EMERGENCY RESPONSE PROTOCOL FOR THE SALDANHA BAY AQUACULTURE DEVELOPMENT ZONE







June 2022

Version 3



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List of Acronyms

AAH - Aquatic Animal Health

ADZ - Aquaculture Development Zone

AMC - Aquaculture Management Committee

CF - Consultative Forum

DAFF - Department of Agriculture Forestry and Fisheries (Now DFFE: Branch Fisheries Management)

DEA - Department of Environmental Affairs (Now DFFE: Branch Environment)

DFFE - Department of Forestry, Fisheries and the Environment

DEO - Designated Environmental Officer

EA - Environmental Authorisation

ECO - Environmental Control Officer

ERP - Incident Response Protocol

EMPr - Environmental Management Programme

HAB - Harmful algal blooms

NEMA - National Environmental Management Act

NRCS- National Regulator for Compulsory Specifications

NSRI- National Sea Rescue Institute

SAMSA- South African Maritime Safety Authority

SANHO - South African Navy Hydrographic Office

SANParks - South African National Parks

SAPS - The South African Police Service

SAWDN - The South African Whale Disentanglement Network

SMB - Saldanha Bay Municipality

TNPA - Transnet National Ports Authority

Definitions

Aquaculture Development Zone

is an area that has been earmarked specifically for aquaculture activities with the purpose of encouraging investor and consumer confidence; creating incentives for industry development, to provide marine aquaculture service; manage the risks associated with aquaculture; as well as to provide skills development and employment for coastal communities.

ADZ Incident Response Leader

The person delegated by the AMC to perform a centralised coordinating function in the event of emergencies. This position is most likely to be filled by the Chairman of the Bivalve Association (BSASA) if resident in Saldanha Bay or surrounds or the current ECO depending on experience and expertise.

Custodian / Owner

of the ERP is the person responsible for ensuring that the ERP is kept up to date and made available to all relevant parties.

Incident response

includes the systematic response to an unexpected or dangerous occurrence with the objective of coordinating a procedure to mitigate the impact of the incident on people and the environment

Environment

as defined by the National Environmental Management Act (107 of 1998) and its regulations (NEMA) means the surroundings within which humans exist and that are made up of-

- the land, water and atmosphere of the earth.
- (ii) micro-organisms, plant and animal life.
- (iii) any part or combination of (i) and (ii) and the interrelationships among and between them; and
- (iv) the physical, chemical, aesthetic, and cultural properties and conditions of the foregoing that influence human health and well-being.

Incident

in terms of NEMA; is an unexpected, sudden and uncontrolled release of a hazardous substance, including from a major emission, fire or explosion, that causes, has caused or may cause significant harm to the environment, human life or property. For example, a large oil spill into the bay.

Responsible person

includes any person who is responsible for causing the incident, owns any hazardous substance involved in the incident; or was in control of any hazardous substance involved in the incident at the time of the incident

Section 30 incident

As per the Section 30 of NEMA refers to an "incident" and defines this in subsection (1) as "an unexpected, sudden and uncontrolled release of a hazardous substance, including from a major emission, fire or explosion, that has caused or may cause significant harm to the environment, human life or property".

1. Purpose

The purpose of this document is to describe potential incidents or emergencies that could occur within the Saldanha Bay Aquaculture Development Zone (ADZ) and detail the Standard Operating Procedure to follow when such events occur. This is a "living document" and is intended to be expanded upon and adapted as unforeseen incidents or emergencies take place and as lessons are learnt. This document cannot predict every single possible incident or incident but aims, by dealing with already identified incidents or emergencies, to provide guidance for a response to a previous unidentified incident or incident.

2. What is an incident?

An incident in terms of NEMA, is an unexpected, sudden and uncontrolled release of a hazardous substance, including from a major emission, fire or explosion, that causes, has caused or may cause significant harm to the environment, human life or property. For example, a large oil spill into the bay. However, for the purpose of this protocol this definition is expanded to include all incidents / events originating from an ADZ activity that could affect the environment / other Bay users AND all incidents / events occurring elsewhere in the Bay that could impact on the ADZ. Reference is made to some of these below:

- release of any alien invasive caged fish;
- loss of equipment;
- · localised equipment washed up on the beach;
- mooring lines or other infrastructure becoming loose or drifting;
- widespread and large-scale equipment loss and debris formation (e.g. as a result of heavy seas of storms);
- major oil spill in the harbour- unrelated to ADZ operations;
- any other deviation or non-compliance with either the ADZ or farm-specific EMPrs which could pose a risk to the environment, people or other infrastructure and bay users; or.
- sewage or poorly treated effluent spill outside of the Aquaculture Development Zone (ADZ).

Thus, two broad **categories** of incidents can be defined based on the source of the incident and consequent risk of damage to the environment, people or property:

- ✓ an incident originating from within the ADZ farms and,
- ✓ an incident originating outside of the ADZ, but which could affect the farms.

Two levels of incident can be defined:

- A localised, farm specific loss of equipment, discharge of pollutant that does not need outside assistance, and which is likely to have localised impact and not affect other bay users (this type of event will be termed an INCIDENT in the remainder of this plan) and
- 2. A larger, more significant incident in which multiple farms are involved and the effects of which are potentially felt by other bay users and the environment such as loss of fish.

3. What should be done if such an incident occurs?

The two **categories** of event (i.e. originating inside the ADZ or outside the ADZ) are approached differently. The flow diagram below summarises the approaches which are then detailed in subsequent paragraphs.

For an incident or emergency originating in the ADZ

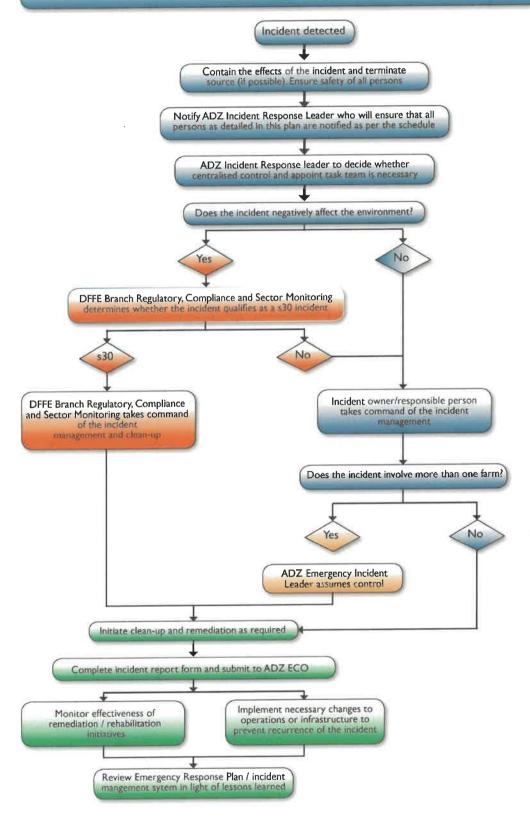


Figure 3-1: Flow chart for an Incident originating inside the ADZ

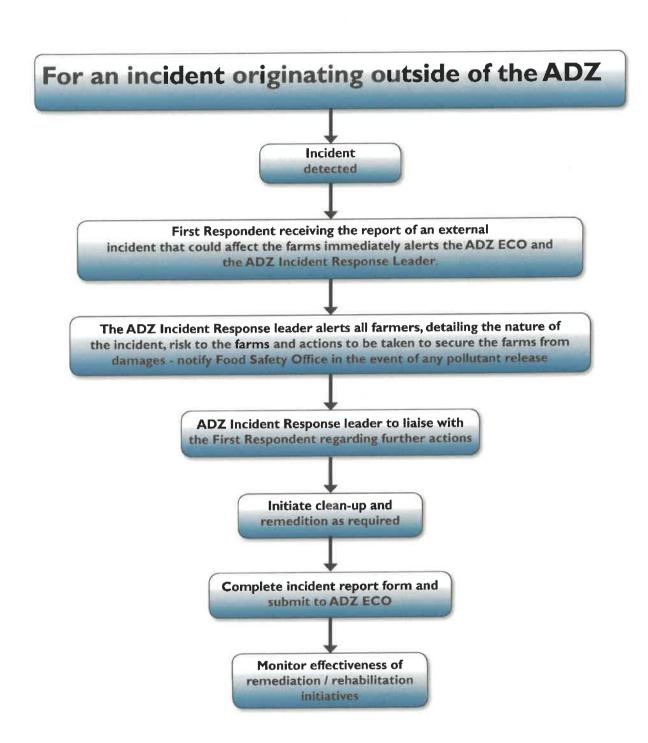


Figure 3-1: Flow chart for an Incident originating outside the ADZ

The following paragraphs provide a summary of actions to be taken in the event of an INCIDENT. More details are provided in Table 4-1.

3.1 First Response: Contain and minimise the effects of the ADZ originated incident

The responsible person must, as soon as reasonably practicable after knowledge of the incident take the following actions:

- a) Take all reasonable measures to contain and minimise the effects of the incident, including its effects on the environment and any risks posed by the incident to the health, safety and property of persons (this may include isolating the source of the incident i.e. in the event of a spill or the hole through which fish have escaped);
- b) Notify the ADZ Incident Response Leader who will notify the persons detailed in the sections below dealing with specific incidents or emergencies and make a decision whether centralised control is necessary;
- c) Initiate containment and control measures;
- d) Initiate clean-up operations; and,
- e) Complete incident report (Appendix 1) for submission to ADZ ECO.

