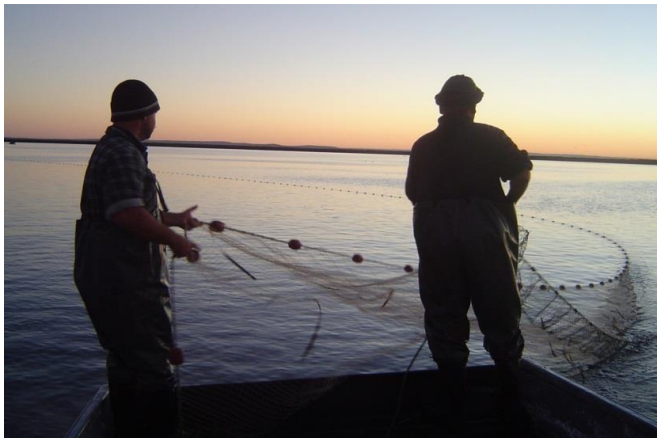
PROPOSED MODIFICATIONS TO WEST COAST NETTING CLOSURES IN COASTAL WATERS AND DEVELOPMENT OF A FRAMEWORK FOR SUSTAINABLE HARVESTING STRATEGIES



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Proposed modifications to West Coast netting closures in coastal waters and development of a framework for sustainable harvesting strategies

Accompanying this summary are maps of the proposed closure modifications and 2 tables of our harvesting strategy.

Our objectives:

- Recover some lost fishing area due to fishing closures implemented by government.
- Target fish are Garfish and secondary species (Sea Mullet, Yelloweye mullet, Australian Herring, Snook) but NOT King George Whiting (KGW). We want to prohibit landing of KGW in our netting operations in all the areas that we want modified.
- To obtain a bit more area to fish to make our business economically viable. Our netting operations are restricted to a small area (less than. 3.9 square km) situated west of Point de Mole and Yanerbie which is a minute fraction (less than 0.13 %) of the area of water within the WC bays (see maps).
- Revitalise local seafood sector, provide affordable fish and create employment in local area.
- Promote prime SA produce through farmers markets, Oysterfest, Cleve and Paskeville field days.
- Promote and facilitate fishery and marine ecological research in the region in collaboration with SARDI and Universities.

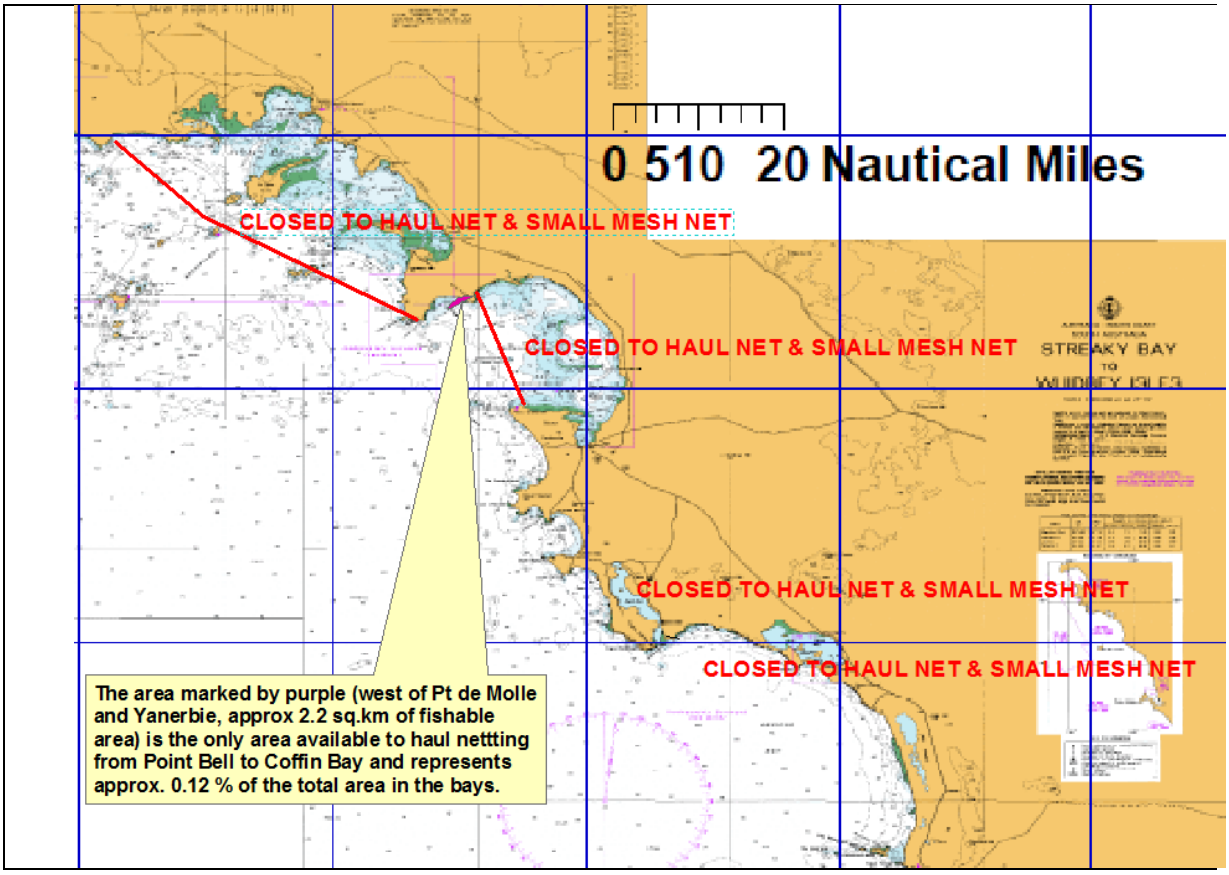
Fish species we want to target, process and add value to.

