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The role of discourse in the quest for low-carbon economic practices: A case of standard development in the food sector

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KEYWORDS
Climate change;
Discourse;
Sustainability;
Deep structures;
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Food sector;
Stakeholder interaction

Summary This article explores a collaborative initiative aiming to set standards for low-carbon practices in the Swedish food sector. Examining stakeholders' comments and considerations during formative stages of standard development, the process is explained in terms of how it is influenced by discursive activity. Findings illustrate diverging assumptions and interests, but also how science partly bridges economic and ecological perspectives. However, while more critical arguments serve to validate the initiative, the resulting compromise does not question the canon of market discourse, including consumer sovereignty and the legitimacy of established economic interests. When acknowledging the role of consumers and mainstream business as causes to climate change, voluntary initiatives such as our case could, nevertheless, influence discourse through the spread of knowledge and awareness, and finally facilitate change in practices and acceptance for stricter regulation.

Introduction

Today, there is scientific consensus on climate change and its link to human activity (IPCC, 2007; Rosenzweig et al., 2008). The topic of climate change is also climbing political and corporate agendas and is the theme of many bestselling books (e.g. Friedman, 2008; Gore, 2006; Lynas, 2007). However, the implementation of carbon-cutting policies, and changes in behaviours, is lagging behind these trends. While massive reductions of greenhouse gas (GHG) emissions have been commended by the intergovernmental panel on climate change (IPCC, 2007), global consumption of fossil fuels and subsequent emissions increase (EIA, 2009). In the business sector, more carbon-efficient practices and technologies are spreading, but the average economic transaction continues to be a net contributor to global warming.

One potential explanation for this discrepancy (Beale & Fernando, 2009) is found in economic discourse, dominating ''our talk about society and wellbeing'' (Armour, 1997, p. 1056), and is used by actors to uphold and reproduce certain values and structures. The meanings assigned to nature, society and human activities (de Graaf, 2006), consciously

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or unconsciously, can provide barriers for change towards sustainable economic practices (Hudson, 2005). For example, economic activity is assumed to add value and benefits for society through the transformation and use of elements in nature (soil, minerals, etcetera). In contrast, findings on the causes of climate change target the transformation of certain natural elements, not least the most significant input factor in economic processes, fossil fuels, which account for approximately 86% of world energy consumption (EIA, 2009, p. 203).

Subsequently, due to their embeddedness in economic discourse, (Desjardins, 2007; Subhabrata, 2003), conventional approaches to tackle environmental problems, such as ecoefficiency, may prove insufficient. Although additional research on the link between discursive activity and change in economic practice is needed (e.g. Heracleous & Barrett, 2001; Phillips, Lawrence, & Hardy, 2004), a substantial change in practice, which allows radical emission reductions, could require corresponding changes in the deep structures, i.e. beliefs, assumptions and goals guiding our use of discourse and action (Gergen, 1999; Hay, 2005). What scope does this leave for new, ''low-carbon'', economic practices to emerge?

Indeed, various practice-level organisational responses to global warming can be seen. Examples include hybrid forms of governance, such as the European Emission Trading System, and voluntary carbon management in firms (Okereke, 2007). More recently, voluntary climate labelling initiatives have been taken. As one form of environmental labelling (Rubik, Frankl, Pietroni, & Scheer, 2007), such initiatives can be seen as traditional segmentation efforts, where demand for low-carbon products does not differ from other preferences. Environmental labelling can, however, also challenge conventional ways to produce, organise and trade, as the label, and the corresponding standard, informs about negative impact from business (Alexander & Nicholls, 2006). Subsequently, attempts to persuade businesses to adopt climate standards could be opposed, negotiated or ignored by established actors, and economic discourse can be used to thwart more radical aspects of such standards (cf. Subhabrata, 2003). This raises questions about the potential of voluntary standards and labels as means to meet the challenge of climate change, requiring swift and radical change in economic practices.

This article explores a collaborative initiative taken by the major Swedish developer of organic standards. Its ambition was to set standards for low-carbon practices through the food sector (e.g. production, packaging, distribution); standards that would constitute the basis for a product label. We focus on the formative stages of climate standard development through an examination of stakeholders' comments and considerations within the initiative. The purpose is to explain the process in terms of how discourse and discursive activity support and constrain the scope of implementation for low-carbon practices.

Consequently, this article should enhance the understanding of the link between discourse and practice, especially the roles of discursive deep structures and communicative acts, in the quest for sustainable economic practices. Empirically, the study contributes through a case of standard development for a climate label, a relatively new type of initiative, and opens up for a critical discussion on the implications of the role of such voluntary initiatives in a broader policy context.

Market discourse and sustainability discourse

A discourse can be defined as ''groups of statements that provide a way of talking and thinking about something, thereby giving meaning to social reality'' (de Graaf, 2006, p. 249), or ''a way of signifying a particular domain of social practice from a particular perspective'' (Fairclough, 1995, p. 14). Researchers disagree on the role and effect of discourse: some hold that discourse is beyond the conscious control of single individuals (de Graaf, 2006; Foucault, 1993/1971) whereas others argue that discourse can be used strategically as a resource (Hardy, Palmer, & Phillips, 2000). We position ourselves closer to the second camp; emphasising the agency of individuals relative to discourse, while maintaining that discourse per se can also socially construct our world and hence has implications beyond the control of any single individual. Due to their embeddedness in a wider discursive order, some discourses tend to become more widely used and hence are more influential and taken for granted than others (Craig & Amernic, 2004).

A case in point, as well as an important domain in relation to the causes of climate change, is economic discourse. Economic and management theories has spread beyond business schools, are used as frames for legitimate action among managers and policy-makers (Ghoshal, 2005), and economic discourse has come to dominate other social discourses and influence what it describes (Armour, 1997; cf. Hardy et al., 2000).

Within the sphere of economic discourse, characterised by an emphasis on economic exchange, growth, and efficiency, several varieties can be identified. Examples are discourse influenced by neo-classical economics, Austrian economics and transaction costs (Lunt, Mannion, & Smith, 1996). Although markets are fundamental in economic texts and talk (cf. Armour, 1997; Freeman, Martin, & Parmar, 2007; Lunt et al., 1996), a discourse on free and efficient markets gained momentum as legitimate provider of societal descriptions and goals (cf. Craig & Amernic, 2004; DesJardins, 2007) in the mid 1980s, parallell with a political wave of economic liberalisation. Among its characteristics are market price as ''the primary meaning of 'value''' (Armour, 1997, p. 1070), and a focus on competition (Porter, 1979).