Where an incident involve hazardous substances and fall within the ambit of NEMA S30 the responsible person must follow provisions of Section 30. Guideline can be found at:

https://www.dffe.gov.za/sites/default/files/legislations/incidentsadministration_nemasection30guideline.pdf.

In the event the response is required to deal with an incident of external origin, the ADZ Incident Response Leader will direct activities to protect the ADZ farms in liaison with the ADZ ECO and First Respondent of the external incident.

3.2 Immediate reporting

The First Respondent must report the incident to the ADZ Incident Response Leader who will then initiate the incident contact notification, under the immediate list and notify the appropriate individuals depending on the nature of the incident and risks posed to other users as detailed in section 6 of this document (Incident Response Protocols per incident type).

The notification must be via telephonic/ VHF (channel 16) and followed up by email and must include-

- a) The nature of the incident; (including date, time and location) and causes of the incident, whether direct or indirect, including equipment, technology, system, or management failure;
- b) Any risks posed by the incident to people, property and the environment (i.e. floating rafts or ropes endangering other vessels);
- c) The toxicity of any substances or by-products released by the incident;
- d) The nature and estimated number of alien fish escapees
- e) Any steps that have already been taken to avoid or minimise the effects of the incident on people, property and the environment; and,

Once the transmission is received the Port Captain/ NSRI EOC and MRCC and depending on the nature of the incident Stn4 Mykonos will be contacted to respond accordingly.

3.3 Subsequent reporting - within 7 calendar days

The ADZ Incident Response Leader, must, within 7 calendar days of the incident, ensure the submission of a completed incident report form to the ADZ ECO.

4. Incident Response Roles and Responsibilities

The following tables define the various roles and responsibilities in the two categories of incidents (i.e. originating inside or outside the ADZ).

Table 4-1: Roles and Responsibilities for incidents

Role	Incidents that originate INSIDE the ADZ	Incidents that originate OUTSIDE the ADZ
First Respondent	This may be a member of the public, the farm staff member on a barge, or a member of a ship's crew or Departmental official and is referred to as the person that first detects the incident or incident. The First Respondent should notify the ADZ Incident Response Leader or any other person listed on the contact list who can then get in contact with the ADZ Incident Response Leader. If the person is a farm member of staff, they must endeavour must try to minimise the magnitude of the incident by shutting off the source (i.e. a hole in the cage netting) and limit the extent of the damage by containing the effects of the event (i.e. containing the escaped fish), where possible. The intention is to prevent the situation from becoming worse while reaction activities are being initiated. While the incident or incident is being contained/ stabilised, the staff member must notify the farm manager who must then assume control of the incident or event and notify the ADZ ECO and ADZ Incident Response Leader. An alert report in terms of NEMA S30(3) must be sent to DFFE: RCSM in case of S30 incidents	The first respondent in this instance will be the organisation taking control of the INCIDENT and is likely to be organisations such as Port Control, TNPA or DFFE Oil Spill Response Unit. The First Respondent will make contract with the ADZ ECO and or the ADZ incident Response Leader who will issue instructions as appropriate.
Farm Manager	The Farm Manager is the person who must take control of any incident or incident originating inside the ADZ where the incident arose since the incident or incident and the response will have resource implications and only the farm manager can authorise those responses. If the event qualifies as an INCIDENT, the ADZ Incident Response Leader must notify all persons/ organisations included in the list detailed for each incident type below (see Table 6-1 and Table 6-2) and perform the activities detailed. The Farm Manager must adhere to any instructions issued by the ADZ Incident Response Leader in actions to contain or remediate the INCIDENT. If the INCIDENT falls with the ambit of NEMA S30, the Farm Manager must follow the requirements of NEMA S30. In the event of an INCIDENT, the Farm Manager must ensure that a completed incident response report is submitted to the ADZ ECO within 7 calendar days of the incident. The Farm Manager may make media statements IF the INCIDENT is confined to a single farm ONLY. If this is not confined to a single farm, all media queries must be referred to the DFFE.	For an INCIDENT originating outside of the ADZ this requires notification of the ADZ farmers and operators, it can be assumed to be a large-scale INCIDENT or INCIDENT. As such there is unlikely to be direct communication with individual farm managers. The ADZ Incident Response Leader will assume control for the ADZ response, so if the Farm Manager is notified by an outside agency, the Farm Manager must immediately notify the ADZ Incident Response Leader. The Farm Manager must then implement any instructions provided by the ADZ Incident Response Leader. The Farm Manager may not make media statements. Any media queries are to be routed to the DFFE.
Farm Designated	The farm DEO (if applicable) is a farm staff member with assigned environmental management and control functions. That individual will assist the farm manager to	For an INCIDENT originating outside of the ADZ this requires notification of the ADZ farmers and operators, it can be assumed to be a large-scale INCIDENT. As such

Role	Incidents that originate INSIDE the ADZ	Incidents that originate OUTSIDE the ADZ
Environmental Officer (DEO)	ensure that the environmental damage caused by the INCIDENT is limited and that clean-up activities are effective and comprehensive.	there is unlikely to be direct communication with individual farm DEO. The ADZ Incident Response Leader will assume control for
	This person may NOT make any media statements, all media queries must be referred to the DFFE.	the ADZ response, so if the farm DEO is notified by the outside agency, the Farm Manager must immediately be notified and the farm DEO must then implement any instructions provided by the Farm Manager.
		The farm DEO may not make media statements. Any media queries must be referred to the DFFE.
Farm ECO (applicable to finfish farms)	The farm ECO (if applicable) is not a staff member but an external consultant appointed by the farm management to oversee environmental protection measures and ensure compliance with the ADZ Environmental Authorisation (EA) and Environmental Management Programme (EMPr) and any other instructions or protocols issued by the Saldanha Bay Management Committee (AMC) including this Incident Response Protocol.	The farm ECO (if applicable) will monitor activities to contain and remediate the INCIDENT to ensure the outcome is acceptable to the ADZ ECO and/ or authorities (as appropriate). This person may NOT make any media statements, all media queries must be referred to the DFFE.
	He/ She will monitor activities to contain and remediate the INCIDENT or INCIDENT to ensure the outcome conforms with the objectives of the approved EMPr and/ or authorities requirements (as appropriate).	
	This person may NOT make any media statements, all media queries must be referred to the DFFE.	
ADZ ECO	The ADZ ECO is appointed by the DFFE to oversee compliance with environmental management actions detailed in the ADZ EA and EMPr.	The ADZ ECO will not be actively involved in such INCIDENTS but may act as a conduit for instructions and information to channelled from the First Respondent to the
	He/ she will provide monitoring to ensure legal requirements are met, coordination between parties is effective, that stakeholders are notified and that clean-up is completed.	ADZ Incident Response Leader and the DFFE if appropriate. The ADZ ECO is responsible for updating the ADZ AMC and DFFE on the progress of the INCIDENT activities and
	The ADZ ECO will receive, register and process all incident response forms for INCIDENTS.	compiling an Incident Report. This person may NOT make any media statements, All
	The ADZ ECO can request additional or alternative actions to those taken by the farm managers if required.	media queries must be referred to the DFFE.
	The ADZ ECO is responsible for verifying that clean-up is completed and that any long-term monitoring required is implemented and maintained.	
	This person MAY NOT make media statements - any media queries must be referred to the DFFE.	
ADZ Incident Response Leader	At present, the ADZ Incident Response Leader is the current Chair of the Bivalve and Shellfish Association of South Africa (BSASA).	The ADZ Incident Response Leader – BSASA Chair is to be the primary link between the First Respondent and the farmers and operators.
	As chair, this individual's response is to ensure that activities and notifications are coordinated in the event of an INCIDENT- i.e. when more than one farm is involved.	The ADZ Incident Response Leader – BSASA Chair will channel and coordinate responses to all instructions from the First Respondent to affected farmers and operators.
	This individual will be the one of the main role players notifying the persons/ organisations detailed in the list in section 6 below.	The ADZ Incident Response Leader – BSASA Chair must also initiate any actions that may be required to protect the ADZ operations from the INCIDENT but only after these

