MOMBASA SPECIAL ECONOMIC ZONE PROJECT
CONTRACT PACKAGE 1 – CIVIL AND BUILDING WORKS
(KPA/065/2022-23/PDM)

MONTHLY ENVIRONMENTAL MONITORING REPORT

DECEMBER 2025

DOCUMENT REVIEW VALIDATION:

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1. INTRODUCTION

The Project is located within Mbuta Location of Likoni Sub-County, and comprises mainly of the following construction components:

- Quay (L: 300 m, W: 50 m, D: -15 m)
- Trestle and causeway (L: 363 m, W: 20 m)
- Cargo yard (13 ha)
- Turning basin / navigation channel (-15 m)
- Port faclities (e.g. administration building, gate, workshop)

This Monthly Environmental Monitoring Report provides a summary of the environmental management and monitoring activities undertaken in December 2025.

2. DESCRIPTION OF CONSTRUCTION ACTIVITIES

Table 1 summarizes the main construction activities undertaken during the month.

Table 1 Summary of Main Construction Activities

Component	Construction activities
Temporary facilities	Construction of access road, weighbridge, Contractor's office and canteen, perimeter fence, gate and temporary jetty
Quay	Dredging of quay foundation and disposal of dredged material at designated offshore disposal site
Trestle / causeway	Dredging of trestle foundation and disposal of dredged material at designated offshore disposal site
Cargo yard	Sand delivery and stockpile, site clearance utility area
Turning basin / navigation channel	No activity
Port facilities	No activity
Others	Mangrove cutting

Table 2 are photos of main construct activities during the month.

Table 2: Photos of Main Construction Activities

Progress of construction of contractor's office

Progress of construction of the canteen

Temporary jetty area excavation

Temporary jetty platform preparation

Temporary access road compacting

Side drainage trench stone pitching

Setting out of Survey Platform 2

Dredging

Rock sand stock pilling

Topsoil stripping at Reclamation Yard

Mangrove clearance


Precast yard preparation

3. ENVIRONMENTAL MANAGEMENT

Table 3 shows the main mitigation measures undertaken during the month.

Table 3 Implemented Mitigation Measures

Potential Impacts	Mitigation Measures
Turbidity dispersion from dredging	Use of frame-type silt curtain
Fugitive dust from vehicle movement	Water sprinkling of access road and construction site using water bowser
Accidents from sand haulage trucks	Trucks hauling sand from quarry areas are regularly serviced as per manufacture's specifications.
Leakages or discharges of dredging material during transport to the offshore disposal site	Use of a Dredging and Dumping Monitoring System (DDMS), a real-time monitoring system to track and detect leakages from hopper barges involved in dredging and disposal operation.
Waste pollution	Storage of wastes within designated areas and containers.
Noise pollution	Truck drivers are instructed not to race nor hoot when approaching school and health center zones

4. ENVIRONMENTAL MONITORING

Table 4 shows the environmental monitoring implemented during the month.

Table 4: Implementation Status of Environmental Monitoring

Monitoring Item	Implementation (Y/N)	Implementation Dates	Reason for non-implementation
Noise	Yes	• 2/12/2025 • 9/12/2025 • 16/12/2025 • 23/12/2025 • 30/12/2025	Implemented on schedule
Air quality	Yes	Implemented daily from 1/12/2025 to 31/12/2025	Implemented on schedule
Turbidity (in situ survey)	Yes	• 2/12/2025 • 3/12/2025 • 4/12/2025 • 16/12/2025 • 17/12/2025 • 18/12/2025 • 22/12/2025 • 23/12/2025 • 24/12/2025 • 29/12/2025 • 30/12/2025 • 31/12/2025	Implemented on schedule
Turbidity (aerial survey)	Yes	• 19/12/2025	Application to fly was approved by authorities to fly on 19/12/2025 for the month of December
General water quality	Yes	• 4/12/2025 • 18/12/2025 • 24/12/2025 • 31/12/2025	Implemented on schedule
Coral	Yes	• 21/12/2025 • 22/12/2025	Only one biweekly monitoring was done as opposed to expected two biweekly monitoring due to pausing of dredging activities that affected the schedule.
Seagrass	Yes	• 21/12/2025 • 22/12/2025	Only one biweekly monitoring was done as opposed to expected two biweekly monitoring due to pausing of dredging activities that affected the schedule.
Macrobenthos	No	-	Scheduled date for implementation was not yet due

4.1. NOISE

4.1.1 Objective

Noise monitoring was conducted to confirm whether construction noise remained within acceptable levels (i.e. reference standard).

4.1.2 Method

Table 5 outlines the method of noise monitoring. Figure 1 shows the noise monitoring sites.

Table 5 Method of Noise Monitoring	
Parameters	A-weighted equivalent sound level (LAeq)
Method	In-situ measurement with sound level meter (PCE-322 Sound Level Meter)
Frequency	Once a week during daytime working hours (06:00-18:00)
Location	Construction boundary: N1 and N2 Sensitive site*: N3 (DCC office) *: Monitoring sites will be increased as necessary
Reference standard	N1 and N2: 75 dB*1 N3: 55 dB (mixed residential) *2 *1: Second Schedule of Environmental Management and Coordination (Noise and Excessive Vibration Pollution) (Control) Regulations 2009 *2: First Schedule of Environmental Management and Coordination (Noise and Excessive Vibration Pollution) (Control) Regulations 2009

Figure 1 Noise Monitoring Sites

4.1.3 Results and Discussion

Table 6 shows the results of noise monitoring and the implemented remedial actions. Noise levels were below the reference standard at all the monitoring sites and days.

Table 6: Results of Noise Monitoring				
Date	**Site**	**LAeq (dB)**	**Ref. standard (dB)**	**Possible cause of exceedance and remedial actions**
2/12/2025	N1	56.3	75	Noise level was below the Reference Standard
	N2	49.7	75	Noise level was below the Reference Standard
	N3	45.5	55	Noise level was below the Reference Standard
9/12/2025	N1	57.3	75	Noise level was below the Reference Standard
	N2	43.6	75	Noise level was below the Reference Standard
	N3	49.5	55	Noise level was below the Reference Standard
16/12/2025	N1	56.7	75	Noise level was below the Reference Standard
	N2	41.9	75	Noise level was below the Reference Standard
	N3	48.0	55	Noise level was below the Reference Standard
23/12/2025	N1	60.1	75	Noise level was below the Reference Standard
	N2	47.0	75	Noise level was below the Reference Standard
	N3	53.2	55	Noise level was below the Reference Standard
30/12/2025	N1	53.7	75	Noise level was below the Reference Standard
	N2	43.6	75	Noise level was below the Reference Standard
	N3	43.2	55	Noise level was below the Reference Standard

4.2. AIR QUALITY

4.2.1 Objective

Air quality monitoring was conducted to confirm whether construction activies are not causing excessive air pollution.

4.2.2 Method

Table 7 Outlines the method of air quality monitoring while figure 2 shows the monitoring sites.

Table 7: Method of Air Quality Monitoring	
Parameters	Fugitive dust and exhaust gas emissions
Method	Visual observation at fixed locations
Frequency	Daily during daytime working hours (6:00-18:00)

Location	DCC Office, Lutsangani Primary School
Reference Standard	N/A

Figure 2 Air Quality Monitoring Sites

4.2.3 Results and Discussion

Table 8 shows the results of air quality monitoring and the implemented remedial actions. In somedays increase in fugitive dust along the access road to the temporary yard was recorded.

