## SUSTAINABILITY LABELLING SCHEMES: THE LOGIC OF THEIR CLAIMS AND THEIR FUNCTIONS FOR STAKEHOLDERS



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In this paper the author examines the role of labelling and certification schemes in the pursuit of policies to make production and consumption processes more sustainable. From a logical point of view, labels are conceived as claims put forward by sellers to inform buyers about certain characteristics of their products. In the case of sustainability, labels might identify relevant 'ideals' to approach and/or significant 'ills' to escape. Toulmin's argumentation theory is used to show how claims can be substantiated and challenged. Based on literature on the behaviour of the main stakeholders, the author discusses what labelling means for producers, consumers, policymakers and other groups in society. In the conclusions, attention is drawn to the way in which societal pressure might interact with market forces to shape the information environment for products

\* Correspondence to: Joop de Boer, Institute for Environmental Studies, Vrije Universiteit Amsterdam, De Boelelaan 1087, 1081 HV Amsterdam, The Netherlands. E-mail: joop.de.boer@ivm.vu.nl and services. As a result, the role of sustainability labels might become more differentiated, varying from direct shopping aids to background quality assurances. Copyright © 2003 John Wiley & Sons, Ltd and ERP Environment.

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### **INTRODUCTION**

abels in the form of trademarks and brand names are part of a rich tradition of practices that sellers have developed to assure buyers of the authenticity of their products or services. Modern quality assurances are often aimed to attend to changing buyer demands and new competitive positions in the market. Environmental labelling schemes are relatively new in this context and that applies even more to social labelling schemes and sustainability labelling in general (Browne *et al.*, 2000). By their nature, these schemes refer to qualities of products or production processes that are not only relevant



from a private perspective, such as human health issues, but also from a public perspective, such as issues of biodiversity and social justice. These qualities are neglected by the conventional labelling schemes, but are increasingly recognized by actors in the market-place (Diller, 1999; Reinhardt, 1998). Apparently, there is a need for more comprehensive labelling schemes that are still compatible with a free-market approach. However, the fact that the qualities in question are relatively new and involve both private and public concerns may preclude their smooth incorporation into conventional quality assurance systems.

A crucial problem is the translation of sustainability issues in terms of a company's social responsibility. The World Commission on Environment and Development (WCED, 1987, p. 8) defined sustainable development as 'development that meets the needs of the present without compromising the ability of future generations to meet their own needs'. This definition links the environment's ability to meet present and future needs with theories of social justice (Langhelle, 2000). It refers to long-term balances between ecological, economic and social processes at the level of society as a whole and that makes it difficult to fully specify what sustainability ideally means at the level of a particular product, production process or producer (Pezzey, 1992). In the absence of a fully specified ideal model, there are two more pragmatic strategies one can choose. As the political scientist Charles Lindblom (1990) notes, the first strategy is to identify some relevant 'ideals' to approach (e.g. recycling) whilst acknowledging that these ideals only refer to limited aspects of a complete ideal model. The second strategy is to identify some significant 'ills' to escape (e.g. dependence on pesticide use or labour in sweatshops). Lindblom (1990, p. 42) argues that it is often easier for a heterogeneous society to agree on the ills to be avoided (e.g. severe forms of poverty) than on the ideals to be achieved (e.g. the ideal distribution of income). The same rule applies to the various

issues of sustainability, which can also be identified as ills and ideals. Extreme forms of overconsumption are clearly unwanted, but there are many competing ideas about sustainable production and consumption patterns. Compared with the early 1990s, producers now are more cautious about using 'green claims', as their initial attempts have been heavily criticized by competitors, consumer organizations and governments (Peattie, 2001; Reinhardt, 1998). Accordingly, it is essential to examine the role of sustainability labelling schemes from the perspective of different stakeholders to assess how and under which conditions this instrument might work.

My aim in the present paper is to highlight the role of sustainability labelling schemes by combining a logical analysis of labels with a behavioural analysis of their functions for stakeholders. The next section describes labels as claims put forward by sellers to inform buyers. This analysis is elaborated in the following sections, which are based on literature on the behaviour of the main stakeholders, namely companies, consumers, policymakers and other groups in society. In the final section, I shall draw together these discussions and come to conclusions.