Role	Incidents that originate INSIDE the ADZ	Incidents that originate OUTSIDE the ADZ
	The ADZ Incident Response Leader MUST designate an alternate contact who can assume his/her roles if the	actions have been endorsed by the ADZ ECO and/ or the DFFE to ensure there is no conflict.
	primary contact is unavailable.	This person may NOT make any media statements, All
	The ADZ Incident Response Leader is also responsible for receiving instructions and coordinating activities in the event that the incident falls within the ambit of S30 of NEMA and the DFFE Branch Regulatory, Compliance and Sector Monitoring assume control. This individual will be the link between the DFFE Branch Regulatory, Compliance and Sector Monitoring and the farmers.	media queries must be referred to the the DFFE.
	The ADZ Incident Response Leader must, in order to effectively discharge the responsibilities as coordinator, establish a working forum with DFFE to ensure effective and rapid transfer of information. Other key organisations will be invited to participate in this forum as required.	
	This person may NOT make any media statements, and all media queries must be referred to DFFE.	
DFFE Branch Regulatory, Compliance and Sector Monitoring	 DFFE Branch Regulatory, Compliance and Sector Monitoring has two roles in this context: The first role is to ensure complete compliance with the conditions detailed in the ADZ EA and other relevant legislation; and, The second role is to process any INCIDENT notification and make a declaration whether it constitutes a S30 Emergency. The DFFE will then decide to either assume direct control of response activities or merely provide oversight. If DFFE elects to merely provide oversight, the farm manager or ADZ Incident Response Leader must implement any directives issued by the DFFE and provide report-back as required. If DFFE assumed complete control of the incident, the ADZ Incident Response Leader must establish a forum to ensure effective transfer of communication from DFFE Branch Regulatory, Compliance and Sector Monitoring to the farmers. DFFE will receive and process all Incident Reports submitted by the ADZ ECO and issue any further 	DFFE Branch Regulatory, Compliance and Sector Monitoring will be notified by the First Respondent. It is not the role of the ADZ ECO or ADZ Incident Response Leader to notify DFFE Branch Regulatory, Compliance and Sector Monitoring in this instance. If the INCIDENT is classified as a S30 Emergency they will engage directly with the other relevant parties.
DFFE Branch Fisheries Management (EA holder)	instructions to the ADZ ECO, as required. DFFE Branch Fisheries Management is the "holder" of the EA and as such is ultimately responsible for compliance of all activities in the ADZ.	DFFE Branch Fisheries Management is the "applicant" and thus will receive regular updates from the ADZ ECO but will not be actively involved in the management of the INCIDENT.
	DFFE appoints the ADZ ECO and can issue specific instructions to farmers to ensure compliance with regards to incidents. DFFE must be notified in all cases. Only DFFE is permitted to engage with the press / media in the event of an INCIDENT	

Role	Incidents that originate INSIDE the ADZ	Incidents that originate OUTSIDE the ADZ
DFFE Branch Fisheries Management: Aquaculture Authorisations	DFFE: Aquaculture Authorisations is responsible for ensuring compliance with Aquaculture Rights and Aquaculture Permit conditions. DFFE will investigate when a contravention of Right or Permit conditions is evident in the incident.	DFFE Branch Fisheries Management Compliance Monitoring will only be notified if there is a breach of the Marine Aquaculture Right and or permit conditions but will play no role in the management of the INCIDENT.
DFFE Branch Fisheries Management: State Veterinarian	The State Veterinarian is responsible for ensuring adequate measures are in place to promote animal health and prevent or contain a disease outbreak in the ADZ farms. The State Veterinarian MUST be notified if any fish escape or in the event of any disease outbreaks and may then issue specific instructions to the farmers or to the ADZ Incident Response Leader as required. The State Veterinarian is the only agency that may instruct euthanasia of a trapped animal. If no State Veterinarian is available, a registered veterinarian in consultation with NSPCA must make the decision to euthanise and indicate the method of doing so and records for such consultation shall be kept appended to the incident report.	The State Veterinarian will only be notified if there is an issue of animal health. While it should be the responsibility of the First Respondent, in the event that the First Respondent does not do so and the ADZ Incident Response Leader deems it necessary, The First Respondent can be requested to do so, or the ADZ Incident Response Leader may notify the State Veterinarian, but the First Respondent must be copied in all communication.
DFFE Branch Fisheries: Aquaculture Research and Development	DFFE ARD is primarily responsible for marine (aquaculture) research. As such DFFE ARD must be notified if specialist marine biology information is required or in the event of fish escapees, disease outbreaks which are believed to be zoonotic and entanglements, they may issue specific instructions to the farmers or ADZ Incident Response Leader as required.	DFFE: ARD will only be notified if specialist marine biological knowledge or advice is required. While it should be the responsibility of the First Respondent the ADZ Incident Response Leader may be requested to notify the DFFE ARD but the First Respondent must be copied in all communication.
DFFE Branch Fisheries Management: Food Safety	DFFE: Food Safety Office is primarily responsible for ensuring that the ADZ products are fit for human consumption. The Food Safety Office monitors environmental residues and pathogenic microbiological organisms amongst other parameters. Examples include polycyclic aromatic hydrocarbons from hydrocarbon spills and E. coli from sewerage spills and heavy metals from ore spillage. They may issue specific instructions to the farmers or ADZ Emergency Response Leader as required.	DFFE: Food Safety Office will only be notified if there is an issue of food safety. While it should be the responsibility of the First Respondent the ADZ Incident Response Leader may be requested to notify the DFFE: Food Safety Office but the First Respondent must be copied in all communication.
South African Navy Hydrographic Office (SANHO)	SANHO is responsible for compiling charts showing obstructions to shipping and boat users. In the event that the INCIDENT involves an obstruction such as a loose raft, or loose ropes or cages that may cause a hazard to shipping, they must be notified immediately by the ADZ Incident Response Leader and may decide to issue a warning/ notice. ONCE THE HAZARD IS REMOVED, they may withdraw the warning.	SANHO will only be notified if there is an issue of obstructions to bay users. While it should be the responsibility of the First Respondent the ADZ Incident Response Leader may be requested to notify SANHO but the First Respondent must be copied in all communication.
Saldanha Bay Port Control/ Port Captain	Saldanha Bay Port Control/ Port Captain is responsible for all activities in the Port of Saldanha they will only be directly involved if there is a hazard to shipping, or pollution.	Saldanha Bay Port Control/ Port Captain will only be notified if there is an issue of obstructions to bay users. While it should be the responsibility of the First Respondent the ADZ Incident Response Leader may be requested to notify the Saldanha Bay Port Control/ Port

Role	Incidents that originate INSIDE the ADZ	Incidents that originate OUTSIDE the ADZ
	Any such event requires immediate notification of the Saldanha Bay Port Control/ Port Captain they may be involved in coordinated clean-up such as after a major storm where the debris results from numerous operations within the Port. They may issue specific instructions to the farmers or ADZ Incident Response Leader as required.	Captain but the First Respondent must be copied in all communication.
Transnet National Port Authority (TNPA)	TNPA leases the water space to the operators of the ADZ farms and the lease contains provision for environmental protection. In the event of an INCIDENT such as widespread damage from storms, TNPA may participate in retrieving debris resulting from numerous Port-based operations they may issue specific instructions to the farmers or ADZ Incident Response Leader as required.	Notification of the TNPA rests with the First Respondent.
South African National Parks (SANParks)	SANParks manages the West Coast National Park and if the INCIDENT negatively impacts on the Langebaan Lagoon or its surrounds must be notified. Section 6 details the events in which South African National Parks (SANParks) must be notified and they may issue specific instructions to the farmers or the ADZ Incident Response Leader as required.	Notification of SANParks rests with the First Respondent
South African Maritime Safety Authority (SAMSA)	SAMSA is responsible for maritime safety and MUST be notified immediately in the event of any collisions with vessels, vessels running aground or onto ADZ infrastructure as per section 6. SAMSA can issue incident authorisations to allow vessels to exceed their permitted maximum seaward passage to permit disposal of animal carcases.	Notification of SAMSA rests with the First Respondent
South African Police Service (SAPS)	SAPS is responsible or law enforcement and must be notified in the event of tampering or damage to ADZ infrastructure and a case can be opened regarding the matter and they may offer assistance if people are in danger from shipping accidents and may issue specific instructions to farmers or the ADZ Incident Response Leader as required. SAPS may also be required to assist with control of the public in the event of debris or animals being washed ashore.	Notification of SAPS rests with the First Respondent
National Sea Rescue Institute (NSRI)	NSRI is responsible for rescuing people and vessels at sea. They have a base in Langebaan and must be notified if human safety is involved or if a marine mammal is entangled. Section 6 details when NSRI must be notified. The NSRI, in conjunction with SAWDN will take control of any incident in which sea animals are entrapped.	Notification of NSRI rests with the First Respondent. While it should be the responsibility of the First Respondent the ADZ Incident Response Leader may be requested to notify the NSRI but the First Respondent must be copied in all communication.
South African Whale Disentanglement	SAWDN are permitted to assist with any marine mammal entanglements in the area and must be notified immediately.	SAWDN are responsible for any marine mammal entanglements in the area and must be notified

