NSW Environmental Code of Practice for the Abalone and, Sea Urchin and Turban Shell Fisheries

SUPPORTED BY:

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ABALONE
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Code of Practice

1. Purpose

- The NSW Environmental Code of Practice for the Abalone and, Sea Urchin and Turban Shell (SUTS) Fisheries has been developed to promote industry best practice, environmentally sustainable practices, and quality assurance in the NSW Abalone Fishery. This is a voluntary set of standards and behaviours for responsible commercial fishing of Abalone and SUTS in NSW.
- This code includes information relating to regulatory requirements, respect and expected behaviour, best practice in operations and safety, environmental and threatened species awareness, diseases and biosecurity, and food safety and quality assurance.
- Most of NSW abalone and turban shell harvest is sold live into either domestic or export markets so the handling, from removal, to handling on boat, transporting and onto tanking facilities, is crucial in ensuring product integrity.

2. The NSW Abalone Fishery

- In NSW, Blacklip Abalone, *Haliotis rubra* forms the basis of the Abalone Fishery; they are harvested from rocky reefs by divers using surface supplied air.
- In 1980, the NSW Abalone fishery became the first restricted fishery in NSW as intense fishing and destructive storms caused catches to decline significantly. The Abalone fishery is a category 1 share managed fishery operating under the Abalone Share Management Plan 2000. As such, commercial fishing rights are gained through ownership of shares. Shareholders may catch abalone themselves or nominate a diver to take abalone on their behalf. Those shareholders holding fewer shares than required to commercially fish for abalone may transfer their quota to other shareholders. Commercial fishing of abalone is controlled through a quota management system; the total allowable commercial catch (TACC) is set every year. TACC is allocated proportionately to fishery shareholders.
- The NSW Abalone Fishery extends along the NSW coastline between the Queensland and Victorian boarders; most of the commercial fishing takes

place on the NSW South Coast from Jervis Bay to the Victorian boarder. The fishery is managed as one unit; as such, fishers are not restricted to fishing regions.

- The abalone fishery in NSW is divided up into Spatial Management Units (SMUs; Appendix. 1). Each month abalone divers are given monthly catch updates, these detail fishing effort in each SMU. Based on these reports, mandatory recommendations of allowable catch of abalone in each SMU are given to fishers. The SMU system ensures an even distribution of fishing effort across the fishing ground, helping to maintain healthy population levels of abalone throughout the fishery.

3. The NSW Sea Urchin and Turban Shell Fishery (SUTS)

- The Purple Sea Urchin (*Centrostephanus rodgersii*) and Red Sea Urchin (*Heliocidaris tuberculate*) form the basis of commercial sea urchin harvests in NSW, the harvesting of the Green Sea Urchin (*H. erthrogramma*) is less common. The Sydney Turban Shell (*Turbo torquatus*) and the Military Turban Shell (*T. militaris*) provide the majority of commercial harvest of Turban Shells in NSW, the Green Turban Shell (*T. undulates*) is less commonly harvested. Sea urchins and turban shells are harvested from rocky reefs by freediving, using surface supplied air or SCUBA.
- The SUTS Fishery is managed as one unit, the fishery remains relatively small. Access to the fishery is limited to fishing business owners eligible for endorsement in the SUTS fishery. Each business is limited to only one person endorsed to commercially harvest SUTS. The main restraints to the fishery are the high processing costs and limited domestic market.
- The TACC for Red Sea Urchins is set by the statutory and independent Total Allowable Fishing Committee. TACC is proportionally allocated to each fishing business that holds an endorsement in the fishery.

4. Regulations

4.1. Be aware of and comply with all legislation that applies to the NSW Abalone and SUTS fisheries.

4.2. Be aware of any changes made to the legislation governing the NSW Abalone and SUTS fisheries.

4.3. Follow the size limits imposed by NSW DPI. Be aware that size limits vary across the fishing grounds (Appendix 2).

4.4. Report all fishing activity and quota usage using the FisherMobile App. A pre-fish report must be completed prior to leaving port, and post-land report must be completed in the immediate vicinity of landed catch (appendix 3, 4).

4.5. Always use fishing gear in accordance with legislation.

4.6. Industry members are encouraged to participate in regulatory reviews to ensure regulations are appropriate and effective and do not place unnecessary regulatory burdens on the fishery (Most recent regulatory review by DPI and Industry: April/May 2020).

