Sea Change Fish Stocks Roundtable Meeting 6 Report

RAYC, Auckland, 5 November 2014

A report for the NZ Sport Fishing Council, Hokianga Accord & non-commercial interests
By Trish Rea and Barry Torkington
19 November 2014

Attendees

Commercial:	Laws Lawson (AFL & TOKM), Jeremy Helson (Sanford), Dave Moore (Leigh Fisheries), Robyn Garrett (CRA2). Alan Riwaka (TOKM), Peter Sopp & 2 others (Coromandel Scallop Fishers Association).
Charter operators:	Megan Andrews (Thames-Coromandel Charter Association)
Non-commercial:	Barry Torkington (NZSFC), Trish Rea (NZSFC/Hokianga Accord).
Customary:	None.
Environmental:	Clive Monds (Environmental), Barry Weeber (Environmental)
Technical support:	Victoria Jollands (Fisheries Analyst, Inshore Fisheries), Laura Furneax (Acting Team Leader, Inshore Fisheries), Ian Tuck (NIWA), Darren Parsons (NIWA), Nick Shears (Auckland Uni), Clinton Duffy (DoC).
SWG members:	Alan Proctor, Dave Kellian (group co-leader), Raewyn Peart (group co-leader).
Duration:	5.25 hours
Next meeting:	3 & 4 December. Last roundtable meeting.

Introduction

This was the last meeting with presentations from outside experts. Ian Tuck discussed the impacts of trawling and dredging on benthic habitats in the Hauraki Gulf and Nick Shears presented on trophic cascades. Alan Riwaka presented an overview of the Coromandel scallop fishery and developing fisheries including surf clams.

Healthy habitats were the group's focus for the day. Prior to the meeting members had been asked to identify local 'keystone' species. NZSFC discouraged this approach given that members were not qualified to make judgements on keystone species. Also, identifying a species as important could diminish the perceived priority of other species, and could focus members' attention on species that are harvested while ignoring other species.

Stakeholder Working Group (SWG) members were keen for the roundtable to agree on 5-7 issues of highest importance, to identify issues, objectives and potential solutions. Some ideas were discussed but no agreement was reached so notes will be distributed for discussion prior to the 2-day meeting in December. Output from this roundtable will be fed to the SWG. A SWG report is due in June 2015.

Discussion

Alan Riwaka summarised past and present management of the **Coromandel Scallop fishery** (SCA CS). Current TACC is 100 tonnes. The Coromandel Scallop Fishers Association (CSFA) divides the available ACE amongst the fleet of seven vessels. There are eight quota owners (iwi 20%), two processors and around 40 people employed during the season. They have developed decision rules that apply to all fleet vessels. A CPUE of 70kg or more an hour is acceptable. At 50kg/hr vessels have to move to another area. A minimum 10% meat recovery also applies.

The CSFA estimated there was 1000 tonnes of scallops in the recently discovered Hauraki Gulf bed. The Association recognised the scallops in that bed were dying and in last two years they tried to take out as many as they could before they all died. The CSFA envisages using modern technology, such as underwater cameras, to find new scallop beds. Alan assured the group scallop dredges are used within sustainable limits, but industry is seeking to improve their environmental impacts.

In answer to questions Alan advised there are discussions occurring overseas, but there is currently no new low impact dredges under development in NZ. Industry did not agree there had been serial depletion of scallop beds in the Gulf. While industry collected finer scale data than MPI required that information was not made available publicly, some was released to MPI and used as inputs into the science process.

- Members acknowledged the application of decision rules for the fleet was a positive development, but industry could not argue scallop dredging was benign.
- Records demonstrate serial depletion of beds, that fishing effort has shifted over time as beds were depleted and new beds found.

Surf clams and sea cucumbers are fisheries that industry also wants to develop. Industry considers surf clams are distributed throughout the Hauraki Gulf. Research into surf clams is underway in Golden Bay, South Is. Surf clams and sea cucumbers are a delicacy overseas, especially in Asian countries and could be a high value export earner.

