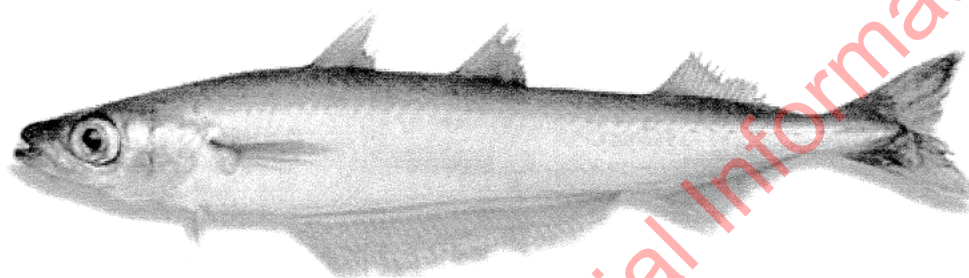




2012 Compliance Risk Profile of the Sub-Antarctic Southern Blue Whiting Fisheries



Released under the Official Information Act

1. Executive Summary

In line with the National Fisheries Plan for Deepwater and Middle-depth Fisheries the Ministry for Primary Industries (MPI) Operational Coordination Maritime team (OCM) was tasked to deliver a risk profile on the 2012 Sub-Antarctic Southern Blue Whiting (SBW) fisheries. Three of the Sub-Antarctic SBW fisheries are ranked as Tier 1. The profile is intended to provide MPI fisheries management, compliance and fishing industry participants with an assessment of compliance risks in this fishery. The risk profile is not required to be delivered to an evidential standard. Risks have been identified where possible, based on the data available.

The SBW fishery is managed as four separate fish stocks within the Sub-Antarctic fisheries management area (FMA6). The main two SBW fishstocks (i.e. SBW6I [Campbell Rise] and SBW6B [Bounty Platform]) have undergone changes in TACC levels since 2000, however both are now at similar levels to where they were 12 years ago.

In 2012, the SBW fishery became New Zealand's third fishery to achieve Marine Stewardship Council (MSC) certification. This eco-label gives endorsement that New Zealand SBW meets the MSC's guiding principles and criteria for a healthy, well managed sustainable fishery.

To profile the Sub-Antarctic SBW fisheries, OCM commenced an operation code named "Operation Trois" to gather, examine and analyse data pertaining to the 2012 SBW fishery. Data was collected by Fishery Officers during 17 in port vessel inspections. In addition, 15 vessel trips carried MPI observers who also collected data and carried out SBW length frequency work. Vessel TCEPR data was used and analysed for both MPI observed and unobserved vessels operating in this fishery.

As a result of this analysis the 2012 SBW risk profile has identified a number of compliance related risks. The three main risks are:

1. Non-compliant head cuts for the DRE state;
2. The underreporting of carton weights
3. The underreporting of whole and processed SBW to meal

It is estimated that the total greenweight of SBW unreported due to non-compliant head-cuts was between 1,108 tonne and 2,677 tonne (which equates to between 3% and 6% of the TACC for the tier 1 SBW stocks). Quantification of unreported catch for other risks identified in this report has not been possible due to insufficient data obtained. Therefore estimates of unreported greenweight are considered conservative for this season. Further examination of risk areas will be continued during the 2013 season.

Due to resource limitations and the time required to prepare for and co-ordinate both observer and at-sea phases for the 2013 fishery, completion of this profile has been delayed. The risks identified in this report were, however, addressed with Industry members prior to the commencement of the 2013 SBW season. It is intended that the 2013 update will provide a more comprehensive assessment.

2. Background

In collaboration with industry and environmental organisations, MPI has developed a National Fisheries Plan for Deep-water and Middle-depth Fisheries. The National Deep-water Plan, approved by the Minister, sets out the long-term goals and objectives for deep-water fisheries. It also sets the specific operational objectives that will be delivered annually for each key deep-water species, and establishes performance indicators to assess if the management strategy has been delivered.

All deepwater QMS species are ranked into two tiers according to their commercial importance. Tier 1 fisheries are high volume and/or high value fisheries and are traditionally targeted. Tier 2 fisheries are typically less valuable bycatch fisheries or are only targeted sporadically.