We aim to make Council and the local community more aware of our proposed modifications to the WC net closures and our netting operations, including a Government regulation prohibiting the take of KGW in our netting operations.

There are many 'misunderstandings' and a lot of 'misinformation' about haul netting and other issues (e.g. benefits of marine sanctuaries for fisheries, among others) out there. The netting issues need to be addressed without bias and deal with the facts.

The issues:

- Nowhere to go (see maps below). We have minute share of area of water in the WC bays compared to the recreational and commercial line fishing sectors. Or netting operations are restricted to a small area (less than. 3.9 square km) situated west of Point de Mole and Yanerbie which is a minute fraction (<0.13 %) of the area of water within the WC bays (approx. 2,946 square km) which extend from Ceduna to Coffin Bay. We do not want to fish the Ceduna-Smoky Bay; nor do we seek access to Coffin and Waterloo Bay but only small areas near Point de Mole, Venus and Bairds Bay (see maps).
- Misunderstanding of the fishery and perceived negative impacts on fish stocks and ecological impacts of haul netting.
- Economic hardship induced by net closures and threat to our livelihoods. Our net fishing operation is not economically viable and we do not want to move interstate nor move our families to Spencer Gulf regions. Our families are here at Streaky and Venus Bay.
- We have a minute and disproportionate share of the West Coast (WC) available fishing area. The area available to us for Garfish haul netting is less than 3.9 square km and <0.13% of the water which minute fraction of the area of the WC bays. Hence, we have a relatively very small and a grossly disproportionate share of the fishery resource compared to other sectors (commercial line and recreational sector).



The facts:

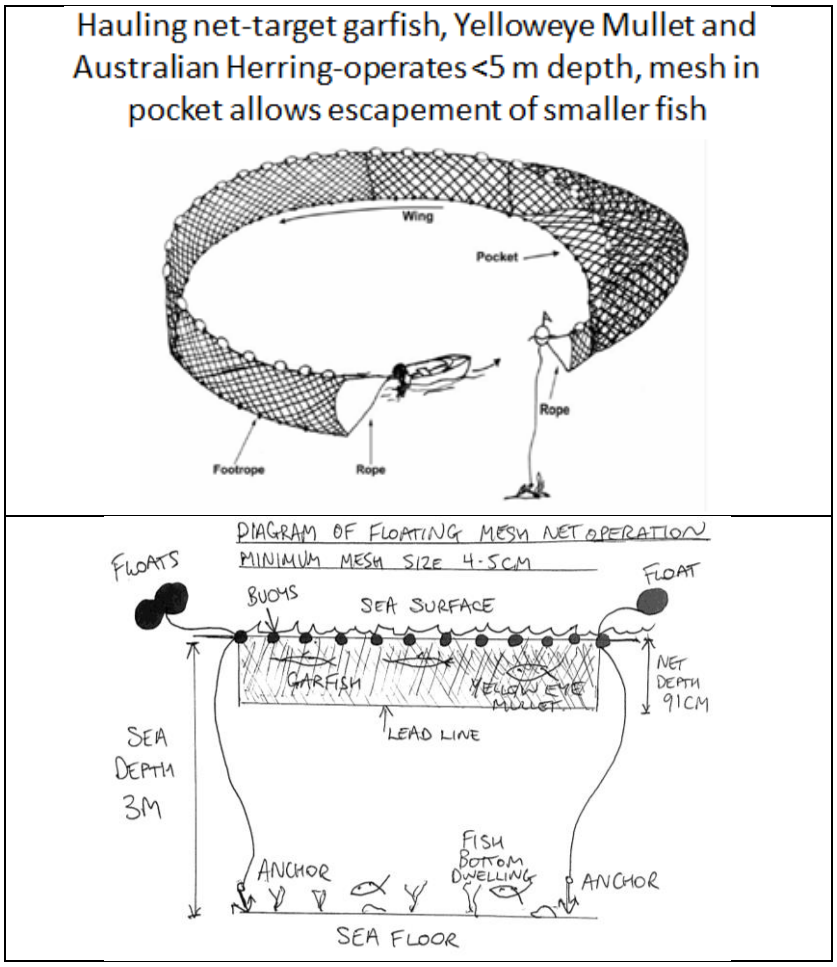
- We have nowhere to go as the net fishing area available is very limited and we have a grossly disproportionate share of the marine scale fish resource.
- This is about the WC and not Gulf St Vincent and Spencer Gulf –our fishing for Garfish will have no impact on Garfish stocks in the Gulfs, nor would we have impact on KGW stocks in the Gulfs as the WC population is a separate stock.
- By Government regulation we will not have access to the Denial-Smoky Bay areas where legal and large numbers of undersize KGW fish occur; nor will we fish the adjacent

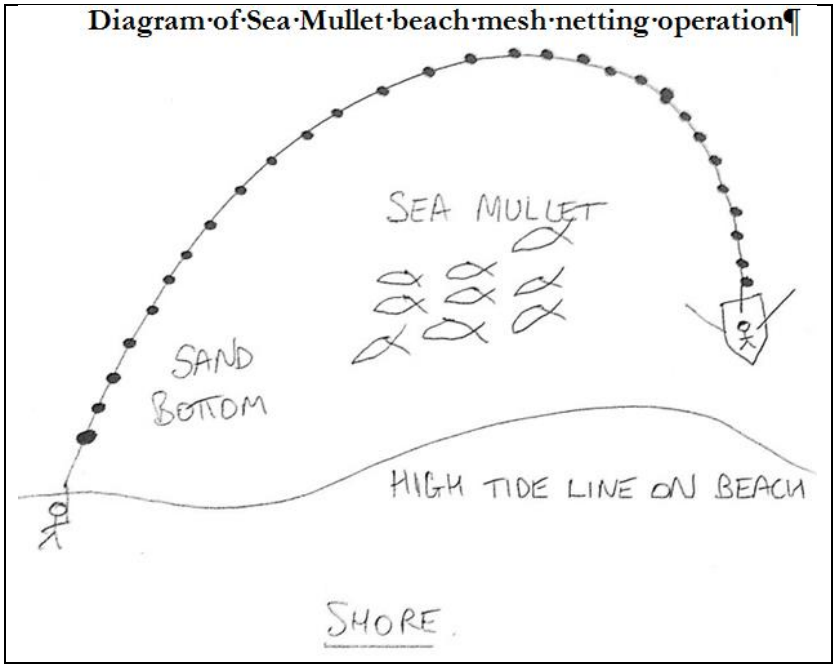
islands and reefs where spawning occurs. We will have no impact on the KGW spawning population.

