

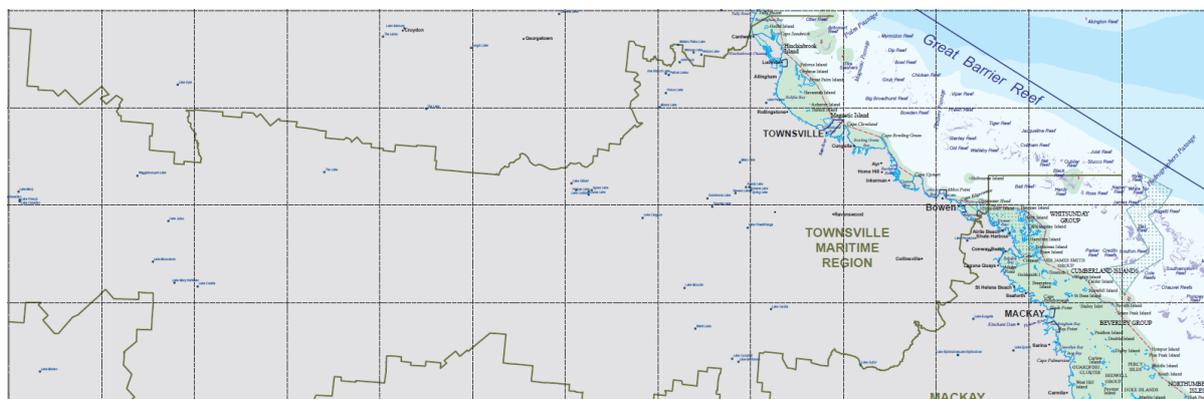
# Extreme Weather Event Contingency Plan Townsville – 2022/2023

# Introduction

Maritime Safety Queensland (MSQ) is an agency of the Dept. of Transport and Main Roads (DTMR) which works closely and cooperatively with the disaster management agencies, the industry and community on both a State wide and local basis. The recent extreme weather events throughout Queensland have highlighted the need for awareness and vigilance to the risks such events present to the maritime community. MSQ's core focus is on the preservation of life and property on the State's waters and in the prevention/response to ship based pollution.

MSQ has built on these recent experiences and is reissuing its contingency plans as one way of ensuring stronger resilience within the maritime community. Timely awareness and adequate preparation will reduce the impact of such events.

This extreme weather event contingency plan for Townsville sets out the broad framework that will apply for this region. MSQ takes advice on developing weather situations from the Bureau of Meteorology (BOM) which is the government's primary source of weather intelligence.



The Townsville region encompasses the area of the coast and waterways from Gloucester Passage, Southeast of Bowen in the south to Meunga Creek, north of Cardwell to the north, and includes all boat harbours, marinas, navigable rivers, creeks and streams as well as offshore islands within Queensland jurisdiction.

Townsville regional coast is occasionally exposed to direct cyclone activity as well as low pressure systems that can have their effects felt along the coast with gale force winds and heavy rain recorded. The frightening intensity of cyclones can cause widespread flooding, destruction and devastation.

Cyclone season commences on the 1 November and it is imperative that all vessel owners in the region are prepared for the possibility of a cyclone affecting the region. Major flooding, along with occasional tornadoes can be experienced as a result of these weather systems. Major flooding combined with strong winds, storm surge, high tides and strong currents can have disastrous effects on vessels within rivers and estuaries.

The region is also affected by severe summer storms mostly during the months of October through to April. Usually, electrical disturbances from these storms have produced wind gusts of up to 80 knots, although, winds generally do not exceed 45 knots and is typically only for a short duration. Heavy rain and hail may also be experienced during these storms and localised flash flooding can result.

The local topography of the region offers limited protection from a tropical cyclone hence the prime intent of the plan is to provide small craft owners and operators with adequate warning to secure their vessels for severe weather conditions and organise the orderly removal of commercial vessels from the port to sea.

It is the responsibility of owners and Masters of vessels to take the necessary action within the context of the official weather warnings to protect their passengers, crew and craft and abide by any directions provided by the Regional Harbour Master.

It may be necessary for the Regional Harbour Master to give directions in relation to the operation and movement of vessels when entering, leaving, or operating in a pilotage area. This may include but is not limited to the orderly removal of vessels from their normal moorings to more sheltered locations or in the case of large commercial vessels, the orderly evacuation of these vessels to sea. The closure of the pilotage area effectively means that marine activities cease, including the operation of ferries to/from island terminals and all island resorts. Changes are being proposed in relation to those vessels specifically nominated as being used to transport passengers and staff from island resorts and as a direct result of the weather warnings in place.