#### LABELS AS CLAIMS

Labels are not just messages about a product or a service but claims stating that it has particular properties or features. In fact, even the instrument of labelling itself is a claim, as it refers to certain characteristics of the procedure under which the label is awarded. One of the ways to get a better understanding of such claims is to consider them from the perspective of logical theory. A claim is essentially a conclusion and the merits of this conclusion can be established by analysing the arguments on which it is based. Since the arguments will differ, depending on the content of the claim, it is the analysis of their layout or structure that counts. A general framework for the analysis



of arguments has been developed by the British philosopher Stephen Toulmin (1958), who took the discipline of jurisprudence as a starting point to elaborate logical theory in a practical way. His approach focuses on the set of statements that provide the rationale or plausibility for arguing that certain data (D) imply a claim (C). The plausibility of the relationship between data and claim is based on warrants (W), which are supported by backings (B). In contrast, its plausibility can be challenged by rebuttals (R). The next two examples illustrate how this particular layout can be used.

The first example is the claim that 'Sustainability labelling is a kind of quality assurance in the marketplace'. In this case the datum is in the form of a description, namely 'Sustainability labelling discloses certain features of a product or production process'. In this description I chose the term 'disclosure' because labelling will reveal differences between more sustainable and less sustainable practices, which buyers might have been aware of but which they could not identify in the market. Next, bridgelike statements or warrants are used to connect the datum with the claim. In this example, the warrant is taken from the field of economics (Reinhardt, 1998) and it can be stated as follows. 'Any disclosed feature that informed buyers are willing to pay for is a quality of that product.' Therefore, almost certainly, 'Sustainability labelling is a kind of quality assurance'. However, the warrant may not convince every challenger of the claim and it is necessary to have other logical arguments in the form of backings to ensure that the warrant will possess authority. In the present example, the backing refers to the scientific literature: 'Several studies have shown that at least a number of buyers are willing to pay extra for a product that has been created in a more sustainable manner' (Ozanne and Vlosky, 1997). As a counterforce to the backing, however, there is always an opportunity for rebuttal, indicating circumstances in which the general authority of the warrant would have to be set aside. Rebuttals to the present argument are that the message of sustainability is often too complicated for a straightforward quality disclosure and that labelling causes unwanted side-effects in the market, which will turn into negative qualities sooner or later (e.g. accusations of unfair trading). These rebuttals can lead to a qualified conclusion, such as 'Sustainability labelling is a kind of quality assurance in the marketplace, unless its organizers have disregarded the rules of good communication and fair competition'.

The above is not very specific about the nature of sustainability labelling. A major difference with other quality assurance systems is that sustainability refers not only to private but also to public concerns. How can a private party claim that these concerns are addressed in an appropriate way? Focusing on a hypothetical sustainability label, the layout of arguments in the second example is as follows. In support of the claim that a certain product has been created in a sustainable manner, its producer can appeal to the datum that a special label has been attributed to it, bundling information about the production process. The warrant is that producers who use such a label do comply with a set of standards for sustainable production processes. Since, however, questions of sustainability are always subject to qualifications and conditions, the conclusion may be rebutted, for example, because the production process is only relatively more sustainable than others and complies only with current standards for sustainability. If the warrant is challenged, it can make an important difference whether and how the claim is regulated. To support the strength of arguments, therefore, the backing might be derived from knowledge about successful quality assurance systems. A strong case would imply that (i) the sustainability standards have been endorsed by one or more relevant and independent parties (i.e. recognition), (ii) compliance with the accepted set of standards is verified by an independent third party (i.e. certification) and (iii) the party that is verifying



Table 1. Examples of labels in the various categories

Label as a benchmark to achieve ideals	Label as a bottom line to avoid ills
EU eco-label	Organic label Fair trade label
Energy consumption label	Dolphin Safe label No Sweat label Green electricity label
	achieve ideals  EU eco-label

compliance has been formally recognized by an authoritative body (i.e. accreditation).