Table 8: Results of Air Quality Monitoring (Dust and Exhaust Emissions)

Location	Issues	Remedial Actions
DCC office	Fugitive dust due to increased trucks in and out of the temporary yard delivering sand	It was recommended water application suppress fugitive dust
Primary	Monitoring at this site has not begun because sourcing of sand from Takawa Quarry has not begun	None

4.3. WATER QUALITY

4.3.1 Turbidity (In-situ Measurement)

4.3.1.1. *Objective*

Turbidity monitoring (in-situ measurement) was conducted to confirm whether turbidity dispersion from dredging and disposal activities remained within acceptable levels (i.e. reference standard).

4.3.1.2. *Method*

Table 9 outlines the method of turbidity monitoring. Figure 3 shows turbidity monitoring sites.

Table 9: Method of Turbidity Monitoring (In-situ Measurement)

Parameters	Turbidity (NTU)
Method	In situ measurement with water quality meter (TOA-DKK WQS-24)
Frequency	Three times/week during dredging works
Layer	Surface and bottom
Location	Port Reitz/ Kilindini: 5 sites (WI1-WI5) Tudor Creek: 3 sites (WI6-WI8) Inner reef: 4 sites (WIR1- WIR4) Outer reef: 5 sites (WOR3-WOR7)
Reference Standard	Dredging/disposal method will be reconsidered in case of exceedance of the following levels for 2 weeks continuously: Inshore: Site specific baseline + Site specific threshold level Inner reef area: Site specific baseline + Threshold level (2 NTU) Outer reef area: Site specific baseline + Threshold level (1 NTU)

Figure 3 Turbidity Monitoring Sites

4.3.1.3. *Results and discussion*

Table 10 shows the results of turbidity monitoring. There was no exceedance of refference. standard for two weeks continuously.

Table 10: Results of Turbidity Monitoring (NTU)																		
Date		**WI1**	**WI2**	**WI3**	**WI4**	**WI5**	**WI6**	**WI7**	**WI8**	**WIR1**	**WIR2**	**WIR3**	**WIR4**	**WOR3**	**WOR4**	**WOR5**	**WOR6**	**WOR7**
2/12/2025	S	7.5	11.6	3.6	2.2	0.5	0.0	0.2	2.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	B	8.5	9.3	3.9	2.0	0.4	0.0	0.5	3.8	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.0	0.0
3/12/2025	S	10.9	12.1	4.7	2.9	2.0	1.7	4.9	1.9	0.0	0.0	0.0	0.0	0.0	0.0	0.7	0.0	0.0
	B	10.8	9.9	3.9	3.2	2.2	5.4	7.4	7.9	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.0	0.0
4/12/2025	S	12.8	8.5	3.2	3.7	2.2	6.2	8.1	1.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	B	12.5	10.1	4.5	3.5	2.1	11.8	15.9	9.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
16/12/2025	S	8.4	5.1	2.4	2.5	0.8	0.0	0.8	1.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	B	9.1	5.8	3.0	2.4	0.7	0.0	0.0	6.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
17/12/2025	S	8.7	6.6	3.7	1.8	0.6	0.0	0.0	3.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	B	10.4	6.9	4.4	2.5	0.8	0.8	0.6	3.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
18/12/2025	S	8.3	6.8	3.9	2.7	0.5	0.3	2.2	0.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	B	9.0	5.8	2.9	3.2	1.1	0.1	4.3	8.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
22/12/2025	S	13.4	10.2	4.1	3.4	1.2	2.6	6.7	2.4	0.0	0.0	0.0	0.0	0.0	0.1	0.2	0.0	0.0
	B	12.7	9.8	3.6	2.7	1.0	6.1	7.7	9.4	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0
23/12/2025	S	10.2	8.7	2.3	3.6	2.0	0.0	6.3	3.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	B	9.4	7.3	2.3	3.7	2.1	0.0	7.7	6.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
24/12/2025	S	10.2	6.7	2.9	2.2	1.4	1.9	4.5	3.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	B	9.7	5.8	2.4	1.9	1.6	5.0	8.6	11.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
29/12/2025	S	7.7	6.3	2.7	3.5	0.3	0.0	0.1	1.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	B	6.3	4.6	3.4	3.0	0.1	0.0	0.2	2.9	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.0	0.0
30/12/2025	S	4.1	5.3	2.7	2.2	0.0	0.0	0.0	2.4	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0
	B	3.8	4.8	2.0	1.8	0.0	0.0	0.1	3.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
31/12/2025	S	10.6	5.5	1.2	1.8	0.8	0.0	4.7	3.2	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0
	B	8.1	5.9	1.0	2.2	0.9	0.0	1.6	3.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Ref. Standard	**S/B**	**22.6**	**17.2**	**7.5**	**6.5**	**3.3**	**11.3**	**13.9**	**15.7**	**2.8**	**3.1**	**2.4**	**2.5**	**1.0**	**1.1**	**1.0**	**1.0**	**1.0**

Table 11 shows the remedial actions implemented in cases where exceedances of the reference standard occurred due to construction-related activities.

Table 11: Implemented Remedial Actions

Site	Exceedance of Ref. Standard (Y/N)*	Possible Cause of Exceedance and Remedial Actions
WI1	N	Turbidity was within the reference standard
WI2	N	Turbidity was within the reference standard
WI3	N	Turbidity was within the reference standard
WI4	N	Turbidity was within the reference standard
WI5	N	Turbidity was within the reference standard
WI6	N	Turbidity was within the reference standard
WI7	N	Turbidity was within the reference standard
WI8	N	Turbidity was within the reference standard
WIR1	N	Turbidity was within the reference standard
WIR2	N	Turbidity was within the reference standard
WIR3	N	Turbidity was within the reference standard
WIR4	N	Turbidity was within the reference standard
WOR3	N	Turbidity was within the reference standard
WOR4	N	Turbidity was within the reference standard
WOR5	N	Turbidity was within the reference standard
WOR6	N	Turbidity was within the reference standard
WOR7	N	Turbidity was within the reference standard

*: Exceedance of ref. standard for 2 weeks continuously.

4.3.2 Turbidity (Aerial Survey)

4.3.2.1 Objective

Turbidity monitoring (aerial survey) was conducted to confirm awhether turbidity dispersion from dredging and disposal activities remained within acceptable levels (i.e. reference standard).

4.3.2.2 Method

Table 12 outlines the method of turbidity monitoring (aerial survey).

Table 12: Method of Turbidity Monitoring (Aerial Survey)	
Parameters	Turbidity
Method	Taking of aerial photographs by drone
Frequency	Once / week during dredging works
Location	2 sites: Dredging area and between dredging area and disposal site
Reference standard	Dredging/disposal method will be reconsidered in case of observation of significant outflow of turbidity (e.g. from dredging area and hopper barge).

4.3.2.3 Results and Discussion

Table 13 shows the results of turbidity monitoring and the implemented remedial actions. The aerial photographs are presented in Appendix 1.