Even if you are an experienced mariner, we encourage you to read this plan for your region and familiarise yourself with its requirements. As you will see, the contingency plan requires you to think about your own planning in this context and to be prepared to enact this plan if required.

MSQ has also adopted the Guardian Incident Management System to manage extreme weather events. One advantage of the system is the ability of the public to access the MSQ Dashboard, where a summary of warnings, Port closures and other information is available at all times throughout the State.

Remember, the best protection against extreme weather events is to plan for such eventualities and respond accordingly.

Kell Dillon  
General Manager  
Maritime Safety Queensland

Captain Frank D'Souza  
Regional Harbour Master  
Townsville Region

## Objective of this plan

The overall objective of this plan is to provide for the safety of vessels and their operation during extreme weather events. Personal safety is of prime importance at all times.

An extreme weather event may require the evacuation of a pilotage area, part of a port, a harbour or boat harbour. In such instances, the Regional Harbour Master's primary objective is to have the relevant area secure and for all vessels to have enacted their own safety plans between 48 and 6 hours but no later than 6 hours before the event is expected to impact the area.

This plan utilises emergency management concepts such as, a comprehensive all agencies approach and principles in its creation to best manage emergent events.

## Master's and owner's responsibility in regard to this plan

Masters and owners of vessels have an obligation under the Transport Operations Marine Safety Act 1994 at all times to take appropriate precautions for the safety of their vessels, passengers and crew.

In extreme weather conditions, the Regional Harbour Master (RHM) may give directions in relation to the operation and movement of vessels within their jurisdiction. Masters and owners are required to follow such directions.

Masters and owners need to familiarise themselves with this plan, determine and develop the most appropriate safety plan for their vessel and respond in accordance with any directions. Masters and owners are also required to monitor developments to ensure that they have the most up-to-date information on weather conditions and any directions in place.

Masters and owners are required to notify MSQ of any changes to the following:

- vessel ownership
- residential address; and
- contact telephone numbers.

Masters and owners can update their information by attending a Department of Transport and Main Roads Customer Service Centre, online services or by telephoning 13 23 80. This up-to-date contact information is vital for an immediate response to any port emergency. Failure to provide correct details of vessel ownership is an offence under the Transport Operations (Marine Safety) Act 1994.

Unless, absolutely unavoidable, all owners of vessels on the water should ensure their vessel is capable of moving without assistance or have alternative means of moving their vessel, particularly during extreme weather event peak seasons (for example cyclone seasons). Failure to do so may present an unacceptable hazard to the vessel, as well as other vessels and infrastructure. This may cause an owner to incur towage expenses.

If owners are unable to attend to their vessels at short notice for any significant duration, particularly during the tropical cyclone season, owners are to make arrangements with a person that can act on your behalf in the event of an extreme weather event. That person will be responsible to implement the owner's safety plan. However, the owners are still responsible for the safety of your vessel.

In the event of extreme weather, masters and owners of vessels should avoid entering waterways if there is no valid purpose to be there.

# Extreme weather procedures in detail

In the event of an extreme weather event threat the Regional Harbour Master will take the following action:

- restrict the movement of vessels within a pilotage area if necessary
- direct and oversee the evacuation of vessels from a pilotage area, or other affected areas within their jurisdiction, if applicable
- provide directions which restrict and/or allow the entering or leaving of a pilotage area, in effect closing and reopening the port
- Advise mariners of relevant warnings and response requirements; and
- Seek compliance with the response requirements.

These actions will be enacted over four distinct phases that allows for the development of appropriate responses to the threats faced.

Maritime Safety Queensland follows statewide maritime warning system for alert status for the Townsville Region:

- Yellow Alert: 24 to 48 hours before event
- Orange Alert: 12 to 24 hours before event
- Red Alert: 6 hours before event
- Yellow Alert: Event has ceased however authorities are checking infrastructure. Some services will commence operations with caution.
- Green: Business as usual

The tier alert status may be enacted for the whole of the Townsville Region or just part of the Townsville Region. The Regional Harbour Master or his/her representative will notify of the activation of this plan, the alert status, and the area to which it applies.

The Regional Harbour Master may enact a combination of tiered alert statuses within the one waterway during an extreme weather event.

