

Case Study: 4. Shoalhaven River Fishing Industry

Why is the Shoalhaven River Seafood Industry Important?

The Shoalhaven River supports a large concentration of commercial fishers that produce high quality seafood for domestic and export markets. The seafood industry makes a large contribution to the local economy directly through the sale of product and indirectly through employment and benefits to seafood retailers, seafood restaurants etc. The estimated value of the seafood industry in the Shoalhaven area is \$25 million annually.

The broader socio-economic benefits provided by the seafood industry to the community cannot be understated, with fishers and oyster farmers spending an estimated 90 percent of their income in the area, allowing flow on effects to many local businesses. Furthermore, consumption of seafood has been shown to have many health benefits such as a reduction in heart disease and mental illness.

Quality seafood is a great bonus to the Shoalhaven region – it not only helps feed the local population but also attracts large numbers of tourists. Non-fishers and non oyster farmers can obtain quality fresh seafood by visiting local fish co-operatives, fish shops and oyster retailers.



Local fish and chip shop at Greenwell Point, source: OceanWatch Australia

Why is a Healthy, Sustainably Used Shoalhaven Catchment Important to the Local Fishing and Oyster Industries?

As with all river systems, the productivity of the Shoalhaven River is very closely linked to the health of the estuary and the state of the surrounding catchment and the habitat contained within it, both terrestrial and aquatic.

Commercial fishers and oyster farmers spend extended periods on the water and have an intimate understanding of the environment in which they work, and in many cases, knowledge that has been passed down through generations of fishing and oyster growing families.

Since fishers and oyster farmers are dependent on the health of the river system for a viable and sustainable livelihood, no other individuals have a greater vested interest in the health of these systems and are often the driving force behind advising government authorities about questionable development or habitat destruction.



Oyster retailers are plentiful in the Shoalhaven, source: Sue Field, GTANSW

The Oyster Industry

Oyster growing is a major part of the Shoalhaven seafood industry. There are about 150 oyster leases in the Shoalhaven estuary and about 40 growers. Total oyster production in the Shoalhaven estuary in 2005-06 was 165,000 dozens, fetching \$850,000.



Oyster growing in the Shoalhaven River, source: Lyn DeSoto, Shoalhaven oyster farmer

What are the Main Fishing Methods Used by Commercial Fishers in the Shoalhaven?

The majority of commercial fishing in the Shoalhaven is conducted under an Estuary General Endorsement with fishers using a wide range of methods to suit seasonal fluctuations, locations fished and the species targeted. Each commercial fishing licence carries special endorsements which dictate the methods and gear fishers are allowed to use. Fishers pay a large annual fee to the Department of Primary Industries for their licences which entitle them to target species for commercial sale.

The main Fishery of the Shoalhaven is:

- Estuary – general – this is a general fishing licence that permits within estuary fishing by a number of methods including purse seine nets, gill nets and traps for a variety of species including bream, mullet, luderick, flathead, whiting, as well as crabs.

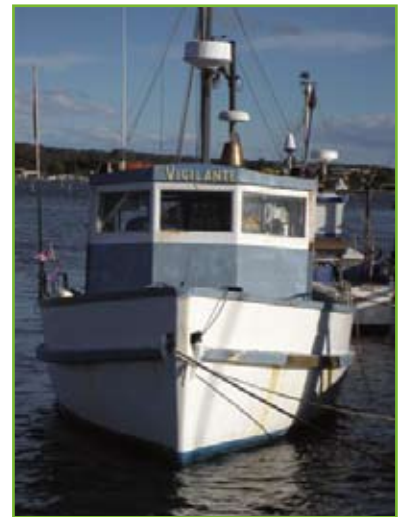
Other fisheries that occur on beaches and ocean waters east of the Shoalhaven are:

- Ocean haul – this is a type of fishing where fishers target specific coastal species that congregate in coastal 'gutters' or migrate at certain times of the year in near shore locations that make it feasible to take advantage of the species behaviour patterns. The species commonly harvested by this method are sea mullet. The mullet are harvested in particular as an export product to Japan.
- Ocean trap and line. – the methods used under this licence type include line fishing using multiple hook rigs for both demersal and pelagic species or using traps. Species harvested by trapping in the Shoalhaven generally include snapper and other mixed reef species. Line fishing is targeted at a variety of species including both pelagic and demersal species such as tuna.
- Ocean trawl – the ocean trawl fishery is divided into two sectors that include prawns and fish. It is further divided into northern and southern areas of the state. The ocean trawl fish is a sector that operates in the south only but the ocean trawl prawn sector (inshore) operates from the Queensland border south

The main seafood species targeted by the Shoalhaven commercial fishing industry are sea mullet, luderick, whiting, mulloway, bream and school prawns. Between 105,000 kg and about 140,000 kg is caught annually by the local commercial fishers with an estimated catch value of \$500,000 each year.