Table 13: Results of Turbidity Monitoring (Aerial Survey)			
Date	**Location**	**Exceedance of Ref. Standard (Y/N)***	**Remedial Actions**
19/12/2025	Dredging area	No	No exceedance of ref. standard hence no remedial actions triggered
19/12/2025	Kilindini	No	No exceedance of ref. standard hence no remedial actions triggered

*: Observation of significant outflow of turbidity

4.3.3 General Water Quality

4.3.3.1 Objective

General water quality monitoring was conducted to confirm the status of water quality around the construction site.

4.3.3.2 Method

Table 14 shows the method of general water quality monitoring. The monitoring sites are the same as turbidity monitoring (see Figure 3).

Table 14: Method of General Water Quality Monitoring	
Parameters	Water temp., salinity, pH, DO, SS, T-N, T-P, Coliforms
Method	Water temp., salinity, pH, DO: In-situ measurement with portable multi-item water quality meter (TOA-DKK WQS-24) SS, T-N, T-P, Coliforms: Sampling and laboratory analysis
Frequency	One time/week during dredging works
Layer	Surface and bottom
Location	Port Reitz/ Kilindini: 5 sites (WI1-WI5) Tudor Creek: 3 sites (WI6-WI8) Inner reef: 4 sites (WIR1- WIR4) Outer reef: 5 sites (WOR3-WOR7)
Reference standard	Refer to Table 15

Table 15 is the reference standard of general water quality parameters

Table 15 Reference Standard

Monitoring location	pH	SS (mg/l)	T-N (mg/l)	TP (mg/l)	Total coliform (CFU/100ml)
WI1	6-9	42.6-88.9	2.4-4.4	0.01	<500
WI2		33.8-87.7	2.5-3.6	0.01	
WI3		22.8-72.8	0.1-2.2	0.01	
WI4		17.6-66.1	0.3-17.0	0.01-0.1	
WI5		7.9-52.6	1.8-2.9	0.01	
WI6		14.9-63.7	0.2-3.0	0.01	
WI7		22.1-74.8	0.2-4.5	0.01	
WI8		52.3-90.1	0.2-2.8	0.01	
WIR1		3.8-39.1	0.2-2.2	0.01	
WIR2		3.7-38.6	1.4-4.1	0.01	
WIR3		52.3	1.8-3.0	0.01-0.1	
WIR4		-	2.0-3.6	0.01	
WOR3		5.3-26.5	2.2-4.2	0.01	
WOR4		7.2-29.3	0.2-2.3	0.01	
WOR5		5.4-26.7	0.8-3.0	0.01	
WOR6		5.0-29.2	0.2-2.3	0.01	
WOR7		4.5-22.6	0.2-2.7	0.01	

Note: These values are set for reference purpose only.

pH and total coliform: The Environmental Management and Coordination (Water Quality) Regulations (2024), Schedule 10

SS: Range recorded through the Natural Condition Survey (2024)

T-N and T-P: Range recorded through the 14-day baseline survey (June-July 2025)

4.3.3.3 Results and discussion

Table 16 shows the results of general water quality monitoring. Overall, the water quality was within normal levels, with no significant deviation from the reference standards.

Table 16: Results of Water Quality Monitoring

Site	Date	-	Temp. (°C)	Salinity	pH	DO (mg/l)	SS (mg/l)	T-N (mg/l)	T-P (mg/l)	Coliforms (CFU/100ml)
PORT REITZ/ KILINDINI CREEK										
WI1	4/12/2025	S	28.70	33.00	7.92	6.02	122.0	2.4	0.2	38.0
		B	28.70	33.00	7.93	5.89	116.0	3.1	0.1	40.0
	18/12/2025	S	31.00	32.70	8.18	5.90	49.2	0.1	<0.10	12.0
		B	31.20	32.70	8.15	5.72	38.0	0.0	<0.10	8.0
	24/12/2025	S	29.00	32.30	7.98	6.36	68.0	1.1	<0.10	6.0
		B	29.10	32.40	7.86	6.24	66.4	0.8	<0.10	8.0
	31/12/2025	S	29.20	33.00	8.11	6.12	43.2	0.6	<0.10	Nil
		B	29.00	33.00	8.03	6.02	37.6	0.6	<0.10	Nil
WI2	4/12/2025	S	28.60	32.40	8.24	6.13	30.0	3.0	0.1	12.0
		B	28.70	32.30	8.18	5.97	27.4	2.8	0.1	16.0
	18/12/2025	S	30.10	32.20	8.17	5.83	28.8	0.0	<0.10	Nil
		B	30.50	32.20	8.15	5.76	26.4	0.0	<0.10	Nil
	24/12/2025	S	28.90	32.40	7.99	6.42	34.0	0.6	<0.10	4.0
		B	28.90	32.50	7.88	6.24	37.6	1.0	<0.10	Nil
	31/12/2025	S	30.00	33.00	8.10	6.24	29.2	0.2	<0.10	Nil
		B	30.00	33.00	8.13	6.20	25.6	0.4	<0.10	Nil
WI3	4/12/2025	S	28.60	32.30	8.22	5.86	28.8	0.6	0.1	36.0
		B	28.50	32.40	8.20	5.79	29.6	0.4	0.1	40.0
	18/12/2025	S	29.60	32.40	8.16	5.83	30.8	0.0	<0.10	6.0
		B	29.70	32.10	8.15	5.91	36.0	0.0	<0.10	2.0
	24/12/2025	S	28.80	32.30	8.02	6.53	29.2	0.0	<0.10	3.0
		B	28.70	32.30	8.04	6.44	34.0	0.0	<0.10	3.0
	31/12/2025	S	29.00	32.40	8.07	6.27	13.6	0.2	<0.10	Nil
		B	29.40	32.30	8.03	6.22	11.2	0.2	<0.10	Nil
WI4	4/12/2025	S	28.30	32.30	8.18	6.02	14.0	0.7	0.1	Nil
		B	28.10	32.20	8.20	5.93	28	0.9	0.1	Nil
	18/12/2025	S	29.30	32.30	8.14	5.82	12.0	0.0	<0.10	Nil
		B	29.60	32.40	8.17	5.66	16.4	0.0	<0.10	Nil
	24/12/2025	S	28.80	32.30	8.05	6.64	20.8	0.2	<0.10	Nil
		B	28.60	32.20	8.03	6.45	16.2	0.4	<0.10	Nil
	31/12/2025	S	29.00	32.00	8.17	6.25	18.0	0.0	<0.10	Nil