Role	Incidents that originate INSIDE the ADZ	Incidents that originate OUTSIDE the ADZ
Network	The SAWDN, in conjunction with NSRI will take control of any incident in which sea animals are entrapped.	immediately by the First Respondent or if this is not done, by the ADZ Incident Response Leader.
(SAWDN) Southern African Foundation for the Conservation of Coastal Birds (SANCCOB)	SANCCOB is responsible for any turtle or avian entanglements in the area and must be notified immediately. SANCCOB, in conjunction with NSRI will take control of any incident in which sea animals are entrapped.	SANCCOB is responsible for any chelonian or avian entanglements in the area and must be notified immediately by the First Respondent or if this is not done, by the ADZ Incident Response Leader.
National Council of Societies for the Prevention of Cruelty to Animals – Wildlife Protection Unit (NSPCA)	NSPCA are permitted to ensure that all animals are handled in a humane manner without unnecessary stress. They need to be notified in the event of any entanglements and they will send a representative to site as appropriate.	NSPCA is responsible for ensuring that all animals are handled in a humane manner without unnecessary stress. They need to be notified in the event of any entanglements and they will send a representative to site as appropriate.
Saldanha Bay Municipality (SBM)	SBM has responsibility for incident response and environmental management landwards from the high-water mark and must be notified if there is a risk of debris washing up onto the beaches or safety concerns at the SBM beaches. Section 6 details when SBM must be notified.	Notification of SBM rests with the First Respondent
DFFE: Branch Oceans & Coasts - Oil Spill Unit	DFFE: Branch Oceans & Coasts - Oil Spill Unit is a national unit designed to develop and coordinate effective responses to marine oil (and hydrocarbon) spills. This unit is ONLY notified in the event of an oil spill they may issue specific instructions to farmers and the ADZ Incident Response Leader.	Notification of Branch Oceans & Coasts - Oil Spill Unit rests with the First Respondent
Saldanha Bay Consultative Forum (CF)	The Saldanha Bay Consultative Forum (CF) is a forum established to exchange information between the ADZ operators and farmers and the general or affected public. The CF will not be directly involved in INCIDENTS or EMERGENCIES but MUST be notified in the event of any INCIDENT or INCIDENT which could affect their safety (such as loose infrastructure) or their health and welfare (pollution events). All communication with the CF MUST be via the ADZ ECO ONLY. All incident reports are summarised monthly for the CF by the ADZ ECO – full transcripts are available on request.	Responsibility for keeping the CF informed rests solely with the ADZ ECO who must issue updates, IRRESPECTIVE of whether the First Respondents is independently issuing updates.
Aquaculture Development Zone Management Committee (AMC)	The AMC is a management committee comprising all government departments responsible for the management and control of the Saldanha Bay ADZ. This Committee makes decisions and issues instructions to farmers and operators. The AMC will receive notification of INCIDENTS via the ADZ ECO and must be notified as per the details in section 6.	Responsibility for keeping the AMC informed rests solely with the ADZ ECO who must issue regular updates, IRRESPECTIVE of whether the First Respondents is independently issuing updates.

Role	Incidents that originate INSIDE the ADZ	Incidents that originate OUTSIDE the ADZ
	All incident reports are summarised monthly for the ADZ	
	by the ADZ ECO – full transcripts are available on request.	
	The AMC may issue media statements if appropriate.	

5. Review of the Incident Response Protocol

This Incident and Response Protocol must be reviewed every year by the ADZ ECO as a minimum or after each significant incident. The review will consist of:

- 1. Reviewing the effectiveness and appropriateness of all instructions in dealing with the incident
- 2. Reviewing the reporting procedures and structures
- 3. Reviewing the contact details
- Determining what changes are required and effecting the changes within 7 calendar days of the last event.

6. Incident and Incident Response Protocols

The following paragraphs provide details of responses required in the identified INCIDENTS or EMERGENCIES. Note: all of the below listed incidents need to follow the process outlined in section 3.

In the tables below,

 Each incident type is listed providing the identity of the individual or organisation who could have a role to play in the management of the listed INCIDENT;

It depicts the individuals or organisations that must be contacted immediately- without delay;

INFRASTUCTURE RELATED INCIDENTS

6.1 Loose/ drifting equipment (single or small items only)

Minimum requirements for infrastructure used in the ADZ have been issued to all farmers. This includes specifications for mooring blocks, ropes and shackles etc. In addition, all the major infrastructure elements must be marked with unique markings so that their owners can be traced. These measures notwithstanding, buoys, ropes and other **small** pieces of infrastructure do break loose on occasion. **Note:** entire rafts breaking loose do not fall within this category, nor do complete longlines drifting off station. In the event of INCIDENTS involving small items of infrastructure, the following actions must be taken.

Immediate Response

- If the loss is detected by farm staff- Farm Manager must be notified immediately.
- Farm Manager
- o must notify all relevant parties in Table 6-1.
- o initiate retrieval where possible.
- initiate repairs or replacements of infrastructure which may have washed onto the beach.
- If the items are found on the beach by a stakeholder or member
 of the public, the notification can come through either the ADZ
 ECO or the ADZ Incident Response Leader the farm
 manager is then required to collect the item as identified by its
 unique marking without delay.

Within 7 calendar days

- Farm Manager
- o complete Incident Report and submit to ADZ ECO.
- ADZ ECO
- o to register the Incident Report in the Incident Register,
- review the Incident Report and request additional information or actions before sign-off if required.
- o sign-off Incident Report.
- submit a summary of the Incident report to the AMC and CF.
 Complete transcripts must be available on request.
- send complete transcripts and summaries to DFFE Branch Regulatory, Compliance and Sector Monitoring.

6.2 Large-scale loss of equipment or infrastructure as a result of severe storms

Minimum requirements for infrastructure used in the ADZ have been issued to all farmers. This includes specifications for mooring blocks, ropes and shackles etc. In addition, all the major infrastructure elements must be marked with unique markings so that their owners can be traced.

These measures, it has been found, do not provide total security in the event of severe storms and/ or high seas. Such weather events can result in large pieces of equipment tearing loose, posing a risk to other users and cetaceans. In the event of such EMERGENCIES involving large items of infrastructure, the following actions must be taken.

Immediate Response

- If the loss is detected by farm staff- Farm Manager must be notified immediately.
- Farm Manager
- must notify the ADZ Incident Response Leader who will take overall charge for coordination and reporting.
- o initiate repairs or replacements.
- The ADZ Incident Response Leader
- must notify all relevant parties in Table 6-1.
- SANHO office to be contacted via the Port Control to notify all vessels in the area of the potential navigational hazard.
- initiate securing any loose articles until such time the weather permits retrieval where possible to prevent further damage.
- coordinate beach patrols including Hoetiesbaai, Dial Rock, Blue Water Bay, Spreeuvalle. Langebaan Lagoon and Paradise Beach and any other beaches in the areas where

- The ADZ Incident Response Leader
- to complete Incident Report and submit to ADZ ECO.
- The ADZ ECO
- to physically verify that the beaches have been cleaned within 7 calendar days of the incident.
- register the Incident Report in the Incident Register, review the Incident Report and request additional information or actions before sign-off if required.
- o sign-off Incident Report.
- submit a summary of the Incident report to the AMC and CF, complete transcripts are available on request.
- send complete transcripts and summaries to DFFE Branch Regulatory, Compliance and Sector Monitoring.
- SANHO to be requested to remove the warning notice if such a notice is issued, post clean up.

- debris is likely to wash ashore, to detect any debris on the shore
- coordinate clean-up and return of loose items to their owners as per the unique identifiers.
- As soon as the weather permits, large loose articles must be returned to their original position and repaired or moved to another area for repairs that will not pose a threat to other bay users.
- If the items are found on the beach by a stakeholder or member
 of the public, the notification can come through either the ADZ
 ECO or the ADZ Incident Response Leader the farm
 manager is then required to collect the item as identified by its
 unique marking.

6.3 Accidents (collisions) with other water users

The ADZ operations make use of service vessels to install and service infrastructure. While every attempt is made to avoid collisions with other water users, such INCIDENTS do occur. In this instance, the following actions must be taken.

Immediate Response

- If the collision is detected by farm staff- Farm Manager, ADZ Incident Response Leader, NSRI and Port Control must be notified immediately.
- Farm Manager
- o must notify all relevant parties in Table 6-1 immediately.
- administer any incident first aid required to stabilise any injuries while waiting for the arrival of NSRI.
- ensure that the other party's vessels is removed from the
- In the event that the other party is within the ADZ exclusion zone, the Farm Manager may lay a criminal charge with SAPS.
- In the event that any farm infrastructure is damaged, the Farm Manager shall initiate repairs.
- ADZ ECO to notify the AMC and the CF.

Within 7 calendar days

- Farm Manager
- complete Incident Report and submit to ADZ ECO.
- ADZ ECO
- to register the Incident Report in the Incident Register, review the Incident Report and request additional information or actions before sign-off if required.
- sign-off Incident Report.
- submit a summary of the Incident report to the AMC and CF, complete transcripts must be available on request.
- send complete transcripts and summaries to DFFE Branch Regulatory, Compliance and Sector Monitoring.

6.4 Infrastructure theft, vandalism, tampering or other intrusions

The ADZ farm infrastructure is not staffed after hours or over weekends, theft, vandalism, tampering or other intrusions are therefore a possibility. In the event that these events do take placethe following actions must be taken.

Immediate Response

- If theft, vandalism, tampering or other intrusions are detected by farm staff- Farm Manager must be notified immediately.
- Farm Manager
- o must report the incident to SAPS and obtain a case number.
- o notify all relevant parties in Table 6-1.
- · ADZ ECO to notify the AMC.

- Farm Manager
 - must follow up on investigations by SAPS.
 - o complete Incident Report and submit to ADZ ECO.
- ADZ ECO
 - to register the Incident Report in the Incident Register, review the Incident Report and request additional information or actions before sign-off if required.
 - o sign-off Incident Report.

 submit a summary of the Incident report to the AMC and
CF, complete transcripts must be available on request.
o send complete transcripts and summaries to DFFE Branch
Regulatory, Compliance and Sector Monitoring.

6.5 Sewage spills

The Saldanha Bay Municipality operates a sewage treatment facility. Break-downs in controls can lead to un-or semi-treated sewage being discharged into the Saldanha Bay. Such discharge has the potential to contaminate the shellfish and render them unsaleable. In this event, the following actions must be taken:

Immediate Response

- If the sewage discharge is detected by farm staff- the Farm Manager must be notified immediately to report the incident to the DFEE Compliance and Sector Monitoring.
- The Farm Manager
- immediately notify the ADZ Incident Response Leader who in turn will notify SBM.
- take appropriate action to prevent the harvesting of potentially contaminated products
- send shellfish samples to Mérieux NutriSciences for food safety analysis.
- The ADZ Incident Response Leader
- notify all relevant parties in Error! Reference source not found.
- If more than one farm is at risk, the ADZ Emergency Response Leader shall take responsibility for coordination and monitoring.
- If the discharge is detected by SBM staff, they must notify the ADZ Incident Response Leader and the Food Safety Office who in turn will inform all Farm Managers and all relevant parties in Table 6-1.
- Food Safety Office through the Shellfish monitoring programme to monitor farm stock to determine the level of contamination (if any) and has the mandate to close the farm until the levels of contamination are within regulatory limits.
- ADZ ECO to notify the AMC and the CF.

