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Landcare Research
Manaaki Whenua

SUSTAINABLE BUSINESS PRACTICE

New Zealand businesses of all shapes and sizes are tackling a wide range of sustainability challenges in their everyday work.

These cover social, environmental and economic matters of interest to clients, staff and other stakeholders in the business. Sustainable practice has become “business as usual” for many, rather than the exclusive concern of those operating on the global stage or at the very green end of the spectrum.

As a member of Business New Zealand’s Major Companies Group, I hear many CEOs now talking about social licence to operate, meaning the responsibility of business to

society (customers and local communities) and expectation that the businesses will operate within acceptable parameters, not merely within the law. Collective approaches are becoming more common, in which businesses engage closely with communities to reach agreement on expectations. Allocating and protecting the quality of water are increasingly handled through co-governance approaches.

In this edition of Discovery we look at some of the readily available sustainable practice tools developed by Landcare Research specifically for New Zealand businesses. These tools help businesses know where they stand, they ensure integrity in the actions taken by businesses and reduce risk around the claims businesses make. We also offer insights into the early thinking and research around new sustainability topics that are starting to hit the business horizon.

The Enviro-Mark[®] management system is a good example of a tried and tested approach to reduce environmental impacts and communicate results in a simple and honest way to customers and other stakeholders. The examples in the article are high profile NZ companies, but rest assured, many smaller businesses in manufacturing and services also enjoy the benefits of the Enviro-Mark programme.

Enhancing sustainable practice in-house often leads companies to consider their supply chain. This is particularly important for those operating on the international stage, where evidence of emissions or a product footprint can make or break a deal. The article about product stewardship tackles this challenge and looks at what happens when a product is used or disposed of – and the end-of-life questions.

Credible science underpins Landcare Research’s tools, advice and services for business and we often hear from our clients how important this is to them. Our science also helps us to uncover new opportunities for NZ businesses to keep up with international developments in areas such as water management, ecosystems services, biodiversity and sustainable land use.

Outlined in this issue are the concepts of ecosystems services and natural capital and why your business needs to understand what they mean. Landcare Research is working with the Sustainable Business Council and others to make this information and tools more readily available.

I hope you enjoy this issue of Discovery and welcome your questions, feedback and ideas on the topics we present here, or your own challenges with sustainable practice.

Dr Richard Gordon
Chief Executive



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ACCOUNTING FOR NATURE

The phrases “ecosystem services” and “natural capital” are moving from the realm of policy and research into the language of business.

Both relate to the resources and processes that are supplied – usually free of charge – by nature (some people call them “nature services”) and that fuel our industries and enable business to operate. Examples of ecosystem services include the supply of clean fresh water (which is a key service to many diverse industries), the biodiversity of soil microbes that release nutrients for plants to grow, and pollination services provided by bees and other insects that are critical to the production of fruit, vegetables, pasture, and of course, honey.

A useful analogy describes the concept of ecosystem services as the cash flow of nature (i.e. it shows the flow of services/value), while natural capital can be represented as a balance sheet for the same services and values.

Throughout history the development of our economies and lifestyles have depended on these ecosystem services but only recently has there been work to quantify their condition and value and start to understand how businesses depend on, and impact, them.

Primary sector businesses are, by their very nature, direct users and beneficiaries of ecosystem services and therefore there is a growing level of interest in the sector to understand these dependencies and recognise their value, researcher Cerasela Stancu says.

“For example, businesses that rely on a continuous supply of fresh water face operational risks when deforestation upstream alters the timing, quantity, or quality of the water they consume – in addition to increased flooding risks. This is becoming a real concern for many New Zealand companies as there has not been concerted action to assess dependencies on ecosystem services.”

Equally, if a company negatively impacts one or more ecosystem services, it can be exposed to legal or reputational risks, she says.

“There are examples of businesses in various sectors in New Zealand and overseas that have faced such business risks because their activities have degraded ecosystem services that were valued by local communities or by other companies.

“Generally we found that businesses tend to be more aware of their impacts on ecosystem services than what their dependencies are.”

