'RED ALERT and GREEN WASH'

New evidence of fish farming's ecological crisis in Macquarie harbour

The Aquaculture Stewardship Council's (ASC) has released an audit report of Petuna Seafoods fish farms in Macquarie Harbour. It shows serious breaches of ASC conditions but *still* recommends the company be awarded ASC certification.

"*From plummeting oxygen levels to use of WHO-listed Critically Important antibiotics, the ASC's audit report for Petuna provides a snapshot of the ecological disaster in Macquarie harbour*," says Laura Kelly, Strategy Director at Environment Tasmania.

"*The fact that the ASC Audit team still recommends certification for farms where 85,000 fish were suffocated in March 2015 because of low oxygen levels, raises serious concerns about the integrity of the ASC label,"* Ms Kelly said.

"*Consumers buying salmon with an ASC logo expect environmental best-practice. They would be shocked to discover their salmon came from farms that are discharging pollution into a World Heritage Area and threatening listed endangered species.*

Leading researchers have described Macquarie Harbour as a 'biological system under stress', certifying salmon from these farms will destroy any trust consumers have in the value of the ASC logo," Ms Kelly said.

Even more worrying than the 28 criteria Petuna is shown to be in breach of, are the criteria they should be found in breach of but have received a tick for.

"*The report finds the company has complied with local regulations, when publically available Government data shows the company is in breach of licence conditions relating to water quality and build-up of fish faeces.*

The report finds they comply with requirements for no use of antibiotics the WHO lists as Critically Important for human health, when data in the report itself shows the company is using oxytetracycline – a WHO-listed Critically Important antibiotic."

Environment Tasmania will be appealing ASC certification for any salmon farms in Macquarie Harbour – including Tassal's operations.

Below is a copy of Environment Tasmania's submission to the ASC Audit team.

For interviews call Laura Kelly, Director, Environment Tasmania. P: 0401 559 335.

Public comment in relation to Petuna Pty Ltd - Table Head Central Farm, Liberty Farm, Table Head Farm (Cluster certification)

Attention: Joseph Kochanski, SCS Global Services

Dear Mr Kochanski,

Environment Tasmania would like to place on the record our serious concern regarding the inaccuracies and omissions within the audit report for the cluster of Petuna farms in Macquarie Harbour.

There are five criteria for which the company is found to be conforming, regardless of evidence from publicly available Government reports, and within the audit report itself, which indicate the company is *not conforming* with these criteria. Evidence listed in the details of this submission indicates that that company is not conforming with the indicators listed below, and that this failure to comply has continued over a long period of time and effects the integrity of the product from these farms.

- 1.1 Comply with national laws and local regulations
- 2.1 Benthic biodiversity and benthic effects
- 2.2.3 Demonstration through a third-party analysis that the farm is in an area recently classified as having "good" or "very good" water quality
- 2.4 Interaction with critical or sensitive habitats and species
- 8.17 Use of antibiotics listed as Critically Important for human medicine by the World Health Organisation.

In addition to this, a number of the 27 non-conformities listed as 'minor' should be considered major, as they have continued over a long period of time, affect a wide area and effect the integrity of the product. The most serious of these relate to the low rates of dissolved oxygen at the site, impacts on benthic fauna and impacts on water quality. Taken together, these 27 non-conformities (a large number in comparison with the majority of ASC audits) reflect the breakdown of a farming system in Macquarie Harbour that is likely to result in the failure to achieve the objective of ASC criteria.

Government data referenced in this submission shows dissolved oxygen levels plummeted in Macquarie Harbour following the 360% increase in fish farm production in 2012. Dissolved oxygen levels in the Harbour have not recovered. In May 2015, 85,000 of Petuna's farmed fish were suffocated due to low levels of dissolved oxygen in the Harbour.[1] While the company states that the mass fish kill was the result of a one-off storm event that pushed up lower levels of water with low dissolved oxygen, they fail to acknowledge the correlation between increased fish farming and low levels of dissolved oxygen at 20 metres

[1] http://www.abc.net.au/news/2015-05-22/petuna-salmon-deaths-storms/6490138

in the Harbour, which followed the increase in salmon production in 2012 and has continued to deteriorate.

In March 2015, a leaked industry report documented that local regulations have been breached by all fish farms in Macquarie Harbour. The report describes a build-up of feed waste and faecal matter at all lease sites, the presence of bacteria mats and an increased incidence of fish disease.

In August 2015, the Government-commissioned Cawthron Institute report described Macquarie Harbour as a "biological system under stress". The report documents pollution indicator species some 7.5 kilometres from fish farm sites. It documents a "*harbour-wide decline in dissolved oxygen (DO*),"and finds that "*there is correlative evidence that finfish farming is affecting the water quality of the harbour environment and is contributing to benthic DO reductions in the system.*"

Recent Government data shows impacts on benthic biota extending from fish farms in Macquarie Harbour and entering the World Heritage Area. And in February 2016, an FRDC report found that plummeting dissolved oxygen in Macquarie Harbour represent a major threat to the Maugean Skate, a federally-listed endangered species; *"the environmental health of Macquarie Harbour, in particular, implications of low dissolved oxygen concentrations, represent a major threat to the species."*[2]

For an ASC auditing team to recommend certification for such a site raises significant concerns about the rigour and integrity of the auditing process for these farms.