The use of this market discourse (MD) underpins regional and global free trade agreements, the deregulation of sectors such as European agriculture, and the diffusion of market mechanisms into traditional spheres of the public sector (e.g. Lowrie, 2007; Lunt et al., 1996; Nelson, 1997). Although markets are understood as value-free systems for the efficient provision of goods and services, like any discourse, MD rests on value-laden assumptions (Callon, 1998), which are part of deep structures: ''persistent features of discourse that transcend individual texts, speakers, authors, situational contexts, and communicative actions'' (Heracleous & Barrett, 2001, p. 758).

Within market discourse, costs and demand displayed on markets are assumed to reflect a society's real values and needs (Armour, 1997; Nelson, 1997). A reason lies in the

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assumption concerning autonomous and instrumentally rational – self-interested – actors (Armour, 1997; Freeman et al., 2007), but also in the general absence of (purchasing) power differences in descriptions (text and talk) that are made. Furthermore, market discourse emphasises the satisfaction of the human need to consume as its end. Basically, consumer demand directs firms in their profit-seeking behaviours, and, in the aggregate, competition is assumed to lead to the best possible use of resources; the market thus being the efficient means of meeting needs in society (cf. Egri & Pinfield, 1996; Gladwin, Kennelly, & Krause, 1995). This extends to the provision of a sound environment, as, for the market proponent, a relevant valuation and internalisation of environmental costs is the efficient way to solve environmental problems (Dryzek, 2005). Thus, while there is little preoccupation with effectiveness, the market discourse can be characterised by a ''progressive gospel of efficiency'' (Nelson, 1997, p. 195).

Further, the assumption that value is derived from economic activity, rather than from solar energy influx, geological processes and other natural processes, reveals an anthropocentric ontology and ethics (cf. Gladwin et al., 1995). Similar to Foucault's explanation to psychiatry's rise as discourse (Foucault, 1993/1971), the market discourse presupposes a separation between human subjects and natural objects. Nature contains objects which can be given value by and for humans through exploitation and transformation, as they become input into economic processes (cf. Nørgård, 2006). Theoretically, this relates to static efficiency, and the call to use natural resources to maximise the present value of net benefits to society (Tietenberg, 1994). It is a ''short-termist'' (Beale & Fernando, 2009) reductionist model, in that all relevant value creation can be expressed as market exchange (Armour, 1997), and the assumed substitutability among different types of capital is accompanied by a denial of limits posed by nature (Des-Jardins, 2007). Rather, economic growth (including volumes, market shares and profits) is imperative, as it implies satisfaction of needs, and efficient markets lead to economic growth (cf. Egri & Pinfield, 1996, on the 'dominant social discourse').

The market discourse provides interpretive schema (Heracleous & Barrett, 2001), but is also used strategically to describe, legitimate or criticise certain phenomena and actions (cf. Fairclough, 1995). As action is necessary to sustain discourse (Craig & Amernic, 2004; Heracleous, 2006), managers and other economic actors reproduce and legitimate market discourse, for instance when ideas of growth or free trade are expressed or enacted. Such communicative acts are oriented by meanings attached to situations, hence purposeful (Giddens, 1984; Heracleous & Barrett, 2001), and in our interpretation corresponding to ''purposive-rational action'' in a broader sense than (solely) communicative actions in the meaning of Habermas (1984). In summary, this approach to discourse can be depicted as in Figure 1.

Following this approach, our focal domain of social practice (Fairclough, 1995), mainstream economic activity and organisation, is understood through market discourse. There are, however, contending discourses, and, of pivotal importance for our paper, sustainability discourse is increasingly used to influence and challenge economic practices,

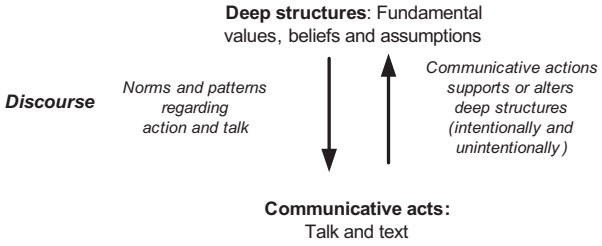

Figure 1 Discourse: interaction between deep structures and communicative acts.

implying a wider responsibility for business paired with increasing demands on accountability for the ecological impact of economic practice. As examples, mainstream producers have adopted environmental concepts and goals (Beale & Fernando, 2009), entered the organic food business (Hughner, McDonagh, Prothero, Schultz, & Stanton, 2007), and presented climate strategies (Okereke, 2007). Often, such efforts represent ''weak sustainability'' discourse (WSD): Traditional economic goals remain untouched while the means of technology and market mechanisms are circumscribed by moderate environmental regulations (Orsato & Clegg, 2005). The world-view tends to be ''techno-rational'' and anthropocentric, where ''environmental managers can concentrate on 'real' scientific facts'', facts that often are used to refute environmentalists' claims (Kallio, Nordberg, & Ahonen, 2007, p. 45).

While WSD implies a belief that environmental problems can be solved largely within current societal frames (e.g. Sheu & Lo, 2005), ''strong'' positions commence from the capacity and limits of ecosystems, identifying critical natural capital and refuting (full) substitutability between human-made capital and nature (Hopwood, Mellor, & O'Brien, 2005). Subsequently, a core critique of mainstream economic organisation is that value chains follow a faulty cradle-to-grave logic: ecosystems are assumed to be infinitely resilient and inexhaustible as suppliers (cf. Ekins, Simon, Deutsch, Folke, & DeGroot, 2003). Hence, industry's serious and rising GHG emissions reveal fundamental dysfunctions which cannot be met with efficiency improvements.

Rather, a strong sustainability discourse (SSD) would describe climate change as a comprehensive question about relationships between man, society and nature. The alternative world views within SSD call attention to a diversity of goals and stakeholder satisfaction in a wide sense, including intra- and intergenerational justice (Hopwood et al., 2005; Kallio et al., 2007). Moreover, inclusive and non-reductionist views on values and needs conflicts with the belief that self interest and system features, ''the invisible hand'', are sufficient for the coordination and distribution of utility. Consequently, new forms of governance, and new economic ''practices, flows and spaces'' would be needed (Hudson, 2005). As regards the ends, a steady-state economy, conservation, or even enhancement of the natural capital, are among the aspirations within SSD (Devkota, 2005; Hopwood et al., 2005).

We acknowledge that there are alternative ways to distinguish among discourses (see e.g. Dryzek, 2005), and boundaries between MD, WSD and SSD are not clear-cut.

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One crucial issue is whether or not sustainability concerns and the capitalistic market system are compatible (Schweickart, 2009; Storm, 2009). There are positions basically combining ''strong'' assumptions with market reform (see e.g. Lovins, Lovins, & Hawken, 1999) while others call for an ''ecological revolution'' where the current capitalist system is replaced (Foster, Clark, & York, 2009).