This layout of arguments can be used to describe many different labels. The analysis of the layout can reveal which kinds of knowledge and value judgement are used to make a claim plausible. In addition, it can show how the initial warrants or backings are challenged and how the claim has to be qualified from a logical point of view. This requires a further analysis of sustainability to identify single issues in the form of 'ideals' or 'ills', and to assess how the single issues might be combined into a more comprehensive multi-issue label. Such a combination will not always be feasible, because there is a marked difference between environmental labels and social labels. Environmental labels, especially the multi-issue eco-labels, are often designed as a benchmark of excellence; the eco-label claims to disclose the top 5–30% of the products in a certain category from the perspective of environmental performance (OECD, 1997, p. 14). Social labels are often designed to become the bottom line in the market; the label claims to disclose those products or services that have at least been created in a socially acceptable manner.

This difference in strategy has several implications. It means that sustainability labelling cannot simply replace the existing environmental and social labels, as there may be good reasons to keep these instruments. Whether it is relevant to disclose both environmental and social performance will depend, among other things, on the economic sector and the products or services in question. In addition, the companies involved may have their own strategic preferences. Depending on their position in the market and their ambitions, some companies may want to disclose their top ranking, whereas others may want to disclose their compliance with a proper bottom line.

An additional strategic point is the difference between multi-sector and sector-specific labels. Multi-sector labels, such as eco-labels, are intended to identify comparable levels of performance, regardless of the product category. It has been argued that multi-sector labels are suitable for product sectors where standards can be easily defined and where no controversial political issues exist (Truffer et al., 2001). For more complex products or products that avoid particular ills (e.g. canned tuna caught in a dolphin safe way), sector-specific labels have been developed that are tailor made for the specific problem at hand. This means that there are at least four categories of labels, as specified in Table 1.

The position of eco-labels as multi-sector labels meant to achieve 'ideals' has been seriously criticized. For example, a major argument of business representatives (e.g. Shimp, 1999) is the lack of accepted methodology to clearly distinguish individual products across an entire product category. Moreover, the label's claim to identify an 'ideal' has been challenged, because the standards involved are based on an evaluation of products as they exist in the marketplace today, and on publicly known technologies. Thus, the standards cannot anticipate what will develop tomorrow



and, instead, can create barriers to innovation. This criticism seems to confirm Lindblom's (1990) observation that it is often harder to agree on the specification of 'ideals' than of 'ills.'

A final point for the present discussion is what conclusion can be drawn in the absence of a label. Whether the presence or absence of a label makes a difference will obviously depend on the degree to which environmental and social issues are part of the competition in the marketing of the products or services involved. If these issues are part of the competition, the label's presence or absence can be highly diagnostic for a buyer. In other cases, however, the absence of a label will not be informative at all. It can mean that there are no significant sustainability-related differences between the products or services in a certain category. It can also mean that producers have decided not to compete with each other on a sustainability issue to protect their industry's image and avoid additional costs. Hence, the logical analysis of a claim is one thing; it is another to find out how that claim is perceived by the actors in the marketplace, such as producers, retailers, purchasers and regulators.

## WHAT LABELLING MEANS FOR SELLERS

Labelling of products or services is one of the ways in which a company can attempt to improve its competitive position in the market and in its wider environment. The reasons to choose this option instead of others might be quite diverse, but they can always be translated into traditional business criteria, aimed at short-term and long-term profits. Notably, these criteria do not necessarily encourage strong competition. For any company there are circumstances in which it is more advantageous to opt for collaboration with other companies or organizations than to proceed on its own. This is particularly relevant for a company's decision on labelling and certifica-

tion, because these options will often imply both competitive and co-operative aspects. The incentives that can stimulate a company to improve its environmental and social performance will also depend on various kinds of societal pressure, showing the interests of government agencies, shareholders, customers, business associations and other organizations. In varying degrees these actors have the ability to raise and to maintain pressure on certain companies and to turn environmental or social issues into economic ones that affect the companies' profitability.

Companies that are in a position to claim voluntarily that their environmental and social performance is fully compatible with public demands can do so in different ways. When this performance is achieved by all their business units and also by their business partners in the supply chain, they may adopt a 'code of conduct' to articulate their commitments to particular principles and practices (Diller, 1999). In the field of marketing, a company may invest in its brand or store name to make the relevant sustainability issues consistent with other signals that it is sending to its customers. When their sustainability performance only refers to certain products or services, companies may use more specific signals to bundle sustainability issues with product quality information and to gain attention from qualitysensitive customers. Such signals include quality assurance labels certified by the company itself (first party), by industry-related associations or the country of origin (second party) or by an independent third party.