I look forward to receiving your reply,

Sincerely,

Laura Kelly

Director, Environment Tasmania
25/08/16.

[2] Bell et al (2016) Movement habitat utilisation and population status of the endangered Maugean skate and implications for fishing and aquaculture operations in Macquarie Harbour.

Environment Tasmania Public Submission -

Aquaculture Stewardship Council Salmon Standard Certification Assessment Report; Petuna Pty Ltd Cluster – Table Head, Central Table Head, Liberty.

1. **Evidence of non-compliance with criteria 1.1. Comply with national laws and local regulations.**

The Macquarie Harbour Dissolved Oxygen Working Group (MHDOWG) Report, leaked to media in March 2015, documents breaches of licence conditions 1.1 and 1.2 for farms across Macquarie Harbour. Licence condition 1.1. states there must be no visual, physio-chemical or biological impacts extending 35m beyond the boundary of the lease area. The report documents the presence of "numerous opportunistic polychaetes (e.g. *Capitella spp*, *Dorvelleid spp*) over 150m away.

Licence condition 1.2 relates to 'Visual impact within the lease area.' The report notes effects related to organic deposition of particulate faecal and waste feed across almost all farm lease sites in the Harbour.[3]

These findings are repeated in the Cawthron Institute report, [4] which finds fish farms are influencing benthic DO reductions throughout the Harbour and documents the presence of pollution indicator species 7.5 kms from fish farm sites.

2. **Evidence of non-compliance with Indicator 2.1 Benthic biodiversity and benthic effects**

Both the reports cited above, the Macquarie Harbour Dissolved Oxygen Working Group Report and the Cawthron Institute report, document clear benthic effects at fish farms throughout Macquarie Harbour. Environment Tasmania notes that the ASC audit team refers to Petuna being granted a 'variance' or exemption from the usual practice of submitting benthic sample results for ASC certification. They defer instead, to local government requirements on visual impact monitoring.

Given the above evidence that the company has in fact breached local regulations with regards to visual impacts, there is a clear need for the Audit team to review its deference to these regulations and require benthic samples, in line with standard ASC processes. It would also be appropriate to review publicly available data and reports relating to damages to the benthic environment caused by fish farming activities in the Harbour.

[3] http://www.tasmaniantimes.com.au/index.php/article/New-call-for-Government-to-come-clean#sthash.iD2fl0Gk.dpuf. http://www.openaustralia.org.au/senate/?id=2015-03-02.169.1
[4] http://dpipwe.tas.gov.au/Documents/Report%20Cawthron%20Review.pdf.

3. **Evidence of non-compliance with Indicator 2.2.3 Demonstration through a third-party analysis that the farm is in an area recently classified as having "good" or "very good" water quality.**

Industry and academic reports and publicly available government data document low levels of Dissolved Oxygen throughout Macquarie Harbour from 2012 onwards. The Government's Macquarie Harbour Status Update 2016, shows Dissolved Oxygen levels at 20m continue to decline.[5] Further to this, the Cawthron Institute report shows the presence of opportunistic polychaetes throughout the Harbour and up to 7.5 kms from fish farm sites. Both low DO and the abundance of pollution indicator species indicates poor water quality resulting from significant levels of nutrient enrichment in the Harbour. This evidence would appear to contradict the findings in the audit report, that the company complies with requirements that lease sites are in areas recently classified by third-parties as having "good" or "very good" water quality.

4. **Evidence of non-compliance with Indicator 2.4 Interaction with critical or sensitive habitats and species**

The Government's Macquarie Harbour Status Update 2016 clearly shows that pollution indicator species associated with fish farming in Macquarie Harbour have entered the World Heritage Area. Further to this, recent research indicates the impacts of fish farming on Dissolved Oxygen levels is seriously threatening the survival of endangered species in the Harbour. Below is a statement from IMAS Principal Investigator, Jeremy Lyle, relating to the impacts of marine farming on the federally-listed endangered species, the Maugean Skate.

"A focus of the study included assessing threats to the population in Macquarie harbour posed by human activities, in particular fishing and marine farming. Bycatch of skate in gillnets has been identified as a threat and there have been recent management changes to reduce these interactions. The study also found that although direct interactions with marine farm operations are limited, the environmental health of Macquarie harbour, in particular implications of low dissolved oxygen concentrations, represent a major threat to the species."[6]

5. **Evidence of non-compliance with Indicator 8.17 Allowance for use of antibiotics listed as critically important for human medicine by WHO.**

The Audit team finds the company conforms with this indicator and states that "no antibiotics listed as critically important for human medicine by the WHO were used on fish purchased by the farm." At the same time, the report details the use of Oxytetracycline to treat bacterial infections at the Cressy Hatchery. Oxytetracycline is listed as a Critically Important antibiotic by the WHO.