- We will be prohibited from fishing in Blanche Port and from using small mesh nets within Acramans Creek and adjacent mud-flats and seagrass beds where juvenile KGW and Garfish occur.
- Our target species using haul nets are Garfish and a few secondary species (e.g. Australian herring, sea mullet, yellow-eye mullet and snook).
- We will not catch snapper and have a limited range of available target species compared to the commercial and recreational line (including Charter boats) fisheries.
- The WC Garfish stock is separate from the Gulfs, is not over fished and is considered 'under-utilised'. Our proposed harvesting strategy would limit our take (and harvest rate) by effort controls i.e. spawning and seasonal closures and limits on maximum number of days fished over a month and year, gear restrictions (e.g. large mesh size 3.5 cm haul net) and restriction on depth (<5 m haul net) of operation. We propose to implement a spawning closure which, with other methods, would ensure fishery sustainability over the long term (see Tables 1 & 2, Harvest strategy and schedule).
- Our operations are limited to waters <5 m for haul netting and <2 m depth for Sea Mullet mesh beach seine. The depth of haul nets in the wings is limited to 3 m by government regulation, so the gear will only effectively catch fish in waters less than 3 m.
- Scientific evidence indicates that haul netting has no to negligible impact on seagrass and would have minimal mortality to undersize Garfish via escapement through the 3.5 cm new mesh net regulation in pocket (bunt).
- Scientific evidence indicates the King George Whiting stock on the WC is a separate stock to the Gulfs The WC stock is not overfished; nor would we have negative impact on the stock or on the line fishing sectors (commercial and recreational) catch. Haul net operations at Streaky Bay would be selective (by sight and habitat) with few KGW captured with a large proportion released alive due to the thick ply size (18) in the bunt mesh (3.5 cm).
- Prohibition on landing KGW. We want government regulation from prohibiting the landing of KGW in the proposed fishing areas. Hence, will not land King George whiting but will catch a few as bycatch which will be released alive.
- Some critics have claimed that haul nets are indiscriminate in what is captured and kill a lot of fish. Our operations will be selective on what we fish. KGW are easily sighted (in day and night by spot light) and easily differentiated from targeted Garfish, yellow-eye mullet and tommy ruff by professional net fishers. Also, the mesh size with thick mesh ply will significantly reduce meshing and post-capture mortality (see Kumar et al. 1995). KGW will be brailed from net and most released alive.
- Our operations would result in zero to negligible impact on the seagrass and associated epi-benthic communities. We will not have any negative impact on wildlife populations including dolphins, seals, white sharks, seabirds and shorebirds nor would we have any impact on Sygnathids (seahorses, sea dragons and pipefish) populations.
- There are misunderstandings about the ecological impacts of haul netting which we will address, including threats to listed species. See PIRSA (2011) ESD Risk assessment report. The SARDI (2014) report on Wildlife interactions in SA Managed Fisheries, as well as, scientific reports provides evidence of negligible-minimal risk to TEP species.
- We want to revitalise the local seafood sector, provide affordable fish and create employment through fishing operations and local processing and adding value.
- Our waters are pristine and clean – free from industrial and effluent discharges. Hence, our fish tastes better than in other areas, this is reflected in the high demand for WC fish (Jim Elias, personal communication).
- Why are we importing low quality Garfish from China?
- The South Australian Seafood processing sector supports our case and letters are expected to be forwarded to Councils and PIRSA to support our case.

Our fishing gear operations:

- Garfish haul net- new regulation for pocket (bunt) minimum mesh size 3.5 cm to allow escapement of smaller fish (see below).
- Garfish floating mesh net- only fishes surface water (91 cm, 3 feet) with operations restricted to waters greater than 1.5 m depth. Gear targets Garfish and Yelloweye Mullet surface swimming fish (c.f. KGW, a bottom dwelling species).
- Sea Mullet beach mesh net operation only takes place during daylight hours (not night) and is limited to shallow (<3m) water on sandy and sandy mud bottom. The size of the beach haul mesh net is 450 m with mesh size of 9.5 cm. The gear is highly selective to sea mullet due to fishing operation, depth, habitat type and large mesh size.