The specific compliance services for 2012-13 contained in the National Deep-water Plan include the completion of risk profiles on the tier 1 SBW fisheries. These service requirements are in addition to the typical monitoring and surveillance activities undertaken by the Compliance Directorate.

The SBW fishery, like many other QMS species, is subject to a number of regulatory measures. Discarding of SBW, area misreporting and the non deployment of bird mitigation devices are listed in the Southern Blue Whiting Fisheries Plan Chapter as the three main compliance risks of particular relevance to the fishery. The plan describes these risks as:

1. Discarding of Southern Blue Whiting

There is evidence of discarding within the Southern Blue Whiting fishery. Illegal dumping may occur in an attempt to avoid utilising or acquiring annual catch entitlement (ACE) or paying deemed value charges where ACE is unavailable to purchase.

Because Southern Blue Whiting can be caught in large volumes during a single tow there are increased risks of catch been dumped in order to maximise economic return. Reasons for dumping include (but are not limited too):

- a) Catch taken in excess of vessel's capacity to process all fish before it begins to spoil;
- b) Large catches resulting in large quantities of damaged fish;
- c) Near the end of the season when fishers are near their quota limit, catching a large bag may push them over their quota limit and result in large deemed value fines.

It is vital that operators in this fishery therefore monitor and regulate catch rates in order to prevent wastage.

2. Area Misreporting ("trucking")

Area misreporting occurs when catch taken in one QMA is reported as caught in another. The primary motive behind this type of offence is to minimise the cost of acquiring ACE or payment of deemed value charges, by taking advantage of differential ACE prices or deemed value rates between QMAs. To reduce this incentive to misreport, MPI has implemented uniform deemed value rates across the four sub-Antarctic stocks.

3. Deployment of Seabird Mitigation Devices

Regulations require that all deepwater trawl vessels operating in the southern blue whiting fisheries deploy bird mitigation devices to ensure that fishing activity does not pose an unnecessary risk to seabirds.

With the assistance of the fishing industry, MPI undertakes risk analysis of the southern blue whiting fishery. Some risks were identified as a result of previous investigations and prosecutions.

Risk analysis and information sharing between MPI and industry allows the Ministry to adapt compliance efforts to current risks. It helps minimise opportunities for offending and facilitates the development and monitoring of the compliance standards necessary to achieve the objectives of the National Deep-water Plan.

3. The Southern Blue Whiting Fishery

The SBW fishery is a high volume fishery and is managed as four separate stocks within the sub-Antarctic fisheries management area (FMA6). Beyond FMA6, the rest of SBW is managed under a single QMA to account for SBW taken as bycatch.

In 2011, approximately 21,000 tonnes (t) of southern blue whiting was exported with a value of NZ\$36.3 m¹. For that year it was the fifth largest export species by volume and the fourth largest deepwater species by value. In 2009 the estimated total asset value of southern blue whiting was \$74 m. The majority of landings are exported (>90%) with the main export markets being Europe, Japan, Russia and Spain.

Because of its commercial importance, SBW is ranked as a Tier 1 fishery in the National Deep-water Plan. Three of the stocks (SBW6B, SBW6I and SBW6R) are considered Tier 1 stocks and are assessed accordingly. Currently SBW6A and SBW1 are listed as Tier 2 fishstocks due to a distinct lack of target fishing in these areas. SBW6A may in the future be elevated to Tier 1 status if there is evidence to indicate increased fishing effort.

Regulations prescribe a minimum mesh size of 60mm for cod end for trawls in the southern blue whiting fisheries. These mesh sizes are not permitted for use in any other fisheries.

In April 2012 SBW gained Marine Stewardship Council (MSC) certification. Assessors found that the targeted fish stock was healthy, fishing practices have minimal impact on the marine ecosystem and overall the fishery was well managed.

3.1 Southern Blue Whiting Management

SBW was introduced into the QMS in November 1999. Prior to this it was managed by catch limits which were set across the three tier 1 stocks. Initially SBW was managed by the October/September fishing year but this was later changed to the April/March fishing year to better align with the timing of the fishing season and associated commercial catch taken.