A company's decision on sustainability labelling and certification will be governed by strategic and political circumstances, such as the ripeness of a certain issue at the time the options are contemplated (Reinhardt, 1998). Whether an issue is ripe will be influenced on the one hand by technological innovations related to sustainability ideals and on the other hand by public campaigns that emphasize the ills of an industry. A well known example of collective responses to public criticism is the



development of the Responsible Care Program in the chemical industry. Likewise, societal concern about the harvesting of resources such as fish stocks and forests has generated collective initiatives to provide companies with a market-based incentive to maintain sustainable resources and to counter the common perception by the general public that most fisheries and forest practices do irreversible damage to the natural environment (Kozak and Maness, 2001; Reinhardt, 1998).

These examples show that a company's decision on labelling and certification might involve a mixture of competitive and collaborative strategies. Depending on its size, a company may have different reasons for a collaborative approach, but cost savings and risk reductions will always be important. The development of a certification scheme means that the companies involved are prepared to share knowledge 'from the kitchen' and want to learn about a particular activity, such as sustainable resource management (Kiker and Putz, 1997). A collaborative approach can be necessary to overcome barriers to the dissemination of credible information about sustainability issues. The assurance by a distinctive label, indicating collective membership of an organization or certification by an independent third party, may serve this purpose at lower costs than other marketing strategies that can differentiate a product. However, companies may also collectively decide not to compete with each other on a sustainability issue to protect their industry's image and avoid additional costs. Accordingly, much will depend on the pressure of other actors, who might emphasize the relevance of the issue.

# WHAT LABELLING MEANS FOR CONSUMERS

Because consumers often have limited incentives to invest in obtaining information, the idea behind labelling seems to be very straightforward. A label is a distinctive symbol reveal-

ing differences between more sustainable and less sustainable practices, which consumers might have been aware of but which they could not identify in the market. By enabling consumers to identify these differences, marketers expected that they would become motivated to buy the labelled products instead of the others. This line of thought might be too simple, however. What happens in practice seems to be that consumers often say to be very concerned about sustainability issues, but that their actual purchases are something of a disappointment to many companies that have tried to create 'green' market segments (Peattie, 2001). An obvious cause of this discrepancy is the level of the premium price that is often charged for the 'green' product. A more general explanation might be that consumers and producers do not recognize or trust each other's intentions and that they need more time to adapt themselves to the changing circumstances in the marketplace.

Whether it is the premium price that explains the behaviour of consumers or some other factor requires a closer look at their motives and lifestyles. There are large differences between consumers in the strength of their motivation to include pro-environmental or moral considerations into their purchasing decisions (Browne et al., 2000). Moreover, many consumers who make an ecologically or ethically motivated choice in the context of a certain product class may not do so in the context of another. The reason is that they are often dealing with mixed motives. Consumers who are well aware of the ethical nature of purchase decisions may not change their buying pattern as long as that would be inconsistent with their loyalty to a particular taste, brand or supplier (Newholm, 2000).

These examples indicate that consumers' preferences cannot simply be read off their purchases in the market. At the moment of the purchase decision, the label's impact will depend on how consumers understand, trust and value its claim in relation to other choice criteria. Given the many hurdles that might



hold consumers back from making a well informed choice between more sustainable and less sustainable practices, it is currently emphasized in the marketing literature that the companies involved should pay more attention to the question of what kind of green products consumers really want (Meyer, 2001; Peattie, 2001). If the only merits of a green product seem to be that it is considered preferable from an environmental or moral point of view, many consumers might not be fully convinced that they should search for that product and pay a price premium for it. In order to create more value for these consumers, both the design and the marketing of a product should be addressed to all the product attributes that they consider relevant, such as functional and aesthetical features, together with distinctive environmental and moral advantages. Depending on the product category (e.g. luxuries or necessities) and the market segment the product is aimed at, this strategy might imply that the product's environmental and moral advantage is presented as one of its self-evident qualities rather than as its main selling-point.

