McLaren, S.J., Singh, R., & Clothier, B., 2017. Environmental certification: adding value for New Zealand's primary producers, or a waste of time and money? In: *Science and policy: nutrient management challenges for the next generation* (Eds L. D. Currie and M. J. Hedley). http://flrc.massey.ac.nz/publications.html. Occasional Report No. 30. Fertilizer and Lime Research Centre, Massey University, Palmerston North, New Zealand. 7 pages.

ENVIRONMENTAL CERTIFICATION: ADDING VALUE FOR NEW ZEALAND'S PRIMARY PRODUCERS, OR A WASTE OF TIME AND MONEY?

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Abstract

Environmental certification programmes for primary products are increasingly common around the world. The purpose of these certification programmes varies according to different stakeholders' perspectives. From the perspective of the primary producer, they include differentiating the producer's product in the marketplace in order to increase its market share, achieve premium price, and by association, enhance the producer's reputation. From the perspective of the consumer, an ecolabel on a product that represents an environmental certification enables the consumer to choose products that are aligned with their values. From the perspective of government, environmental certification programmes are seen as mechanisms for moving societies towards more sustainable consumption and production (SCP) systems. This is realised through influencing producer activities and consumer purchasing choices, and driving eco-innovation in different economic sectors.

The continued existence, and increase in number, of environmental certification programmes over the last 30 years indicates that they serve some purpose. However, on the other hand, the process of gaining environmental certification can be time-consuming and expensive for a primary producer. It is therefore pertinent to ask whether these programmes are efficient in achieving their objectives (i.e. Are they "eco-efficient"?). Based on examples from different environmental certification programmes, we conclude that these programmes can offer strategic value over the long-term, enhancing the producer's reputation and increasing market share. However they need to be designed and implemented carefully, considering multiple environment aspects and developing appropriate accounting and auditing tools and procedures to deliver credible and eco-efficient schemes. A well-designed sector-based national programme would enhance New Zealand's brand and add value for New Zealand's primary producers.

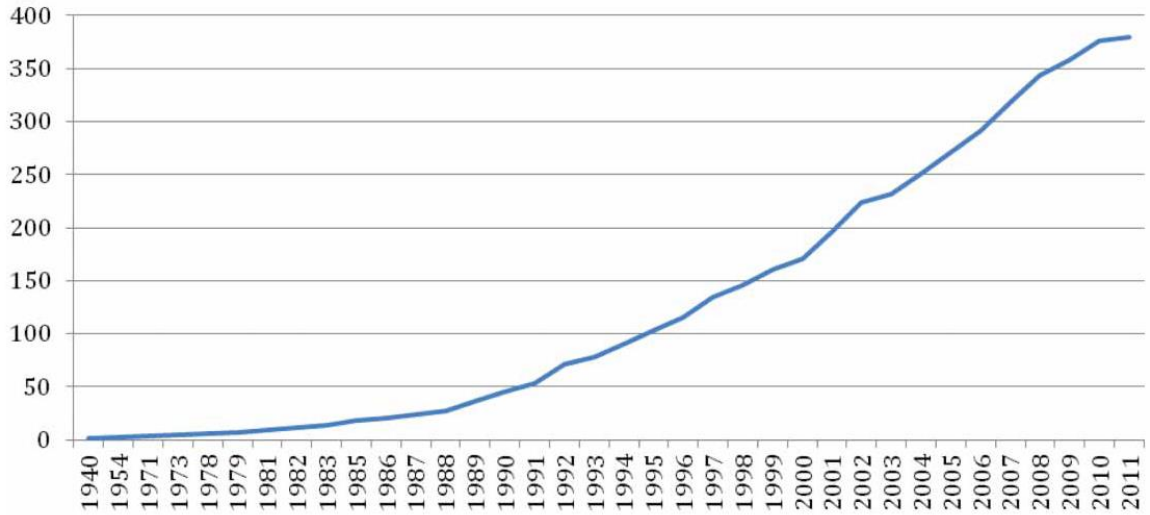
Introduction

Certification systems have been described as "regulatory initiatives in which a group of actors set and enforce standards" (Marx, 2014). For environmental programmes, obviously these standards relate to environmental aspects. For example, ISO 14025 describes "environmental declaration programmes" as voluntary programmes for the development or use of environmental labels or declarations indicating the environmental aspects of a product or service (ISO 14025, 2000). Successful certification of a product leads to the opportunity to have an ecolabel logo on that product and/or to be used in marketing the product, and (potentially) realisation of premium pricing.

Environmental certification programmes are increasingly common around the world (Figure 1). They are particularly common for food products, and Prieto-Sandoval et al. (2016) note in their review of research on ecolabels that some 24, 23, and 6 articles of the 94 publications that they reviewed focused, respectively on food products, fish and coffee. That is, 56% (53/94) of the articles focused on food and drink products.

Examples of environmental certification programmes used in New Zealand include; carboNZero, EnviroMark, Energy Star, WELS (Water Efficiency Labelling Scheme), Sustainable Wine Growing New Zealand (SWNZ), and the Australasian Environmental Production Declaration (EPD) Programme. Examples of environmental certification programmes used abroad include Origin Green in Ireland, the Linking Environment and Farming (LEAF) system in the UK, and UK Carbon Trust's Carbon Footprint certification.