¹ SBW scores again (page 12). Seafood New Zealand May 2012.

Figure 1 below illustrates SBW QMAs within New Zealand's EEZ. The sub-Antarctic SBW QMAs are based on four known spawning locations, defined as:

1. SBW6B – Bounty Platform
2. SBW6I – Campbell Island Rise
3. SBW6R – Pukaki Rise
4. SBW6A – Auckland Islands

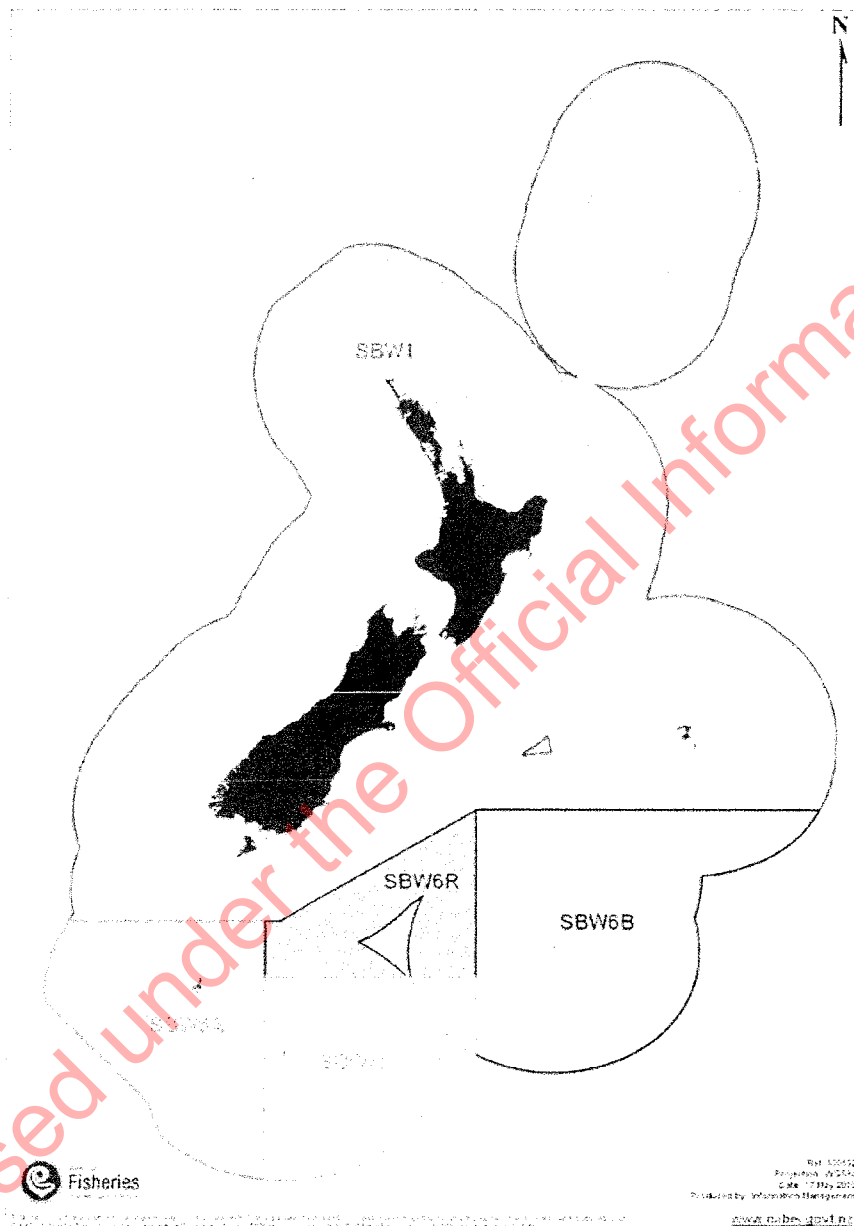


Figure 1 – Map illustrating Southern Blue Whiting stock boundaries

3.2 Southern Blue Whiting TACC Changes

Pre-1980 SBW was predominantly taken by the Soviet foreign licensed fleet. Annual landings during this time fluctuated between 2,000 and 48,500 t. In 1986 Japanese surimi vessels entered the fishery, which resulted in increased catches peaking at 76,000 t in 1991-92. In 1992-93 a catch limit of 32,000 t was set with area sub limits (for SBW6B, SBW6I and SBW6R/6A). When SBW was first introduced into the QMS on 1 November 1999 the total allowable commercial catch (TACC) was set at 58,000 t.