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5 http://dpipwe.tas.gov.au/Documents/2016%20Update%20to%20the%20Macquarie%20Harbour%20Status%20Report.pdf

6 Bell et al (2016) Movement habitat utilisation and population status of the endangered Maugean skate and implications for fishing and aquaculture operations in Macquarie Harbour.

Refer to: **http://www.who.int/foodsafety/foodborne_disease/CIA_2nd_rev_2009.pdf**

Use of a WHO-listed Critically Important antibiotic should disqualify the farm for certification. At the very least is should be recorded as a major non-conformity.

6. **Indicator 2.2.1 Weekly average percent saturation [13] of dissolved oxygen (DO) [14] on farm, ≥ 70%; If any weekly average DO values are < 70%, or approaching that level, monitor and record DO at a reference site and compare to on-farm levels.**

The Audit team classifies the company's non-compliance with this criteria as 'minor'. Considering that the non-compliance is part of a Harbour-wide decline in dissolved oxygen that correlates with the 360% increase in production, and that DO levels in the harbour continue to fall, this non-compliance should more appropriately be recognised as a major indicator of a breakdown in the marine farming system in Macquarie Harbour. This is exactly how research refers to the situation in the harbour, which the Cawthron Report describes as a *"biological system under stress*".[7] Given that Petuna suffered a loss of some 85,000 farmed fish in March 2015 due to the decline in Dissolved Oxygen in the Harbour, it is difficult to determine how the ASC Audit could find a breach of DO values to be a 'minor' non-conformity.

7. **Indicator 3.4.1 Maximum number of escapes**

The ASC requirement is for no greater than 300 escapes. Not only does Petuna not fulfil this requirement, they state that the "number of fish escaped was unknown." Despite documenting maintenance records that show tears in nets on a number of occasions, the Audit team classify an 'unknown' number of escapes as only a 'minor' non-compliance. While a minor breach of the 300 threshold may warrant classification as a minor non-conformity, failure of a company to have in place a system for preventing and monitoring escapes should be considered a systemic failure or major non-conformity.

8. **Indicator 3.4.2 Accuracy of counting technology**

The Audit team state that "Calibration of the AquaScan CSE 3150 was not possible…" Nonetheless, the cluster was found to be compliant. This is particularly concerning given the absence of an escape log. The company should not have been found compliant without verification of counting technology.

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7 http://dpipwe.tas.gov.au/Documents/2016%20Update%20to%20the%20Macquarie%20Harbour%20Status%20Report.pdf

9. **Indicator 5.4.1 Single year class**

The report states that a variance request has been submitted, however there is none listed on the ASC website for Petuna.

10. **Indicator 8.3 Evidence of an assessment of the farm's potential impacts**

The report fails to mention Saltas (contract hatchery). It is a requirement that all smolt producers are conforming.

11. **Indicator 8.4 Maximum total amount of phosphorus released into the environment**

The Cressy hatchery significantly breaches maximum phosphorus thresholds. There is no reason given as to why this leads to classification as a minor non-conformity, rather than disqualification from certification.

12. **Indicator 8.34 Macro-invertebrate surveys**

The Auditors find that "Benthic health in the downstream environment for both the Saltas and Cressy hatcheries was considerably worse than for upstream waters. These impacts on the macroinvertebrate assemblages of the water system demonstrate a minor non-conformity."

It is unclear how the company will be able to close this non-conformity in one year – which is a requirement of retaining certification.

12. **Indicator 8.35 Evidence of implementation of biosolids (sludge) Best Management Practices**

The Audit report states that "the Saltas hatchery has been removing sludge, but have not provided a biosolids management plan." This clearly breaches ASC standards and the report provides no detail as to why auditors have considered this a 'minor' non-conformity rather than grounds for disqualification. Given additional issues with the hatcheries, including use of WHO listed critically important antibiotics, use of mulit-year class smolt, breaches of maximum phosphorus thresholds and considerable damage to downstream benthic health, it is concerning that auditors see no pattern of failure of hatchery management, limiting the company's ability to achieve the objective of ASC criteria.

13. **Non-Conformity Action Plan and Timeframes**

For a minor non-conformity, ASC standards require the auditors and company to agree to an action plan to address the root cause of the non-conformity, with a clear timeframe for corrective action. This report lists only 3 non-conformities with a timeframe for closure. This leaves 24 without a closure date. Without a clear action plan and timeframe for closure of non-conformities, the auditor's recommendation that the company retain certification reflects a failure to follow ASC process.