For example; the Ross River may be at Red Alert while the Port of Townsville is at Orange Alert. Specific details will be communicated as outlined in this plan.

## Yellow Alert - Watch

### Weather event forecast within 24 to 48 hours

Townsville Region will declare a Yellow Alert when an extreme weather event watch is issued by BOM.

This means an extreme weather event or developing event is likely to affect the area within 48 hours, but not expected to impact the area within 24 hours.

This phase is a critical time for masters and owners to plan and prepare for the impact of the event.

The following procedures are to be followed when Yellow Alert is activated:

- Townsville VTS will broadcast advice, warnings, information and directions on VHF channel 12 and 16 (Lucinda VHF channel 13 and 16) as appropriate
- VMR/Coast guards may also broadcast warnings

- Vessels are to maintain a continuous listening watch on VHF Channel 12 or 16 (Lucinda VHF channel 13 and 16) for updates
- Review and enact severe weather procedures for the particular event e.g. Cyclone, flood
- ABC radio will provide updates

#### **Additional requirements for large Commercial Vessels:**

- All marine services are to be made available at short notice
- Vessels at anchor must ballast down with engines on standby and be ready to proceed to sea at short notice
- Vessels alongside may continue to load at the discretion of the Regional Harbour Master but must be ready in all aspects to depart at short notice; and
- Vessels are not permitted to enter the pilotage area without the approval of the Regional Harbour Master – approval will only be given if fully satisfied that the ship can safely load and depart before cyclonic conditions affect the pilotage area.

#### **Additional requirements for small Commercial and Recreational Vessels:**

- Vessels owners on moorings should be aware of apparatus integrity
- Mooring lines are to be doubled with secondary lines to alternative cleats
- Check boat cleats for integrity, ensure lines are made fast to substantial boat parts, for example mast steps, winches and so on, bearing in mind cleats are known to have been torn out of decks
- Have sufficient line to secure your vessel and position spare fenders and lines
- Ensure ropes and other synthetic fibres are in good order and are capable of withstanding high loads, lines to be adjustable from on-board
- Remove all sails, furling sails, awnings and any items of high windage and stow securely
- Dinghies/tenders to be inverted on deck to prevent filling with water and securely lashed.
- Ensure that all scuppers and freeing ports are clear and will remain clear
- Confirm that all bilge pumps are operational
- Secure all hatches
- Reduce wind loading to a minimum and stow all loose gear below
- Shore power and water leads are to be disconnected
- Keep storm anchors and spare warps ready at hand but well secured to prevent them creating a potential hazard such as fouling propellers in the event you must move the vessel
- Make sure you comply with all directions issued by the Regional Harbour Master or his/her delegates; and
- Listen to and monitor radio broadcasts/ other media outlets and Local Council websites for updates on conditions and advice warnings.

Vessels are to comply with routine vessel traffic management procedures unless otherwise authorised by the Regional Harbour Master.

## **Orange Alert - Warning**

### **Extreme weather event forecast within 12 to 24 hours**

Townsville Region will declare an Orange Alert when an extreme weather warning is issued by BOM for an extreme weather event or developing event is likely to affect the area **within 12 to 24 hours**.

This phase is critical for masters and owners to complete all preparations in an orderly manner prior to the event occurring.

The following additional procedures are to be followed when an Orange Alert is enacted

- Smaller commercial vessels will go to storm moorings in accordance with local plans and should notify the VTS of their location when secure
- At this time liaison with MSQ staff, DDMG, Police or Emergency Services will issue advice on the course of action to be taken in the local area
- All vessels in a marina should by now be securely moored with additional lines and all other boats should be relocated to their nominated cyclone mooring in accordance with their plan; and
- Listen to radio broadcasts, monitor the Council websites and check weather forecasts to evaluate weather conditions and determine evacuation plans on the advice given.

#### **Additional requirements for large Commercial Vessels:**

- All large commercial vessels, whether underway, alongside or at anchor, will likely be directed to proceed to sea
- All marine services are to be mobilised to assist clearing the pilotage area; the VTS will coordinate the safe and orderly clearing of the pilotage area
- Ships alongside will depart as soon as marine services are available (if conditions deteriorate rapidly, it may be necessary to depart without normal marine services in order to minimise the risk associated with remaining in port, as approved by the Regional Harbour Master)
- Ships are to report on Channel 12 (Lucinda VHF channel 13) when clearing the pilotage area; and
- Ship Masters must determine their own course of action to avoid the cyclone once clear of the pilotage area – no direction or recommendation will be made with regards to cyclone avoidance or the safe navigation or operation of the vessel.