Table 16: Results of Water Quality Monitoring										
Site	**Date**	**-**	**Temp. (°C)**	**Salinity**	**pH**	**DO (mg/l)**	**SS (mg/l)**	**T-N (mg/l)**	**T-P (mg/l)**	**Coliforms (CFU/100ml)**
		B	29.00	32.30	8.13	6.22	22	0.0	<0.10	Nil
WI5	4/12/2025	S	28.00	32.20	8.22	6.38	19.6	0.2	<0.10	Nil
		B	28.10	32.20	8.18	6.37	22.0	0.1	<0.10	Nil
	18/12/2025	S	29.00	32.20	8.12	5.98	18.0	0.1	<0.10	Nil
		B	29.00	32.30	8.17	5.76	15.6	0.1	<0.10	Nil
	24/12/2025	S	28.70	32.10	8.09	6.48	14.4	0.6	<0.10	Nil
		B	28.60	32.20	8.08	6.37	9.8	0.2	<0.10	Nil
	31/12/2025	S	28.40	31.80	7.98	6.30	14.0	0.4	<0.10	Nil
		B	28.50	32.00	8.01	6.19	12.4	0.2	<0.10	Nil
TUDOR CREEK										
WI6	4/12/2025	B	28.10	33.40	7.96	5.31	34.4	0.9	0.1	17.0
		S	28.10	33.40	7.95	5.49	29.6	0.5	0.1	11.0
	18/12/2025	S	29.00	33.50	7.90	5.03	50.4	0.3	<0.10	14.0
		B	29.00	33.60	7.91	5.11	40.0	0.1	<0.10	10.0
	24/12/2025	S	28.60	33.50	7.93	5.24	53.6	0.2	<0.10	8.0
		B	28.60	33.50	7.99	5.32	48.4	0.2	<0.10	10.0
	31/12/2025	S	28.30	33.30	7.95	5.37	8.4	0.0	<0.10	Nil
		B	28.20	33.20	7.93	5.29	20.2	0.3	<0.10	Nil
WI7	4/12/2025	S	28.40	33.50	7.76	5.29	44.4	0.3	0.1	42.0
		B	28.30	33.50	7.95	5.22	49.8	0.1	0.1	30.0
	18/12/2025	S	29.20	33.60	7.82	5.01	49.6	0.0	<0.10	Nil
		B	29.20	33.80	7.85	5.29	47.2	0.1	<0.10	Nil
	24/12/2025	S	28.80	33.60	8.01	5.13	40.2	0.1	<0.10	Nil
		B	28.80	33.80	7.96	5.11	36.0	0.0	<0.10	Nil
	31/12/2025	S	28.80	33.40	7.91	5.16	26.0	0.4	<0.10	Nil
		B	28.70	33.70	7.89	5.20	18.6	0.6	<0.10	Nil
WI8	4/12/2025	S	29.10	33.90	7.82	4.91	56	0.2	0.3	28.0
		B	29.10	33.90	7.78	4.56	52.0	0.2	0.1	30.0
	18/12/2025	S	29.70	34.10	7.78	4.89	44.4	0.4	<0.10	Nil
		B	30.00	34.30	7.76	4.74	51.2	0.2	<0.10	Nil
	24/12/2025	S	29.30	34.00	7.88	4.90	62.8	0.5	<0.10	Nil

Table 16: Results of Water Quality Monitoring										
Site	**Date**	**-**	**Temp. (°C)**	**Salinity**	**pH**	**DO (mg/l)**	**SS (mg/l)**	**T-N (mg/l)**	**T-P (mg/l)**	**Coliforms (CFU/100ml)**
		B	29.20	34.10	7.84	4.96	69.2	0.3	<0.10	Nil
	31/12/2025	S	29.40	33.80	7.85	4.72	27.4	0.4	<0.10	Nil
		B	29.30	33.90	7.85	4.92	30.0	0.2	<0.10	Nil
INNER REEF										
WIR1	4/12/2025	S	28.00	33.20	8.07	5.67	11.2	0.6	<0.10	Nil
		B	27.90	33.20	8.07	5.79	28.0	0.7	<0.10	Nil
	18/12/2025	S	29.20	33.30	8.04	6.29	13.2	0.2	<0.10	Nil
		B	29.20	33.30	8.03	6.13	20.0	0.0	<0.10	Nil
	24/12/2025	S	27.90	33.10	8.07	5.80	8.0	0.4	<0.10	Nil
		B	27.90	33.20	8.09	5.58	5.2	0.2	<0.10	Nil
	31/12/2025	S	27.50	33.00	8.03	6.09	13.2	0.2	<0.10	Nil
		B	27.50	33.00	8.05	6.01	10.0	0.2	<0.10	Nil
WIR2	4/12/2025	S	27.80	33.20	7.99	4.59	14	0.1	<0.10	Nil
		B	27.80	33.10	7.99	4.63	16.4	0.1	<0.10	Nil
	18/12/2025	S	28.60	33.20	8.00	5.98	28.8	0.0	<0.10	Nil
		B	28.70	33.10	8.03	6.01	26.4	0.0	<0.10	Nil
	24/12/2025	S	27.90	33.10	7.94	5.66	13.2	0.1	<0.10	Nil
		B	27.90	33.20	8.05	5.65	16.0	0.1	<0.10	Nil
	31/12/2025	S	28.70	33.20	8.08	5.92	16.4	0.0	<0.10	Nil
		B	28.70	33.20	8.07	6.01	12.0	0.0	<0.10	Nil
WIR3	4/12/2025	S	28.50	33.30	8.24	6.61	30	0.8	<0.10	Nil
		B	28.50	33.30	8.24	6.49	22.8	0.5	<0.10	Nil
	18/12/2025	S	29.70	33.40	8.25	7.10	20	0.0	<0.10	Nil
		B	29.70	33.40	8.25	7.19	19.6	0.0	<0.10	Nil
	24/12/2025	S	27.90	33.20	8.07	5.65	15.2	0.1	<0.10	Nil
		B	27.90	33.10	7.99	5.10	15.6	0.1	<0.10	Nil
	31/12/2025	S	28.60	33.20	8.21	6.48	7.2	0.0	<0.10	Nil
		B	28.60	33.20	8.20	6.28	5.6	0.0	<0.10	Nil
WIR4	4/12/2025	S	28.00	33.20	8.18	7.01	20.0	0.2	<0.10	Nil
		B	27.90	33.20	8.16	7.23	18.0	0.0	<0.10	Nil

Table 16: Results of Water Quality Monitoring										
Site	**Date**	**-**	**Temp. (°C)**	**Salinity**	**pH**	**DO (mg/l)**	**SS (mg/l)**	**T-N (mg/l)**	**T-P (mg/l)**	**Coliforms (CFU/100ml)**
	18/12/2025	S	29.40	33.40	8.21	6.69	18.0	0.1	<0.10	Nil
		B	29.40	33.40	8.21	6.81	16.4	0.3	<0.10	Nil
	24/12/2025	S	27.60	33.10	7.95	5.38	22.0	0.3	<0.10	Nil
		B	27.70	33.10	7.94	5.42	18.0	0.5	<0.10	Nil
	31/12/2025	S	28.30	33.10	8.19	6.23	6.8	0.1	<0.10	Nil
		B	28.30	33.10	8.18	6.20	14.4	0.0	<0.10	Nil
OUTER REEF										
WOR3	4/12/2025	S	27.60	32.00	8.19	6.58	8.8	0.2	<0.10	Nil
		B	27.60	32.00	8.22	6.56	24.0	0.1	<0.10	Nil
	18/12/2025	S	28.40	32.10	8.30	6.33	20.0	0.0	<0.10	Nil
		B	28.30	32.00	8.36	6.29	22.2	0.0	<0.10	Nil
	24/12/2025	S	28.20	31.90	8.02	6.87	15.6	0.1	<0.10	Nil
		B	28.10	32.00	8.03	6.92	10.0	0.1	<0.10	Nil
	31/12/2025	S	28.20	31.90	8.05	6.64	15.6	0.0	<0.10	Nil
		B	27.80	31.80	8.03	6.47	20.0	0.0	<0.10	Nil
WOR4	4/12/2025	S	27.70	32.10	8.20	6.67	27.6	0.1	<0.10	Nil
		B	27.60	32.00	8.18	6.51	28.4	0.0	<0.10	Nil
	18/12/2025	S	28.70	32.10	8.26	6.35	9.6	0.0	<0.10	Nil
		B	28.50	32.10	8.22	6.21	4.0	0.1	<0.10	Nil
	24/12/2025	S	28.30	32.00	8.16	6.92	8.0	0.0	<0.10	Nil
		B	28.20	32.00	8.13	6.57	6.0	0.0	<0.10	Nil
	31/12/2025	S	28.40	32.00	8.05	6.52	18.0	0.2	<0.10	Nil
		B	28.30	31.90	8.06	6.48	9.2	0.0	<0.10	Nil
WOR5	4/12/2025	S	27.50	32.00	8.21	6.47	32.0	0.8	<0.10	Nil
		B	27.40	32.00	8.23	6.40	20.0	0.6	<0.10	Nil
	18/12/2025	S	28.80	32.20	8.25	6.10	24.0	0.0	<0.10	Nil
		B	28.70	32.20	8.22	6.08	22.0	0.0	<0.10	Nil
	24/12/2025	S	28.50	32.00	8.13	6.58	25.6	0.0	<0.10	Nil
		B	28.30	32.00	8.15	6.41	30.0	0.0	<0.10	Nil