Nevertheless, on the basis of four guiding dimensions (cf. Bonnedahl & Eriksson, 2007; Egri & Pinfield, 1996; Gladwin et al., 1995), a rough categorisation of contending discourses has been made in Table 1. First, deep structural features related to ontology and ethics are described, followed by dimensions closer to practice: basic principles that relate to the norms in Figure 1, guiding and promoting economic activity, and criteria, which provide examples of established concepts within text and talk (communicative acts).

Discourse and change

Although it is difficult to radically reform or replace a dominant discourse, it is always in a state of change; both an unintended and an intended result of human interaction. Actors may influence discourse when their texts or talk is ''distributed and interpreted by other actors'' (Phillips et al., 2004, p. 640). Here, texts (and talk) that are perceived to be legitimate are more likely to leave traces and disseminate (Glynn & Lounsbury, 2005). We have argued that the discourse on free and efficient markets (MD) not only provides a perceived truth within its (economic) practice (cf. Foucault, 1993/1971) but that it also constitutes a dominant economic and social discourse. It is, however, challenged by empirical findings on the relation between economic practices and climate change, and contested by sustainability discourse. The increased recognition of climate-related arguments in society could thus be important in directing economic activities. Power, in terms of centrality, resources, or formal authority can also strengthen the possibility to influence discourse (Phillips et al., 2004). Furthermore, the need for change in accordance with critical texts, such as scientific reports or climate standards, may be supported by the perceived urgency or ''the degree to which managerial delay in attending to the claim or

Table 1 Three alternative discourses on economic organisation.

Dimension	Discourse		
	Market (MD)	Weak sustainability (WSD)	Strong sustainability (SSD)
Ontology			
Ecosystem resilience	Robust	Robust/vulnerable	Highly vulnerable
Human versus natural capital	Full substitutes	Partial substitutes	Complements
Time scale	Short	Short/medium	Indefinite
Hierarchy of systems	Economic system superior	Interdependence between economic, social and ecological systems	Ecological systems superior
Primary type of human rationality	Instrumental	Instrumental	Values/beliefs
Ethics			
Value of other species and ecosystems	Value as resources (anthropocentrism)	Value mainly as resources (anthropocentrism)	Inherent value (biocentrism)
Human relation to nature	Disassociation	Interdependence	Association
Human role	Domination	Domination/stewardship	Plain member
Ethical responsibility	One self, maximize self-interest	Recognition of humans distant in time and space	All humans, species and ecosystems
Principles for economic conceptualisation			
Approach to natural capital	Exploit and convert for profit maximization	Prudent exploitation	Protect and enhance
Approach to economic actors	Autonomy, integrity	Interdependence, integrity	Interdependence, variety
Limits to economic organisation	Perceived utility/ market price	Reduced benefits from the environment; social costs	Resilience; needs and rights of individuals and species
Goal fulfilment	Materialism	Materialism/post-materialism	Non-material values
Economic growth	Good/necessary	Good, controlled	Bad/eliminate
Criteria for economic organisation			
Framework for economic organisation	Free market	Market subject to environmental regulations	Steady-state economy
Corporate goals	Profit and growth	Profit, sustainable growth	Stakeholder satisfaction
Focus for economic activities	Efficiency	Eco-efficiency	Multi-value effectiveness
Sources for solutions	Market mechanisms, technology	Market, technology, regulation	Personal development, regulation

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relationship is unacceptable to the stakeholder'' (Mitchell, Agle, & Wood, 1997, p. 867).

However, support for changes in economic practices may not only emanate from new meanings attached to situations (e.g. changes in how we interpret the relation between economic growth and eco-systems). New practices may also stimulate the production of new texts and talk (Phillips et al., 2004), such as when initiatives to deal with GHG-emissions influence the description of activities by introducing concepts such as climate neutrality and carbon footprints. Returning to Figure 1, new ''climate friendly'' talk and text may in turn inspire change in assumptions and beliefs (Heracleous & Barrett, 2001). It could raise awareness and ''challenge the taken-for-granted conventions of understanding, and simultaneously invite us into new worlds of meaning and action'' (Gergen, 1999, p. 116), possibly resulting in changing principles of economic organisation in order to reduce GHG-emissions sharply.

Among the impediments to such processes are responses from actors deeply embedded in current economic practices and discourse (e.g. Hudson, 2005), presumably perceiving that they stand to lose from such changes. Stakeholders in initiatives for new economic practices may hence resist such change and seek legitimacy and arguments in the market discourse, for example; by keeping economic wealth a higher social goal than environmental protection, and viewing efficient markets as the superior means for production and distribution of wealth.

Change in a particular discourse can also be restricted by its fit with other social discourses (Hardy et al., 2000). As an illustration, the way we talk and think about the efficient transformation of resources (productivity, added value, etcetera) is not only a feature of market discourse, but is also consistent with discourses on technology, science and societal progress (cf. Kallio et al., 2007). Attempts to reconceptualise transformation to meet environmental goals could thus conflict with established views, in which continuous efficiency improvements to enable increased consumption play an important role.

This touches upon a problem with strong interpretations, which ''with their desire to question the role of economic growth, are forced to base their arguments on the complex ground of deep structural change'' (Kallio et al., 2007, p. 42). It may also explain why WSD can offer a compromise between businesses and environmental actors. Studying such compromise, Bulkeley (2000) found that alliances were typically time-limited, and, while changes in text and talk occurred, an emphasis on business as usual remained. Others have also found that weak approaches have not encouraged sufficient changes in economic behaviour (Hudson, 2005).

Method

To investigate how discourse and discursive activity may support or impede the introduction of new economic practices, we employed a single case study design (Siggelkow, 2007), drawing on qualitative methods for data collection and analysis. An initiative to develop standards for low-carbon practices in the food sector was selected. Aiming for a climate label on the Swedish market, the initiative was taken in 2006 by KRAV, the largest Swedish organisation for development of organic standards. Subsequently, the project ''Climate labelling for food'' (CLF) has developed alongside the emerging public interest in climate change. Contextually, a challenge to conventional economic practices and the market discourse could be expected, through new data, ideas and perspectives.

As a related argument for the case, CLF has been debated by actors in and around the sector, and the process was expected to continue to display a dynamic interaction in which different positions meet, allowing interpretations of its discursive embeddedness. Further, aiming industry wide, the CLF potentially affects a large number of actors and their organisation.

In the project, KRAV was first joined by Sigill, which administers the quality label of the Federation of Swedish Farmers (LRF). LRF is the dominant interest and business organisation in the Swedish primary sector, representing some 90,000 enterprises and having considerable influence on policy. Sigill mainly targets conventional farming but is set to guarantee certain criteria for food safety, animal welfare and the environment. Later, five major primary sector organisations and the Swedish Board of Agriculture (the government's authority in agricultural and food policy) joined the CLF.