## **RED ALERT - Event**

### **Extreme weather event within 6 hours**

Townsville Region will declare a Red Alert when an extreme weather event is issued by BOM

This means all vessels should have enacted their safety plans noting that the pilotage areas may be closed and/or vessel movements restricted commensurate with the threat of safety of vessel movements or environment.

Mariners should maintain a listening watch on VHF frequencies 12 and 16, (Lucinda VHF channel 13 and 16)) for weather and condition updates.

Flying debris may be a major danger to any persons on vessels and mariners are advised to stay indoors.

The Regional Harbour Master may effectively close the pilotage areas, wholly or in part, by giving general or particular direction to restrict the:

- entering or leaving of vessels in or out of a pilotage area; and/or
- movement of vessels within a pilotage area

Such direction will be appropriate with the threat to the safety of shipping or the environment and may occur at any time prior to the event.

The closure of the port or restriction on vessel movements will, as far as practical, be implemented in consultation with key authorities and in a timely manner in order to minimise risks.

## **Yellow Alert**

**Event warning has ceased however authorities are checking infrastructure, some services will commence operations with caution**

### **Extreme weather event warning has ceased - proceed with caution**

The Regional Harbour Master will assess residual risks and determine the actions needed to be addressed. Do not assume that as the extreme weather event warning has ceased and it is now safe to move your vessel.

The Police or the Regional Harbour Master may issue directions to evacuate a certain area or waterway, so check with the relevant agency before moving.

Broadcasts will be made over key VHF frequencies to alert vessel owners of the lifting of navigation restrictions and any hazards that may have been identified in local waters.

Owners and masters of vessels should be aware that aids to navigation may be affected by the extreme weather event. Owners and masters should reference Notices to Mariners for the latest updates.

Port infrastructure will need to be inspected to ensure that facilities are fit for purpose. Charted depths may have been altered as a result of storm surge and or flood water runoff.

Caution needs to be exercised due to debris in the water, which is not only above water but can also be undetected just under the surface.

The pilotage areas and ports may be re-opened by the Regional Harbour Master following direction to allow the entering or leaving of ships in and out of a pilotage area, or movement of vessels within a pilotage area. Such direction will be provided when satisfied that the pilotage area is safe for vessels to re-enter or leave.

## **Green - Business as usual**

Following inspections and surveys to critical maritime infrastructure (for example: navigational aids, wharf, etc.) as well as clearance of navigational hazards, the Regional Harbour Master will reopen the anchorages, port and pilotage areas.

## **Port Closure**

The Regional Harbour Master may effectively close the port, wholly or in part, by giving general or particular direction to restrict the:

- entering or leaving of vessels in or out of a pilotage area; and/or
- movement of vessels within a pilotage area

Such direction will be appropriate with the threat to the safety of shipping or the environment and may occur at any time prior to the event.

The closure of the port or restriction on vessel movements will, as far as practical, be implemented in consultation with key authorities and in a timely manner in order to minimise risks.

## Reopening of the port

A pilotage area may be effectively re-opened by the Regional Harbour Master following direction to allow the entering or leaving of ships in and out of a pilotage area, or movement of vessels within a pilotage area. Such direction will be provided:

- when satisfied that all danger has passed, and the pilotage area is safe for vessels to re-enter or leave; and
- following inspections and surveys to critical maritime infrastructure (for example navigational aids, wharves) as well as clearance of navigational hazards

The Vessel Traffic Services Centre will coordinate the safe movement of vessels following the opening of the pilotage area in accordance with normal practice. Berths will be re-opened and operations resumed when wind and sea conditions are within operational limits.

## Communication

The successful implementation of this plan relies on high quality communication of information and directions.

The Vessel Traffic Services Centre will implement the extreme weather event contingency plan on behalf of the Regional Harbour Master by acting as the central communications point for the duration and aftermath of the extreme weather event.

The Vessel Maritime Control Centre call sign is **Townsville VTS**.

VHF channels **12 and 16 (Lucinda, VHF Channels 13 and 16)**, will be continuously monitored before and during the extreme weather event. Extreme weather watches, warnings and any directions will be issued on these channels.

If the plan requires for actions such as port evacuation or closure will be coordinated by the Townsville VTS.