Table 16: Results of Water Quality Monitoring										
Site	**Date**	**-**	**Temp. (°C)**	**Salinity**	**pH**	**DO (mg/l)**	**SS (mg/l)**	**T-N (mg/l)**	**T-P (mg/l)**	**Coliforms (CFU/100ml)**
	31/12/2025	S	28.40	31.90	8.10	6.58	8.8	0.1	<0.10	Nil
		B	28.10	31.90	8.12	6.48	13.2	0.1	<0.10	Nil
WOR6	4/12/2025	S	27.40	31.80	8.23	6.48	15.8	0.1	<0.10	Nil
		B	27.50	31.90	8.22	6.42	13.4	0.0	<0.10	Nil
	18/12/2025	S	28.60	32.00	8.30	6.58	22.0	0.0	<0.10	Nil
		B	28.40	32.10	8.24	6.38	25.6	0.0	<0.10	Nil
	24/12/2025	S	28.30	32.00	8.14	6.94	20.0	0.1	<0.10	Nil
		B	28.40	32.00	8.15	6.90	19.8	0.3	<0.10	Nil
	31/12/2025	S	28.30	31.90	8.07	6.64	16.4	0.4	<0.10	Nil
		B	28.20	31.90	8.10	6.37	9.2	0.2	<0.10	Nil
WOR7	4/12/2025	S	27.40	31.90	8.24	6.54	19.2	0.4	<0.10	Nil
		B	27.30	32.00	8.23	6.46	18.0	0.1	<0.10	Nil
	18/12/2025	S	28.50	32.00	8.28	6.48	10.0	0.0	<0.10	Nil
		B	28.40	32.00	8.22	6.39	7.4	0.0	<0.10	Nil
	24/12/2025	S	28.40	31.90	8.01	6.87	8.0	0.0	<0.10	Nil
		B	28.40	32.00	8.05	7.01	12.0	0.0	<0.10	Nil
	31/12/2025	S	28.20	31.90	8.00	6.38	10.0	0.0	<0.10	Nil
		B	28.00	31.90	7.95	6.41	11.2	0.1	<0.10	Nil

4.4 CORAL

4.4.1 Objective

Coral monitoring was conducted to confirm whether dredging and disposal activities caused any adverse impacts on corals.

4.4.2 Method

Table 17 outlines the method of coral monitoring. Figure 4 shows the coral monitoring sites.

Table 17: Method of Coral Monitoring	
Parameters	Hard coral coverage, algae coverage, bleaching, sedimentation, Abundance of *Drupella* spp. and *Acanthaster planci*, coral health (e.g., discoloration, mucus secretion, disease)
Method	Quadrat survey (10 x 10 m and 1 x 1 m)
Frequency	Once every 2 weeks during dredging works
Location	Inner reef: 2 sites (C1-C2) Outer reef: 2 sites (C3-C4)
Reference standard	Dredging/disposal method will be reconsidered in case adverse impacts on corals (e.g., reduction of coral coverage, significant bleaching, excessive mucus secretion, sedimentation) are observed through the monitoring.

Figure 4 Coral monitoring sites

4.4.3 Results and Discussion

Tables 18 and 19 show the results of coral monitoring. Coral monitoring results show an increase in sedimentation from low to medium.

Table 18 Results of Coral Monitoring

Site	Date	Hard coral cover (%)	Algae cover (%)	Bleaching (%)	*Drupella* sp. (Y/N)	*Acanthaster planci* (Y/N)	Discoloration (Y/N)	Mucus secretion (N/L/M/H)	Disease (N/L/M/H)	Sédimentation (N/L/M/H)
C1	Baseline 2025/06/25	8.0%	50%	0%	N	N	N	N (0%)	L	L (6.25%)
	Monitoring 2025/12/21	9.6%	55%	0%	N	N	N	N	L (6%)	M (10%)
C2	Baseline 2025/06/25	8.0%	41%	5%	N	N	N	N	L	L (5%)
	Monitoring 2025/12/21	7.1%	65%	0%	Y	N	L (5%)	N	L (8%)	M (5%)
C3	Baseline 2025/06/24	21%	51%	0%	N	N	N	N	N	L (5%)
	Monitoring 2025/12/20	16.0%	76%	0%	N	N	N	N	L (5%)	M (8%)
C4	Baseline 2025/06/24	27.0%	36%	0%	N	N	N	N	N	N
	Monitoring 2025/12/20	29.0%	53%	N	N	N	L (5%)	L (5%)	L (8%)	M (9%)

N: None, L: Low, M: Medium, H: High

Table 19 Results of Coral Monitoring

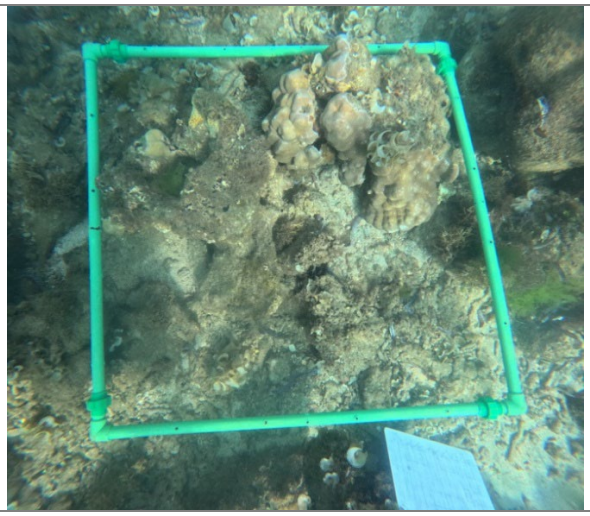
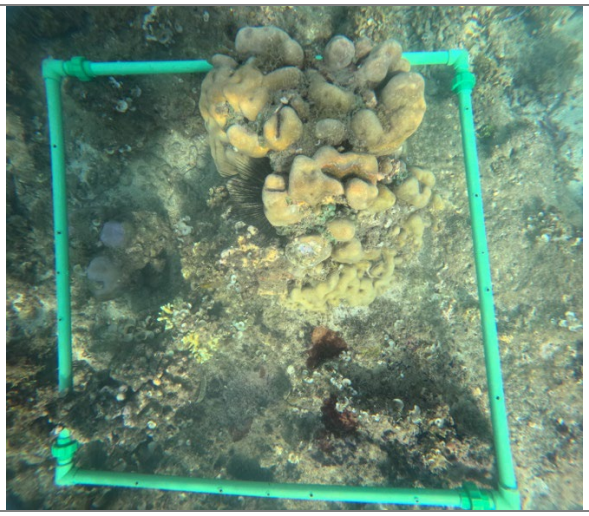
C1 – Coral Carden (Inner Reef)