The first standards, covering parts of the food sector, were presented in 2009, but standard development and discussions over the label proceeded, and the CLF project was scheduled to continue through 2010. After the presentation of the draft standard, the process became more closed with the sponsors and the project organisation as the main actors. However, our focus is on the formative stages of development, until the first draft standard was circulated for consideration. This early part of the process was expected to present the principal discussions about the relevance and role of a climate standard, and hence also better allow for observations of the role of discourse in arguments for and against the CLF, its direction and contents.

When searching for data, we started by defining stakeholders broadly, as organisations affected by, or able to affect the initiative (cf. Mitchell et al., 1997). Such actors will produce talk and text that directly or indirectly comment on the initiative. In doing so, they draw on different discourses, and, for example depending on the legitimacy of the discourse and of the stakeholder, the communicative acts will affect the development of the initiative (cf. Heracleous & Barrett, 2001).

To understand the CLF's context and background, a document study began in 2007. This included stakeholders' homepages and press releases, reports and media coverage on the initiative and on related ventures and issues, concentrating on global warming and the food sector. Semi-structured interviews were performed from February to May 2008. The first interviews, with the people responsible starting up and managing the CLF, focused on the project's background, present status and direction. They also identified relevant organisations for further interviews: those that had participated in workshops or referrals, and those that were referred to us as having strong views on the project or important roles in its development. Moreover, to ensure that a variety of positions in the sector were included, subsequent interviews targeted three categories of

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Table 2 Organisations participating in the study.

Organisation (Abbreviation)	Organisation's role in the Swedish food industry	No. of respondents (interviews) and respondent position	Member of KRAV	Type of importance as stakeholder[a]	Public communication on climate/food-related issues[b]	Participation in workshop on first draft standard	Response to draft referral
Climate labelling for food (CLF)	Create certification system to reduce climate effects, enable conscious consumer choices, strengthen producers' competitiveness	2 (3). Project leader and agri-expert	n.a.	n.a.	n.a.	n.a.	n.a.
KRAV	Sponsor of main Swedish label for organics. CLF initiator	1 (1). Standard development manager	n.a.	n.a.	Yes (significant)	Yes	Yes
Sigill (Swedish Seal of Quality)	Labeller of Swedish produce, subsidiary of the Federation of Swedish Farmers (LRF). Main partner in CLF	1 (1). Rule developer/ environmental expert	Indirect[c]	n.a.	Yes (significant)	Yes	No
ICA	The largest Swedish retailer	1 (1). Environment and CSR manager	Yes	Role	Yes (significant)	No	Yes
Swedish Retailers' Trade Association (SRTA)	The Swedish retailer's industry organisation	2 (1). CEO and a product safety and legislative coordinator	No	Role/views	Yes (limited)	No	Yes
Arla Foods	Dominant Swedish-Danish dairy company	1 (1). Environmental manager (Sweden)	Yes	Role	Yes (significant)	No	No
The Swedish Food Federation (Li)	Trade and employerś federation	1 (1). CEO	No	Role	Yes	No	No
The Foundation Biodynamic Products	Niche wholesaler in the organics field	1 (1). Chairman	Associated	Views	Yes	No	No
National Food Administration	Government agency responsible for food safety, quality and fair practices (incl. labelling)	1 (1). Environmental coordinator	No	Role	Yes	Yes	Yes
Swedish Environmental Management Council (SEMCo)	Semi-governmental organisation working with environmentally related procurement, management and product information	1 (1). Manager environmental product declarations	No	Related standard	Yes	No	No
Fair trade Sweden	NGO focusing on fair trade issues	1 (1). Communication manager	No	Related standard	Low	No	No
Swedish Society for Nature Conservation (SSNC)	Leading Swedish environmental NGO	1 (1). Environmental manager	Yes	Views/related standard	Yes (significant)	Yes	Yes
The Swedish Consumers' Association (SCA)	Sweden's main consumer's rights NGO	1 (1). International secretary	No	Views	Yes (significant)	No	Yes
Animal Rights Sweden (AR)	Major animal rights NGO	1 (1). Political director	Yes	Views	Low	No	Yes

[a] Based on interviews with CLF management.
[b] Based on annual reports, homepages, press releases and other documentation from January 2007 to June 2008.
[c] Both LRF (owner) and Lantmännen (owner's member) are members of KRAV.

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stakeholders: commercial, governmental and non-governmental organisations (NGOs). Nevertheless, multiple stakes in the initiative can be identified. Many have formal linkages to KRAV, but some are also competitors, as they work with related labelling efforts.

Respondents represented the organisation's general policy (e.g. CEO or chairman), were responsible for environmental and/or quality issues or had been involved in the CLF. Altogether, 16 persons from 13 organisations were interviewed (Table 2). A follow-up interview was conducted with one of the project leaders, and one author participated in a workshop in which the draft standard was discussed and prepared.

The interviews were tape-recorded and focused on the organisation's priorities, environmental activities, view of climate change, the CLF and similar initiatives. In accordance with Heracleous and Barrett (2001), we searched for central statements in individual ''texts'', such as transcripts and documentation, as well as intertextual patterns between statements. The analysis transpired in a number of steps. First, on the basis of the draft standard, nine overarching approaches to a new practice were identified (see Table 3). These are general practice-oriented traits of the data material, present in the draft. An example is the discussion about products versus production systems, and the CLF decision to target the latter.

Second, we aimed to identify key considerations that had directed the process, i.e. arguments which relate to the adoption of a certain approach by the CLF. To exemplify, a production system approach was adopted to enable a quick launch. Considerations are, in turn, related to, and often supported by, communicative acts of stakeholders (examples given in Table 4). Third, key considerations were linked to deep structures (cf. Heracleous & Barrett, 2001), using the relations indicated in the theoretical section (in particular Table 1) as interpretative lenses (Hotho & Pollard, 2007). As a final step, we attempt at analytical generalisations by discussing the issue of discursive embeddedness with notice taken to the outcome of the considerations and the need to redraft the standard.

The case: Climate labelling for food (CLF)

In this section, we first describe the background and start-up of the CLF, and participating actors. Next, the context of partly competing initiatives and labels is described, before we focus on the key issues of the case. Views on climate change and its relation to the food sector is followed by sub-sections on the responsibilities of different actors and considerations concerning content, measurement and communication. Finally, the outcome of the process in terms of a draft standard and a referral round is presented.

Background and start-up

Global warming has only recently surfaced as a prioritised issue in Swedish society, but in the autumn of 2006, media coverage and public debate boomed, not least resulting from the attention paid to Al Gore's movie, ''An inconvenient truth''. Interest grew in 2007 in the wake of IPCC report and the joint (Gore/IPCC) Nobel Peace Prize. It has also been acknowledged that the food sector has an important part in global warming, through land use, livestock, the production of fertilizer, transportation, etcetera (IPCC, 2007).