Fishery and environmental issues of relevance our proposed netting operations:

- Garfish stock and sustainability. An enormous under-utilised resource, which can be fished sustainably with a planned harvest strategy and adaptive management. The resource extends through the west coast bays and to nearshore and offshore islands and reefs (e.g. Franklins, St Francis, and Waldergrove Island).
- Sea Mullet- a schooling species which moves into the inshore regions of WC bays from January to feed on bottom detritus and subsequently move offshore to spawn from April-June. The population consists of large size fish (approx. 1.0-2.5 kg, 40-55 cm in length) compared to other states and we expect WA is the population source or origin.
- High potential for adding value to Sea Mullet including export of roe to NSW and Asian markets. Under-utilised resource in WC.
- Yelloweye mullet and Australian Herring and Snook. Expect a large under-utilised WC resource.
- Sharks. Gummy, school and bronze whalers. There is a Government catch limit of 5 Gummy sharks per day in internal waters and we can easily release sharks and rays alive rapidly with haul net operations with no injury or mortality. Sharks will not get enmeshed due to the small mesh size.
- Bycatch from Sea Mullet net operations demonstrates negligible bycatch (a few stingrays and eagle rays, flathead, toadfish and a salmon) which are easily released alive (see Carrick 2007, unpublished report to PIRSA).
- Bycatch from haul nets. Will catch a negligible to very small amount of King George whiting including undersize fish but most will be released alive with minimal mortality owing to fishing operations, mesh size (3.5 cm) and large twine thickness (ply size 18) of the mesh (see Kumar et al 1995, Knuckey et al. 2002 and Fowler 2005). On retrieval of net by hand, fish in the net (bunt) are maintained in water and collected with a brailing net and released alive (see figure below).

- Floating Garfish mesh nets proposed to be used at Bairds Bay will not catch KGW as the net fishes only surface water (see figure).

- Impact of nets on Threatened, Endangered and Protected species and others - dolphins, White Pointers, seals/sea-lions and Sygnathids (seadragons, seahorses and pipefish) and seabirds (shags, seagulls, penguins, pelicans, shearwaters etc.). No impact on populations as few interactions with negligible injury or no mortality induced by our netting operational practices. Any Sygnathids captured would be released alive. Leafy sea dragons are not in the area of our operations as they prefer deeper water with red seaweed and seagrass. Seahorses are mainly in deeper water (>15 m). Pipefish can occur in waters from 2-5 depth in seagrass and reef habitats. We do not fish reefs only soft bottoms. Major threats to Sygnathids in Australia are due to seagrass loss and habitat fragmentation and not haul netting (see Browne et al. 2008, Knuckey et al. 2002)
- Impact on habitat including sea grass.
    - Sea mullet operations take place on sandy-mud shallow (<2 m) depth not on seagrass; hence there would be no impact on seagrass.
    - Impact of haul net on seagrass – scientific evidence support no to negligible impact, especially compared to storms, vessel mooring structures and anchors and chains. The gear (foot rope) is light and does not dig the bottom, lightly sweeping the bottom surface instead. Underwater observations (and video) of gear operations of haul netting made by SARDI support this claim.
    - Impact of floating mesh net (Bairds Bay). The gear does not touch the bottom; it targets surface schooling Garfish; hence no impact on seagrass and no catch of KGW. The gear fishes surface water of 91 cm with a minimum depth limit of 1.5 m which would ensure at least 0.6 m gap between leadline and seafloor.
- Impact of netting on fish nursery and spawning populations.
    - We have restrictions on fishing in mangrove areas, tidal creeks and adjacent mud flats. The Sea Mullet proposed fishing region at Streaky Bay excludes the mangroves and tidal creeks in the Blanche Port and Acramans Creek area (see maps). Haul net fishing would be restricted to a small area east of Pt de Mole; hence fishing would not take place in any mangrove regions and adjacent mud flats in the Acramans Creek and Blanche areas which are known nurseries for fish including KGW and Garfish.
    - KGW spawn in offshore waters over low profile reefs and seagrass; hence we would not have any impact on the spawning population which is expected and widely distributed in WC offshore/nearshore waters where we do not fish...
    - Garfish spawn in inshore waters of Venus Bay from August to February (Jones et a. 2002); hence the spawning closure and constrained effort would facilitate spawning and growth (see Table 1 & 2)
    - Australian Herring -spawning takes place in WA waters and fish migrate here and the stock is very much influenced by environmental variation, as are many other fish species.
- Sanctuary zones and marine reserves.
    - A buffer (100 m) around sanctuary zones will apply either by regulation or an agreement in our code of practice. We will have no impact on the sanctuary zones in the region. We played a role in developing and supporting the MP3 sanctuaries and would respect them.
    - Since we would not fish anywhere near the sanctuary zone boundary with a buffer around it there would be no effect on the ecological integrity of the sanctuary