Since 2000-01 the TACC has been subject to a number of reductions and by 2006-07 the TACC was set at 30,648 t. Subsequent increases and decreases to the TACCs set for SBW6B and SBW6I have resulted in the 2012-13 combined TACC being set at 43,408 t. SBW has been managed using a Current Annual Yield (CAY) strategy which has contributed to the fluctuations in catch limits and TACCs². Table 1 below illustrates TACC changes since the introduction of southern blue whiting into the QMS in November 1999.

Fishing Year	TACC (tonnes)					Total TACC
	SBW1	SBW6A	SBW6B	SBW6I	SBW6R	
1999/00		1,640	15,400	35,460	5,500	58,000
2000/01	8	1,640	8,000	30,000	5,500	45,148
2001/02	8	1,640	8,000	30,000	5,500	45,148
2002/03	8	1,640	8,000	30,000	5,500	45,148
2003/04	8	1,640	3,500	25,000	5,500	35,648
2004/05	8	1,640	3,500	25,000	5,500	35,648
2005/06	8	1,640	3,500	25,000	5,500	35,648
2006/07	8	1,640	3,500	20,000	5,500	30,648
2007/08	8	1,640	3,500	20,000	5,500	30,648
2008/09	8	1,640	9,800	20,000	5,500	36,948
2009/10	8	1,640	14,700	23,000	5,500	44,848
2010/11	8	1,640	14,700	23,000	5,500	44,848
2011/12	8	1,640	6,860	29,400	5,500	43,408
2012/13	8	1,640	6,860	29,400	5,500	43,408

Table 1 - Changes to TACC for southern blue whiting

The TACC for the Bounty Platform was progressively reduced to 3,500 t by 2003-04, reflecting a period of poor recruitment to the stock². The TACC remained the same until 2008 when the strong 2002 year class entered the fishery, and the TACC was increased to 9,800 t and then 14,700 t in 2009-10. From 1 April 2011, the TACC for the Bounty Platform stock was reduced again down to 6,860 t.

The TACC for the Campbell Island Rise was also progressively reduced to 20,000 t by 2006-07, which is thought to reflect a period of poor to average recruitment to the stock. The TACC remained at that level until 2009-10 when the strong 2006 year class entered the fishery, and the TACC was increased to 23,000 t and then to 29,400 t in 2011-12.

Catch limits for Pukaki Rise and Auckland Islands have been unchanged since 1997-98².

3.3 Southern Blue Whiting Biology³

Southern Blue Whiting (*Micromesistius australis*) are almost entirely restricted in distribution to sub-Antarctic waters. They are dispersed throughout the Campbell Plateau and Bounty Platform for much of the year, but during August and September they aggregate to spawn near the Campbell Islands, on Pukaki Rise, on Bounty Platform and near Auckland Islands, over depths of 250-600m. During most years, fish in the spawning fishery range between 35-50cm fork length (FL), although occasionally a smaller size class of males (29-32cm FL) is also present. Information received from NIWA indicated there may be a high percentage of small SBW (≤ 30 cm) present within the Campbell Islands fishery for the 2012 season.

SBW juveniles reach about 20cm FL at the end of their first year and 30cm FL after two years. Growth slows down after 5 years and virtually ceases after 10 years. It is believed

² Review and summary of the time series of input data available for the assessment of southern blue whiting (*Micromesistius australis*) stocks. Dunn et al 2013 – unpublished report.

³ Report from the Fisheries Assessment Plenary, May 2012, part 3.

that SBW live to a maximum age of about 25 years. The age and length of maturity, and recruitment to the fishery, varies between areas and between years. The majority of both males and females mature at age 3 or 4, at lengths of 33-40 and 35-42cm FL respectively. SBW have been shown to have very high recruitment variability.