5. Respect

5.1. Divers should ensure their actions do not bring the industry into disrepute.

5.2. Always act professionally with any public official, other resource users or members of the community.

5.3. Be aware of and respect the customs of the Aboriginal people and cultural fishing methods.

5.4. To ensure the sustainability of this fishery, resource sharing should be respected by commercial, recreational and cultural harvest, fishers under existing management rules.

5.5. Always be courteous to other waterway users when exercising priority rights.

5.6. Respect the public amenity of boat ramps.

6. Safety

6.1. Ensure a qualified Coxswain or General Purpose Hand commands the fishing vessel.

6.2. Ensure operations are conducted with an acceptable level of safety for the diver/deckhand and the community.

6.3. Be aware of prevailing weather conditions, plan fishing operations accordingly. Do not take any unnecessary risks.

6.4. Ensure a General Purpose Hand is onboard vessel when required. SUTS divers do not require a deckhand when anchoring vessel.

7. Best Practice Operations

7.1. Divers should carry a suitable measuring device for measuring catch underwater to ensure size limits are followed.

7.2. Divers should not harvest abalone, sea urchins or turban shells if there is doubt that it will not adhere to legal size requirements.

7.3. Abalone irons should be maintained to avoid injuring abalone when harvesting. Iron should be kept smooth and rounded with no sharp edges, there should be at least 6 cm of blade for levering the abalone from the substrate.

7.4. Do not intentionally harm any other organism whilst harvesting.

7.5. Avoid leaving catch bags unattended where possible to avoid risk of damage or predation.

8. Sustainable Best Practice Operations

8.1. Maintain the total harvest of the resource at levels which ensure the viability of sea urchin, turban shell and abalone populations.

8.2. The diver should move to new area if there is evidence of recent harvest, to minimize risk of depleting the localized populations.

8.3. The diver should leave some individuals behind rather than taking all the available resource.

8.4.   Be mindful of spreading harvesting effort across productive reef areas and avoid regularly returning to the same location.

8.5.   If an individual spawns when disturbed it should not be harvested on that day.

9. Best Practice Handling

9.1.   Take care when removing targeted species from rock surfaces, harvesting in a manner that minimizes injury to the individual and other marine organisms nearby.

9.2.   When harvesting if an abalone or turban shell is not removed in the first attempt, leave it and move on to another.

9.3.   Catch should be handled carefully to avoid causing damage to the soft tissue of abalone and turban shells, and damaging roe quality in sea urchins.

9.4.   Divers should replace undersize catch immediately from where it was removed. Divers should wait until undersized turban shells and abalone have firmly reattached to the rock substrate before moving away to protect from predation.

9.5.   Undersized catch detected by the deckhand/diver onboard must be returned to the diver for correct placement back on the reef. They should not be thrown overboard as they may not land on suitable reef substrate and/or may be predated upon as a result.

9.6.   Handling of catch should be kept to a minimum.

10.   Environment & Pollution

10.1. Divers should not interfere with the reef substrate or other marine life where possible.

10.2. Divers and Deckhands must be aware of anchor damage to reef and habitat, and take reasonable effort to avoid and minimize damage.

10.3. All observed pollutants (i.e. oil spills) which constitute ecological hazards should be reported to relevant authorities as soon as possible.

10.4. Dispose of rubbish responsibly, all equipment and material taken out on the vessel should be returned. Nothing should intentionally be left in the ocean.

10.5. Any unusual observations of other marine creatures (e.g. diseases, mortality, changes in species populations) should be reported to the relevant authorities.

10.6. Any observations of changes in population size of target species should be reported to the relevant authorities.Effort should be made to retrieve any non-degradable waste located during operations, for proper disposal on land.

11. Threatened, Endangered, and Protected Species

11.1. Divers and deckhands should be familiar with the list of, and methods for identifying, threatened, endangered, and protected species, populations and ecological communities that may be encountered during operations.

11.2. Fishing operations should be conducted in a manner that minimizes potential for interactions with threatened species, populations or ecological communities.

12. Biosecurity & Disease

12.1. Be aware of diseases infecting targeted species and know how to identify a diseased specimen (appendix 5).

12.2. Report any evidence of disease or unnatural mortality immediately to NSW DPI.

12.3. Follow decontamination procedures when moving between states (e.g. VIC into NSW) to prevent the spread of diseases. Divers should avoid/limit diving in different states (appendix 5).