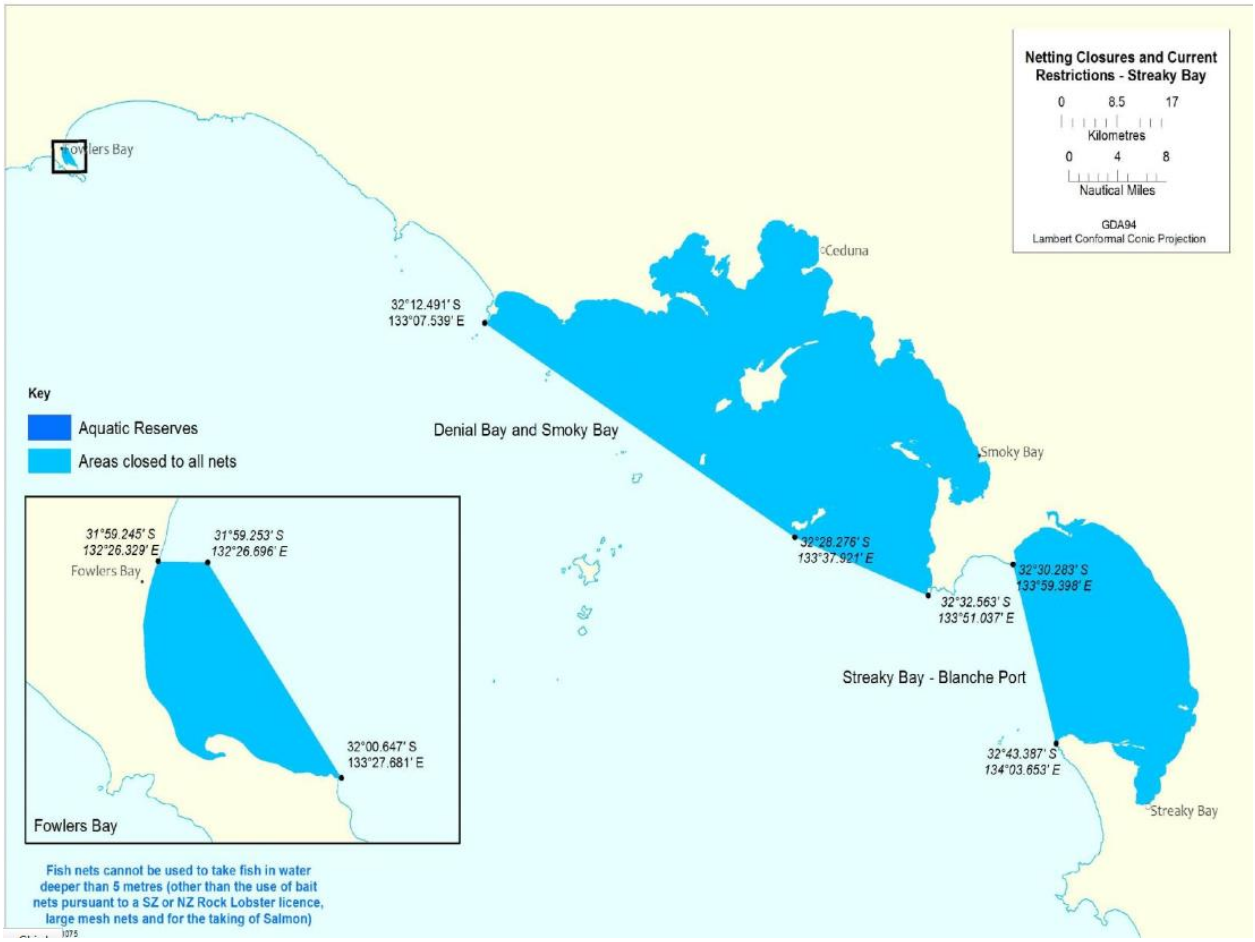
Our proposal will be of benefit to fisheries and ecological research in the region.

- Our fine scale spatial (GPS lat/lon) catch-effort data and fish sampling collection system would provide valuable information for SARDI for stock assessment.
- We anticipate assisting and facilitating ecological research on fish populations and seagrass ecological communities with Flinders University.