Spawning on Bounty Platform begins in mid-August and finishes by mid-September, while spawning usually begins 3-4 weeks later in all other areas, finishing in late September/early October. The Campbell Island Rise has two separate spawning grounds, one in the north and one in the south. Fish appear to recruit first to the southern ground, but thereafter spawn on the northern ground. Spawning appears to occur at night, in mid-water, over depths of 400-500m on Campbell Island Rise but shallower elsewhere. Spawning aggregations have also been found near Auckland Islands however the uncertainty of spawning here means that this fishery is rarely targeted. The main distribution and spawning grounds for SBW are illustrated in figure 2 below.

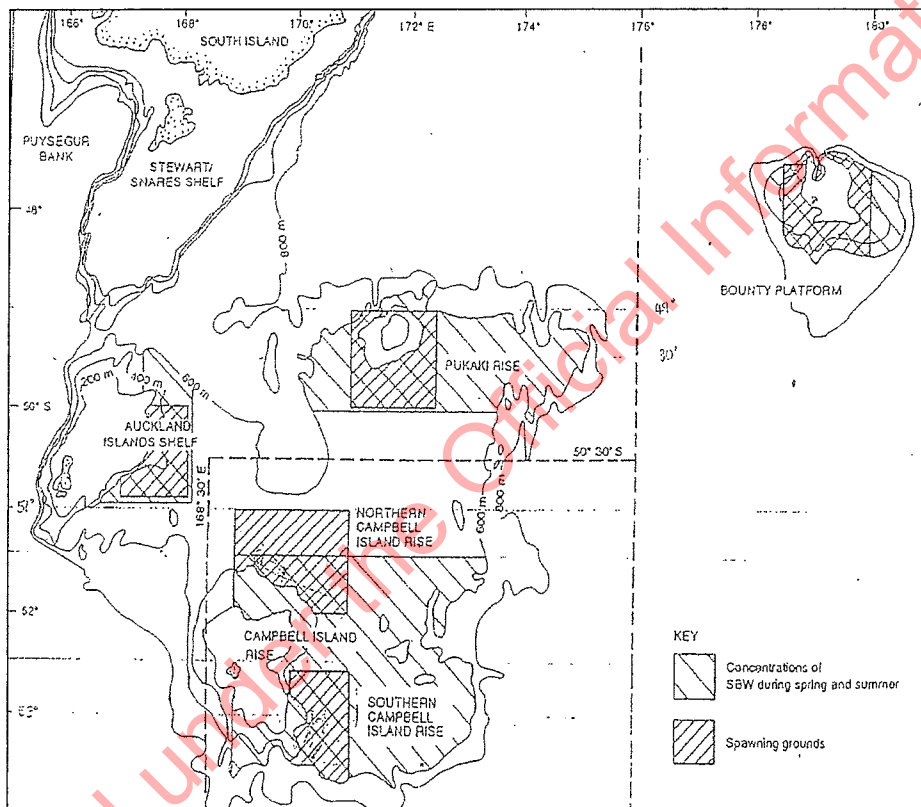


Figure 2 - Main distribution area and spawning grounds of southern blue whiting.

3.4 Illegal Catches

The 2011 and 2012 stock assessments suggest that the level of illegal and unreported catch is thought to be low. However, a number of operators have been convicted for area misreporting and discarding without reporting. In 2002-03, one vessel falsely reported approximately 684 t which was taken from the Campbell Island Rise (SBW6I). Of this 480 t was reported against quota for the Auckland Islands (SBW6A) and the balance of 204 t was reported against quota for the Pukaki Rise (SBW6R). In addition to this, evidence suggested that another vessel had misreported a total of 250 t of SBW catch during the 2002-03 and 2004-05 fishing years relating to falsely reported catches in SBW 6R, SBW 6B, and SBW 6I. Further still, the operators of another vessel were convicted for discarding without reporting fish in 2004: crew members estimated that between 40 and 310 t of SBW were illegally discarded during a two and a half week period fishing on the Campbell Island Rise.