Similar developments in other countries have stimulated activities to reduce industry's climate impact. Early initiatives were taken in the UK (e.g. Tesco and the Carbon Trust). In the Swedish food sector, several projects to tackle or communicate the climate effect of business and consumption were initiated in 2007 and 2008. Thus, the CLF has emerged in a context of related enterprises, where different actors have overlapping memberships and interests.

In 2006, KRAV recognised that climate was a topic of public debate and decided to set a standard. To share experiences and optimise resources, a partnership with Sigill followed. It was met with some surprise due to conflicts between conventional and organic farming, branded by Sigill and KRAV, respectively. The organisations were, however, already connected; Sigill's parent organisation LRF was represented on KRAV's board and several organisations were members of both KRAV and LRF. Together, the two partners invited other actors, to exchange views and build support, e.g. in workshops and reference group meetings.

The project did not gain momentum until the late autumn of 2007, when a group of related organisations formally joined the initiative and provided the necessary financing. These were LRF and three organisations that were members of both KRAV and LRF: the dairy companies Milko and Skånemejerier, and Lantmännen, one of the largest food sector organisations in the Nordic region, owned by Swedish farmers. In addition, the Swedish Board of Agriculture joined the initiative, mainly to offer its expertise.[1]

Each sponsor got representation in the steering committee, but most of the work was conducted by a small project team; a project leader and an expert on agriculture and environment. While steering committee meetings, expert meetings, and the like, were restricted to members, various workshops, referrals and external presentations have provided opportunities for open interaction with stakeholders throughout the CLF process. Interaction has, for instance, also taken place via KRAV's board, where key stakeholders such as retailing organisations were members, and via media and other outlets for public debate.

A label among labels

There are certainly differing views on the benefits of a climate label and what a potential label should encompass. The Swedish government has declared itself a proponent in a debate article in July 2007, but did ''not want to see a compulsory climate label, or that the Government should legislate around a label''. Hence, the ministers of agriculture and environment declared their trust in labelling organisations such as KRAV, with their ''knowledge, experience and networks''. At the time, the question of whether climate criteria would be integrated with KRAV's organics standards or result in a freestanding label remained open.

[1] The meat producer Scan joined the CLF after the period covered in this paper.

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After they joined forces with Sigill, it was decided to aim for an add-on label.

As a result, CLF was criticised for separating climate from other environmental dimensions. Strong opposition came from SSNC, arguing that a label should guide consumers to the least overall environmental impact. Although SSNC also sponsors an eco-label, with criteria for a number of products and services, including grocery retailing (but not food products), it argued that organic production was the best system available and that it should be updated on the climate dimension. KRAV's concerns regarding this issue include potential difficulties for organic producers to meet climate standards, but also potential effects of a new (climate) label on the regular organics label. In relation to the latter, the competitive arena changed when the largest retailer ICA launched a line of organic products in March 2008, implying that KRAV, the dominant label for organic products, became subordinate to the product line label, and in many cases exchanged for the organics label of the European Union (EU; until July 2010, the EU label was optional for organic produce originating from within the EU).

Further complicating matters, parallel to the CLF, KRAV was developing a declaration of origin, motivated by consumer demand and need for clarity, as ''many firms claim to be local although there is confusion regarding the notion of local''. If the relevant criteria are met, the geographic area of origin can now be stated on the product packaging under the regular label. While the Sigill label already promotes domestic produce, Lantmännen (indirect owners of Sigill), introduced a climate declaration for products in April 2008. Unlike the CLF, it builds on a LCA model developed by SEMCo and an Italian engineering firm. With cross-sectoral scope, made for industry's needs and market demand for ''science-based, verified and comparable information about environmental performance'', the model is intended for inclusion of the climate dimension to the EU Ecolabel.

Further, the increasingly popular fair trade label would partially compete with a climate label. The latter may discriminate against extensive transport (especially by airplane) whereas fair trade, in practice, favours long distance trade between developing and developed countries. Yet other standards have indirect relations to the proposed label. Following the increasing attention paid to the meat industry's role in global warming, examples are low profile vegetarian and Animal Rights labels, branding meat as less healthy or ethically wrong.

The food sector and climate change

The two main sponsors (KRAV and Sigill) express deep concern about climate change. KRAV's interest is also explained by the appreciation that organics is an environmental label, and the need to incorporate dimensions that are salient to consumers. While Sigill acknowledges the environment as one of several dimensions, climate is considered a priority. Referring to author Mark Lynas, the magnitude of the challenge and the urgency of action are stressed. The Sigill respondent advocates a precautionary principle for human activity, fearing threshold effects, while a CLF respondent claim it is important ''to quickly launch something that would make a difference ...''.

The SSNC has emphasised climate in a series of reports on food and environment presenting ''the worst within food'', i.e. the negative aspects of consumption. According to the fair trade respondent, however, climate is more than a matter of consumption; it is about lifestyles. The wholesaler also expresses strong concern: ''the scientific data indicated that we affect the climate in a threatening way'', and emphasises the need for a holistic view, a precautionary principle, and the need to preserve nature in order to survive.

Most respondents find the main food sector drivers of climate change at the farm level. In support of this claim, both KRAV and Sigill cite scientific reports and arguments. A reduction of these emissions is possible, and many such projects have been launched (e.g. within LRF). Examples include switching to biofuel heating in stables and greenhouses. Furthermore, ''the best way is to start where we have the most knowledge, the Swedish production system'' (CLF team member).

At the same time, most respondents worry that emphasis on the climate will counteract achieving other environmental goals. Obviously, economic goals are considered to conflict with a climate focus, and the Li respondent described the recent climate focus as an exaggerated ''climatism''. Referring to a well-known Swedish liberal debater and the climate sceptic Bjorn Lomborg, this respondent embraced the autonomy of market actors in defining values and threats.

In contrast, the fair trade organisation highlights an important market imperfection as a basis for its activities: the asymmetry between buyers in the northern hemisphere and farmers in the third world. Their emphasis on global justice contrasts overtly with contemporary world trade order. Animal Rights Sweden (AR) has gone even further, explicitly rejecting an anthropocentric perspective and attributing the problems to lack of reason rather than ''design faults''. AR has internalised an environmental perspective in its practices (recycling, organic products, etcetera) but ''lobbies for all individuals''. Consequently AR distances itself from a common argument for environmental protection, i.e. to sustain current or rising levels of consumption.