Some of the fishers, who are licensed to operate in the above fisheries, may have approvals or endorsements for lobster trapping. Lobster harvesting in the Shoalhaven is significant but is generally more common south of Jervis Bay.

Many of the south coast estuaries have been closed to commercial fishing – the Shoalhaven estuary is one of the few estuaries where recreational and commercial fishing still coexists.



Commercial fishing boat, Greenwell Point, source: OceanWatch Australia



Commercial fishing boats, Greenwell Point, source: OceanWatch Australia

How are these Fisheries of the Shoalhaven Regulated?

Each of the Shoalhaven River Fisheries is regulated by the NSW Department of Primary Industries (DPI) Fishing and Aquaculture division. Each fishery has a number of complicated conditions that restrict the areas that can be fished, the equipment that can be used, the size of the boat, the timing or season during which the fishing can occur and quotas on the catch (number of or weight of fish that can be caught).

Each fisher is required to fill in log books to record where they are fished, the species and the quality caught. This information provides vital data to researchers and managers about stock levels and provides a good indication about the health of the waterway.

What are Some of the Internal Issues of the Fishing Industry?

These include:

- a closure or restriction of the areas on the NSW south coast able to be fished that has resulted in an increased effort in the Shoalhaven area;
- need to re-organise the way fishing operates and how it is regulated;
- need to reduce the number of fishers within each fishery;
- an aging industry (mainly older fishers, with younger fishers taking their place);
- lack of encouragement for younger people to come into commercial fishing (costs and uncertainty); and
- removal of latent capacity/effort removed i.e. to remove licences which exist but are not being used.

All these areas have been addressed in proposed changes and submissions to the regulatory authority (NSW DPI Fishing and Aquaculture) but as yet have not been addressed by government.

What are the external factors affecting the fishing and oyster growing industries?

The major factors external to the industry itself that affect the fishing/seafood industry in the Shoalhaven relate to water quality issues that are generally the result of inappropriate or unsustainable landuse practices on industrial, agricultural and urban lands of the Shoalhaven River catchment. Moreover, the loss or degradation of fishery nursery habitats including wetlands such as mangrove and saltmarsh areas as well as seagrass beds, affects the productivity of the Shoalhaven River fisheries.

The Shoalhaven oyster growing industry is particularly vulnerable to the impacts of water quality in the catchment. Some of the concerns of the local oyster industry include:

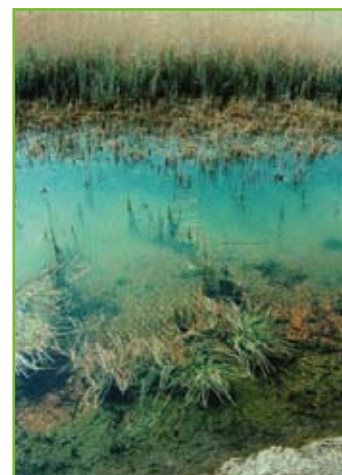
- being unable to harvest oysters due to high levels of faecal coliforms (originating from animal wastes) in the estuary;
- impacts of discharges or spills that affect water quality (e.g. boats, sewage systems);
- stormwater discharges from adjacent urban areas during periods of wet weather; and
- increase in recreational boating pressure adjacent to oyster leases that increases the risk of contamination.

General factors that may impact on commercial fishing in the Shoalhaven estuary include:

- barriers to fish migration by floodgates, weirs and other structures (see fact sheet on Land and Water Management Issues in the Lower Shoalhaven River Catchment);
- drainage of wetlands and other parts of the Shoalhaven River floodplain;
- acid water entering the estuary from disturbance of Acid sulfate soils (see fact sheet on Land and Water Management Issues in the Lower Shoalhaven River Catchment);
- changes in the balance between mangrove and saltmarsh habitat;
- impacts of upstream water extractions on flows into the estuary that can influence salinity levels particularly during times of low flow; and
- impacts of sea level rise and temperature rise (e.g. possibly more algal blooms) as a result of climate change.



Cow standing in saltmarsh, potentially polluting estuary with its waste, source: SRCMA



Acid water, source: NSW DPI (Allan Lugg)

What are Some of the Initiatives Practiced and/or Promoted by the Fishing and Oyster Industries in the Shoalhaven?