3.5 Other sources of Mortality

Scientific observers have occasionally reported discards of undersize fish and accidental loss from torn or burst codends. The Fisheries 2012 Plenary report⁴ provides estimates for annual discards as determined by Anderson (2004) whom estimated total annual discards (including estimates of fish lost from the net at the surface) as ranging between 0.4% and 2.0% of the total estimated SBW catch. Anderson (2009) reviewed fish and invertebrate bycatch and discards in the SBW fishery using observer data from 2002 to 2007. Anderson estimated that 0.23% of the catch was discarded from observed vessels. The low levels of discarding were thought to occur primarily because most catch came from vessels that targeted spawning aggregations.

In August 2010, the F.V. Oyang 70 sank while fishing for SBW on the Bounty Platform. It was fishing an area between 48°00" S and 48°20" S, and 179°20" E and 180°00" E between 15 and 17 August 2010, before sinking on 18 August 2010. The Ministry of Fisheries estimated that it had taken a catch of between 120 t and 190 t that was lost with the vessel.

The TAC has a built-in allowance for "other sources of fishing mortality", which may include unreported burst bags, loss of catch, discarding of small fish and mortality of escapees from the net. In April 2011 the allowance was set at 740 t (made up of 140 t for SBW6B and 600 t for SBW6I).

3.6 Marine Stewardship Council (MSC) Certification

In April 2012 southern blue whiting gained Marine Stewardship Council (MSC) certification. This eco-label gives endorsement that New Zealand Southern Blue Whiting meets the MSC's guiding principles and criteria for a healthy, well managed sustainable fishery. SBW is NZ's third fishery to receive MSC certification. Current certification is valid until April 2017 with reassessment required before expiry.

The independent assessment was undertaken by Intertek Moody Marine which found that the targeted fish stock was healthy, fishing practices have minimal impact on the marine ecosystem and overall the fishery was well managed. Annual surveillance audits are a requirement of certification. Actions required by industry as part of the certification process are strongly linked to the environmental effects of fishing within this bulk fishery.

The main issues relate to the level of interactions with:

- NZ sea lions (particularly at the Campbell fishery)
- NZ fur seals (particularly at the Bounty fishery) and
- Seabirds

For continued certification the Deepwater Group Ltd were required to develop an 'Action Plan' to address issues associated with their management strategy for Endangered, Threatened and Protected (ETP) species.

Prior to the 2012 season, the Deepwater Group Ltd produced a 'Southern Blue Whiting Industry Briefing Paper' (refer appendix 1). This paper details particular actions required through the MSC Certification process regarding environmental effects of fishing for SBW, especially reducing instances of non-fish bycatch. Strategies discussed in this paper for limiting these effects focus on good management of offal and whole fish lost overboard, and good fishing practices that limit the amount of time the net is near the surface.

⁴ Report from the Fisheries Assessment Plenary, May 2012.

3.7 Bird Mitigation Devices and Vessel Management Plans (VMPs)

Seabirds are killed or injured by trawl gear because they are either struck by the trawl warps (particularly larger seabirds such as albatross) or caught in the net when it is on the surface during deployment and retrieval (particularly smaller seabirds such as shearwaters and petrels). Regulations require trawl vessels to deploy bird mitigation devices, such as tori lines, to scare birds away from the danger zone around the stern of the vessel.

Mitigation methods such as streamer (tori) lines, Brady bird bafflers, warp deflectors and offal management are used in the SBW trawl fishery. Warp mitigation became mandatory in April 2006. The 2006 notice mandated that all trawlers >28 m in length use a seabird scaring device while trawling (being "paired streamer lines", "bird baffler" or "warp deflector" as defined in the notice).

In addition to the requirement to deploy bird mitigation devices, all trawlers over 28 m in length must have and comply with a Vessel Management Plan (VMP). VMPs specify measures that must be followed on the vessel to reduce the risk of incidental seabird captures. These measures include storing offal while shooting and hauling fishing gear, and making sure all fish is removed from the net before it is put back in the water. Vessels capable of producing fishmeal are better able to control offal, as they are able to process most offal into fishmeal. LPFVs⁵ with no meal plant may have several tonnes of offal and fish waste per day to manage and discard (Albert Times, 2007). MPI monitors vessels' performance against their VMPs. If a vessel is not complying with its VMP, the Chief Executive of MPI has the option of imposing vessel-specific regulations to control offal management practices.