## Key Contacts

Name	Contact Number
Regional Harbour Master	(07) 4421 8100
Townsville VTS	1300 721 263 OR 1300 721 293
Townsville Water Police	(07) 4759 9790
Port of Townsville	(07) 4781 1600

## Key Websites

Detailed weather updates: [www.bom.gov.au](http://www.bom.gov.au)

MSQ Website [www.msq.qld.gov.au](http://www.msq.qld.gov.au)

# Appendix A - Your safety plan

The master and owner's responsibility is at all times to take appropriate precautions for the safety of their vessels, passengers and crew.

All masters and owners should have developed a vessel safety plan in response to extreme weather events. The plan should take into account the most likely risks arising from the hazards presented for your region.

You should trial your plan to ensure that it can be enacted competently and rapidly. Do not wait until the last minute to plan and prepare your response to extreme weather risks.

## General considerations

A well prepared vessel with fully functional equipment is a key element to a successful safety plan.

### **Ensure that your vessel is in a seaworthy state**

Maintain your vessel to ensure that deferred maintenance does not compromise the seaworthiness of your vessel at critical times. Check that all bilge pumps are operational and that all self-draining openings are clear and will remain so. Make sure all safety equipment is available, in working order and up-to-date where applicable (for example flares). Check all cleats and associated fittings for integrity. Generally, mooring lines are stronger than these. Keep storm anchors, spare warps and spare fenders ready at hand but well secured to prevent them creating a potential hazard in the event you must move the vessel. Securely stow all loose items. Secure all hatches and vents. Provision your vessel with fresh water, food and fuel and ensure that the batteries are charged.

### **Ensure your mooring arrangements are up for the job at hand**

Check all mooring lines and warps for chafing and deterioration and replace if necessary. Man-made synthetic fibres such as polyethylene, polypropylene and polyester deteriorate in the sunlight and may show little signs of deterioration prior to failure. You should have a schedule worked out to replace mooring lines in accordance with manufacturer's recommendations. Allow for a sufficient number of mooring lines so that you can double up your mooring arrangements. Have sufficient fenders for the anticipated mooring arrangements. Check anchor chains, shackles and anchor warps for wear and replace if necessary. If you intend to utilise a swing mooring, ensure that the mooring chain has been recently inspected. You should also be aware that flooding events resulting from extreme weather events may result in build-up of debris around the mooring chain, compromising the integrity of the mooring arrangement.

### **Reduce wind loadings**

Remove all deck gear including lifebuoys, dodgers, bimini covers, clears and so on and store below. Remove sails, self-furling sails and covers. If this is not possible, double wrap or tie these components in such a way that the wind cannot tease any ends out and allow flapping of gear to commence.

### **Secure your tender**

Ideally, tenders should be stored in dinghy lockers, garaged or deflated and stowed if applicable. If stored with the vessel, tenders should be securely lashed inverted on deck to prevent filling with water – do not contemplate towing tenders. If left on purpose-built davits, tenders should be cleaned out and securely lashed and bungs removed.

## Marina-based safety plans

Marina-based plans may be appropriate for your region. You should note that the design and construction of marinas requires the consideration of the likely range of weather conditions that might be experienced so that the overall structures would withstand the expected loads including storm surge while vessels are moored in the berths.

Notwithstanding the care which was taken in establishing design and construction criteria that were considered to be appropriate, no guarantee can be given that the structures are capable of maintaining their integrity in the complete range of extreme weather conditions. Remember vessels are moored at owners' risk and it is the owner's prerogative to move their vessel if they feel insecure in the marina, noting that any vessel movement should occur in line with the extreme weather contingency plan for the port.

In addition to the general points made above, marina-based safety plans need to consider the following issues. It is important that you discuss this with your marina management to understand their requirements so that your plan is consistent with marina operations:

### **The loadings on marina berths**

Some marinas allow for berths to remain occupied provided the berth has a pontoon equivalent to the overall length (LOA) of the vessel occupying it. Vessels may also be allowed to bear against the fingers/pontoons noting that suitable or additional fendering is likely to be required.