12.4. Decontaminate equipment and fishing vessels during and after diving (appendix 5).

12.5. Abalone divers must land all abalone in their shell; they must not be shucked at sea.

13. Food safety & Quality Assurance
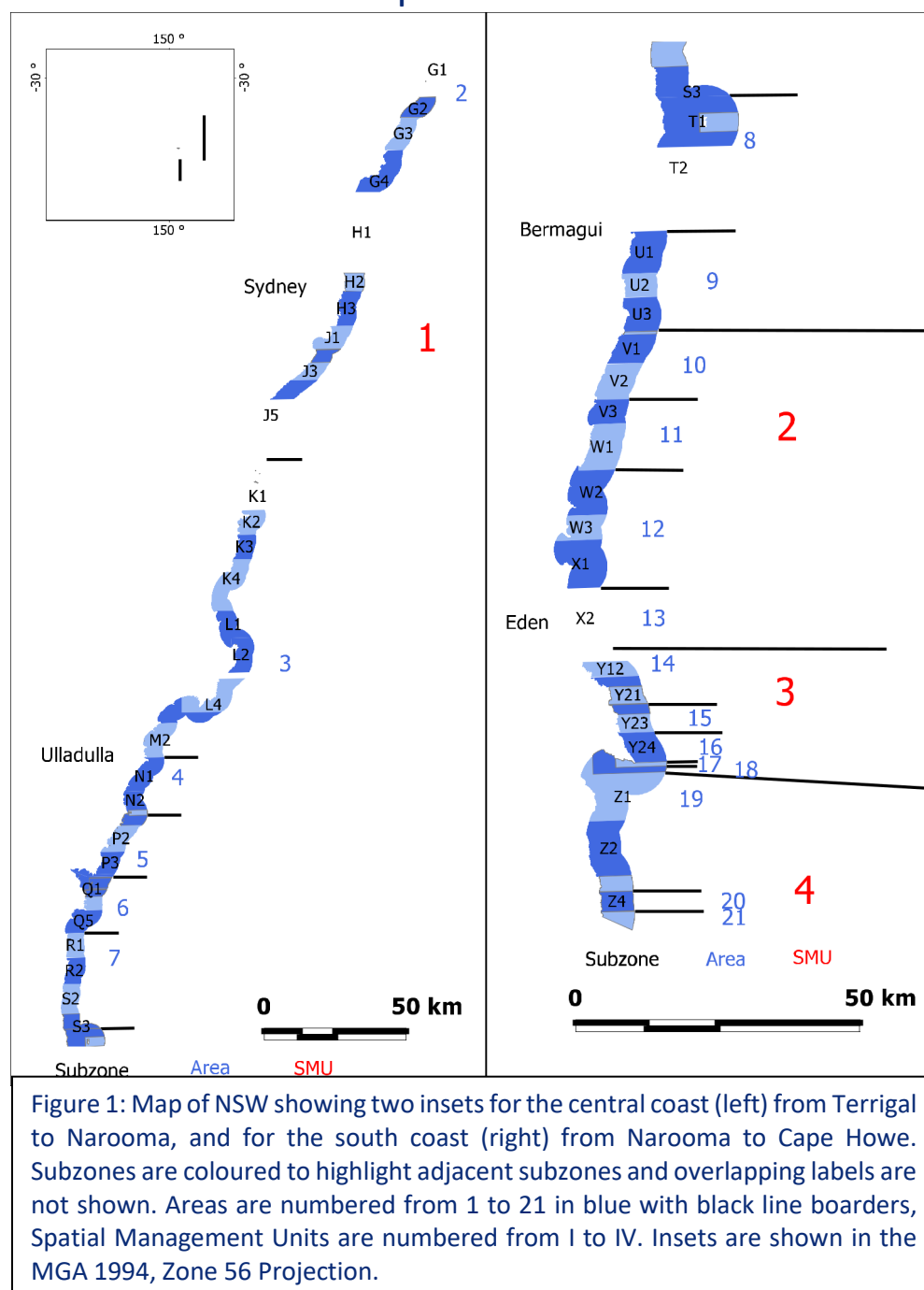
13.1. Comply with all NSW Food Authority requirements to minimize food safety hazards.