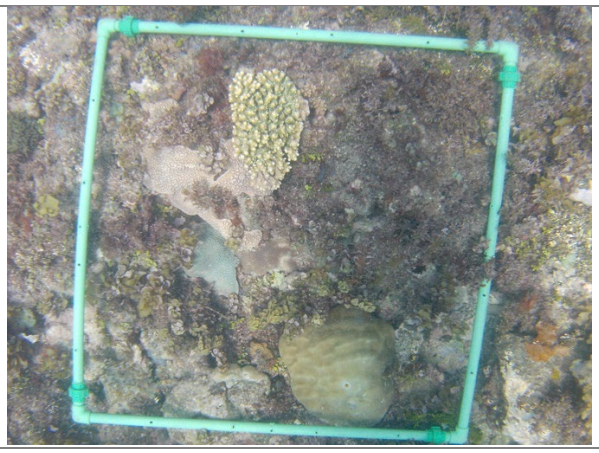
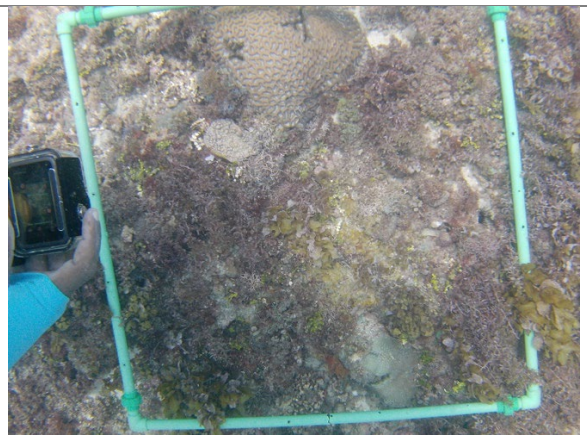
Baseline- 2025/06/24 & 25

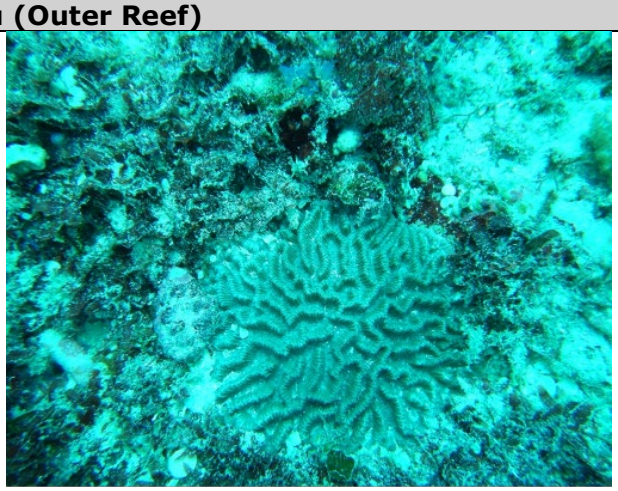
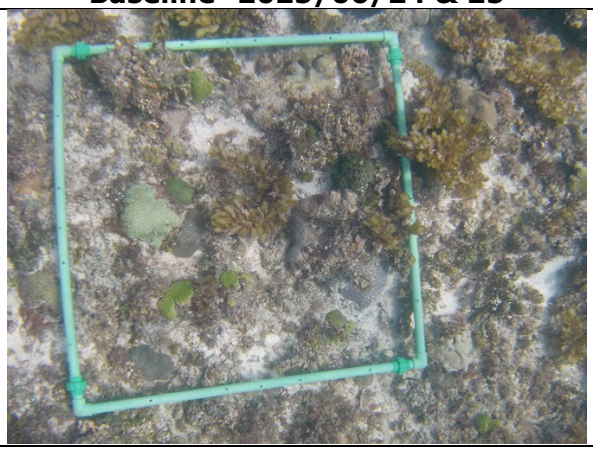
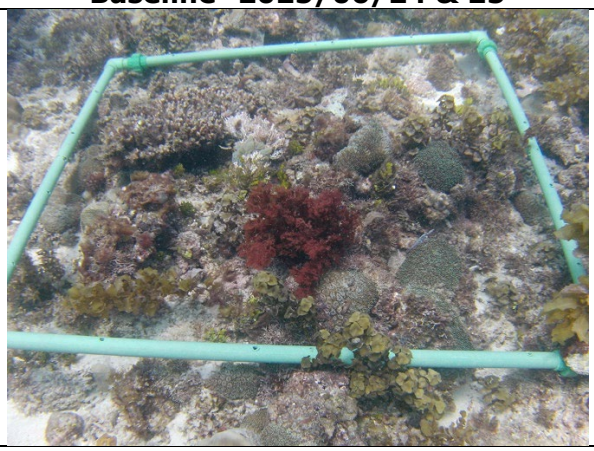
Baseline- 2025/06/24 & 25

2025/12/20 & 21

2025/12/20 & 21

C2 Marine Reserve (Inner Reef)	
	
Baseline- 2025/06/24 & 25	**Baseline- 2025/06/24 & 25**
	
2025/12/20 & 21	**2025/12/20 & 21**

C3 Shelly Beach (Outer Reef)	
	
Baseline- 2025/06/24 & 25	**Baseline- 2025/06/24 & 25**
	
2025/12/20 & 21	**2025/12/20 & 21**

C4 Shika Adabu (Outer Reef)	
	
Baseline- 2025/06/24 & 25	**Baseline- 2025/06/24 & 25**
	
2025/12/20 & 21	**2025/12/20 & 21**

4.5 SEAGRASS

4.5.1 Objective

Seagrass monitoring was conducted to confirm whether dredging and disposal activities have caused any adverse impacts on seagrass.

4.5.2 Method

Table 20 outlines the method of seagrass monitoring. Figure 5 shows the seagrass monitoring sites.

Table 20: Method of Seagrass Monitoring	
Parameters	Seagrass coverage, algae coverage, sedimentation
Method	Quadrat survey (10 x 10 m and 1 x 1 m)
Frequency	Once every 2 weeks during dredging works
Location	Inner reef: 4 sites (S1-S4)
Reference Standard	Dredging disposal method shall be reconsidered in case adverse impacts on seagrass (e.g., reduction of seagrass coverage, sedimentation) are observed through the monitoring.

