit period.

Individual	Organization	Subject
SJ Poggenpoel	Blue Ocean Mussels (BOM)	Site inspection, Farm maintenance
Tiisheto Maswanganye	Blue Ocean Mussels (BOM)	Site inspection
Kevin Ruck	Blue Sapphire Pearls (BSP)	Site inspection
Leon Moodaley	Requa Enterprises	Farm maintenance
Jonathan Venter	Saldanha Bay Oyster Company (SBOC)	Farm maintenance
	Aquaculture Operators	Environmental Training
Bongumenzi Gumbi	DFFE: Compliance Monitoring	Monitoring Spreeuwalle beach for aquaculture debris.
Nketu Lesejane	DFFE: Compliance Monitoring	Monitoring Spreeuwalle beach for aquaculture debris.
Michelle Pretorius	DFFE: Fisheries Management	Management of the ADZ
Maxhoba Jezile	DFFE: Fisheries Management	Management of the ADZ
Ferdie Endemann	Western Cape: Department of Agriculture	Infrastructure allocations
Alma Vermeulen	SASH	Incident report
Johan Coetzee	Paradise Beach Estate	Incident report

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.
- Monitoring progress with the maintenance plans should continue.
- Continue monitoring waste data submitted by the Operators.
- Main receiving beaches should continue to be included in ECO site inspections.
- The DFFE: Fisheries Management should engage with the Operators to determine a solution to the accumulation of sediment due to wash down activities on Pepper Bay Jetty.

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.

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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