She says that because companies both impact and depend upon ecosystem services, ecosystems’ conditions and trends matter to the corporate bottom line.

Landcare Research is currently deepening understanding of the importance of ecosystem services and developing tools for issue identification and prioritisation. We are also working to understand the relationship between corporate initiatives and landscape context and how to integrate ecosystem services in corporate strategy and decision making.

Kiwifruit producer ZESPRI® is an example of a business taking steps to identify and act on ecosystem services.

Landcare Research initiated the renowned World Resource Institute’s corporate Ecosystem Services Review (ESR) application at ZESPRI, the first pilot-test of ESR in New Zealand. ESR is a step-by-step methodology for identifying risks and opportunities from ecosystem services. The work identified priority ecosystem services



that ZESPRI depends on or has an impact on. We also collated knowledge about the condition and trends of these priority ecosystem services and identified the gaps in knowledge. The outcomes for ZESPRI included an improved understanding of priority ecosystem-services interventions and investigation of potential response strategies.

The project at ZESPRI provided useful information to help both researchers and the businesses themselves progress their understanding of ecosystem services in New Zealand while also contributing to international research in this area.

“Landcare Research will continue to look for avenues to show the relevance of our ecosystem services work to businesses and engage with broader business platforms like the Sustainable Business Council to further our research agenda,” Cerasela says.

CONTACT

CERASELA STANCU
LANDCARE RESEARCH,
AUCKLAND
stancuc@landcareresearch.co.nz

FOOD GLORIOUS FOOD



The food and beverage sector is an important component of New Zealand's economy.

Reliant on primary production and land resources for their raw materials, efficiencies, quality and brand, the food and beverage sector is sensitive to issues relating to national and corporate environmental performance.

In 2012 Landcare Research surveyed selected food and beverage companies to explore current environmental/sustainability practices and identify issues of concern. A similar survey had been carried out in 2007, so the researchers were able to assess some of the changes in the industry over the intervening 5 years.

The results were interesting with new issues arising, particularly increasing concern about climate change and natural resource provision, and evidence of improving practical environmental measures.

As expected, traceability featured as a key export market requirement in 2012; this was followed by mandatory certification, packaging specifications and mandatory labelling.

Food exporters also reported facing a greater number of market requirements and there has been a significant uptake of International Standards and Codes of Practice.

"Not surprisingly, large companies are also more likely to face demands for more rigorous

certification and audit processes while smaller companies are more likely to take on voluntary environmental labelling to difference themselves in the market" researcher Cerasela Stancu says.

80% of responding businesses had implemented at least one practical environmental measure and 30% had carried out some form of environmental footprinting of their products or services with the focus on carbon and water.

The survey also highlighted the need for better market intelligence, the sector showing a preference for more in-depth and issue-focused analysis where implications and response options for NZ exporters are explored - as opposed to the current practice of broad market updates .

A surprising result was the high percentage (70%) of respondents who saw biodiversity and ecosystem services as 'very important' to their business operations – this is significantly higher than the world average of 27% amongst global companies. As ecosystem services is becoming a leading theme in corporate sustainability, reporting and performance benchmarking is also expected to play a bigger role in business practice. Interestingly, almost half of the respondents suggested government regulation as means to stimulate adoption of sustainability policies that will benefit the whole industry and the "clean green" brand.

Concern about climate change has increased significantly from 13% to 37% over the 5 year

period; putting it in the top three concerns alongside food safety and distance to market.

Water scarcity and competition for water resources also features high on the issues of concern for food and beverage producers.

Other issues include the need to tackle global and national issues such as climate change, build capability in the industry to respond to new challenges (such as biodiversity and ecosystems services approaches) and to help shape smart government regulation shows the need for strong science to underpin the changes ahead for the industry.

This project was carried out by Landcare Research in conjunction with NZ Trade and Enterprise, the Ministry of Foreign Affairs and Trade, Ministry for Primary Industries and Ministry of Business and Innovation.