Identification of responsibilities

KRAV and Sigill argue that all must assume responsibility for production, travel and consumption patterns: ''You have a responsibility as a consumer and as a human, and you have a responsibility as a producer [...] This issue is so big that everyone has a responsibility'' (Sigill respondent). The official goal of the CLF, however, is to reduce the climate impact via more informed consumers, as the label will enable ''conscious choices as regards climate'' while ''firms can improve their competitiveness''.

Nevertheless, all firms in the study have claimed responsibility for the climate impact of their own operations. The retailers emphasise responsibility for assortment, which also creates a powerful position, as labelled products must be accepted into their stores. The larger commercial actors, such as SRTA, even suggest that industry is getting ahead of the environmental movement and that the CLF can be interpreted as a fight for the lead in the environmental area. One example of industry's efforts is Arla's 2020 target of a 25%

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reduction of CO_2 emissions in all activities it can control. ICA has similar ambitions, but its respondent also calls for cooperative solutions throughout the food chain, nationally and internationally.

NGOs in particular have insisted on the need for political governance, or ''overall rules of the game''. This was, however, reiterated by some commercial organisations; one argument being that ''profitability is the foundation [of business operations]'' (Arla respondent). Nonetheless, the government argued for a market solution to the food sector's climate impact, emphasising the integrity of consumers and businesses, portraying consumers as primary agents of change: ''We believe in the individual'', but consumers must be assisted in making the right choices. This is largely consistent with the SCA, which regards a label as a promising step, giving consumers a fair opportunity to make an active choice, but firms and government must also take responsibility; the worst products should not be marketed.

Other stakeholders emphasise individual responsibility in other ways. The wholesaler argues that responsibility could improve if ''each individual was able to track the impact of her/his actions''. SSNC provides such information, enabling consumers to choose ''in favour of environment, animal concern, health and global solidarity''. The consumer should be enabled to influence agriculture globally, and SSNC's essentially anthropocentric perspective on sustainability is shared by the Fair Trade organisation, which further emphasises the global scale of our responsibilities. Sigill also declares that responsibility is global, but ponders how one can demand that people should renounce welfare. Further, a focus on eating habits makes responsibility very personal, and is in the experience of AR a more difficult challenge than questioning animal testing. Powerful interests are also said to resist the comparison among product categories (e.g. meat versus beans).

As regards responsibility in terms of food sector activities, it was made clear at the outset of the project that most emissions in the sector were related to primary production. As a prominent example, a scientist at Sigill presented LCA data in support of this at the Swedish trade fair Interfood in September 2007. These and other data show considerably lesser impact from transportation, but according to respondents, food transports receive too much attention in the general debate. SRTA suggests that ''consumers are not aware what the climate issue is about. They think it is about transport, but they are not aware of [...] the impact of primary production.'' Business sector respondents such as Arla highlight a paradox in this concern. While industry has adopted many emission-reducing initiatives, consumers' shopping mileage has increased. Despite industry initiatives, however, the wholesaler argues that our fossil fuel dependency, combined with institutional favouring of scale in retailing, hamper necessary change. The industry organisations Li and SRTA, on the other hand, do not question today's organisation on the market but embrace consumer autonomy and instrumental rationality. Hence, as climate became a matter of greater interest to consumers, Li elevated the climate issue to a prominent place in its own reporting.

Content, measurement and communication

KRAV rejects the task to make consumers choose beans instead of meat. The label should build on climate impact within broad product categories but not distinguish the categories themselves. Somewhat inconsistent however, under the heading ''what to do awaiting the [climate] label'' on its homepage, KRAV did advice consumers to eat less meat, giving the example that meat causes CO_2 emissions that may be 67 times higher than beans do.

Other stakeholders also express somewhat contradictory positions regarding communication. ICA and Arla claim that it is important to teach consumers about products and climate impact, even though the Arla respondent also points out that changing people's food preferences is a sensitive process. At the same time, firms must sell products that consumers want. Benefitting from a trend of eating well, SRTA hesitates to ''make food a problem'' and to differentiate between ''A, B and C products or brands''. KRAV, in contrast, does not want to exclude too many of its present brand users from the new label. Further, to gain impact, it is necessary to recruit a sufficient number of suppliers, a concern shared by Sigill. Sigill however, also notes that similar concerns were raised when ecological milk was launched. This resulted in an improved consumer perception of the entire milk category, and according to Sigill, the success of a label depends on effective communication of the label's content.

NGOs and business sector respondents, such as SRTA, however, worry that consumers will not understand a climate label. Fears include the ''illusion of precision'' of a label with exact numbers, such as from LCA, and that standard development may become ''an abstract project of details''. In reality, the climate impact depends on the time and place of production, where the product is sold, how it is stored, prepared, etcetera. Moreover, standards could exclude certain production and confuse consumers if organic produce received a low climate rating due to extensive land use. Similarly, Arla comments that LCA numbers on a label could mean that soft drinks were recommended over milk. For the labelling organisations, a desire for precision would open up for critique, and possibly compromise legitimacy, if media or opposing organisations reveal inconsistencies. Subsequently, the project manager stated that CLF was ''against using this as a number on a package, to use towards the consumer. We believe that it is too complex, and it would be to separate the climate issue from everything else; what should I compare to?''

Partly related to such measurement and communication problems, many respondents call for additional knowledge. Retailers refer to climate change and labelling in general, whereas upstream stakeholders such as Arla Foods, talk about farm-level knowledge. The two main partners believe that retailers have presented the strongest resistance, maybe wanting to slow the process down and thus gain some control. However, KRAV and Sigill representatives do not perceive a lack of knowledge; ''We know quite a lot actually [...] the question is rather how much we can handle'' (Sigill respondent). It is impossible to follow every product with LCA, and such a process would be too slow in relation to the challenge.

On one issue, the position taken by CLF does not reflect the asserted state of knowledge. Rather, emissions from transportation were acknowledged due to the importance

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assumed by the public. Even so, several respondents argue that the entire distribution chain is important, but the CLF team does not find it possible to include final distribution and consumption. Reasons include measurement challenges, e.g. differences depending on geography and population density, retailer organisation (logistics and store formats), and consumer behaviour.

A concern with international dimensions appeared as the National Board of Trade issued a warning about possible protectionist content, and outcomes implying trade barriers. Similar concerns were also voiced by retailers, and SRTA expressed its concerns about possible protectionism in a Swedish weekly business magazine. Arguments focus on the need to guard the liberal trade order as part of sound economic organising, but the wholesaler adds the issue of third world solidarity.