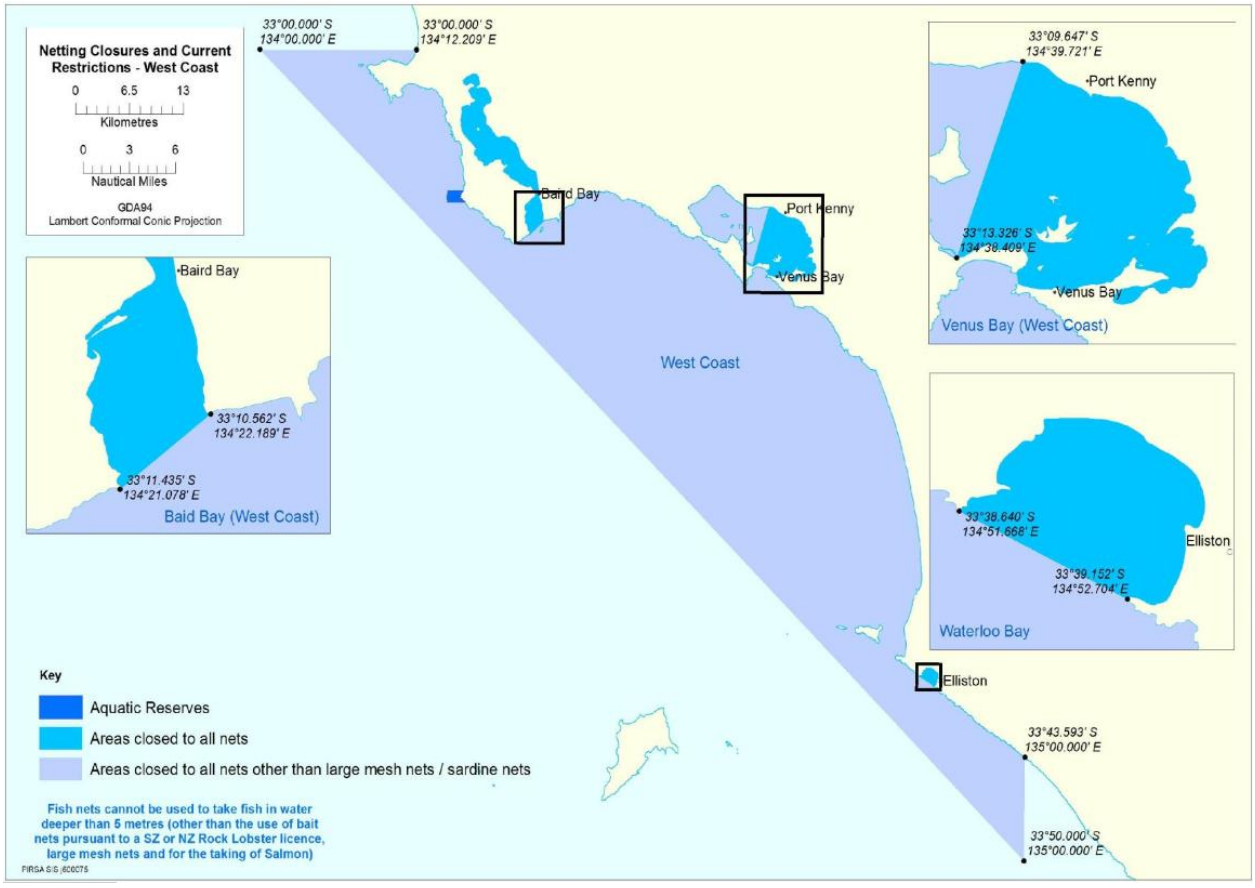
It is mandatory for commercial fishers to complete SARDI logbooks for monitory catch, effort undersize fish and wildlife interactions in the fishing areas. SARDI cannot provide a rigorous stock assessment of Garfish on the WC because there is limited data available on the commercial sector in the region. It is pointed out that:

- Our operations which targets Garfish using floating mesh net and haul net would allow data to be collected for stock assessments and monitoring of other secondary species.
- We would enhance the amount and quality of fishery and environmental data collected which would be of long-term benefit to SARDI stock assessments, fishery research and the public.
- We anticipate facilitation of ecological research on fish populations and ecological communities with Flinders University.