CONTACT

CERASELA STANCU
LANDCARE RESEARCH,
AUCKLAND
stancuc@landcareresearch.co.nz

HELPING BUSINESSES GROW

Envirocomp is a small New Zealand company started in 2007 that is making an increasingly large impact across the globe.

Landcare Research has played a small but important part in its transformation to international leader in the composting of all brands of disposable nappies, sanitary and incontinence pads.

The use of absorbent hygiene products is increasing around the world but, with it, increased waste to landfill. However, Envirocomp is the first company in the world to provide a composting alternative. Originally covering the Canterbury Region the firm has recently opened its second processing site for waste in the Wellington urban area.

As part of its commitment to business sustainability Envirocomp has applied to accredit their waste stewardship scheme under the auspices of the Waste Minimisation Act 2008 through the Ministry for the Environment.

Product stewardship schemes are a “cradle to grave” or life cycle tool that helps reduce the environmental impact of manufactured products. In product stewardship schemes, producers, brand owners, importers, retailers, consumers and other parties accept responsibility for the environmental effects of their products – from the time they are produced until they are disposed of. Current accredited schemes cover packaging, oil, tyres, paint, computers and mobile phones.

Businesses with accredited schemes take responsibility for the environmental effects of their products or services and take these costs into account when making decisions about the production, purchase and disposal of their products.

Through its preferred supplier agreement with the Ministry, Landcare Research has completed an audit of Envirocomp’s performance and processes by reviewing the scheme’s process and highlighting possible areas for improvement, says researcher Anthony Hume.

The auditor’s role covers a diverse range of activities and assessments including checking the toxicology of the firm’s compost, checking if the scheme has appropriate funding, and that waste processing data are effectively managed.

“From an environmental perspective the most challenging element is to determine whether the scheme will deliver a reduction of waste to landfill or environmental harm from a life cycle perspective. In this case the used compost should deliver tangible environmental

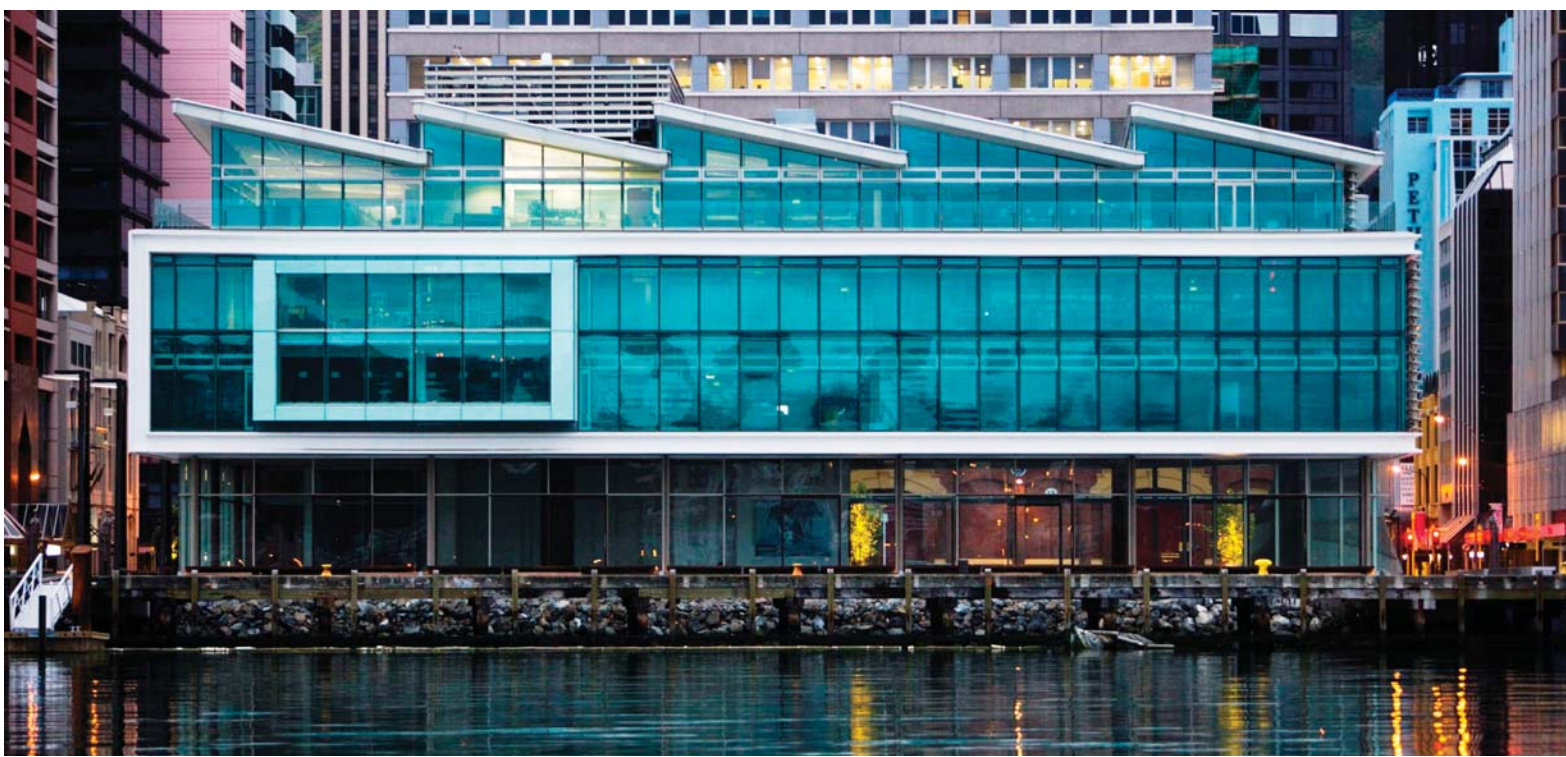
benefits by reducing the need for artificial fertilisers, reducing the volume of waste, and providing a potential stabiliser for remediation of contaminated soils,” Anthony says.