Figure 1. Cumulative number of ecolabel certification systems in the world from 1940 to 2011 (Source: Marx, 2014).



The purpose of these certification programmes varies according to different stakeholders' perspectives. From the perspective of the food producer, they include differentiating the producer's product in the marketplace in order to either increase or retain its market share,

obtain premium pricing, and by association protect and enhance the producer's reputation. From the perspective of the consumer, an ecolabel on a food product that represents an environmental certification, enables the consumer to choose products that are aligned with their values. From the perspective of governments and quangos, environmental certification programmes are seen as mechanisms for moving societies towards more sustainable consumption and production (SCP) systems through influencing producer activities and consumer purchasing choices. This drives eco-innovation through the different economic sectors.

Characteristics of environmental certification programmes

Environmental certification programmes have different characteristics which may be more, or less, relevant when considering their effectiveness in meeting the multiple purposes of the different stakeholders in society and the economy.

Two fundamental characteristics relate to whether the programmes focus on (a) certification of products and/or organisations, and (b) one or multiple environmental aspects. For example, carboNZero offers certification for both products and organisations, but is only focused on assessment of climate-change impacts. In contrast, SWNZ is just focused on certification of vineyards and wineries (although the SWNZ ecolabel can be used on wine bottles), but assesses a range of environmental aspects.

Concerning what is measured in the certification programme, some programmes take a life cycle perspective in that they are concerned with environmental aspects arising throughout the life cycle of the product or organisation's activities. This extends from the extraction of raw materials through manufacture, distribution, use and on to the end-of-life management. For example, the Australasian EPD Programme certifies documents reporting environmental impacts based on Life Cycle Assessment (LCA) studies. Other programmes may be concerned with just one life-cycle stage. For example, WELS rates the use- phase of products based on their relative water use efficiency and total water consumption.

The type of measurement employed to measure environmental aspects may be either performance-based or technology-assessed, which can also be described as effect- or means-based assessment. Performance- or effect-based indicators reflect actual environmental impacts, such as the quantity of greenhouse gas emissions. Technology- or means-based indicators assess the methods used in the system being studied, such as the livestock stocking rate (Lebacq et al., 2013). For example, carboNZero is performance-based, and measures greenhouse gas emissions. The UK's Land and Environmental Farming (LEAF) certification programme is technology-based, and measures compliance with aspects such as existence of an Environmental Policy, an Energy Audit, and a Water Management Plan (LEAF, 2016).

Legitimacy is an essential characteristic when considering the effectiveness of environmental certification programmes. These programmes must be recognised as legitimate in order for organisations to comply with their standards. Marx (2014) suggests that legitimacy is enhanced through (at least) (i) the openness of the standard-setting process, (ii) the

independence of the auditing and verification process, and (iii) having a dispute settlement system in place (Marx, 2014). In practical terms, the characteristics of certification programmes that build legitimacy include: the involvement of government, quangos, and a range of industry organisations in development of the programme; the existence of independent auditing and verification as part of the certification process (including dispute settlement systems); and demonstrated alignment with international standards and/or other certification programmes. Thus, for example, WELS is regulated by the NZ Ministry for the Environment, and the Energy Wise programme is managed by the Energy Efficiency and Conservation Authority (EECA). The carboNZero certification involves regular and ongoing independent auditing and verification of certified organisations and products, and the certification process is aligned with the ISO 14064 (for organisations), or the UK PAS 2050 (for products) carbon footprint standards. The Australasian EPD Programme is aligned with the International EPD Programme, and registration of an EPD is dependent upon approval by an independent reviewer who has been approved to act in this capacity for the Programme.

Marketing of the certification programme is an important consideration, because those companies seeking certification want to realise a competitive advantage in their market places. Indeed, in a study of environmental certification in the New Zealand wine sector, the need to focus on better marketing of certification programmes was often cited as an important issue by wineries (McLaren and Garnevska, 2014). An important component of this concerns the appearance of the ecolabel that is used to indicate certification on the product, company website, or via other marketing media. Should the ecolabel be a simple "tick" or should it provide more information about environmental performance? Examples of both types of ecolabel can be found on supermarket shelves.

Finally, the uptake of certification programmes may be mandatory for organisations in some countries and industry sectors, whereas it may be voluntary elsewhere. For example, either SWNZ certification or organic/biodynamic certification (or equivalent other certification) is mandatory for New Zealand wine producers because New Zealand Winegrowers requires this in order to include these wines in their marketing, promotional and awards events. Almost all New Zealand wine producers moved to achieve either SWNZ certification, or organic/biodynamic certification by 2012 (New Zealand Winegrowers, 2017). The Irish Origin Green programme is operated by Bord Bia, the Irish Food Board, and is a national sustainability programme for the Irish food and drink industry. Although it is described as a voluntary programme, over 49,000 beef farms and 13,000 dairy farms, 70% of Ireland's dairy farms, had taken part in farm carbon assessments by the end of October 2016 (Bord Bia, 2016). On the other hand, the carboNZero, EnviroMark and Australasian EPD Programmes are voluntary and not targeted at particular economic sectors.

