



Dairy for life

NEW ZEALAND PILOT OF THE CORPORATE ECOSYSTEM SERVICES REVIEW CASE STUDY: FONTERRA

“Use of the ESR tool to explore impacts and dependencies led to some revealing insights into the supply chain and global sourcing that would not have become apparent without the tool.”

Sean Goddard, Fonterra

ABOUT FONTERRA

Fonterra is a New Zealand-based dairy co-operative and the world's largest processor and exporter of dairy nutrition. Formed in 2001, the company produces more than two million tonnes of dairy ingredients, specialty ingredients and consumer products each year and exports to over 100 countries around the world. Products range from milk powders through to a range of cheese, cream, butter, yoghurt, pastries and beverages. Milk is sourced from 10,000 farmer shareholders in New Zealand, and from suppliers in Australia, Chile, Brazil, Sri Lanka and North America, and from company-owned dairy farms in countries such as China.

WHY FONTERRA PILOTED THE ESR

Fonterra recognises the value of healthy, functioning biodiversity and ecosystem services and is seeking to understand how to incorporate this value into business decision-making. The Corporate Ecosystem Services Review (ESR) tool provided a structured methodology to help identify ecosystem services dependencies and impacts in their supply chains, and to put action plans in place to manage associated risks and opportunities.

Fonterra undertook a pilot ESR project on strawberry yoghurt produced at the Fonterra Brands Takanini factory in Auckland. The objective of this pilot study was to understand the value and limitations of the tool, and to use it to develop strategies to enhance the sustainability of Fonterra products over time.



HOW FONTERRA USED THE ESR PROCESS

Led by the Global Sustainability and Social Responsibility (GSSR) team, the assessment team included staff from the Takanini factory and the corporate procurement team. The pilot followed the steps described in the Corporate Ecosystem Services Review¹, and involved:

- A prioritisation workshop to identify ecosystem services most relevant to the production of strawberry yoghurt.
- A desk-top assessment of the condition and trends of these priority ecosystem services.
- A second workshop to identify risks and opportunities related to each ecosystem service.
- The development of a set of actions to mitigate the risks and capitalise on the opportunities for the priority ecosystem services.

“People willingly engaged in the ESR process. A good introduction to the concept of ecosystem services is important, particularly for those joining workshops for the first time.”

- Lara Phillips, Fonterra

SCOPE OF ASSESSMENT

Fonterra limited the scope of the assessment to a single product line to ensure that good data was available, an appropriate team could be up-skilled, and that the project could provide a pragmatic assessment of the potential and limitations of the ESR tool for wider application across their business.

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 strawberry yoghurt were crops, livestock, freshwater and regulation of water timing and flows. The manufacture of strawberry yoghurt is most dependent upon the consistent delivery of these services. The condition and trends analysis of these ecosystem services highlighted the following:

Crops – Research revealed known environmental issues with strawberry production worldwide, including impacts on water and soils, and the impact of environmental degradation and climatic changes on strawberry growing regions.

Livestock – There is a substantial body of information in New Zealand on the state and trends of key ecosystem services that support the production on milk, including soils, pasture and feed.

Freshwater – Freshwater is critical for the production of milk and strawberries and in the manufacturing process. However, there is increasing demand for household and industrial water in Auckland, and as a result it is likely that the price of water will rise over time.

Regulation of water timing and flows – This is important for ensuring the consistent supply of water to various systems, and preventing flooding and drought. The production of milk and strawberries relies on the consistent and reliable supply of freshwater.

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.

Risks identified included security of supply and risk of strawberry crop failure due to climate, pollination and other factors. Water was also identified as a key risk, particularly increasing water costs, drought and population growth in Auckland leading to water shortages, and damage to food production from flooding. Opportunities included developing an improved procurement framework and process to enhance supply chain sustainability, as well as applying the ESR tool to other parts of the business.

STRATEGY AND NEXT STEPS

Fonterra identified 3 key actions:

- **Enhance procurement processes:** While existing procurement processes consider sustainability and security of supply, there is potential to expand this procurement framework to include consideration of ecosystem services in procurement decisions.
- **Continue water conservation:** Significant investment in water conservation has already been undertaken at the Takanini factory. This activity will continue to be promoted, including a new initiative to undertake life cycle analysis to demonstrate the efficiency of products made at Takanini.
- **Pilot ecosystem services review at a catchment scale:** Fonterra aims to explore using ESR as an engagement, scoping and planning tool for working with farmers at catchment scale. A workshop has been held to introduce the ESR tool to a wider selection of Fonterra managers and staff.

¹www.wri.org/publication/corporate-ecosystem-services-review

OUTCOMES AND ADVICE

The pilot ESR study has built Fonterra's understanding of the ESR process and tools, and stimulated thinking on how ESR might be applied in other parts of the business, including on-farm and at catchment scale, and as an engagement tool for their offshore offices. Key learnings included:

- The ESR is a practical tool that enables quick engagement in concepts of ecosystem services impacts and dependencies and can be applied to a wide range of situations.
- Taking a pilot approach through selecting a project with a defined scope and committed team provides an opportunity to build understanding and refine the approach before committing to using the ESR with wider groups across the business.
- ESR is applicable at a range of scales, from product scale through to catchment scale. Clearly defining the scope of the assessment is important to ensuring a successful outcome.

- ESR provides the opportunity to connect parts of the supply chain together that may not have been previously connected. In the strawberry yogurt example this included thinking about the extended supply chain for fruit ingredients and milk and any associated risks or opportunities.
- The ESR is a high-level assessment tool – detailed assessment and strategy development may require more complex modelling and data.

“The value of using an ecosystem services approach is that it quickly leads to thinking about the supply chain and ecosystem dependencies, impacts, risks and opportunities beyond the manufacturing process.”

- Nic Bishop, Fonterra

www.fonterra.com

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



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