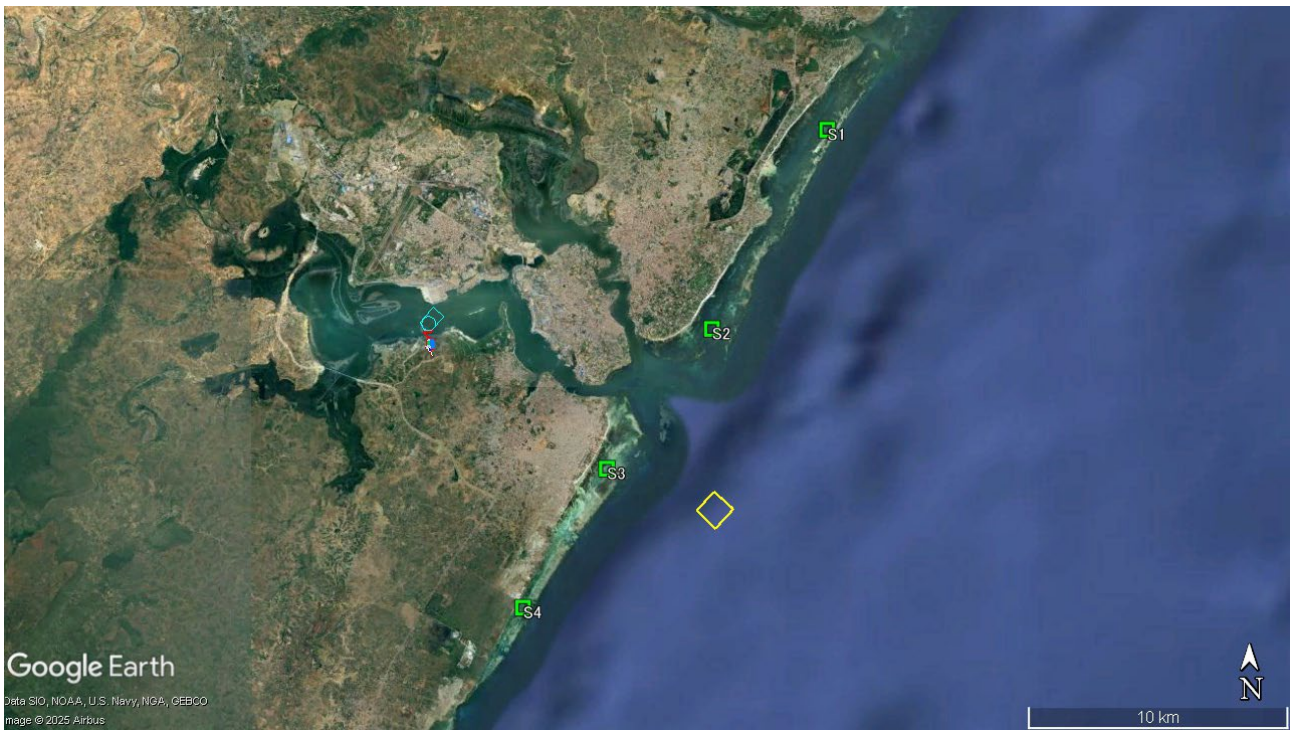


Figure 5 Seagrass Monitoring Sites

4.5.3 Results and Discussion

Table 21 and Table 22 show the results of seagrass monitoring.

Seagrass monitoring results show that so far, there are no observable impacts on seagrass beds at the 4 monitoring sites.

Table 21: Results of Seagrass Monitoring

Site	Date	Seagrass cover (%)	Algae cover (%)	Sédimentation (Visual) (N/L/M/H)
S1 (CG)	**Baseline June 23 – 27, 2025**	TC = 100	0	N
	Monitoring 2025/12/21&22	TC = 95	0	N
S2 (MR)	**Baseline June 23 – 27, 2025**	TC = 90	0	N
	Monitoring 2025/12/21&22	TC = 95	0	N
S3 (SB)	**Baseline June 23 – 27, 2025**	TH = 70	5	L
	Monitoring 2025/12/21&22	TH = 60	10	L
S4 (CFG)	**Baseline June 23 – 27, 2025**	TC = 90	0	N
	Monitoring 2025/12/21&22	TC = 100	0	N

N: None, L: Low, M: Medium, H: High

TC - *Thalassodendron ciliatum*

TH - *Thalassia hemprichii*

Table 22: Results of Seagrass Monitoring

S1 Coral Garden (CG)

Baseline June 23 – 27, 2025

2025/06/25 (10 x 10m)

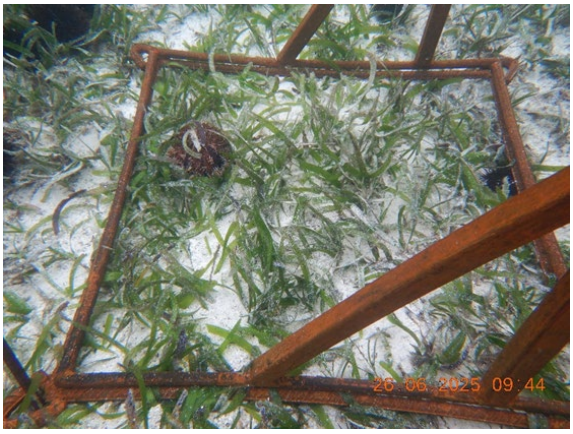
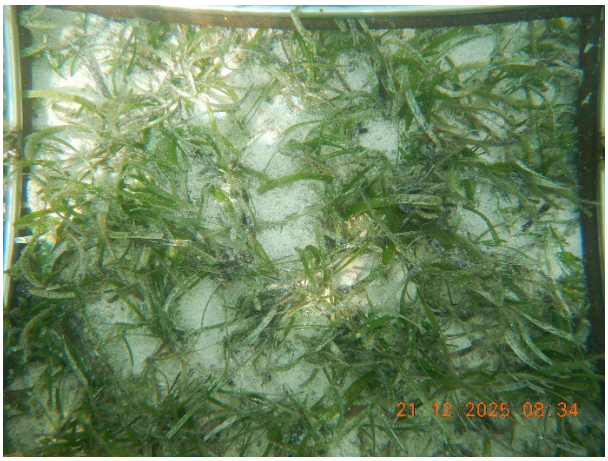
2025/06/25 (0.5 x 0.5m)

Monitoring December 2025

2025/12/21&22 (10 x 10m)

2025/12/21&22 (0.5 x 0.5m)

S2 Marine Reserve (MR)	
Baseline June 23 – 27, 2025	
 2025/06/25 (10 x 10m)	 2025/06/25 (0.5 x 0.5m)
Monitoring December 2025	
 2025/12/21&22 (10 x 10m)	 2025/12/21&22 (0.5 x 0.5m)

S3 (Shelly Beach SB)	
Baseline June 23 – 27, 2025	
 2025/06/26 (10 X 10m)	 2025/06/26 (0.5 X 0.5m)
Monitoring December 2025	
 2025/12/21&22 (10 X 10m)	 2025/12/21&22 (0.5 x 0.5m)

S4 Calcium Fishing Ground (CFG)	
Baseline June 23 – 27, 2025	
	
2025/06/26 (10 X 10m)	2025/06/26 (0.5 X 0.5m)
Monitoring December 2025	
	
2025/12/21&22 (10 X 10m)	2025/12/21&22 (0.5 x 0.5m)

5 WASTE MANAGEMENT

Table 23 is waste management record for the month of December.

Table 23: Record of Waste Management

Waste type			Waste source	Waste volume	Waste destination
Solid waste	Hazardous	Cement bags	Temporary yard	5 KG	Incineration
		Sanitary	Offices	750 grams	Incineration
	Non-hazardous	Scrap metal	Temporary yard	15 KG	Scrap dealers
		Paper	Temporary yard	2.5 KG	Incineration
		Food	Temporary yard	1.5 KG	Pig farm
		Plastic	Temporary yard	2 KG	Incineration
Liquid waste	Hazardous	Sewage	Temporary yard	10 tones	Kipevu Sewage Treatment Plant
	Non-hazardous	Nil	Nil	Nil	Nil

6 OIL SPILL

Table 24 presents the Record of Oil Spill, which is maintained to document any oil spill incidents occurring during the course of the project. This record serves as a formal log to ensure compliance with environmental protection requirements and to support effective monitoring, reporting, and corrective action.