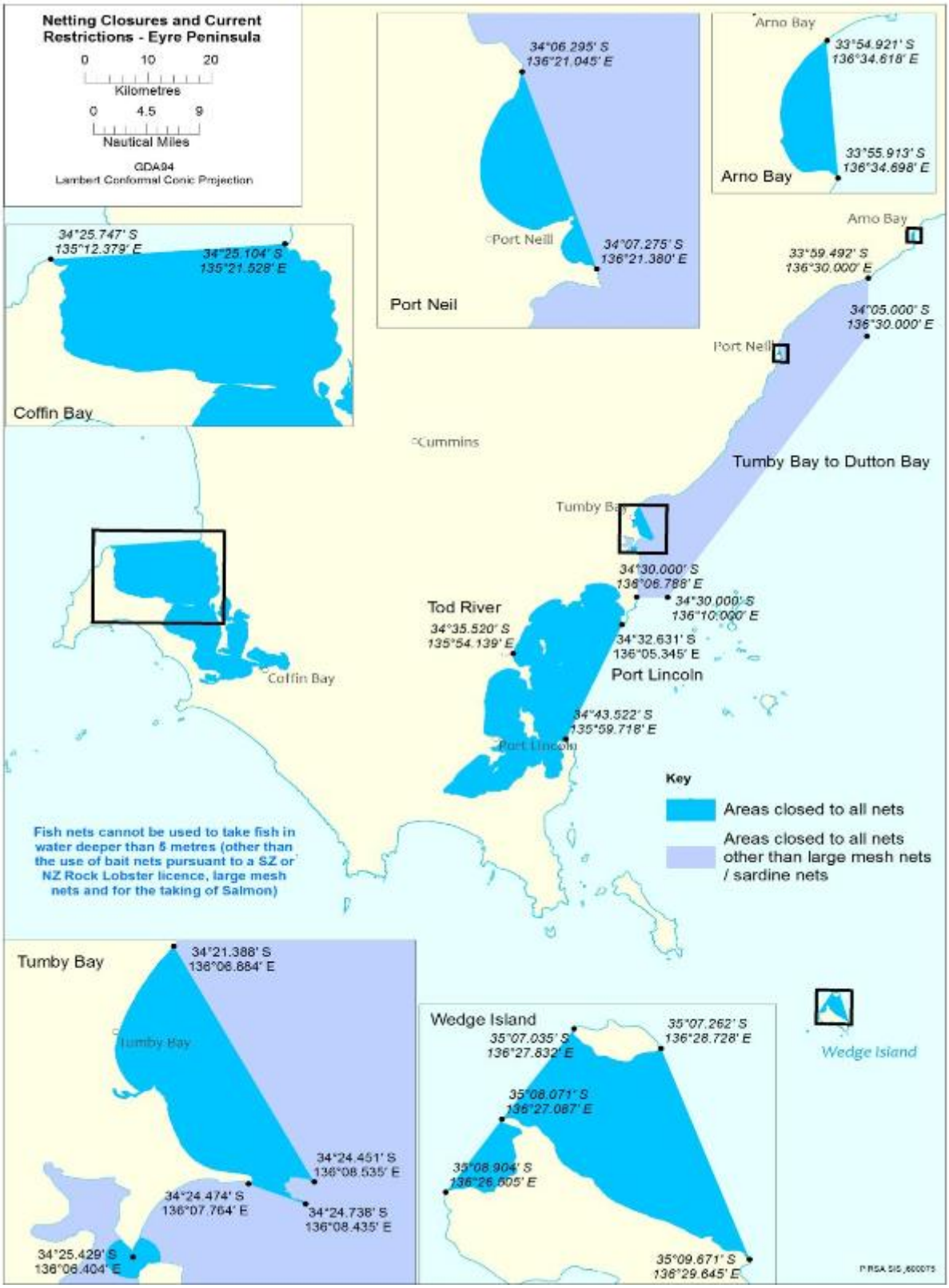
Appendix 1: Map of fishery net closures (source PIRSA)



MSF West Coast netting closures: Fowlers Bay, Denial and Smoky bay and Streaky Bay.



MSF West Coast netting closures: Baird Bay, Venus & Waterloo Bay.



MSF netting closures: Coffin Bay to Arno Bay