The Shoalhaven River area has seen partnerships and programs established between the fishing industry, dairy growers, Shoalhaven City Council and other local sectors to undertake projects that aim to reverse the many years of altered estuary management and poor landuse practices which have resulted in degraded estuarine and marine ecosystems.

Partnerships and programs that are ongoing in the Shoalhaven include:

NSW Oyster Industry Sustainable Aquaculture Strategy (OISAS) – OISAS is a NSW Government strategy that aims to recognize and protect oyster growing areas, including the Shoalhaven estuary. It also aims to improve the environmental performance of the industry and provide greater certainty for the industry.

OISAS identifies priority oyster aquaculture areas (POAAs). In these areas oyster aquaculture development is permissible without consent. A map of the Shoalhaven POAA can be found at:

http://www.dpi.nsw.gov.au/_data/assets/pdf_file/0011/117983/OISAS-Shoalhaven.pdf

OISAS also sets out best environmental practices for the industry.

Oyster Industry Partnerships Program – The Southern Rivers Catchment Management Authority is working with dairy farmers and oyster growers in the Shoalhaven estuary to reduce the impacts of water quality on oyster leases. Dairy farmers that have properties adjacent to the oyster leases have been assisted by the CMA to attempt to minimise the impacts of unrestricted cattle access on the River. Some 20 kilometres of foreshore have been fenced to exclude cattle. As a result, the number of days the River has been closed for oyster harvesting due to high faecal coliform levels has been significantly reduced. The program has also strengthened the relationship between the local dairy farmers and oyster growers.



Greencorps team helping landowners fence cattle out of the Shoalhaven River: source SRCMA

This program also includes initiatives such as cleaning up derelict oyster leases (see fact sheet on *Waste Management in the Lower Shoalhaven River Catchment*).

The success of this project stems on the successful partnerships formed, not only between the SRCMA, dairy farmers and oyster growers, however with others such as NSW DPI, Conservation Volunteers Australia, Job Futures Green Corps and Shoalhaven Riverwatch.

For further information see <http://www.southern.cma.nsw.gov.au/pdf/ShoalhavenRiverCaseStudy1.pdf>

A joint project between four dairy farmers in the Crookhaven catchment near Nowra is supporting downstream oyster growers in the protection of local waterways.

The Agriculture Today (October 2005) reports dairy farmers' efforts are making a big difference to both the water quality and to oyster harvesting in the catchment.

According to Southern Rivers Catchment Management Authority (CMA) landscape manager, Chris Presland, mangroves are already regenerating where fencing has been constructed.

One property now has three kilometres of fencing, excluding 100 head of cattle from the catchment.

"It has long been recognised that unrestricted cattle can pollute streams and erode riverbanks," Mr Presland said.

"On many occasions oyster growers in the Crookhaven catchment have been unable to harvest due to increased faecal coliforms, detrimental to the industry."

According to Barry and Brian Allen from the Shoalhaven Oyster Service, a healthy local environment is critical for the harvest of healthy oysters.

The Allens say the work being carried out in the estuary compliments their shellfish quality assurance.

The dairy and oyster project became a collaboration between two seemingly unrelated industries in May 2004, when members of Shoalhaven Riverwatch, a local Landcare group, met oyster growers and Southern Rivers CMA.

"Southern Rivers CMA then met local dairy farmers, who quickly took on the challenge of improving the health of the water," Mr Presland said.

Funding from Southern Rivers CMA through the Australian Government's Natural Heritage Trust program and the State government has helped the dairy farmers build stock proof fencing to restrict cattle access to waterways.

Ron Graham, a local dairy farmer is very happy to be part of the project.

"It has been encouraging that dairy and oyster farmers are able to get together," Mr Graham said.

Eventually more than 10km of stock proof fencing will be completed.

Southern Rivers CMA currently has funding from the Australian Government's Natural Heritage Trust for on-farm projects that improve farm productivity and the health of South Coast waterways.

Some of the eligible works include fencing to exclude cattle, the provision of off-stream watering, riverbank erosion control and revegetation.

Farmers have also received financial assistance to install and upgrade effluent management systems, plant shelter belts and windbreaks, remove weeds and some cases, improve laneways.

Additional support was secured from Greencorp and Conservation Volunteers Australia (CVA) who provided hands on help and assisted farmers with fencing.

http://www.dpi.nsw.gov.au/archive/agriculture-today-stories/agriculture_today_october_2005