Within 7 calendar days

- The Municipality to identify cause of untreated sewage spill and take appropriate action and report back to ADZ ECO and ADZ Incident Response Leader.
- The ADZ Incident Response Leader
- complete Incident Report and submit to ADZ ECO.
- ADZ ECO
- to register the Incident Report in the Incident Register, review the Incident Report and request additional information or actions before sign-off if required.
- sign-off Incident Report.
- submit a summary of the Incident report to the AMC and CF, complete transcripts must be available on request.
- send complete transcripts and summaries to DFFE Branch Regulatory, Compliance and Sector Monitoring.

6.6 Metal Ore spills

The Saldanha Bay Port Authority operates a bulk ore terminal. Break-down of controls can lead to large quantities of metal ore being deposited into Saldanha Bay. Such deposits have the potential to contaminate the shellfish and render them unsaleable. In this event, the following actions must be taken:

Immediate Response

- If the ore spill is detected by farm staff- Farm Manager must be notified immediately.
- The Farm Manager
- o must the immediately notify Port Control and TNPA.

- The TNPA/ Port Control to identify cause of metal oil spill and take appropriate action and report back to ADZ ECO and ADZ Incident Response Leader.
- The ADZ Incident Response Leader.
 - complete Incident Report and submit to ADZ ECO.

- then immediately notify ADZ Incident Response Leader who will in turn notify all Farm Managers and SBM.
- · The ADZ Incident Response Leader
 - must notify all relevant parties in Error! Reference source not found.
- If the discharge is detected by SBM staff, they must notify the ADZ Incident Response Leader who in turn will inform all Farm Managers all relevant parties in Table 6-1.
- If the deposit is detected by Port Control or TNPA staff, they
 must notify the ADZ Incident Response Leader who in turn will
 inform all Farm Managers.
- If more than one farm is at risk, the ADZ Incident Response Leader shall take responsibility for coordination and monitoring.
- Farm Managers to take appropriate action to prevent the harvesting of potentially contaminated products.
- Shellfish monitoring programme Food Safety Office to monitor farm stock to determine the level of contamination (if any) and has the mandate to close the farm until the levels of contamination are within regulatory limits.
- Farm Managers in association with the Food Safety Office must send shellfish samples to a suitably accredited laboratory for food safety analysis for relevant heavy metals;
- ADZ ECO to notify the AMC and CF.

ADZ ECO

- to register the Incident Report in the Incident Register, review the Incident Report and request additional information or actions before sign-off if required.
- o sign-off Incident Report.
- submit a summary of the Incident report to the AMC and CF, complete transcripts must be available on request.
- send complete transcripts and summaries to DFFE Branch Regulatory, Compliance and Sector Monitoring.

6.7 Oils spills from ADZ operations

The ADZ farmers use petrol, oils and greases for their service vessels. Usually only small volumes are carried into the Bay thereby limiting the potential damage from a spill.

Even though very small volumes are carried, in view of the potential harm this could do to the harvest, the following actions must be taken in the event of a spill of oil, petrol or grease during ADZ operations:

Immediate Response

- If the spill is detected by farm staff- Farm Manager must be notified immediately who must then notify the ADZ Incident Response Leader.
- If more than one farm is involved or at risk, the ADZ Incident Response Leader shall take responsibility for coordination and monitoring.
- Even if not assuming a centralised command role, the ADZ Incident Response Leader.
- o must notify all relevant parties in Table 6-1.
- The Farm Manager or ADZ Incident Response Leader shall notify all farmers.
- Farm Managers
- repairs must be undertaken immediately, and preventative measures installed if appropriate.
- o to take appropriate action to prevent further spillage.
- take appropriate action to contain the spillage and shield the farm infrastructure (booms etc).
- in association with the Food Safety Office send shellfish samples to a suitably accredited laboratory for food safety analysis for polycyclic aromatic hydrocarbons.;

- The ADZ Incident Response Leader/ Farm Manager
- to determine cause of the spill.
- complete Incident Report and submit to ADZ ECO.
- DFFE Food Safety Office /Farm Veterinarian to monitor farm stock after the oil spill for contamination
- ADZ ECO
 - to register the Incident Report in the Incident Register, review the Incident Report and request additional information or actions before sign-off if required.
 - sign-off Incident Report.
 - submit a summary of the Incident report to the AMC and CF, complete transcripts must be available on request.
 - send complete transcripts and summaries to DFFE Branch Regulatory, Compliance and Sector Monitoring.

- DFFE Food Safety Office through the Shellfish monitoring programme to monitor farm stock to determine the level of contamination (if any) and has the mandate to close the farm until the levels of contamination are within regulatory limits.
- ADZ ECO to notify the AMC.

6.8 Major Oils spills from Port operations

The Port of Saldanha has an Oil Transfer Depot where fuels and oils are transferred to or from large oil tankers. The Port has its own Oil Spill Response Plan (TNPA Oils Spill Response Plan for Port of Saldanha TNPA-IMS-SLD-PLN 016.05) which details actions it must take.

In the event of a large oil spill the farmers must take the following actions:

Immediate Response

- If the spill is detected by farm staff- Farm Manager must be notified immediately.
- The Farm Manager must immediately inform Port Control and the ADZ Incident Response Leader.
- The ADZ Incident Response Leader
 - must notify all relevant parties in Table 6-1. Error! Reference source not found.
 - shall take responsibility for coordination and monitoring of ADZ related activities.
 - notify all farmers.
 - shall implement all instructions issued by the TNPA Responsible Person and relay these to the Farm Managers.
- If the report comes from TNPA, if must be routed via the ADZ Incident Response Leader or ADZ ECO who in turn will notify the ADZ Incident Response Leader.
- Farm Managers
- to take appropriate action to contain the spillage and shield the farm infrastructure (booms etc).
- in association with the Food Safety Office send shellfish samples to a suitably accredited laboratory for food safety analysis for polycyclic aromatic hydrocarbons;
- DFFE Food Safety Office to monitor farm stock to determine the level of contamination (if any) and has the mandate to close the farm until the levels of contamination are within regulatory limits.
- ADZ ECO to notify the AMC and CF.

- The TNPA to determine cause of the spill and relay the information to the ADZ Incident Response Leader.
- DFFE Food Safety Office /Farm Veterinarian to monitor farm stock after the oil spill for contamination.
- The ADZ Incident Response Leader
 - o complete Incident Report and submit to ADZ ECO.
- ADZ ECO
 - to register the Incident Report in the Incident Register, review the Incident Report and request additional information or actions before sign-off if required.
 - sign-off Incident Report.
 - submit a summary of the Incident report to the AMC and CF, complete transcripts must be available on request.
 - send complete transcripts and summaries to DFFE Branch Regulatory, Compliance and Sector Monitoring.

BIOLOGICAL INCIDENTS

6.9 Escape of Alien Invasive Fish Species

Alien invasive fish species are authorised to be farmed in the Saldanha ADZ. While best practice procedures are implemented to ensure that any escapees cannot form viable populations, measures to prevent escape are implemented and monitored. In the event that escapes do take place, the following actions must be taken.

Immediate Response

- If the escape is detected by farm staff- Farm Manager must be notified immediately.
- Farm Manager
- o notify all relevant relevant parties in Table 6-2.
- o initiate incident net repair
- attempt recapture
- initiate Escape Plan (See section 8)
- notify all local fishermen and issue spreadsheet detailing the manner of treatment in the event of any alien fish species being caught (use may be made of the CF if required).
- · ADZ ECO to notify the AMC and CF.

Within 7 calendar days

- Farm Manager
 - o complete Incident Report and submit to ADZ ECO.
- ADZ ECO
- register the Incident Report in the Incident Register, review the Incident Report and request additional information or actions before sign-off if required.
- o sign-off Incident Report.
- submit a summary of the Incident report to the AMC and CF, complete transcripts must be available on request.
- send complete transcripts and summaries to DFFE Branch Regulatory, Compliance and Sector Monitoring.

6.10 Accidents (collisions) with marine animals

The ADZ operations make use of service vessels to install and service infrastructure. While every attempt is made to avoid collisions with marine animals, such INCIDENTS do occur. In this instance, the following actions must be taken. SAWDN maintain a ship collision database and should thus receive an urgent notification to keep this database up to date and assist where needed.

Immediate Response

- If the collision is detected by farm staff- Farm Manager, the ADZ Incident Response leader, State Vet, NSPCA, SANCCOB, SAWDN, NSRI and Port Control and the DFFE must be notified immediately and asked to stand by in case they are needed.
- The ADZ Incident Response Leader
- o must notify all relevant parties in Table 6-2.
- In the event that any farm infrastructure is damaged, the Farm Manager shall initiate repairs.
- ensure that the injured animal is safely removed from the ADZ.
- ADZ ECO to notify the AMC and CF.