13.2. Divers should not drag catch bags across the bottom.

13.3. Care must be taken when storing catch, to ensure it is not crammed or squashed.

13.4. Abalone are to be stored stacked on their edge, holes up, with a maximum two layers per bin. This reduces stress; it also places less pressure on abalone meat reducing risk of injury or death. If abalone are stored in catch bags, these should not be packed more than one layer high, to minimise crush injuries.

13.5. When on the vessel, catch should be kept out of the sunlight and harsh weather conditions. Keep catch covered with damp, light coloured hessian or canvas to keep them as cool as possible and protected from the wind, sun and rain.

13.6. Record any individuals in the catch that spawn in the crates, so the processor can be informed and can take appropriate action to give them special attention.

13.7. Crates holding the catch should be stored securely when on the vessel to ensure there is no damage during transit.

13.8. Ensure that fishing records are accurate, and are submitted in accordance with current legislation.

13.9. All landed catch should be marketed in an authorized manner.

Appendices

Appendix 1: Map of Spatial Management Units in NSW Abalone Fishery

Appendix 2: NSW DPI Size Requirements for Abalone Fishery

Figure 1: Map of NSW showing two insets for the central coast (left) from Terrigal to Narooma, and for the south coast (right) from Narooma to Cape Howe. Subzones are coloured to highlight adjacent subzones and overlapping labels are not shown. Areas are numbered from 1 to 21 in blue with black line boarders, Spatial Management Units are numbered from I to IV. Insets are shown in the MGA 1994, Zone 56 Projection.

'*Pre-fishing report*' means a report made in accordance with condition 1 of the endorsement conditions that apply to holders of endorsements in the Abalone Fishery. For the purposes of

section 68(6B) of the Act, it is a condition of an endorsement in the Abalone Fishery that the holder of the endorsement must use the Real Time Reporting System and report specific information to the Department each occasion on which the endorsement holder proposes to take abalone under the endorsement.

Longitude and latitude coordinates are in WGS84 datum.

The fishing closure is effective for a period of five (5) years commencing on publication of this notification, unless sooner amended or revoked.

Dated this 5th day of July 2018

Dr GEOFF ALLAN
Deputy Director General, Fisheries
Department of Primary Industries
(an office within the Department of Industry)
(by delegation)

Abalone

This guide provides the information you need to operate in the Abalone share class.

1. FisherMobile - quota reporting

You must report fishing activity and quota usage in real time using the FisherMobile App on a mobile device.

You must make a FisherMobile pre-fish report before leaving port or your launching place.

The FisherMobile pre-fish report requires you to report:

1. your registration number
2. the date
3. fishing business number
4. time and location of departure
5. time and location of landing
6. if you intend to fish in a 'Differential Abalone Size Zone' being waters south of the entrance to Wonboyn Lake (zones Z1 – Z5) where a minimum length of 125 mm applies to abalone

If you take Abalone, you must report the validated weight (total weight of abalone to one decimal place) using FisherMobile.

You must remain in the immediate vicinity of your landed catch until you make a FisherMobile post-land report.

You must make a FisherMobile post-land report:

1. within 30 minutes and 50m from the point of landing if you have landed Abalone
2. within 30 minutes and 50m of coming ashore if you have hung Abalone
3. before any Abalone are moved from NSW

The FisherMobile post-land report will require you to report:

1. your registration number
2. fishing business number
3. validated weight
4. landing location

2. Interim Fishing Activity Report

If the FisherMobile system is not available, you must complete an Interim Fishing Activity Report

(IFAR) using the IFAR logbook supplied for this purpose.

An IFAR must be completed and submitted in accordance with the instructions in the IFAR logbook.

You still need to submit your Catch and Effort records through FisherMobile, FisherDirect, or by completing the NSW DPI Abalone Fishery Catch and Effort Logbook.

