

Marine Stewardship Council - Variation Request

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| Date submitted to MSC | May 14, 2018 |
| Name of CAB | MRAG Americas |
| Fishery Name/CoC Certificate Number | South Australia Sardine Fishery |
| Lead Auditor/Programme Manager | Richard Banks/Amanda Stern-Pirlot |
| Scheme requirement(s) for which variation requested | FCR 7.4.14.2 - Allow fish or fish products considered as coming from IPI stocks to enter chains of custody, with an exemption to the additional assessment requirements for IPI stocks given in PA4.2. |
| Is this variation sought in order to fulfil IPI requirements (FCR 7.4.14)? | Yes. |

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| 1. Proposed variation | |
| <p>This variation request is referred to allow entering IPI stocks in the MSC chain of custody, in accordance to FCR 7.4.14.2. if the current assessment of South Australia sardine results in a successful certification. The species proposed to include as IPI stocks are: maray (<i>Etrumeus jacksoniensis</i>), anchovy (<i>Engraulis australis</i>), blue mackerel (<i>Scomber australasicus</i>), sandy sprat (<i>Hyperlophus vittatus</i>), Degen's leatherjacket (<i>Thamnaconus degeni</i>), rough bullseye (<i>Pempheris klunzingeri</i>), soldierfish (Family Holocentridae), silver biddy (<i>Gerres subfasciatus</i>), blue sprat (<i>Spratelloides robustus</i>) and rebait (<i>Emmelichthys nitidus</i>).</p> | |
| 2. Rationale/Justification | |
| <p>The assessment team identified that several minor species including maray, anchovy, blue mackerel, sandy sprat, Degen's leatherjacket, rough bullseye, soldierfish, and silver biddy were harvested incidentally with the target species Australian sardine (<i>Sardinops sagax</i>) during purse seine fishing. The process for handling the catch results in these few species of similar size and body shape mixing in with sardine, and it is impractical to separate them from the final catch for this high-volume fishery. Unpublished, fishery-independent data from catch samples taken from 2009 to 2015, provided by the scientific agency South Australian Research and Developed Institute (SARDI), indicate that maray, anchovy and blue mackerel comprise around 1.0%, 0.6% and 0.2% of the catch, respectively. Sandy sprat, Degen's leatherjacket, rough bullseye, soldierfish, and silver biddy were caught rarely, with only 1 or 2 individuals of each species caught during the seven sampled years. Two other species, blue sprat and rebait, are permitted species for the fishery but were not retained in samples. In accordance with FCR 7.4.14.2, MRAG Americas is requesting to allow these fish to be considered as coming from IPI stocks to enter into chains of custody, with an exemption to the additional assessment requirements for IPI stocks given under PA4.2. As required by MSC in the case the variation request is referred to IPI stocks, a detailed and substantiated rationale is provided in Section 6. This variation request does not alter the conformity of the applicant or certificate holder in relation to the relevant MSC standard.</p> | |
| 3. Implications for assessment (required for fisheries assessment variations only) | |
| No implications for this assessment other than those pertaining to the inclusion of the IPI species, maray. | |
| 4. Have the stakeholders of this fishery assessment been informed of this request? (required for fisheries assessment variations only) | Yes, the request was discussed with all key stakeholders at the site visit in Port Lincoln, Australia, 23 May 2018. |
| 5. Further Comments | |
| No further comments | |

6. Inseparable or practicably inseparable (IPI) catches

Is this request to allow fish or fish products from IPI stocks to enter into chains of custody?

Yes

The South Australian Sardine Fishery (SASF) operates primarily in coastal waters at the entrance to Spencer Gulf, South Australia (Ward et al 2017). Sardine is the dominant small pelagic species in the region. The vast majority of the fishery's catch is fed to blue-fin tuna in nearby aquaculture pens.

While vessels vary in capacity, an average haul is around 50 t for most vessels. Once the net has been pursued, the catch is suctioned from the net and water is separated from the catch via a grid. Prior to reaching the grid, a sample of 80-100 sardines (around half a bag) is collected randomly from the catch and frozen for sorting.