- ADZ Incident Response Leader
 - complete Incident Report and submit to ADZ ECO.
- ADZ ECO
 - to register the Incident Report I the Incident Register, review the Incident Report and request additional information or actions before sign-off if required.
 - o sign-off Incident Report.
 - submit a summary of the Incident report to the AMC and CF, complete transcripts must be available on request.
- send complete transcripts and summaries to DFFE Branch Regulatory, Compliance and Sector Monitoring.

6.11 Entanglement of marine animals

The ADZ operations have been designed to limit the potential for marine animals (including birds, turtles, seals, whales and dolphins) to be entangled. In the event of such entanglements occurring, the following actions must be taken.

It is important to remember that speed is paramount. These animals are air-breathing and delayed response can result in them drowning. They are simultaneously at risk of permanent injury from ropes and nets, especially if they start to struggle to free themselves. Do not attempt to free the animals yourself, remain on the scene and maintain visual contact with the animal. If the animal appears to be distressed by your proximity, move away slightly but maintain visual contact wherever possible.

The following information should be provided to the SAWDN and NSPCA if marine mammals are involved:

- a. Type of animal(s) involved such as whales (Humpbacks and Southern Right Whales), seals, turtle, dolphins (Dusky and Heavisides) etc.
- b. Number of animals involved and their condition
- c. Nature of entanglement and if possible, nature of rescue equipment required provide photographs/ video's (on WhatApp if possible) what parts of the body is wrapped with mainline, buoy's and nets etc.
- d. Exact location of the entanglement (Lat and Long if possible)
- e. Current state of the animal (stressed/ inert etc.) any visible injuries.

The following information should be provided to the SANCCOB and NSPCA if marine birds are involved:

- a. Type of bird(s) involved such as penguins, gannets etc;
- b. Number of birds involved
- c. Nature of entanglement and if possible, nature of rescue equipment required provide photographs/ video's (on What's app if possible)
- d. Exact location of the entanglement (Lat and Long if possible)
- e. Current state of the birds (stressed/ inert etc.) any visible injuries.

Immediate Response

- The ADZ Incident Response Leader DFFE must be contact who in term will contact SAWDN/ SANCCOB/ NSPCA (as appropriate), they will then initiate the NSRI protocols.
- NSRI Incident Operation Centre (EOC) to place SAWDN operations manager (M.A. Meyer) on the activated NSRI operations WhatApp.
- SANCCOB will act in collaboration with NSRI as above
- SANParks must be contacted.
- Port Control and SANHO must be notified to ensure that the incident does not pose a navigational hazard to shipping traffic within the port.
- The ADZ Incident Response Leader must notify the Farm Manager of the farm/s involved in the incident location.
- The GPS position of the incident must be reported so that the rescue team can be requested to proceed immediately to the position.
- Farm vessel/ Operator to ensure they are on standby to assist with the disentanglement as instructed by the NSRI/ SAWDN if required such as lifting the lines to allow for disentanglement.
- Farm Manager
 - o must notify all relevant parties in Table 6-2.
 - should remove parallel lines and floats in close proximity to the whale where appropriate so that it cannot be

- · ADZ Incident Response Leader
- complete Incident Report and submit to ADZ ECO.
- ADZ ECO
- to register the Incident Report I the Incident Register, review the Incident Report and request additional information or actions before sign-off if required.
- sign-off Incident Report.
- submit a summary of the Incident report to the AMC and CF, complete transcripts must be available on request.
- send complete transcripts and summaries to DFFE Branch Regulatory, Compliance and Sector Monitoring and SAWDN.

- captured further within the gear. The longer the time period between sighting and responding, the more entangled the whale will become over time.
- remove floating buoys and ropes if appropriate where close to the whale to prevent overwraps.
- be prepared to assist SAWDN/ SANCCOB/ NSRI response vessels during disentanglement.
- remain on site to guide the rescue teams to the animal through submerged infrastructure.
- prevent unauthorised vessels from approaching
- assist SAWDN/ NSRI/ SANParks and/or TNPA with the release of the animal under their instruction.
- In the event that any farm infrastructure is damaged, the Farm Manager shall initiate critical repairs to prevent any further entanglements within 24hrs of the event.
- ADZ ECO to notify the AMC and CF.

6.12 Disease outbreak

Extreme care is taken to ensure the health of all ADZ animals. Disease outbreaks and resulting mass mortalities are rare. In the event that a disease outbreak is detected, the following actions must be taken:

Immediate Response

- If the disease outbreak is detected by farm staff- Farm Manager must be notified immediately.
- Farm Manager
 - o must notify all relevant parties in Table 6-2.
 - notify the Farm-appointed vet if the INCIDENT occurs in relation to finfish.
 - implement recommendations of veterinarian /scientists report.
 - monitor stock.
- All visible mortalities removed and disposed of on land according to animal health and safety protocols (disposal receipts must be retained for audit purposes).
- Obtain proof of diagnosis and mitigation from Farm-appointed veterinarian for Branch Fisheries Management/ State veterinarian.
- ADZ ECO to notify the AMC and CF.

- Farm Manager
- o complete Incident Report and submit to ADZ ECO.
- Farm vet to report diagnosis and actions to branch Fisheries scientist and state vet within 7 calendar days.
- Depending on the case, Branch Fisheries Management/ Sate vet may conduct independent investigation with a diagnosis and mitigation.
- State veterinarian and DFFE Branch Fisheries: Food Safety specialist to do a follow-up visit to see if the mitigation is in place and advise accordingly.
- ADZ ECO
 - to register the Incident Report in the Incident Register, review the Incident Report and request additional information or actions before sign-off if required.
- o sign-off Incident Report.
- submit a summary of the Incident report to the AMC and CF, complete transcripts must be available on request.
- send complete transcripts and summaries to DFFE Branch Regulatory, Compliance and Sector Monitoring.

6.13 Mass stock mortalities

Extreme care is taken to ensure the health of all ADZ animals. Disease outbreaks and resulting mass mortalities are rare. In the event that mass mortalities are detected, the following actions must be taken:

Immediate Response

- If the mass mortality is detected by farm staff- Farm Manager must be notified immediately.
- Farm Manager
 - o must notify all relevant parties in Table 6-2.
 - notify the Farm-appointed vet if the INCIDENT occurs in relation to finfish.
- All visible mortalities removed and disposed of or treated on land according to animal health and safety protocols and in consideration with the Saldanha Bay Municpality Organic Waste Management Diversion Plan (disposal or treatment receipts must be retained for audit purposes for a minimum of five years).
- Samples must be preserved and submitted to branch Fisheries.
- Farm to investigate check the physical and chemical characteristics of the water (e.g. temperature, pH, oxygen content, etc.) and implement the necessary corrective measures.
- ADZ ECO to notify the AMC and CF.

Within 7 calendar days

- Farm Manager
- o complete Incident Report and submit to ADZ ECO.
- Farm vet to report diagnosis and actions to branch Fisheries scientist and state vet within 7 calendar days.
- Branch Fisheries Management scientist and vets to investigate causes of mortalities.
- ADZ ECO
 - to register the Incident Report in the Incident Register, review the Incident Report and request additional information or actions before sign-off if required.
 - o sign-off Incident Report.
 - submit a summary of the Incident report to the AMC and CF, complete transcripts must be available on request.
 - send complete transcripts and summaries to DFFE Branch Regulatory, Compliance and Sector Monitoring.

6.14 Stock Theft

The ADZ farm infrastructure is not staffed after hours or over weekends, stock theft is therefore a possibility. In the event that escapes do take place, the following actions must be taken.

Immediate Response

- If the theft is detected by farm staff- Farm Manager must be notified immediately.
- · Farm Manager
- o must notify all relevant parties in Table 6-2.
- report the incident to SAPS and lay a charge of theft obtain a case number.
- ADZ ECO to notify the AMC and CF.

- Farm Manager
 - o must follow up on investigations by SAPS.
 - o complete Incident Report and submit to ADZ ECO.
- ADZ ECO
 - to register the Incident Report in the Incident Register, review the Incident Report and request additional information or actions before sign-off if required.
 - sign-off Incident Report.
 - submit a summary of the Incident report to the AMC and CF, complete transcripts must be available on request.
 - send complete transcripts and summaries to DFFE Branch Regulatory, Compliance and Sector Monitoring.

6.15 Harmful Algal Bloom

The presence of algal blooms (red tides) can severely affect the harvesting of bivalves. Other algal blooms may indicate a problem with water quality- both situations must be addressed as follows:

Immediate Response

- If the algal bloom is detected by farm staff- Farm Manager must be notified immediately.
- Farm Manager
- must notify the ADZ Incident Response Leader, the DFFE and the ADZ ECO.
- monitor fish mortalities if any; and notify the Branch Fisheries Management.
- The ADZ Incident Response Leader
- must notify all relevant parties in Table 6-2 including the DFFE Food Safety Office immediately.
- Branch Fisheries Management to determine whether the bloom is dangerous or unhealthy for the ADZ and report to the Farm Manager and ADZ Incident Response Leader.
- If a Harmful Algal Bloom (HAB) is detected, DFFE Food Safety
 Office to initiate contingency measures as outlined in the South
 African Live Molluscan Shellfish Monitoring and Control
 Programme.
- ADZ ECO to notify the AMC and CF.