3. Size limits

The following minimum lengths apply to Abalone:

1. 119 mm - Abalone taken north of the entrance to Wonboyn Lake
2. 125 mm - Abalone taken south of the entrance to Wonboyn Lake

4. Conditions on the practice of hanging abalone

You may only hang Abalone subject to the following:

1. the fisher must be in the process of taking Abalone
2. the fisher must remain within 500m of any Abalone that is hung
3. the position of any Abalone that has been hung is indicated by a buoy that:
   a. is positioned above the bin(s),
   b. is not less than 100 mm in all dimensions,
   c. has a height above the water of not less than 50 mm,
   d. is moored in such a way that no rope is floating on the surface of the water, and
   e. displays your fishing business number and the letter "A", in letters of a contrasting colour not less than 50 mm in height
4. any Abalone that has been hung must be retrieved and brought onto the boat being used to take abalone before coming ashore
5. on each occasion the fisher comes ashore, all Abalone on the boat must be landed
6. the fisher must ensure that any Abalone taken must be brought ashore and landed

7. the fisher must not return any Abalone that is taken and landed, to estuarine or ocean waters for the purposes of hanging

5. National docketing system

Transported Abalone must be accompanied by a duplicate copy of the NSW DPI Abalone fishery Catch and Effort Logbook to support the National Docketing System.

Fishers may choose to complete all reporting online and not carry a logbook. A NSW DPI Abalone Disposal Record is being developed and will be made available as an alternate option. A completed copy of a disposal record must accompany transported abalone if the duplicate logbook copy is not used.

6. Nominations

You can be nominated on more than one Abalone fishing business at one time, or if you are an Abalone fishery shareholder, you can fish your business in addition to any other business you may be nominated on.

When fishing more than one business, you must use the logbook allocated to the shareholder of the business you are fishing at the time, or report against the relevant business online.

7. Existing rules

This guide provides information on some rules. You need to be aware of all of the rules that apply to your fishery.

Fisheries management legislation can be found at www.legislation.nsw.gov.au

Other information such as some endorsement conditions, fishing closures and permits can be found at www.dpi.nsw.gov.au

More information

Fiona McKinnon, Senior Fisheries Manager

Phone: (02) 6652 0983

Source: https://www.dpi.nsw.gov.au/__data/assets/pdf_file/0003/737148/OUT17-34582-Abalone-Fishery-Fact-Sheet.pdf (accessed April 2020)

Appendix 4: NSW DPI Fact Sheet: SUTS Fishery (October 2018)

NSW | **Department of Primary Industries**

FACT SHEET – OCTOBER 2018

Sea Urchin and Turban Shell Fishery

This guide provides the information you need to operate in the SUTs fishery.

1. FisherMobile - quota reporting

You must report fishing activity and quota usage in real time using the FisherMobile App on a mobile device.

You must make a FisherMobile pre-fish report before leaving port or your launching place.

The FisherMobile pre-fish report requires you to report:

1. your registration number
2. the date
3. fishing business number
4. LFB number
5. landing location

If you take red sea urchin, you must report the validated weight (total weight of red urchin to one decimal place) using FisherMobile.

You must make a FisherMobile post-land report:

1. within 30 minutes and 50m from the point of landing
2. before transferring red sea urchin into another boat, vehicle, or premises
3. before any red sea urchin are moved from NSW

The FisherMobile post-land report requires you to report:

1. your registration number
2. fishing business number
3. validated weight (or zero if no red sea urchin were taken)
4. landing location

2. Interim Fishing Activity Report

If the FisherMobile system is not available, you must complete an Interim Fishing Activity Report (IFAR) using the IFAR book supplied for this purpose.

An IFAR must be completed and submitted in accordance with the instructions in the IFAR logbook.

You still need to submit your Catch and Effort records through FisherMobile, FisherDirect, or by completing the NSW DPI Sea Urchin and Turban Shell Fishery Catch and Effort Logbook.

3. Existing rules

This guide provides information on some rules. You must be aware of all of the rules that apply to your fishery.

Fisheries management legislation can be found at www.legislation.nsw.gov.au

Other information such as some endorsement conditions, fishing closures and permits can be found at www.dpi.nsw.gov.au

More information

Nicholas Giles, Fisheries Manager

Phone: (02) 6691 9624

Source: https://www.dpi.nsw.gov.au/__data/assets/pdf_file/0009/737145/OUT17-34583-Sea-Urchin-and-Turban-Shell-Fishery-Fact-Sheet.pdf (accessed May 2020)