A well designed marketing strategy can create many opportunities for consumers to learn how to recognize a label and evaluate the meaning of its claim. This learning process may also increase consumers' awareness of sustainability issues in general, even if they do not use the label as a direct shopping aid. Such an additional role of labelling policies is often overlooked (Caswell, 1997). However, consumer learning is not a smoothly running process and it might also be slowed by possible gaps between producers' and consumers' understanding of what 'sustainability' means. Several large companies, such as DuPont and Monsanto, describe sustainability in terms of 'ecologically sound, economically viable and socially acceptable'. In contrast, other organizations as well as consumers may use 'sustainability' as a kind of shorthand for the 'green and good' to indicate production and consumption systems associated with a broader range of attributes, such as community-based efforts to build healthy, just and local food systems (Kloppenburg *et al.*, 2000). Such a gap might hamper the understanding of sustainability labelling.

To return to an earlier point, it has to be noted that consumers should not only trust the difference between labelled and unlabelled products, but also the reasons for a price premium. As a result of the bad reputation of the 'green' claims in the early 1990s, many consumers have become very sceptical about the behaviour of companies (Peattie, 2001). This scepticism adds another motive to consumers' purchasing decisions. Those consumers, in particular, who are highly motivated to include pro-environmental or moral considerations into their purchasing decisions may also be highly motivated to scrutinize the claims and the premium prices of labelled products.

### WHAT LABELLING MEANS FOR POLICYMAKERS

Supporting or regulating labelling schemes are tools that policymakers have at their disposal to address some important aspects of two policy issues. The first issue is mainly concerned with the economic interests of consumers and comes down to correcting for asymmetries in information, because sellers have more information than buyers about product qualities. An important aspect of this issue is protection of consumers against any substantial risks associated with a product or service usage, for example through warning labels, and prevention of misleading advertising or deceptive environmental claims. The second issue refers to government policies to achieve sustainability objectives, particularly by promoting the design and marketing of environmentally sound products or services. From the perspective of a policymaker, labelling and certification schemes can be seen as tools that create incentives for businesses to change the market in a more sustainable direction.



With regard to these wide-ranging policy issues, labelling and certification schemes typically address those aspects that are related to the information environment for products or services. Such an intervention may have farreaching consequences in the marketplace, especially if the information refers to culturally 'sensitive' issues, such as health and moral concerns. Well known government interventions include establishing mandatory labelling laws (e.g. to enforce the disclosure of a disadvantage), regulating claims through legal definitions of specific terms (e.g. 'organic') and providing services to support voluntary labelling (e.g. financing public education). Additionally, governments may incorporate sustainability considerations into public procurement by linking the terms of purchase to labelling and certification schemes. These interventions can often be conceived as complements to or substitutes for other tools, such as the banning of hazardous products.

Whether and in which form labelling is an appropriate policy tool for the specific issue involved will, among other things, depend on the regulatory context and its matching sociocultural tradition. For example, a strong legal and cultural emphasis on consumer right to know combined with consumer responsibility to use the information properly, such as in the United States (Golan et al., 2001), makes labelling a policy tool that is highly compatible with the values and practices of all parties concerned. Given the strategic role of information in this context, however, potential government interventions may become hotly contested, as they leave much room for legal disputes over the description of claims and appropriate disclaimers. Observers have noted that labelling may often represent a short-term solution to a difficult regulatory problem (Golan et al., 2001). If there are diverging opinions on the appropriate regulatory response to an issue, labelling can become a compromise that is particularly attractive to policymakers because of its market-based character. In the long term, labelling can become one of the first steps in a

government strategy of gradually increasing pressure on producers and consumers to steer their behaviour in a particular direction (e.g. voluntary labelling as a precursor to mandatory labelling). Although purely information-based policies will usually be insufficient to achieve societal 'ideals' or avoid societal 'ills,' they may effectively prepare the ground for more far-reaching measures.

A final consideration for policymakers in evaluating interventions in labelling refers to potential conflicts between the national right to regulate and international trade-related rules. Despite the differences between countries in the way they are dealing with the issues of consumer protection and sustainability, there are common attempts to improve the transparency of quality assurances and the substantiation of socially relevant claims, whether they are directly product related, such as health claims for foods, or not, such as ethical claims (Zadek et al., 1998). One of the reasons might be that labelling can only keep its status as a market-based policy tool if policymakers are able to adapt government interventions to the developments in the market, and the latter may require both standardization and differentiation of quality assurances and claims.