Ian Tuck (NIWA) discussed the **impacts of trawling and dredging on benthic habitats in the Gulf**. It was recognised that benthic productivity had been reduced in the Gulf, but it was difficult to quantify the effects of trawling and dredging. It was also difficult to predict if recovery would occur in the absence of fishing and how long any such recovery would take. There were other factors, such as water quality, that were impacting on benthic communities and their ability to recover. Mussels in the Firth of Thames had not recovered in the absence of trawling or dredging. If fishing has impacted important habitats for juveniles then recovery of these habitats is expected to improve recruitment. A report on benthic impacts of trawling, BEN2012-01 is due out within a few weeks.

- This presentation was surprisingly cautious. There is much anecdotal evidence to suggest the Gulf was a very productive and abundant ecosystem prior to industrial fishing.
- There is a clear need to restore habitats from the intertidal zone out to 3D structures, to provide habitat for finfish through all life stages.

Darren Parsons (NIWA) gave an interesting presentation on **habitats of importance to juvenile fish in the Hauraki Gulf**. It was important to consider the whole life cycle of finfish. Fish inhabit a range of habitats from upper estuaries, coastal, rocky reefs, bare sediment and offshore flotsam. Nurseries are important as they provide complex structure to protect juvenile fish from predation and provide food. Information about habitat associations, locations and mechanisms are generally poorly understood.

Seagrass is rated as the 3rd most valuable ecosystem globally. Seagrass is classified as a 'declining species' in NZ. Seagrass is a nursery for a range of species including snapper, trevally and jack mackerel. It is thought that seagrass emits an odour that is attractive to snapper larvae. And, more juveniles are found in dense rather than sparse seagrass beds.

Subtidal seagrass beds were abundant in the Waitemata up to the 1930s. There are limited seagrass beds in the Gulf. Seagrass is recovering in some areas including Whangarei Harbour, Snells Beach and limited areas in the Waitemata.

Using information from past research, there are known hotspots for juvenile snapper, around Kawai Is, Waitemata Harbour, between the mainland and Waiheke, the western side of Great Barrier Is. and on both sides of the northern Coromandel Peninsula. A prerequisite for restoration of nursery areas is ensuring there are suitable environmental conditions. So much is unknown, but juvenile nurseries are disproportionally important to productivity of the Gulf's fisheries.

Nick Shears, University of Auckland Leigh marine centre, **discussed marine reserves, effects of fishing and trophic cascades.** Research in the Leigh marine reserve shows there was a major decline of crayfish numbers between 1995-2000, when they moved out to the sandy bottom environment outside the reserve boundaries. Currently it is estimated that the biomass of crayfish in fished areas is 3-7% of that found inside the reserve. If there were bigger boundaries the reserve would support larger numbers of crayfish, snapper and reef fish. Nick was concerned about the increasing trend by spearfishermen and shellfish gatherers to target species previously left untouched. He was also concerned about increasing recreational catch and effort.

Effects of fishing on shallow reefs can be reversed by implementing protection in the form of a marine reserve. The Poor Knights Is. and Tarawhanui examples demonstrated that allowing recreational only fishing did not deliver the expected ecosystem recovery. Since full closure these areas have recovered to abundant levels. There were six marine reserves representing around 0.3% of the Gulf waters. Around 5% of the Gulf is protected from all forms of destructive fishing activity such as trawling and dredging. Fishing has the most widespread, diverse and increasing impact on the Hauraki Gulf. Fisheries management does not seem capable of protecting and restoring the Gulf. While there are a range of MPA tools, marine reserves are the most effective tool to protect target species and ecosystems.

Members challenged some assertions made in this presentation, including:

- The no-fishing cable zone provided a ready sample of a range of habitat and substrate types to measure the impacts of no fishing in the Gulf. No work had been done.
- The kina barren theory had been disproved in recent publications. Nick accepted that there was no evidence in other areas of NZ, but there was evidence of kina barrens on the northeast coast.
- NIWA webcams on boat ramps showed steady, not increasing recreational effort.
- MPI surveys did not show any increasing snapper catch. In 2011-12 recreational SNA1 catch was estimated to be 3754 tonnes. There was no relationship between actual catch and the recreational allowance made in 1997.

A **workshop** on issues and possible options followed these presentations, but little was achieved as time ran out. Suggestions included the requirement for more research, and the need to shift focus from solely snapper to the broader ecosystem. Members were asked to consider the top five priorities. Email conversations would be initiated prior to the December 2-day meeting. That meeting needed to settle on agreed issues, objectives and options to present to the SWG.

Next meeting 3rd and 4th December 2014.