Standard operating procedures: decontamination for commercial Abalone divers

This primefact presents some key hygiene protocols for Abalone divers to help protect Abalone stocks in NSW from disease. These standard operating procedures (SOPs) have been designed to minimise the disease translocation risk posed by Abalone fishing.
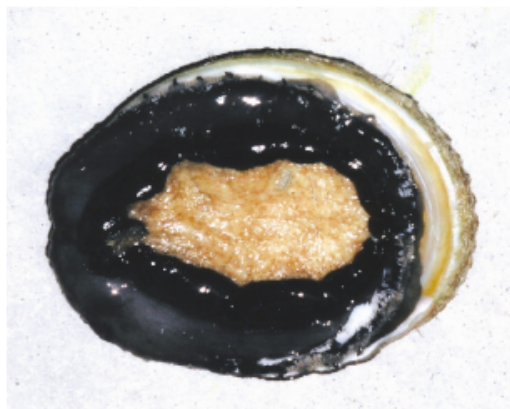
Abalone viral ganglioneuritis

Abalone viral ganglioneuritis (AVG) is a herpes disease that was first detected in Australia in 2005 in southern Victoria, initially in farmed Abalone and subsequently in wild stocks in 2006. The disease has resulted in extensive mortalities of Greenlip and Blacklip Abalone in affected areas. Various management actions, including a fishing closure, have been unsuccessful in containing the disease, which currently spans almost 200 km of Victorian coastline.

Although similar to a virus found in farmed Abalone overseas, AVG is not thought to be an introduced disease. Rather, it is considered to have been latent in native Abalone populations, with disease expression triggered by accumulated stressors.

Figure 1. Healthy Abalone (Photo: Mike Heasman)

Figure 2. Diseased Abalone displaying a symptom of AVG - curling of the foot (Photo: DPI Victoria)

There are no public health or food safety implications associated with this disease and it has not been reported in any other Australian states.

Symptoms

AVG affects the nervous system of Abalone and symptoms include swollen mouthparts, curling of the foot resulting in exposure of shiny edges of the shell, difficulty adhering to surfaces, and lethargy, often causing death.

How is the virus spread?

Possible ways AVG is spread include direct contact between infected and healthy Abalone, viral particles shed into the water column, and contact with infectious material (such as mucus) or contaminated equipment that has been used on diseased and then healthy Abalone.

Detecting AVG

At present the detection of Abalone ganglioneuritis virus (the causative agent of AVG) in Abalone that are not clinically affected with AVG remains a challenge. However, Victorian Government researchers, in conjunction with the Australian Animal Health Laboratory (AAHL), are working to develop a molecular diagnostic test to improve detection of this disease in Abalone which may not be exhibiting obvious signs of disease or sickness.

There is no indication of this disease in NSW.

Perkinsus

Perkinsus is a disease that was first detected in NSW Abalone stocks in 1992. It is an infection of molluscs caused by the genus of parasite *Perkinsus*, with *Perkinsus olseni* being the particular species that infects Abalone. The disease has different symptoms from AVG. It causes abscesses, particularly in stressed Abalone, which can result in mortality.

Perkinsus mortalities have contributed to stock decline, resulting in (ongoing) fishing closures. The impact of *Perkinsus* in NSW demonstrates the importance of safeguarding remaining Abalone stocks from further disease incursions.

Hygiene protocols – standard operating procedures

To protect NSW Abalone stocks from disease risks and the potential spread of diseases such as AVG and *Perkinsus*, NSW DPI worked with industry to develop standard operating procedures (SOPs) based on biosecurity best practice guidelines. The risk of aquatic disease outbreaks can be greatly reduced by applying appropriate biosecurity protocols through thorough hygiene practices. This SOP is designed to minimise the risk posed by activities associated with Abalone fishing.

Decontamination

- Decontamination is important in preventing the transfer of disease.
- Decontamination procedures should be carried out when moving to a different fishing zone. To make decontamination more practical, divers should limit the spatial extent of their diving within each day.
- Decontamination procedures should be carried out when diving has ceased for the day. In particular, decontamination is recommended when diving in a different area from the previous day, e.g. diving in a northern area and then travelling south of the original diving location the next day.

- All equipment and persons that come into contact with Abalone should be decontaminated.
- Effective decontamination generally requires a two step process, and involves a detergent wash followed by treatment with a disinfectant.
- Detergents remove gross organic matter, which impede the ability of disinfectants to inactivate pathogens. Disinfectants are then able to effectively inactivate or kill the pathogens.
- While diving, attention should be given to ensuring equipment, divers and decks are clean and routinely rinsed and kept free of any residue and organic matter such as seaweed, shell, sand etc. to promote effective decontamination.
- Although little is known specifically about AVG, similar viruses are inactivated by immersion in soapy water alone. However, as a precaution, and as part of best practice biosecurity decontamination measures, equipment should also be treated with a disinfectant.