- Farm Manager
 - complete Incident Report and submit to ADZ ECO.
- ADZ ECO
 - to register the Incident Report in the Incident Register, review the Incident Report and request additional information or actions before sign-off if required.
- o sign-off Incident Report.
- submit a summary of the Incident report to the AMC and CF, complete transcripts must be available on request.
- send complete transcripts and summaries to DFFE Branch Regulatory, Compliance and Sector Monitoring.

Table 6-1 Identifying the different role players per incident which are related to infrastructure and which role player needs to be contacted (shaded blocks indicate that the Role player needs to be notified regarding the type of incident refer to Section 11 for specific contact details).

Type of incident	Lonsel drifting squipment (single or small fluins only).	Large state loss of equipment or infrastructure as a result of serve storms	Accidents (collisions) with other water weers	infrastructure thaff, vanidation, tampering or other intrusions	Smrage spills	Mittal Ore spills	Oils spills from ADZ operations	Major Oris apiles from Port operations
Farm DEO								
Farm ECO								
ADZ ECO								
ADZ Incident Response Leader - BSASA Chair								
Compliance Monitoring								
Fisheries Management								
Fisheries State Veterinarian								
Fisheries: Food Safety								
SANHO								
DEA&DP				<u>.</u>				
Saldanha Bay Port Control								
TNPA								
SANParks								
SAMSA								
SAPS								
NSRI								
SAWDN								
NSPCA								
SANCCOB								
SMB								
Oceans & Coasts - Oil Spill Unit		1						
MRCC Maritime Rescue Coordination Centre								
CF								
AMC								

Table 6-2 Identifying the different role players per incident which are related to biological related incident and which role player needs to be contacted (shaded blocks indicate that the Role player needs to be notified regarding the type of incident refer to Section 11 for specific contact details).

Type of incident	Escape of Alian Fish Species	Accidents (collisions) with matine animals	Entangrament of marine animals	Disease outpresk	Mass stock mortanties	Stock Theft	Hamiful Algal Bloom
Fam DEO							
Farm ECO							
ADZ ECO	-						
ADZ Incident Response Leader ~ BSASA Chair							
Compliance Monitoring							
Fisheries Management							
Fisheries State Veterinarian							
Fisheries: Food Safety							
SANHO							
Saldanha Bay Port Control							
TNPA							
SANParks							
SAMSA							
SAPS							
NSRI							
SAWDN							
SANCCOB							
NSPCA							
SMB							
Oceans & Coasts - Oil Spill Unit							
CF							
AMC							

7. Entanglement Prevention

The approved EMPr for the Saldanha Bay ADZ requires the development of a guideline for the prevention and management of marine mammals in the aquaculture infrastructure (which includes ropes, cages and rafts). This section provides a synthesis of inputs from the aquaculture industry, academic research institutes and is based on a specialist opinion on the most appropriate measures to prevent entanglement submitted by Dr Simon Elwen of Sea Search (Elwen 2020). It represents a practical guide for the implementation of preventative measures without compromising compliance with regulatory requirements of the Transnet National Ports Authority (TNPA). This is to be implemented by all holders of aquaculture marine rights in the Saldanha Bay ADZ. Compliance will be monitored (as necessary) by the appointed Environmental Control Officer (ECO) and will be reported on in the monthly ECO reports.

Fisheries bycatch is acknowledged as one of the largest threats to cetacean populations globally (IWC 2010, FAO 2018). "Entanglements" may occur in a broader range of anthropogenic materials including "ghost" gear, shark nets, free floating plastic or ropes, mooring lines and increasingly aquaculture farms – the latter being applicable to this Guideline.

Three main mammalian taxa that are vulnerable to entanglement in aquaculture infrastructure in the Saldanha ADZ are:

- Whales and dolphins; and,
- Seals.

There are few records of interactions between whales and aquaculture as a consequence of low numbers of individuals inshore and small spatial overlap of the mostly pelagic baleen whales with aquaculture farms which are mostly placed within protected coastal waters. The risk of whales becoming entangled in ADZ aquaculture infrastructure is therefore low when the farms is managed appropriately.

Oceanic dolphins (*Delphinidae*) are the only members of the toothed cetaceans with a coastal and shelf habitat in Southern Africa. Dolphins include the Heaviside's dolphin (the smallest) (*Cephalorhynchus heavisidii*) to the largest species the killer whale (*Orcinus orca*). Although there may be seasonal movements along the coast and changes in local numbers, these dolphins are all resident. All dolphins are predatory, eating fish or squid (only the killer whale is known to predate on other mammals in our waters). Dolphins rarely become entangled in well maintained single ropes.

The only resident seal in South Africa is the Cape fur seal *Arctocephalus pusillus pusillus*. They are similar in overall body size to most of the oceanic dolphins. They are more susceptible to bycatch in nets, rather than ropes. However, they are prone to becoming entangled around the neck in much smaller ropes and twines including fishing line.

In summary, the most likely animals to become entangled are seals and whales (especially during the high upwelling period when large numbers of whales forage on the West Coast.). The precautions detailed in the table below attempt to minimise the risk of such entanglements. It is clear that the ropes (mooring and production) of the bivalve farms and the nets of the finfish farms pose the biggest risk to marine mammals. The focus of this guideline is therefore on those components of the aquaculture infrastructure.

Also of concern is the entanglement of birds in the nets covering the finfish cages.

The following table defines the requirements of this guideline in the Saldanha ADZ to prevent entanglement of marine mammals.

	Table 7-1: Entanglement mitigation measures and monitoring.	
AL	L FARMS	MONITORING FREQUENCY
Far	rm placement	
>	Farms should be placed as close together (10-20m between lines in Small Bay and approximately 30m in Outer Bay North and Big Bay) as possible without compromising the productivity of the installations.	Record presence and number of whale and dolphin species observed within ~1 km of the farms and reported in the monthly visual precinct level monitoring reports submitted to the ADZ ECO
>	Support and service vessels should drive with caution and avoid mammals	As above. Any vessel strikes or entanglements must be recorded and reported to the ADZ ECO.
Far	rm structure and design	
>	Anchor lines used should kept taut to minimise entanglement risk.	Ongoing daily visual inspection and maintenance of ropes, moorings etc. reported in the monthly visual precinct level monitoring reports submitted to the ADZ ECO
A	Any groundlines used must be made completely of sinking line.	Ongoing inspection and maintenance of surface ropes (10-20m between lines in Small Bay and 30m in Outer Bay North and Big Bay), moorings etc. to ensure loose lines
>	Number of non-mooring ropes such as for marker buoys should be minimised and lines should be kept taut to minimise entanglement risk.	Ongoing weekly inspection and maintenance of ropes, moorings etc at the farm level and audited by the ADZ ECO on monthly site inspections.
FIN	NESH FARMS	MONITORING FREQUENCY
A	Above water anti-predator barriers to prevent seals entering farms: 1. Electric fencing (the frequency of the fencing which is permitted by the DFFE) If netting is used it should be: 2. Highly visible (i.e. not mono-filament) 3. Sufficiently high as to prevent seals climbing over it 4. Culture net to use a mesh size of no more than 25mmto minimize entanglement. Predator and bird netting to be a mesh size of 50mm and 75mm respectively acting as a barrier for predator exclusion. Other: 5. Reduce resting places for seals on the cages	Ongoing inspection and maintenance of nets, ropes, moorings etc. at the farm level and audited by the ADZ ECO on monthly site inspections.
Þ	Below water anti-predator nets should be 1. Constructed of as small a mesh as possible, maximum 60 mm 2. Closed at the bottom and sides and kept clear of the sea floor 3. Weighted or moored to keep sides taut 4. Well separated from main fish farm net (ideally with rigid poles) 5. Repaired immediately if damage is observed	Ongoing weekly visual and diver inspections conducted and maintenance of nets, ropes, moorings etc. at the farm level and audited by the ADZ ECO on monthly site inspections.
Mil	JSSEL LONGLINES	MONITORING FREQUENCY
4	The black support buoys should be attached close to the mainline i.e. rope connection to have as minimal as possible length attachment but enough to allow space to be cut them free. Diameter of rope should not be excessive (reference is made to the minimum infrastructure guideline).	
>	The longline should be as taut as possible to reduce entanglement in the mainline.	
>	Where possible a weak link along the continuous mussel line depending on what the distance is between each line.	

8 Alien Fish Escapes

Finfish Farms should comply with best practice guidelines some of which are outlined below:

a. Design and construction of the net-pen system

The floating cage system and various nets should conform to industry standards and regulations set out by the Department, if there are no standards international standards should be applied. Culture net mesh size of appropriate diameter should be utilised and predator and bird netting should be a respective mesh size of 50mm and 75mm. These should be inspected daily weather permitting. Regular maintenance of the nets for biofouling should be scheduled and maintenance records kept. The net structure should be properly fit, to minimise unnecessary strain on the nets to prevent excess netting from bunching up, as this can pose an entanglement risk. Biofouling cleaning schedule should be implemented as this if not managed can lead to weighing down of the net pens and allows for predators to enter the cages and increases the risk of escapes.

b. Mooring systems

The mooring system design and infrastructure should conform to industry standards and regulations set by the Department, if there are no standards international standards should be applied. The minimum infrastructure guidelines are to be implemented for the ADZ. Infrastructure set up should withstand the ocean conditions prevalent in the area and should be inspected daily weather permitting. Regular maintenance according to a maintenance schedule and records should be kept.

c. Boat operations

A competent skipper and trained staff to be on board when operating near the net pens, since there is great risk from the propellers which can cut, pinch the infrastructure during manoeuvres around the cages.

d. Fish handling and movement

When there is fish handling there is a higher risk of escapes, due to human error of lack of knowledge or equipment failure and ocean conditions. Mitigations to avoid escapes during handling

- Barrier netting is to be placed from the work boat deck to the net pen, operators is to stand on the netting. This will allow fallen fish to be captured in the net
- Pipe must be properly fixed to the receiving net-pen and operations will be ceased if the ocean conditions worsen, i.e. swell over 3 m with rough winds of over 18 knots.
- Ensure that fish contact surfaces are kept wet and cool.
- All low points on the work boat through which a fish can fall overboard is closed off with netting to ensure that the fish will be captured

e. Staff training

Staff should be adequately trained to ensure that they have adequate knowledge and competency to undertake their function.