A total of 29,024 fish were counted from catch samples collected by fishery-independent observers from 575 hauls between 2009 and 2015 (Table 1, 7.4.13.1c). Bycatch were only observed in 13% of all hauls, with sardine comprising 98.13% of the total catch. Maray, anchovy and blue mackerel comprised 1.0%, 0.6% and 0.2% of total abundance. Because maray, anchovy, blue mackerel and sardine are similar body shape and size, it is reasonable to assume that abundance data are reflective of total weight. Five other species encountered (sandy sprat, Degen's leatherjacket, rough bullseye, soldierfish, silver biddy) were caught rarely (i.e. 1 or 2 individuals only over 6 years). Blue sprat (*Spratelloides robustus*) and redbait (*Emmelichthys nitidus*) are also included in the IPI variation request because they are listed as permitted species for the fishery, although they were not observed in samples during this period.

Table 1. Descriptive statistics from catch samples collected by observers showing the abundance of various species caught between 2009 and 2015.

| Year | fish sampled | hauls sampled | hauls with bycatch | sardine (%) | maray (%) | anchovy (%) | blue mackerel (%) | sandy sprat (%) | Leather jacket (%) | bullseye (%) | soldier fish (%) | silver biddy (%) |
|------|--------------|---------------|--------------------|---------------|--------------|--------------|-------------------|-----------------|--------------------|--------------|------------------|------------------|
| 2009 | 5830 | 140 | 27 | 94.73% | 3.19% | 1.60% | 0.36% | 0.02% | 0.03% | 0.03% | 0.02% | 0.02% |
| 2010 | 9889 | 183 | 19 | 98.98% | 0.34% | 0.54% | 0.13% | 0.01% | 0.00% | 0.00% | 0.00% | 0.00% |
| 2011 | 2456 | 48 | 7 | 99.55% | 0.00% | 0.37% | 0.08% | 0.00% | 0.00% | 0.00% | 0.00% | 0.00% |
| 2012 | 3028 | 51 | 2 | 98.55% | 1.35% | 0.07% | 0.03% | 0.00% | 0.00% | 0.00% | 0.00% | 0.00% |
| 2013 | 1612 | 41 | 4 | 99.69% | 0.00% | 0.25% | 0.06% | 0.00% | 0.00% | 0.00% | 0.00% | 0.00% |
| 2014 | 1928 | 43 | 2 | 99.84% | 0.00% | 0.10% | 0.05% | 0.00% | 0.00% | 0.00% | 0.00% | 0.00% |
| 2015 | 4281 | 69 | 15 | 98.29% | 0.61% | 0.37% | 0.72% | 0.00% | 0.00% | 0.00% | 0.00% | 0.00% |
| | 29024 | 575 | 76 | 98.13% | 0.99% | 0.62% | 0.24% | 0.01% | 0.01% | 0.01% | 0.00% | 0.00% |

For the vast majority of vessels, the catch is suctioned from the net at a rate of 1 to 2 ton per minute, so it is impractical to separate non-target species from the catch (7.4.13.1b). The three most abundant bycatch species (maray, anchovy and blue mackerel) are also difficult to distinguish from the predominately sardine catch as they have similar body shapes and sizes (Figure 1, 7.4.13.1a).

1A)



1B)



1C)



1D)



Figure 1. A) Australian sardine, *Sardinops sagax*¹, B) maray, *Etrumeus jacksoniensis*², C) blue mackerel (*Scomber australasicus*)³, and D) Australian anchovy (*Engraulis australis*)⁴.

The total combined catch from the IPI stocks does not exceed 2% (1.87%, Table 1, 7.4.13.1c, 7.4.14.2ai). None of the IPI species are ETP species (7.4.13.1d). None of the IPI species are certified in other fisheries (7.4.13.1e).

The sardine fishery does not have a significant impact on the state of the IPI stocks (7.4.14.2ai).

Maray are broadly distributed throughout Australian waters from Bundaberg in Queensland through all southern Australian waters to Carnarvon in Western Australia. Their primary habitat is deeper offshore waters where they form dense shoals and they are only occasionally found in coastal or estuarine waters² (i.e. where the sardine fishery operates). As such, the probability of the sardine fishery encountering maray is relatively rare and this is confirmed by the catch data in Table 1. Further, like most clupeids maray are highly productive and recruitment success is likely to be strongly influenced by the environment. There are no commercial fisheries for maray in Australia. On this basis, it is considered that the fishery does not have a significant impact on the maray stock.