Preparation of a 200 ppm effective chlorine solution

Chlorine solution should be made up fresh for disinfection and not stored for any longer than 24 hours. Chlorine solution needs to be kept out of light and kept cool in order to minimise breakdown of chlorine.

To prepare a chlorine solution from granular swimming pool products:

1. Use only registered products containing 650 g/kg available chlorine present as CALCIUM HYPOCHLORITE or SODIUM HYPOCHLORITE as their only active constituent as outlined in permit PER14917.

2. Dissolve 31 grams granular pool chlorine in 100 litres of water to produce a 200 ppm effective chlorine solution.

Note: adhere to all other instructions as indicated in permit PER14917 (valid until 26 September 2017).

Refer to the NSW DPI SOPs for instructions regarding the safe use of this chemical. This information should be available from the distributor when you purchase the product or by contacting the manufacturer.

Decontamination of harvesting equipment

- All equipment that has come in contact with Abalone, such as baskets, Abalone irons, gloves, measures and catch bags, should be scrubbed clean and soaked in soapy water (which acts mainly as a detergent) for 30 minutes, then rinsed with fresh water.
- All such equipment should then be soaked in a 200 ppm effective chlorine solution prepared from calcium hypochlorite or sodium hypochlorite e.g. pool chlorine (as described on page 2) for an additional period of not less than 20 minutes, and then rinsed with fresh water.
- Throughout the diving operation, divers, equipment and decks should be rinsed to remove any organic material.
- Diving equipment that has not had direct contact with Abalone, such as masks, buoyancy vests and regulators, can be washed with fresh water.
- After decontamination procedures are completed, allow equipment to dry in the sun before next use.

Vessel decontamination

- Throughout diving activity, decks and boating equipment should be regularly washed down (with fresh water if possible) and scrubbed, to remove all organic material such as sand, shell and seaweed.
- On returning to port, a thorough vessel cleaning should be undertaken. Cleaning should start from the highest point and work down to ensure all areas are cleaned. The deck and all parts of the boat that have had

Figure 3. Abalone diver (Photo: John Matthews)

contact with Abalone or Abalone equipment should be thoroughly rinsed with fresh water, washed with disinfectant and rinsed again with fresh water.
- Once vessels are removed from the water the hull should be cleaned to remove any fouling organisms and organic material and should be hosed down with fresh water. Bungs should be removed for drainage and bilge areas rinsed with fresh water.
- Detergents specifically designed for cleaning boats should be used.

Decontamination of people and clothing

- Wherever possible, divers should rinse with fresh water between dives.
- Divers and any person who has handled Abalone should wash their hands with soapy water.
- After diving, wetsuits should be washed both inside and out with a neoprene wash or with liquid soap or shampoo.
- Waterproof clothing should be rinsed with soapy water, rinsed with fresh water and dried in the sun.
- Gumboots and any footwear worn on the boat should be washed with soapy water, rinsed with fresh water and dried in the sun.
- Clothes should be washed with laundry detergent.

Decontamination of transport containers

- Containers which hold Abalone should be thoroughly cleaned and disinfected after use.
- Remove any residue and organic material from containers.
- Soak containers with detergent, soak or wipe insides with disinfectant (a two minute contact time is recommended) and thoroughly rinse containers with fresh water. A thorough rinsing is necessary to ensure no harmful chemicals remain which can affect the next catch of Abalone.

Decontamination procedures should be carried out away from the water's edge to prevent detergents and disinfectants from entering the marine environment.

Care should be taken to ensure that waste water from bilges is not discharged into the waterway.

Disposal of Abalone shell, meat and gut

- Abalone should not be shucked at sea.
- Shell, meat and gut should not be discarded into marine waters and should instead be disposed with rubbish.

Reporting disease

1. If you observe any abnormality in Abalone which may be indicative of disease, collect a sample and stop fishing.
2. Place the sample in a sealed plastic bag and add oxygen to the bag if possible. Keep the bag on ice and record the zone, specific location, GPS coordinates, depth and symptoms the Abalone is exhibiting.
3. Contact the NSW DPI Aquatic Biosecurity and Risk Management Unit on (02) 4982 1232 to provide details and to make arrangements for the department to collect the sample.