Draft standard and referral

The presentation of the draft standard and background documentation in April 2008 opened a referral period ending in June. The draft, produced in cooperation with two consulting bodies and a panel of researchers, had one general and two specific sections. The latter deals with fisheries and aquaculture, and agriculture, respectively; areas discussed as production systems in interviews. The texts contained goals and standards, but also recommendations, intended for possible future inclusion in the standards. On some issues, alternatives with different levels of ambition were given. A member of the CLF team pointed out ''it is a continuous balancing act between how many we want to include and how strong rules we want. So we balance. We can see that we need to be sharp enough for it to have an effect, be credible, and at the same time we must get products onto the shelves so that people really actively can choose these products.''

The criteria in the general section included a compulsory third-party certification of production according to KRAV or Sigill standards. The stated intention, however was to open the standards for use by other organisations, but only if certain criteria concerning environment, animal welfare and working conditions are met.

The general standards also covered the use of process energy, focusing on the use of renewables, packaging, including restricted use of certain plastic materials, and storage, stating acceptable use of energy and refrigerants. Finally, a section dealt with transportation from farms to central warehouses. Here, absolute limits were set to 0.1 kg CO_2 equivalents per kg vegetable product, and 0.25 kg in the transportation of fish and seafood. Another example of a differentiated standard was included in the fishing and aquaculture section, where permitted fuel use was significantly higher when fish is intended for human consumption. This section also covered refrigerants on board and feedstuff in aquaculture. Finally, the section on agriculture focused on the production of grain, fruit and vegetables. Criteria included the use of energy in greenhouses, the prescribed use of mineral fertilizer from units equipped with catalyst technology (reducing emissions of nitrous oxide) and a debated — and for many farmers controversial — issue, restrictions for production on the organic soils. Furthermore, in several parts of the draft, the standards prescribed plans for improvement, particularly targeting energy efficiency and the phasing out of non-renewables.

The referral resulted in comments from 36 actors representing many different interests, largely reflecting the concerns discussed above. As an initiative focusing on the food sector's climate impact, it was largely applauded, but the opposition to a treatment of climate separately from other environmental dimensions was massive. SRTA commented:'' [the proposed label] simplifies the very complicated environmental issue. A climate label for food takes the climate issue out of this larger context''. Many were also concerned about the label's narrow basis; its national scope and the need to first certify products according to KRAV or Sigill standards. Among other concerns were consumers' ability to understand the label, including the relation to other labels (particularly KRAV) and the lack of comparability between product categories. As stated by AR: ''there is an obvious risk with the proposed framework that a product with a climate label sits on the shelf next to a non-labelled product with similar nutrient value, which has considerable less climate impact. Beef compared to beans could be the most obvious example...''.

At this point, KRAV and Sigill could have adopted the standard but, as they wanted broad support and it met instead with strong critique, they decided to postpone the launch of the label (originally set for 2008). However, there was also support and a first set of rules was presented in 2009. While modifications have been made, this set of rules is largely in line with the provisions of the first draft. The first adoption of the rules came in 2010, when KRAV started the stepwise integration of the standard into their existing body of rules.

Analysis

Draft standard: approaches and considerations

The draft standard, suggesting detailed new economic practices, represents the first tangible outcome of the CLF. In our first analytical step, a number of approaches to a new, or reformed, practice were identified as steering for the draft. These are presented in Table 3.

Table 3 Approaches to change (A) in the CLF draft standard.

A1. Direct approach to climate impact
A2. Separate treatment of climate
A3. Separate standard, but building on existing standards
A4. Focus on production systems
A5. Absolute standard within given product category
A6. No absolute measure presented on label
A7. Vertically, impact from primary production to retailers' distribution centres included
A8. Industry-wide ambition. Sub-sectors as pilot areas
A9. Initially national scope for agriculture; Nordic scope for fish and seafood. Intention to include imports

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Table 4 Approaches to change, considerations and individual statements.

Approach to change in draft standard	Considerations behind approaches	Statements related to considerations (examples, and stakeholder category)
A1. Direct approach to climate	Perceived urgency; scientific data	''The climate issue is huge and [...] there is an agreement among researchers that we will face large-scale changes and that we need to do something about it. [...] the climate issue will in turn influence all other environmental aspects'' (Sponsor)
	Future harm for mankind	''First and foremost, nature is extremely complicated. The ecosystems are so complicated that we should not disrupt them because we do not know what it may entail'' (Business)
	Respond to consumer awareness; defend strategic position and exploit opportunities	''...then it becomes a special interest from the environmental corner [...] they need to maintain initiative'' (Business)
A2. Separate treatment of climate	Climate knowledge needed in food sector	''It will not be done; one has to somehow build the structure, the methods, the knowledge about this. Then, some time in the future [...] when one agrees about what to measure one can possibly get there. That is, to a product declaration indicating environmental impact'' (Business)
	Cooperation to reach accepted solution	''...concerning labelling issues, we co-operate. Otherwise, the outcome for consumers will not be good, and they are the reason for our existence, so to speak'' (Business)
A3. Separate standard, but building on existing standards	Importance of other environmental dimensions	''...it is one issue, it is only climate. They miss out in important aspects that should be included'' (Governmental)
	Protect current labels and acknowledge interests of users	''...Sigill and KRAV, just take a look at who's behind. It's not the joint climate rescue organisations of Sweden, if I say so. At the same time, of course it's not wrong, that they should not deal with these kind of issues. But the risk is that we get a compromise. Of course, you bring your interests in'' (NGO)
A4. Production system focus	Quick and broad launch	''... the question is how much we can deal with. Tesco announced that they would include LCA on all their products. That is completely impossible. However, with the help of the life cycle analyses and the knowledge we already have, we know what is large and what is small. We cannot follow exactly each product, that is impossible. And if we should wait until we can, then it is too late. Therefore I would forcefully argue that we know enough at least for certain product areas. But everyone does not know this'' (Sponsor)
	Scientific data; main turf of sponsors	''...a very large deal of what's negative for the climate, it emanates from primary production; extremely much one can say'' (Business)
A5: Absolute standard within product category	Balance stakeholder risks and benefits; all producers should be able to comply	''And we think it is pretty ominous when they write that they do not want to pit the different industries against each other. Because that is a rather bad point of departure. Of course one can pose meat production against the production of vegetables'' (NGO)
	Balance environmental and economic objectives	''If one would start saying that one would only accept products produced nearby, not originating from other parts of the world; you know, the liberal world trade regime means very much for wealth, all over the world'' (Business)
	Defend free trade; third world solidarity	''Should we shut out large parts of the world's population from welfare because all of a sudden we do not find it meaningful to transport their goods?'' (Business)
A6. No absolute measure on label	Avoid false claims; realism in communication: Simplicity for consumers	''...I suppose time will catch Lantmännen as well as Max and KRAV in due time, as media is very hungry and pleased to hit, analyse and cut things into pieces. Besides, they begin to be competent in climate issues within media, so, I believe there is a risk if they get to read about foolish things...'' (Government)
	All producers should be able to comply	''The public debate is not there yet, not by a long way. It's much harder to question the consumption of meat [...] there, the economic interests enter, which naturally feed on...'' (NGO)
A7. Impact from primary production to retailers' distribution centres included	Comprehensive but realistic coverage of climate impact	''I do not really see how it should be made to make people understand it. Then they have to understand LCA'' (Business)