### **Mooring considerations**

Double up mooring lines, by running duplicated ropes to alternative bollards. Do not run duplicates to the same bollards – a single bollard failure should not release the craft from a safe mooring arrangement. The duplicate lines should be in good condition and run slightly slack to ensure that they are only required to work in the event of the chafing through the primary mooring lines. Vessels should not be secured to piles as this prevents pontoons moving with tidal and surge movements. Take particular care to protect against chafing. Ensure lines are made fast to substantial boat parts, for example mast steps, winches and so on, bearing in mind cleats are known to have been torn out of decks. Do not use chain to secure your boat to pontoon bollards. Chains have no ability to stretch, where ropes have a certain amount of give. Some marinas allow for anchors to be lowered in the marina berth to the sea bottom. Ensure there is enough slack to rise and fall of the vessel due to swell and storm surges. If the master or owner elects to stay on-board with the vessel, any mooring lines should be adjustable from on-board and sufficiently taut to ensure the vessel and pontoon move as one.

### **Other factors**

You are likely to be required to disconnect all shore power leads and water hoses. Some marinas have particular arrangements for the stowage of vessel tenders. Marina management may determine the time when personnel are barred from the pontoons and/or hardstand areas. Ensure that you abide by any such direction.

## Hardstand storage

Hard stand storage is a viable alternative for trailer vessels or vessels undergoing maintenance. Hardstand storage may have the additional considerations:

- Windage is considerably increased through hardstand storage. Take particular care to secure and stow all deck items. Place the vessel head to the wind if possible
- Ensure wheels are chocked and trailer brakes applied
- Attach the trailer to the nearest strong point(s)
- Flying debris, particularly in the hardstand areas, may be lethal.

## Appendix B – Summary of Alerts

CYCLONE SEASON - Conditions normal – maintain a state of readiness.		
<b>YELLOW ALERT : WATCH</b>	<b>Small Vessels</b> Implement your cyclone/severe weather Safety Management plan.	<i>Small Vessel Owners and Operators</i>
	<b>Commercial Ferries / barges</b> Implement procedures as indicated in your cyclone/severe weather Safety Management plan.	<i>Ferries/Barge operators</i>
	<b>Large Vessels at Port and anchorage</b> Ship's crew to full complement Prepare vessel for departure at short notice Ensure vessel maintains adequate stability for rough weather Based on the severity and anticipated landfall the RHM may consider directing vessels to sea.	<i>Masters of commercial Vessels</i>
	<b>Tugs</b> – ensure crews are available	<i>Tug Manager</i>
	<b>Mooring Crew</b> - ensure crews are available	<i>Mooring co.</i>
<b>ORANGE ALERT: WARNING</b>	<b>Small Vessels</b> <b>Ensure all vessels are secured as per your safety plan.</b>	<i>Small Vessel Owners and Operators</i>
	<b>Commercial Ferries / barges</b> Implement your cyclone/severe weather Safety Management plan. Consult with Regional Harbour Master and prepare for suspension of services.	<i>Ferries/Barge operators</i>
	<b>Large Vessels at Port and anchorage</b> Large vessels will be directed to put to sea <b>Note: Could occur at any time during Yellow, Orange or earlier alerts</b>	<i>Masters of commercial Vessels</i>
	<b>Tugs</b> – manned up and standby to assist, secure on cyclone/severe moorings on departure of last vessel.	<i>Tug Manager</i>
	<b>Pilots</b> - Standby or deployed	<i>Pilotage Services</i>
	<b>Mooring Crew</b> - Standby or deployed	<i>Mooring company</i>
<b>RED ALERT: EVENT</b>	<b>Small craft owners and operators</b> - Your vessels should be moored in their planned cyclone mooring and secured. It is recommended that all unnecessary personnel evacuated.	<i>Small Vessel Owners and Barge Operators</i>
	<b>Commercial Ferries / barges</b> -Implement your cyclone/severe weather Safety Management plan. Consult with Regional Harbour Master and prepare for suspension of services.	<i>Ferry operators</i>
	<b>Commercial vessels</b> Commercial port cleared of all commercial vessels. Tugs / Port vessels, Pilot Boat secured on their cyclone/severe moorings	<i>Masters of commercial Vessels</i>
<b>The Regional Harbour Master may decide to close the pilotage area. Vessel movements are expected to cease once the pilotage area is closed.</b>		
<b>CAUTION</b>	<b>When the extreme weather event has ceased, do not assume it is safe to move your vessel.</b> <i>Owners and masters of vessels should be aware that aids to navigation may be affected by the extreme weather event and debris maybe in the water.</i> The Regional Harbour Master will assess residual risks and determine the actions needed to be addressed. <i>Vessels should not to leave their cyclone moorings until the official all clear is given by the Regional Harbour Master.</i>	
Conditions normal Resume business as usual and maintain a state of readiness.		