All staff must be trained for the following:

- Net-pen assembly techniques
- Opening and closure of nets
- Proper fish handling
- The structure and function of the whole net-pen system, including the mooring system
- · What to look out for during inspections
- Deployment of incident netting
- · Detection of possible missed escape points during a fish handling or movement event
- The importance of preventing escapes
- The initiation and execution of the recovery plan

9 Training and Awareness

All farm and support staff must receive training in this Incident Response Protocol at least annually. Attendance at the training programs must be recorded in attendance registers. Immediately after any substantive changes to the Incident Response Protocol, all staff must receive up-date training, irrespective of how recently they received any other training in this Protocol.

In addition, staff from SBM, Port Control, NSRI and TNPA need orientation so that their ERPs can align with the ADZ ERP and so that they know who to contact.

10 Distribution and version control

The ADZ ECO is responsible for issuing the Incident Response Protocol to all operators and farmers. The ADZ ECO is also responsible for circulating any updates and/or revisions. The ADZ ECO will keep a documented record of when each version was issued and to the recipients. The operators or farmers must destroy outdated versions. Possession of the latest version will be the subject of regular auditing by the ADZ ECO.

11 Contact details

To be read in conjunction with the latest version of the SAMSA Marine Notice. Current version MN No. 55 of 2020

Designation	Name	Email	Telephone No
ADZ Environmental Control Officer (ADZ ECO)	Jen Keleightley	SaldanhaADZECO@DFFE.gov.za	084 447 1100
ADZ Incident Response Leader	Vossie Pinaar Tim Damons	bbmussel@mweb.co.za tdamons@blp-sa.com	083 418 9748 073 385 3761
Port Captain Port Control Incident	Port Captain Willem Roux Acting Harbour Master Silindele Mdlalose	Willem.Roux@transnet.net Silindile.Mdlalose@transnet.net	083 4133902 022 703 5310 022 714 1726 Channel 16 VHF 022 703 5472 084 291 2743
DFFE: Oceans & Coasts - Oil Spill Unit	Feroza Albertus Ulrich van Bloemestein Yazeed Petersen	FBalbertus@DFFE.gov.za UVBloem@DFFE.gov.za YPetersen@DFFE.gov.za	072 173 6234 084 421 6606 083 530 3127
DFFE: Regulatory, Compliance and Sector Monitoring (Pta)	Sonnyboy Bapela	SBapela@DFFE.gov.za	012 399 9422
DFFE: Regulatory, Compliance and Sector Monitoring (CT)	Bongumenzi Gumbi	BGumbi@DFFE.gov.za	071 6090 792
DFFE: Fisheries Management Compliance Monitoring	Wade Theron	WTheron@DFFE.gov.za	028 771 8910
Fisheries Small Harbour Master	Mr K Ndivhuwo	NKwinda@DFFE.gov.za	072 6788619
DFFE: State Veterinarian	Vacant		
DFFE: Aquatic Animal Health	Dr Kevin William Christison	KChristison@DFFE.gov.za	021 430 7010
DFFE: Aquatic Animal Health	Primrose Bontle Lehubye	PLehubye@DFFE.gov.za , AquaHealth@DFFE.gov.za	021 430 7038
DFFE: Food Safety Office	John Foord Mayizole Majangaza	JFoord@DFFE.gov.za MMajangaza@DFFE.gov.za SAMSanitation@DFFE.gov.za	021 430 7003 021 430 7065
DFFE Aquaculture Research Development	Dr Grant Pitcher	GPitcher@DFFE.gov.za	021 430 7015
Department of Environmental Affairs and Development Planning	Amina Sulaiman Control Environmental Officer: Remediation &	Amina.Sulaiman@westerncape.gov.za leptieshaam.Bekko@westerncape.gov.za	021-483 2571 021-483 3370

Designation	Name	Email	Telephone No	
	Emergency Incident Management			
	Leptieshaam Bekko Deputy Director: Coastal Management			
South African National Parks (SANParks)			Office hours 022 772 2144 16h00 to 07h00 071 008 6472	
South African Maritime Safety Authority (SAMSA)	Principal Officer Capt. N. Noble Deputy Principal Officer Mr. H. Esterhuizen SAMSA Duty Surveyor – Capt Neville Noble	saldanhabayoffice@samsa.org.za nnoble@samsa.org.za	022 714 1612 (Office hrs) 076 077 7467 (After hrs emergency/ duty surveyor) 073 608 1377 (Principle Officer Capt Neville Noble) 083 294 8617 (Mr H Esterhuizen)	
MRCC Maritime Rescue Coordination Centre	National Oil Spill Contingency Plan a central number for oil spills		24/7 – 021 938 3300	
South African Navy Hydrographic Office (SANHO)	NAVCOMCEN	ncc@sanavy.co.za		
	Incident Operations Centre (EOC) available 24/7, 365	In all cases the NSRI incident contact number (National) is 112 from cell phone.	112 or, 021 434 4011 (for the EOC), or 082 994 7555 (Stn04 Mykonos directly)	
National Sea Rescue Institute (NSRI)	Bruce Sandmann	operations@searescue.org.za bruce@searescue.org.za		
	Rhine Barnes	Rhine@searescue.org.za		
South African Whale Disentanglement Network (SAWDN)	Mike Meyer	michaelmeyer0@gmail.com	082 578 7617	
Southern African Foundation for the Conservation of Coastal Birds (SANCCOB)			+27 78 638 3731	
NSPCA	Jason Page	Wild4@nspca.co.za	011 907 3590	
Saldanha Bay Municipality (SBM)	Mr B January Ms Nazeema Duarte	mun@sbm.gov.za Basil.January@sbm.gov.za Nazeema.Duarte@sbm.gov.za	022 713 1815	
Saldanha Bay South African Police Services		saldanhäsaps@saps.gov.za	022 714 8333, 022 714 8308	
ADZ Consultative Forum	VIA ADZ ECO			
ADZ AMC	VIA ADZ ECO			

12 Reference List

Elwen, Dr S. 2020. Guidelines and Standards to mitigate marine mammal entanglement for the Saldanha Bay Aquaculture Development Zone. Sea Search Research & Conservation. March 2020

FAO. 2018. Report of the Expert Workshop on Means and Methods for Reducing Marine Mammal Mortality in Fishing and Aquaculture Operations, Rome, 20-23 March 2018.

IWC. 2010 Report of the Scientific Committee. Annex I. Report of the Working Group on Stock Definition. J Cetacean Res Manag: 10-23

Kemper CM, Pemberton D, Cawthorn M, Heinrich S, Mann J, Wursig B, Shaughnessy P, Gales R. 2003 Aquaculture and marine mammals: Co-existence or conflict? In: Gales N, Hindell M, Kirkwood R (eds) Marine Mammals: Fisheries, Tourism and Management Issues. CSIRO Publishing, Melbourne, p 208–225

13 Incident Report Form

The form in **Appendix 1** below must be completed for incidents, whether they arise inside the ADZ or outside. The form must be submitted to the ADZ ECO for review within 24 hours of the incident, even if not all actions have been completed so that that it can be registered on the Incident Register for tracking



Incident Report Form V2 – ADZ ECO/ AMC/ CF

Section One: To be completed by the person reporting the incident								
Name	Designation							
Contact number		Physical location of incident						
Date of incident		Time of incident						
Designation of Responsible Person								
Name		Contact details						
Describe the incident – e.g provide as much detail as possible								
1. What happened?								
2. Where?	2. Where?							
3. What environmental damage is already visible?								
4. What was the probable cause?								
Was there damage/ contamination	on of any of the f	ollowing? (Tick th	e appropriate box)					
Sea water	Beach		Infrastructure					
Other								
What remediation has been undertaken? (Describe)								
Section Two: After the incident has been contained								
Has the damage/ contamination been completely remediated?								
Has the damage/ contamination produced general or hazardous waste? If yes, kindly attached the disposal or treatment receipts.								
If not, what residual damage remains (detail the residual damage).								

If residual damage remains- what is the reason and what is planned to remediate the damage. The must counter sign this form in this event before it can be closed. (see below)	e ECO
Upon investigation, what was found to be the cause of the incident? (Detail)	
Is this a repeat of a similar incident?	
What is the reason that planned changes did not prevent a recurrence of the incident?	
What is to be changed to ensure that the incident will not be repeated? (Detail)	
Section Three: To be completed by the ECO	-mh-s
Does the incident comprise a contravention of legislation?	
If so, what action has been taken?	
Have all the required and appropriate actions been taken to the satisfaction of the ECO?	
Have all parties signed the incident form?	
Date Signature Date Signature ECO	