Evaluation of usefulness and efficiency of environmental certification programmes

As noted earlier, the purpose of environmental certification programmes depends upon the different stakeholders' perspectives; they vary from differentiating the producer's product in the marketplace, to choosing between products on the supermarket shelf, to moving societies towards more sustainable consumption and production (SCP) systems. Given their

proliferation over the last twenty-five years, it is likely they have a role to play in the realisation of more sustainable societies. In particular, in New Zealand, there is merit in considering the development of a New Zealand government-supported programme, similar to the Irish Origin Green programme. This would enable New Zealand's primary producers to capitalise on the "clean and green" image of New Zealand by providing a mechanism to demonstrate environmental credentials across different primary sectors whilst providing economies of scale in delivery of the programme, and set a level playing field for all producers. An additional benefit would be to decrease the likelihood of laggard producers inflicting damage on the positive sustainability story that is associated with New Zealand products. It would certainly add value for growers, marketers and New Zealand's brand image.

However, these benefits have to be balanced against the increased time and costs of complying with the requirements of a national certification programme. It is therefore worth considering the eco-efficiency of the characteristics outlined in the previous section when evaluating options for ecolabelling of New Zealand food products. In this context, eco-efficiency refers to the balance between realisation of reduced environmental impacts relative to the financial costs associated with certification for primary producers.

Firstly, obviously legitimacy is essential for a programme. This would be enhanced by a government-supported programme, alignment with international standards, and independent auditing and verification of the certification process. Likewise, a programme should address multiple environmental aspects and take a life cycle approach. The alternative makes producers vulnerable to accusations of 'greenwash' by focusing on some types of environmental impacts, whilst ignoring others and/or addressing the "wrong" life cycle stages.

However, the particular characteristics where eco-efficiency should be given closer consideration include:

- Certification of products versus organisations
- Performance- versus technology-based criteria used in certification process
- Ecolabel as a simple "tick" versus an ecolabel providing more detailed information on environmental performance.

It is unclear whether certification of products or organisations is likely to yield greatest competitive advantage. It may be argued that it is New Zealand products, rather than companies, that are sitting on supermarket shelves in international markets. Therefore it may be more advantageous to focus on products. On the other hand, it may be more eco-efficient to certify an organisation when it produces many different products. Ideally a certification programme can provide both types of certification from one integrated data collection, auditing and verification process. This would minimise time and compliance costs.

Regarding "what is measured", the technology-based criteria are likely to be more eco-efficient than performance-based criteria. Consider, for example, a company that has installed solar panels on its roof that meet all of its electricity requirements. It will take more

time to measure the company's electricity use and calculate a carbon footprint, than it will to tick a box confirming that it generates its own renewable electricity. However, a technology-based certification programme must be underpinned by robust research that has identified the significant environmental aspects associated with different technologies and has developed relevant criteria based on this information.

The type of ecolabel to be used is less about eco-efficiency, than about differentiating products in the marketplace. Again, it is important that ecolabels are underpinned by robust research that has identified the types that are most likely to convey credible and influential information to others in the supply chain and the value chain.

Discussion and conclusions

It has been recognised for many years that New Zealand's primary sector companies will benefit economically by distinguishing themselves based on their environmental credentials (e.g. KPMG, 2010; Green Growth Advisory Group, 2011; Pure Advantage, 2017). One way of doing this that has gained traction elsewhere over the last twenty-five years, is to make use of environmental certification programmes. However, there has been relatively little uptake of environmental certification programmes in New Zealand.

There is growing international criticism of New Zealand's clean and green image (Kaefer, 2016), and rising awareness about issues like deteriorating water quality and increasing greenhouse gas emissions. So it is time to reconsider use of environmental certification programmes as a means of demonstrating the primary sectors' environmental credentials. In particular, as noted earlier, a national certification programme can deliver economies of scale and a level playing field for producers as well as capitalising on New Zealand's "clean and green" image. However, such a programme should be eco-efficient in order to facilitate its uptake. This requires consideration of its focus and measurement methods, and mechanisms for enhancing legitimacy, marketing, and uptake. In particular, the following specific characteristics require further consideration:

- Fundamental focus:
    - Certification of products versus organisations
    - Assessment of single versus multiple environmental aspects
- What is measured:
    - Use of a life cycle perspective versus focus on specific life cycle stages in developing criteria for certification
    - Performance versus technology-based criteria used in certification process
- Legitimacy:
    - Role of government and/or private organisations in developing and promoting certification programmes.
    - Independent auditing and verification of certification process and results
    - Alignment with international standards/certification programmes

- Marketing:
    - Ecolabel as a simple ”tick” versus an ecolabel providing more detailed information on environmental performance
- Uptake:
    - Certification programme as being voluntary versus mandatory for companies in an economic sector.

A New Zealand-branded national environmental certification programme that addresses our diverse primary sectors will require leadership from government and industry sectors in order to make it a reality. However, it has potential to add value to New Zealand products marketed abroad and, with careful attention to the characteristics of the programme, it can provide an eco-efficient way forward.

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