The Ministry for the Environment is considering the findings and recommendations of the audit and will decide in the near future whether to accredit the Environcomp scheme.

CONTACT

ANTHONY HUME
LANDCARE RESEARCH,
WELLINGTON
humea@landcareresearch.co.nz





INTERNATIONAL TRENDS IMPACTING LOCALLY

The move towards greater business sustainability constantly evolves and one area where we are seeing particular change is in the area of carbon footprinting.

Most significant, says carboNZero Holding CEO Professor Ann Smith, are international moves away from simply measuring a company's operational carbon footprint to instead addressing the contribution of the supply chain to the company's emissions profile.

This has significant implications for New Zealand businesses.

Previously, measuring and mitigating your organisation's operational carbon footprint was the "norm". Now the emphasis will shift to the supply chain – suppliers and contractors. These are called scope 3 emissions, the ones that your business doesn't have operational control over, while scope 1 and 2 emissions are those directly applicable to your business.

"Scope 3 emissions are someone else's problem that have suddenly become your opportunity to work more collaboratively with your supply chain," says Ann.

"Imagine that your business has undertaken a carbon footprint, it's been audited and lo and behold a lot of the carbon is in your supply chain. Where do you start? And in a way that is clearly beneficial, because the hotspots in your supply chain are also opportunities for cost savings for your supplier and in turn for you as their customer."

Not only do you need to measure and manage your own footprint but you need to influence the other players in your value chain to do the same. It's one thing understanding your own footprint but quite different helping others to understand their footprint and how it impacts on your business.

Here in New Zealand, Meridian Energy has taken up this challenge already by undertaking an inventory of its Scope 3 emissions.

Ann says work to influence your supply chain will take time and the key is to involve stakeholders early and explain the benefits to them. And increasingly, accurate measurement with robust verification is vital for reporting and disclosing carbon footprint information from the international scale to individual companies.

Players in the supply chain are asking for or including requirements in contracts for embodied emissions in goods and services purchased, loading and fuel consumption data for deliveries and distribution, volumes and electricity consumption for warehousing and retail, and weight of waste collected, distance transported and management of the landfill.

