

# NEW ZEALAND PILOT OF THE CORPORATE ECOSYSTEM SERVICES REVIEW CASE STUDY: AOTEAROA FISHERIES LTD

*“We had heard about natural capital and ecosystem services through embarking on our sustainability journey and so we were keen to both learn about and test the Ecosystem Service Review tool on a major component of our business, the pāua fishery.”*

Allyn Glaysher, General Manager, Human Resources, Communications and Sustainability, Aotearoa Fisheries Ltd

## ABOUT AOTEAROA FISHERIES LIMITED

Aotearoa Fisheries Limited (AFL) is the largest Māori-owned seafood company. It is a custodian of commercial fisheries assets returned to Māori through the Treaty of Waitangi Fisheries Settlement with the Crown. AFL is an important part of the intergenerational settlement. The nature of the settlement means Māori will always be involved in fisheries. Therefore, activities and investments have a long-term perspective.

AFL operates within three divisions: AFL Inshore (trading as Moana Pacific and OPC Fish and Lobster) controls approximately 50% of the North Island fishery; AFL Aquaculture (trading as Kia Ora Seafoods and Pacific Marine Farms) is the largest Pacific oyster farmer and exporter from New Zealand. AFL also has major interests in deep sea fishing with a 50% shareholding in Sealord Group Limited. The third division, Prepared Foods is the largest processor of pāua (the Māori name for abalone) and also supplies a range of ready-to-eat pouch meals. AFL uses the prime pāua meat and sells trimmings to the nutraceutical sector and shells to the ornamental trade. AFL’s major markets for prime pāua are China, Malaysia, Singapore and Hong Kong.

## WHY AFL PILOTED THE ESR

The security of the Māori fisheries assets is contingent on wise stewardship of marine natural resources. AFL’s products and services are all inherently dependent on ecosystems. Their continued success requires:

- Healthy coastal and offshore marine ecosystems
- Sustainably managed wild-capture fisheries
- A social licence to operate for access to both marine space and resources, and to underpin a product provenance story in premium markets



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Pāua is one of the important components of AFL's business and understanding the relevant strategic issues was an important reason for this focus. Ecosystem change driven by climate change and erosion presents risks to AFL's pāua business, however the company is well-positioned to capitalise on significant opportunities, including lower operational costs, that can be gained from better environmental and ecosystem management. For AFL, use of the Corporate Ecosystems Services Review (ESR)<sup>1</sup> tool was a core project for its pāua division as part of the company-wide Sustainability Strategy.

## HOW AFL USED THE ESR PROCESS

The ESR involved all relevant pāua industry and AFL corporate leaders, including the management of the pāua processing division, Prepared Foods. This ensured the review stayed focused on management's important issues, mobilised key staff, and enabled robust results.

AFL's sustainability advisers, Terra Moana Limited (TML) provided support. The Pāua Industry Council (PIC), the National Institute of Water and Atmospheric Research (NIWA) and Otago University School of Marine Sciences were core technical partners. Ocean Ranch, the pāua harvest operation, provided technical advice about the daily business realities and issues pāua divers face in harvesting a wild resource.

## SCOPE OF ASSESSMENT

AFL focused its ESR on operational issues facing the production of wild pāua in the marine environment.

## PRIORITY ECOSYSTEM SERVICES

*The ESR enables the company to prioritise a few key ecosystem services by evaluating the degree of the company's dependence and/or impact on a range of ecosystem services.*

The priority ecosystem services identified for AFL were:

**Provisioning** - Wildfoods were selected as AFL's pāua operations depend upon the provision of pāua as a wildfood.

**Regulating** - Regional climate change was prioritised as pH levels are influenced by oceanographic trends, freshwater inflows (higher rainfall levels) and water temperature. This affects pāua quality and kelp growth, a source of pāua food and habitat. Erosion control was also prioritised as sedimentation was smothering kelp which impacted pāua habitat and reduced recruitment by suffocating juveniles.

**Cultural** - AFL's pāua operations are affected by recreation and ecotourism, education and inspiration and ethical and spiritual values. Being Māori owned, it is important to demonstrate kaitiakitanga (stewardship) of the pāua fishery.

## TRENDS, RISKS AND OPPORTUNITIES

*The ESR guides an analysis of the conditions or trends in the ecosystem services prioritised, as well as drivers of environmental change that significantly influence those trends. The ESR then helps evaluate how trends can impact the company, either positively or negatively.*

The ESR identified a range of trends, risks and opportunities across the selected ecosystem services. These ranged from risks from sedimentation and ocean acidification, to pressures from other sectors affecting both the health of pāua stocks, as well as commercial access to the fishery stocks.

**Provisioning** - pāua are legally taken by commercial, customary and recreational fisheries; but impacts from illegal fishing are significant and disturb efforts to sustainably manage pāua catchments. The review helped highlight the importance of balancing the needs of the commercial and recreational fishing sectors.