## WHAT LABELLING MEANS FOR OTHER GROUPS

Supporting or criticizing labelling schemes are tools that environmental or social NGOs can use to put pressure on producers and consumers to make progress towards sustainability. This potential function of labelling for third parties has been highlighted by the economist Julie Caswell (1997), who argues that the analysis of labelling policies should not be restricted to their role as a direct aid to consumers in making purchase decisions. For example, a labelling initiative may stimulate public discussion and crystallize a set of judgements on the environmentally or morally rele-



vant qualities of a product. The discussion on these judgements can provide guidelines for appropriate actions by producers, retailers, consumers and other groups. A labelling initiative may also create new relationships between companies and NGOs in the development of standards for practices that are sufficiently more sustainable than the conventional ones (Kiker and Putz, 1997). This can be particularly important in view of the possible gap between sustainability issues as conceived by large companies and those perceived by other groups.

The role of critics of conventional practices is most fundamentally performed by those NGOs who act in a tradition of opposition to the domination of society by consumerism. Consumerism has always provoked opposition, inspired by various moral, aesthetical and political themes (Stearns, 2001). Although the rather heterogeneous nature of this opposition should not be underestimated, its key themes have much in common with the concept of sustainability. This means that a variety of protest groups and more established NGOs may put pressure on companies and governments, for example by public campaigns or court actions to disseminate information about the environmental and social consequences of consumption. As far as their criticism is based on opposition to consumerism, it is not likely that they will support a labelling initiative to promote sustainable consumption without also promoting other themes, such as consuming less, consuming second hand products or consuming products for a longer time. A more radical point of view, noted by Peattie (2001), is that labelling will do too little to transform the environmental or social impacts of entire markets and that it should be denounced as potentially counterproductive. In contrast, groups that are closer to the mainstream, such as many consumer organizations, show a broad support for labelling as a tool for sustainable consumption, provided that misleading claims are eliminated (Consumers International, 1999).

#### CONCLUSIONS

Taken together, the evidence in the preceding sections underlines the special status of sustainability labelling. The claim that a certain product or service has an advantage over a conventional one from the perspective of sustainability is more than just a marketing tool. It refers to ills that can be avoided or ideals that can be achieved in relation to the present production and consumption patterns. By its nature, it is closely connected with the pressure that is generated by all kinds of actor in society to change these patterns in a more sustainable direction. Because this pressure is not the same in all sectors and industries, it is not feasible to draw generalizing conclusions on the effectiveness of labelling and certification schemes. What labelling might produce, at the very least, is that it helps us to learn more about the arguments used to substantiate or to challenge a claim. This learning process requires a transparent organization of labelling schemes with enough opportunities for stakeholders to participate in the design of sustainability standards.

A more effective change might be produced through the interaction between societal pressure and market forces. Many companies will need improved control over all the relevant aspects of product quality, including the way the product has been produced. This will often require more functional co-ordination of widely dispersed activities and more disclosure of information across the whole supply chain. Improved control is particularly necessary for those companies that want to supply to increasingly discriminating (niche) markets. Sustainability issues may be incorporated into their quality management and quality assurance programmes, but that will depend on the ripeness of the issue involved (i.e. innovations and 'hot topics'). Moreover, a company's strategy to improve its sustainability performance may show a mixture of competitive and collaborative approaches. Whether it will disclose its sustainability performance by a dis-



tinctive label or by some other means is a matter of benefits and costs in view of its marketing opportunities.

Producers and consumers are still learning how to communicate about sustainability issues in the context of the marketplace. Actually, both of them have to cope with mixed motives, which include other considerations than the environmental and moral advantage of a product. Consumers can learn, but this takes time and also positive experiences instead of lingering doubts about deceptive commercial practices. Similarly, in order to pursue the diffusion of ecologically or ethically sound products from small niche markets to mass markets producers will need time to find out what kind of 'green and good' products consumers really want.

As a result of new marketing strategies, it can be expected that the role of environmental and social labels in the communication between companies and consumers will become more differentiated, varying from direct shopping aids to background quality assurances. The new strategies may also involve the information the labelling is intended to convey to consumers increasingly referring to the overall corporate image of a store chain or a line of products. In that case, a retailer or producer can claim the distinctive environmental and moral advantage with regard to an assortment of products. This development might increase the probability that consumers come into contact with a labelled product and that they include it in their set of choice alternatives.