Your footprint could be a liability or an opportunity for your customers and stakeholders, Ann says.



AUSTIN HANSELL
LANDCARE RESEARCH,
LINCOLN
hansella@landcareresearch.co.nz
www.carbonzero.co.nz

ENVIRO-MARK® UPDATE

Several of New Zealand's largest corporates are using the Enviro-Mark® programme to implement credible environmental management systems (EMS) in their organisations.

Enviro-Mark is New Zealand's leading environmental certification programme and provides the resources and support that businesses need to implement a credible and effective EMS, says Enviro-Mark consultant Chris Bailey.

After Toyota's corporate office had achieved Gold certification in 2011 the company decided to implement Enviro-Mark at all its dealerships throughout New Zealand. This was a significant undertaking and one that reiterated the company's commitment to sustainability, says Chris.

"They took a collective approach to developing sustainability projects, targeting all their significant environmental effects. Projects include energy efficiency, hazardous substances, procurement, greenhouse gas emission reduction, and correct disposal of washbay water to tradewaste."

Meanwhile New Zealand's largest company, and leading global dairy producer, Fonterra, is also expanding its participation in the programme.

The dairy giant undertook a pilot programme at its Takanini site and progressed through each certification level to Diamond (ISO14001 equivalence) by implementing initiatives including waste reduction, energy efficiency and recycling/reuse or organic wastes. Fonterra is now using the Enviro-Mark programme to implement environmental certification for a further six sites around New Zealand.

The five-step, independently audited programme

helps these and many more businesses to identify and reduce environmental impacts, save money, and understand legal obligations. They establish and maintain a green advantage that provides a clear market edge, Chris says.

KiwiRail recently initiated a pilot scheme at its Tauranga facilities and implementation will provide a template allowing extension to all other New Zealand sites.

And this illustrates one key component of the programme, says Chris.

"The key to Enviro-Mark is its simplicity. We provide easy-to-use checklists, backed up by practical support through our workshops, seminars, question sessions and consultancy services. It takes enthusiasm and commitment, but combined with our tools and support, we get businesses started, highlight a logical sequence for progress, and provide the guidance they need to succeed."

CONTACT

CHRIS BAILEY
LANDCARE RESEARCH,
AUCKLAND
baileyc@landcareresearch.co.nz
www.enviromark.co.nz



MAKING SENSE OF ENVIRONMENTAL AND SUSTAINABILITY TOOLS FOR BUSINESS

There are a plethora of tools and services available to help businesses understand, manage and mitigate their environmental impacts. These tools, if appropriately selected and used, can help reduce costs, improve processes, create market value and demonstrate an ongoing commitment to robustly proving environmental credentials of organisations and products ... but choosing the right tool to achieve these goals can be tricky.

To help businesses avoid the “paralysis” that comes from a long and confusing menu of options Landcare Research has compiled a searchable database of information about the environmental and sustainability tools and services available. The database primarily covers tools that can be used across sectors by small and large corporations alike.

Information about each tool or service is intended to provide insights into its application and robustness and includes:

- A short description and scope
- The level of independent certification
- Cost and resource requirements
- Market uptake

There are approximately 50 tools and services covered in this overview and more will be added as they become available. They originate from a range of government, local authority and business practice approaches. Many of the tools reviewed address a single issue, with greenhouse gas emissions being the most common one. One in five tools requires third-party certification.

<http://www.landcareresearch.co.nz/resources/business/environmental-and-services-database>



CONTACT

CHRISTINE HARPER
LANDCARE RESEARCH,
WELLINGTON
harperc@landcareresearch.co.nz

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**Landcare Research
Manaaki Whenua**

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PO Box 40, Lincoln 7640, New Zealand
Ph + 64 3 321 9999
Fax + 64 3 321 9997

If you wish to be included on the mailing list for Discovery, contact Tom Fraser, Landcare Research, Lincoln (03) 321 9719 frasert@landcareresearch.co.nz

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