Help to protect Abalone in NSW

- Decontaminate equipment and vessels during and after Abalone diving.
- Plan your work to avoid or limit diving in different zones.
- Do not discard Abalone or any part of Abalone at sea.
- Divers are encouraged to not hang Abalone outside the subzone in which they were collected, as this practice increases the risk of disease transmission from one location to another.
- Report anything you may notice in Abalone that is unusual and could be an indication of disease to the NSW DPI Aquatic Biosecurity and Risk Management Unit on (02) 4982 1232.

Source: https://www.dpi.nsw.gov.au/__data/assets/pdf_file/0005/631229/SOP-decontamination-for-commercial-abalone-divers.pdf (accessed April 2020)

Appendix 6: NSW DPI brochure on Abalone theft

Appendix 7: COVID-19 Measures

ABALONE ASSOCIATION NSW

PO BOX 468 Pambula 2549 NSW

Email: AANSW16@gmail.com

Master's Responsibility Managing Covid-19 Risk on Commercial Fishing Vessels

According to Public Health Order 30 March 2020 restrictions on gatherings do not apply to a "gathering for the purposes of or related to transportation" (as per Schedule 2). Vessels, as the primary transport for fishers, are exempt from the requirements.

Social distancing is about reducing close physical contact - in some workplaces this is difficult. ***So wherever possible*** *limit the need for your workers to be in close contact with others. And in the workplace - like on boats - increase hygiene and cleaning practices to minimise any risk and also consider activities that can be adjusted, where possible.*

There are no current border controls in NSW.

PRE-DEPARTURE PROCEDURECS

Pre-departure and briefing will now include:
- Assess myself and crew, if I have them, before boarding to make sure no symptoms and are not sick.
- Make sure myself and crew, if I have them, know how to follow the government advice about hand and respiratory hygiene (coughing and sneezing).
- Make sure myself and crew, if I have them, knows where the hygiene products that are located on the vessel (e.g. hand sanitiser, tissues).
- Make sure myself and crew, if I have them, use the bins to dispose of tissues if I/we use them.

Single Operator

As a single operator that has short trips, I do not present a major risk. To reduce likelihood of transmission I will:
- keep 1.5 metres away from others
- avoid physical greetings such as handshaking, hugs and kisses
- avoid public gatherings and at risk groups like older people
- practise good hygiene

Operator with crew

- As an operator with crew, I acknowledge that there is a small risk of operating.
- Where safely possible, we will comply with social distancing (1.5 metres) by spreading crew apart.
- We will avoid physical greetings such as handshaking etc.
- avoid public gatherings and at risk groups like older people
- practise good hygiene

Cleaning my vessel

I recognise that COVID-19 can also spread by people touching shared work objects or surfaces. These can be:
- handles
- railings
- surfaces
- equipment

I shall clean frequently touched surfaces with detergent solution.

Good Hygiene

I shall ensure myself and crew, if I have them, practise good hand and sneeze/cough hygiene:

- wash my hands frequently with soap and water,
- cover my cough and sneeze, dispose of tissues, and use alcohol-based hand sanitiser

Manage the risks

Identification of COVID-19 Symptoms

Common symptoms:

- fever.
- tiredness.
- dry cough.

Some people may experience:

- aches and pains.
- nasal congestion.
- runny nose.

- sore throat.
- diarrhoea.

On average it takes 5–6 days from when someone is infected with the virus for symptoms to show, however it can take up to 14 days.

If a crew or passenger displays COVID-19 symptoms

If a crew or passenger displays COVID-19 symptoms:

- isolate the person
- phone the National Coronavirus Helpline (1800 020 080)
- keep contact to a minimum
- give the person their own linen, plates, cutlery etc.
- keep their washing separate from the rest of the crew
- make sure the person wears a surgical mask and gloves
- if you are caring for the person you should wear a surgical mask and gloves

Interactions with other vessels

These interactions will be avoided, where possible, or conducted with precautions. For example, bring a tender alongside without boarding.

Dive operations

This advice is specific to operations that involve diving.

These are recommended by the Australian Dive Accreditation Scheme.

Association of Diving Contractors International advice on COVID-19 and sanitization of commercial diving life support equipment.

International Marine Contractors Association COVID-19 guidance for diving contractors.

VESSEL NAME or UNIQUE ID
_____

MASTERS'SIGNATURE
_____

CREW SIGNATURE
_____

DATE