Blue mackerel is a highly productive species that is distributed throughout all Australian waters with the exception of north-west Western Australia³. Ward et al (2009) estimated that the spawning stock of blue mackerel in South Australia was 56,228 tonnes. Ward et al (2016) state "Recent catches are less than one per cent of the estimated spawning biomass from 2005, and well below the sustainable exploitation rate of 23 per cent suggested for this stock". On this basis, it is considered that the fishery does not have a significant impact on the blue mackerel stock.

¹ Dianne J. Bray, in Fishes of Australia, accessed 24 May 2018, <http://fishesofaustralia.net.au/home/species/2067>

² Dianne J. Bray, in Fishes of Australia, accessed 24 May 2018, <http://fishesofaustralia.net.au/home/species/2052>

³ Dianne J. Bray, in Fishes of Australia, accessed 24 May 2018, <http://fishesofaustralia.net.au/home/species/2542>

⁴ Dianne J. Bray, in Fishes of Australia, accessed 24 May 2018, <http://fishesofaustralia.net.au/home/species/2071>

Australian anchovy is a highly productive clupeid species that tend to be concentrated in the northern parts of Spencer Gulf, away from the primary sardine fishing grounds (Ward et al 2017). While Australian anchovy are a quota species of the sardine fishery, no catches have been reported by fishers as they do not fish in the northern parts of Spencer Gulf and only a few individuals are caught in sardine hauls. On this basis, it is considered that the fishery does not have a significant impact on the anchovy stock.

Sandy sprat, Degen's leatherjacket, rough bullseye, soldierfish and silver biddy were only caught rarely, with either 1 or 2 individuals sampled over 7 years. Blue sprat and redbait are permitted species for the fishery, however none were captured during the sampling period. On this basis, it is considered that the fishery does not have a significant impact on these stocks.

Therefore, in accordance to FCR 7.4.13.1(a,b,c,d,e), maray (*Etrumeus jacksoniensis*), anchovy (*Engraulis australis*), blue mackerel (*Scomber australasicus*), sandy sprat (*Hyperlophus vittatus*), Degen's leatherjacket (*Thamnaconus degeni*), rough bullseye (*Pempheris klunzingeri*), soldierfish (Family Holocentridae), silver biddy (*Gerres subfasciatus*), blue sprat (*Spratelloides robustus*) and redbait (*Emmelichthys nitidus*) are considered as IPI stocks.

None of the above are ETP species (7.4.13.1d).

Therefore, in accordance to FCR 7.4.13.1(a,b,c,d), the above-listed stocks are considered IPI. Relative to FCR 7.4.13.1(e), we confirm that none of these stocks are currently separately MSC certified.

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| Is this request to allow an exemption to detailed requirements for IPI stocks? | Yes |
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As described above, there are several small bodied species that are only occasionally caught by the SASF and combined they comprise <2.0% of the total abundance observed from 575 hauls conducted over a seven-year period. Because maray, blue mackerel, anchovy and sardines have similar body shapes and school in the same size classes, the assumption that abundance is representative of total weight of the catch is robust. Sardine comprise 98.13% of the total abundance of the catch and the remaining species are all considered as minor species. Given that these IPI species are lightly fished or not fished at all, and they are caught in such low proportions by the fishery, it is considered highly unlikely that the sardine fishery is having a significant impact on these stocks.

Based on the above MRAG Americas considers that IPI stocks, in addition to 7.4.13.1, also fulfil requirement 7.4.14.2 (i) and (ii). Thus, a request is being addressed to MSC in order to allow those IPI stocks to enter chain of custody with an exemption to the additional assessment requirements for IPI stocks given in PA4.2.

References:

Ward T. M., Smart J. and Ivey, A.R. (2017). Stock Assessment of Australian Sardine (*Sardinops sagax*) off South Australia 2017. Report to PIRSA Fisheries and Aquaculture. South Australian Research and Development Institute (Aquatic Sciences), Adelaide. SARDI Publication No. F2007/000765-6. SARDI Research Report Series No. 971. 107pp.

Wise (eds) 2016, Status of Australian fish stocks reports 2016, Fisheries Research and Development Corporation, Canberra.