Table 24: Record of Oil Spill

Date	Spill source/location	Spill volume	Oil type	Actions taken
28/12/2025	• Spill source: uncertain • Spill location: within the navigation channel adjacent to Berth 22 spreading towards DK 1 • The spill spread rapidly towards DK 1 area and a thin slick layer was encountered at the pontoon jetty and around the edges of the floating silt curtain	• Uncertain	Most likely diesel	• Spill source was investigated on 29/12/2025, but could not be identified • On 30/12/25 the spill had evaporated and naturally dispersed

7 PUBLIC AWARENESS

Table 25 and 26 is a record of stakeholder meetings held in the month of December.

Table 25: Summary of Meetings Held in the Month of December 2025

Date	Stakeholder type	Agenda	Key outcomes/ Issues
17/12/2025	Kaya Elders Chief MSEZ Resettlement expert	Encroachment to Vikadini Shrine	It was agreed that Kaya Elders in the company of the Chief and MSEZ Resettlement expert to inspect the Vikadini Shrine to check encroachment allegations
18/12/2025	Kaya Elders Chief MSEZ Resettlement expert	Site visit to Vikadini Shrine	Kaya Elders in the company of the Chief and MSEZ Resettlement expert inspected the Vikadini Shrine. The Kaya Elders concluded that there was encroachment to their shrine
19/12/2025	Chief Tsimba Location	Candidate date and venue for Nyando Quarry public sensitization meetings	Agreed date: 22/01/2026 Agreed venue: Nyando Quarry site and Tsimba Community Hall

Table 26 MSEZ Project Stakeholders Meeting Photos

Kaya elders on site verification of the site accompanied by MSEZ Resettlement expert Mr Edwin Obadha and area chief

Verification of Kaya boundaries at MSEZ resettlement site office

8 HERITAGE

There were no chance findings in the month of December.

9 GRIEVANCES

Table 27 is a record of grievances for the month of December.

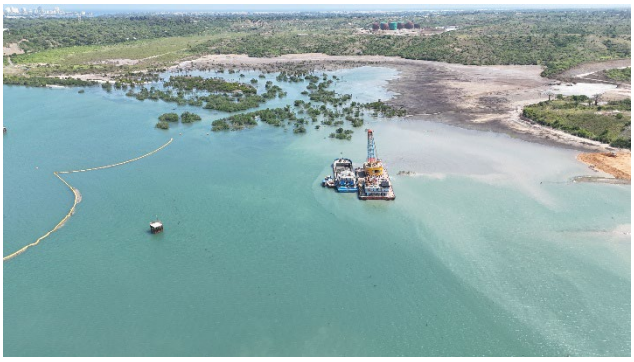
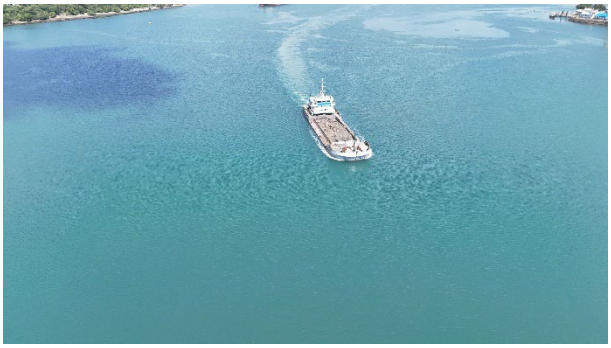
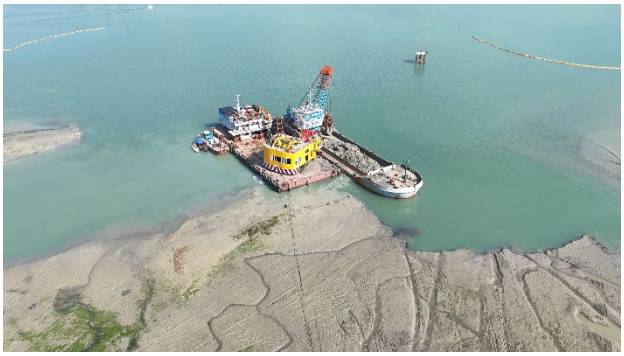
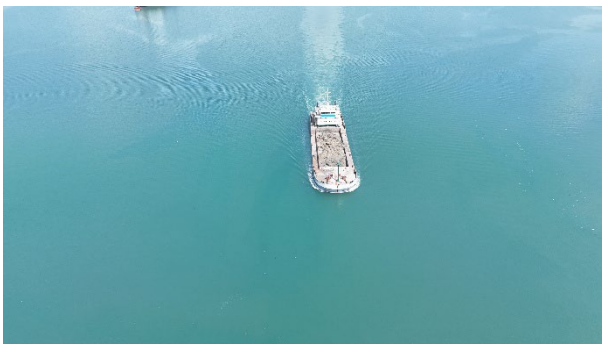
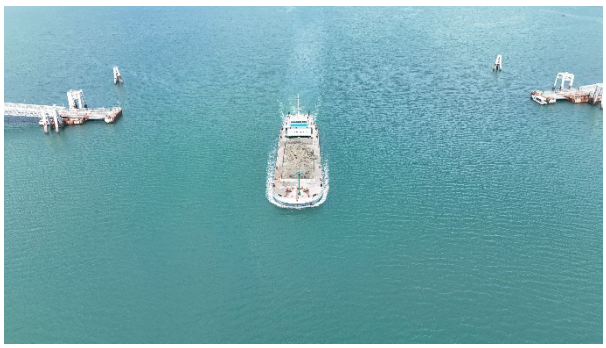
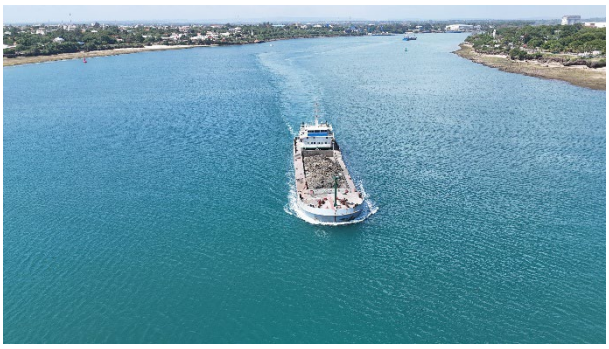
Table 27: Record of Grievances

Date	Complainant	Description of Grievance	Actions taken
18th December, 2025	Kaya Elders	Claims of encroachment to area adjacent to Vikadini Shrine	Kaya Elders in the company of the Chief and the Social Expert inspected the Vikadini Shrine. The Kaya Elders concluded that there was encroachment to their shrine.

10 ATTACHMENTS

ANNEX A - DRONE IMAGES OF AERIAL TURBIDITY MONITORING

10.1 ANNEX A - DRONE IMAGES OF AERIAL TURBIDITY MONITORING

 Dredging	 Barge
 Dredging	 Barge
 Dredging	 Barge
 Dredging	 Barge