The potential change in the information environment for products and services may give rise to additional questions about whether and how claims should be regulated. Government interventions in labelling will often be a complement to or a substitute for other policy tools to improve consumer protection or to achieve sustainability objectives. The links with other tools and broader issues have important consequences for the design and the evaluation of an intervention, because

labelling will be insufficient to achieve these goals if it is merely an isolated action. Moreover, if policymakers want to optimize the design of this tool, they should adapt the intervention carefully to the developments in the market and these may require both standardization and differentiation of claims.

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#### REFERENCES

Browne AW, Harris PJC, Hofny-Collins AH, Pasiecznik N, Wallace RR. 2000. Organic production and ethical trade: definition, practice and links. *Food Policy* **25**: 69–89.

Caswell JA. 1997. Uses of Food Labelling Regulations. OECD: Paris.

Consumers International. 1999. *Green Labels. Consumer Interests and Transatlantic Trade Tensions in Eco-Labelling.* Consumers International: London.

Diller J. 1999. A social conscience in the global marketplace? Labour dimensions of codes of conduct, social labelling and investor initiatives. *International Labour Review* **138**(2): 99–129.

Golan E, Kuchler F, Mitchell L. 2001. Economics of food labeling. *Journal of Consumer Policy* **24**: 117–184.

Kiker CF, Putz FE. 1997. Ecological certification of forest products: economic challenges. *Ecological Economics* **20**: 37–51.

Kloppenburg J, Lezberg S, de Master K, Stevenson GW, Hendrickson J. 2000. Tasting food, tasting sustainability: defining the attributes of an alternative food system with competent, ordinary people. *Human Organization* **59**: 177–186.

Kozak RA, Maness TC. 2001. Quality assurance for value-added wood producers in British Columbia. *Forest Products Journal* **51**: 47–55.

Langhelle, O. 2000. Sustainable development and social justice: expanding the Rawlsian framework of global justice. *Environmental Values* 9: 295–323.



- Lindblom CE. 1990. *Inquiry and Change. The Troubled Attempt to Understand and Shape Society*. Yale University Press: New Haven, CT.
- Meyer A. 2001. What's in it for the customers? Successfully marketing green clothes. *Business Strategy and the Environment* **10**: 317–330.
- Newholm T. 2000. Consumer exit, voice, and loyalty: indicative, legitimation, and regulatory role in agricultural and food ethics. *Journal of Agricultural and Environmental Ethics* 12: 153–164.
- OECD 1997. Eco-Labelling: Actual Effects of Selected Programmes. OECD: Paris.
- Ozanne LK, Vlosky RP. 1997. Willingness to pay for environmentally certified wood products: a consumer perspective. *Forest Products Journal* 47(6): 39–48.
- Peattie K. 2001. Golden goose or wild goose? The hunt for the green consumer. *Business Strategy and the Environment* **10**: 187–199.
- Pezzey J. 1992. Sustainable Development Concepts. An Economic Analysis, World Bank Environment Paper 2. World Bank: Washington, DC.
- Reinhardt FL. 1998. Environmental product differentiation: implications for corporate strategy. *California Management Review* **40**: 43–73.
- Shimp RJ. 1999. Perspectives of a consumer goods company concerning eco-labeling. In *Conclusions and Papers Presented at the International Conference: Green Goods V 'Eco-Labelling for a Sustainable Future'*, Pesso C (ed.). OECD: Paris; 117–119.
- Stearns PN. 2001. *Consumerism in World History*. Routledge: London.

- Toulmin SE. 1958. *The Uses of Argument*. Cambridge University Press: Cambridge.
- Truffer B, Markard J, Wüstenhagen R. 2001. Eco-labeling of electricity strategies and tradeoffs in the definition of environmental standards. *Energy Policy* **29**: 885–897.
- World Commission on Environment and Development (WCED). 1987. *Our Common Future*. Oxford University Press: Oxford.
- Zadek S, Lingayah S, Forstater M. 1998. *Social Labels: Tools for Ethical Trade*. European Commission, DG Employment, Industrial Relations and Social Affairs: Brussels.

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