**Regulating** - Regional climate change was prioritised as pH levels can be influenced by oceanographic trends, freshwater inflows (higher rainfall levels) and water temperature. This affects pāua quality and extreme freshwater inflow events can cause pāua mortality. Furthermore, whilst field research is necessary to assess the real world risks from changes in ocean chemistry, experimentally, pāua shell formation is affected by more acid conditions. Warmer ocean temperatures negatively affect kelp which is pāua food and habitat. The possibility of water temperature dependent disease was identified as a possible risk but information was insufficient.

The risks found anecdotal, correlated evidence of stunted growth in wild pāua where there are erosion impacts. The Marlborough Sounds were identified as having severe erosion and sedimentation impacts, which are believed to significantly affect vegetation in this area, known as Pāua7. Conversely, where coastal native vegetation persists, pāua catches are high, e.g. Palliser Bay.

**Cultural** - Cultural services are a central part of AFL operations and strategy. The ethics of sustainable fishing are promoted by PIC and AFL. PIC incentivizes the training of Māori divers to work alongside experienced commercial operators to provide income and training to Māori. AFL is Iwi-owned and Kaitiakitanga (stewardship) permeates the company. Pāua is an important kaimoana (seafood) and taonga (treasure) in both Māori and non-Māori cultures. Pāua are culturally valued and are served at important Māori cultural events such as tangi (funerals) and hui (meetings). Like sacred land, specific coastal areas are set aside for Māori customary use including mataitai (no commercial fishing) and taipure reserves (for close observation). These areas can be where education of young Māori occurs e.g. to learn how to be Kaitiaki. AFL has to carefully balance how it respects Māori custom and also delivers on their statutory requirement to provide a commercial return for Iwi.

<sup>1</sup>[www.wri.org/publication/corporate-ecosystem-services-review](http://www.wri.org/publication/corporate-ecosystem-services-review)

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*“The AFL ESR project created a dynamic space for collaboration with iwi, industry and the academic and research sector.”*

- Katherine Short, Terra Moana Ltd

## STRATEGY AND NEXT STEPS

The ESR identified the important fishery management challenges as:

- **Integrating customary based Kaitiaki/localised management approaches** to improve how pāua stocks and sub-stocks may be managed more sensitively.
- **Effectively managing recreational pāua fisheries.**
- **Enhancing the Quota Management System (QMS)** to allow quota owners to ocean ranch parts of the seafloor for species such as pāua.
- **Addressing poaching**
- **Fundamentally managing pāua fisheries using an ecosystem approach**, i.e. holistically understanding and managing the aspects that contribute to producing healthy pāua.

A series of priority actions to address these challenges are being looked at by the company and wider industry. Indicative geographies for intervention have been identified, such as the Marlborough Sounds. Identifying priority sites to assess regional climate change are also being considered. Further datasets are being investigated for more robust correlations between the land use, sedimentation and the state of pāua stocks.

Further potential partners have expressed interest in supporting AFL to develop responses to risks and include the Department of Conservation, PIC and experts from Otago University Marine Science Department, NIWA and the Cawthron Institute. AFL is also looking to apply the ESR approach to other priority business areas and supports the use of ecosystem services in resource management in New Zealand through activities such as the Natural Capital Assessment and Sustainable Seas Science Challenge.

## OUTCOMES AND ADVICE

There was clear agreement with the Pāua Industry Council that the ESR was a useful process. The ESR project provided insights into AFL’s interaction with the ecosystem services that are important to the health of pāua. It deepened the company’s understanding of the broader marine environmental issues affecting its pāua business and the opportunities to address them.

The ESR has already motivated further discussions and investigations in AFL’s sustainability, marketing, and procurement divisions.

Following completion of the ESR, the team presented the results to the full AFL and Prepared Foods Executive teams as well as the PIC Executive and Pāua2 Management Action Committee. This ESR project has identified important questions that need further assessment. They range from questions around priority risk sites for the wild fishery, financial implications on the business from cumulative risks, to identification of possible solutions and the opportunities to address these issues in a collaborative manner.

AFL and Prepared Foods are supporting the development of an ESR action plan including considering the development of pāua branding using the ESR’s interdisciplinary knowledge to improve the provenance story for wild, premium New Zealand pāua. An ecological restoration project for the Marlborough Sounds is being scoped.

*“We had never done anything of this nature in AFL. To be perfectly honest, it was a ‘leap of faith’, an opportunity presented to us. We have been surprised at the amount of information we’ve got out of it and what it might mean going forward.”*

- Allyn Glaysher, AFL

[www.afl.māori.nz](http://www.afl.māori.nz)

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## ABOUT SBC ECOSYSTEM HEALTH PROGRAMME

The Sustainable Business Council (SBC) is an executive-led group of companies that catalyses the New Zealand business community to have a leading role in creating a sustainable future for business, society and the environment. Ecosystem Health is one of the priority areas in the SBC work programme, with projects that aim to help members understand their dependencies and impacts on the ecosystem and how this affects their business strategy and resource use.

[www.sbc.org.nz](http://www.sbc.org.nz)



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