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Table 4 (*continued*)

Approach to change in draft standard	Considerations behind approaches	Statements related to considerations (examples, and stakeholder category)
	Meet public opinion regarding transports	''One has succeeded in connecting transportation to the climate problem very forcefully in all its parts. That means that we need to deal with transports'' (Sponsor)
	Meet environmental objectives without upsetting modern retailing or individual lifestyles	''This whole climatism has brought a very bad conscience to many people, and raised many questions about how I live, which actually is bad for people. They get anguish over doing things that are not politically correct to do'' (Business)
A8. Industry-wide ambition. Sub-sectors as pilot areas	Influence economic behaviour widely	''The problem when it comes to KRAV is that it will be few products, one has to say, as KRAV:s assortment is limited from the beginning and this is an add-on label to KRAV:s label and then there will be even fewer. It can be that it is difficult to reach success in this work because there will simply be too few products'' (Government)
	Efficient resource use and communication; balance demand for knowledge and quick launch	''...you never know exactly how everything fits science and technology; that's why one may have to accept what they claim. Otherwise you do not get any systems at all. You have to be careful, but some small errors will always be found. As long as you tread a main path, are aware of its imperfections and keep on making it better, I think you are on the right track'' (Government)
A9. Mainly national scope initially	Main turf of KRAV and Sigill, maintain values and positions	''...[Krav and Fair Trade] are now in the hands of marketing people. Hence, the goals are high brand recognition, large volumes, large turnover...'' (Business)
	Relevant scope to enable success	''The most simple way may be to start domestically, to build awareness, and then proceed. That's probably good...'' (Government)
	Balance national positions and free trade imperative	''What may come are arguments for fairness and arguments for free trade. Particularly as we cannot solve the whole world trade regime at once, but we have to start somewhere, there will of course be people who claim that this is a trade barrier'' (Sponsor)

As the second step, these approaches are discussed as outcomes of considerations and debates. First, CLF's choice of a direct approach to climate (A1) was motivated by the perceived urgency and supported by scientific findings concerning ecosystem resilience. Moreover, scientific findings on the magnitude of the problem were used to argue for a concentrated effort, to approach climate separately from other environmental dimensions (A2). Another influential argument for these two approaches is the need to meet emerging consumer awareness. Subsequently, there are potential competitive advantages to be gained from presenting climate arguments to consumers. While some firms may gain already from indirect approaches, such as when locally produced food is associated with climate friendliness, it is important for KRAV, a key CLF sponsor, to tackle the issue directly, to remain prime movers within environmental labelling.

Nevertheless, the collaborative solutions chosen by KRAV and its partners entailed that standard development would be freestanding from KRAV's organic standard. While one argument was the ambition to achieve broad market acceptance, other environmental criteria were also important. Therefore, the separate climate label decided upon could only be used after basic KRAV or Sigill standards had been met (A3). This compromise was also influenced by concerns among stakeholders; not least KRAV members fearing that the position of organic production as the top environmental choice within foods could be devaluated.

The choice to set standards for production systems (A4) would enable a quicker and broader launch than if individual products would be targeted with LCA. The momentum on the market could thus be utilised, but a speedy and pragmatic process would also respond to the perceived urgency, suggesting that action today is better than waiting for perfection. Furthermore, scientific facts argue that the main food-related GHG emissions are found within primary production. This is also the main area of expertise among CLF staff, which is relevant to meeting the perceived need for accurate and relevant measurements when science is translated into standards.

Creating a label that does not present large risks for individual producers or the KRAV and Sigill brands requires a delicate balance: If standards are set low, the label will lack teeth. If they are set high, few actors will be able to join. This includes the difficulty to exclude influential industries (not least meat production) from the process. Furthermore, strict criteria may impede free trade and counteract needs in the third world. The solution was to go for (absolute) standards within product categories (related to production systems), with non-comparability between categories (A5).

Notwithstanding the importance attributed to science, the risk of criticism if a label gives more exact information than the reality behind it must be minimised. The choice to

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approach production systems, with relatively lower ambitions of exactness, is followed by the rejection of absolute measures on labels (A6). There were also concerns about consumers' comprehension of a label, but, more importantly, it should be possible to communicate realistic messages to producers to adjust activities accordingly. Moreover, comparability between categories would cause concern among producers, not least the livestock industry (directly represented in the project).

Although primary production is the focus, impact from upstream activities is included in the draft standard (A7). As a main argument for the inclusion of distribution, it was held that people generally, but mistakenly, perceive transportation to be a key cause of climate change. Final distribution and consumption were excluded, partly due to measurement challenges, but a reluctance to interfere with individual and corporate decisions is also apparent. Consistent with A4, and a trust in science, a minor climate impact was accredited to these later stages of the chain.

Horizontally, the industry-wide ambition (A8) parallels the scope of KRAV's organic standard. It thus conforms to the market for KRAV's regular activities and provides the ground where it must defend its position as having the strongest environmental label. This scope might also allow low-impact practices to spread. Furthermore, it is argued that standards should be few but comprehensive for the most efficient use of resources and communication. The challenge to attain sufficient knowledge, as well as a quick launch, is solved by a stepwise approach, where certain sub-sectors serve as pilot areas for standard development.

The initial national scope (A9) has an obvious explanation in the labelling organisations' domicile; Sweden is the market of their operations, relations and positions. Success would also be more likely with a national label, as it entails a relatively limited set of actors, established networks, and a singular institutional setting. A possible covert argument would be the protection of national interests; an interpretation supported by parallel developments on the Swedish food market, where several stakeholders promote the local, regional or national origin of products. The official stance is, however, a categorical support for international trade, and, also here, a stepwise approach is presented, where standards for imports would follow.

In Table 4, considerations identified as argumentation for the above approaches are summarised. The table also gives examples of stakeholder statements related to each consideration, i.e. input in a debate which finally led to certain criteria in the draft (hence, some quotes illustrate counterarguments).

A discursive understanding of the case

Turning to the third analytical step, we elaborate on deep structural traits of considerations made. Among the generally held beliefs (related to e.g. A1, 2 and 4) were the availability of objective knowledge and the rationality of actors involved. Whereas most contemporary discourse rely on science, instrumental rationality is a particularly strong trait of MD. However, although there were differences in the present state of knowledge and how it should be used, the recognition of variety and complexity in real world systems had consequences for the project's direction and communication (A4, 6 and 7). Moreover, no interviewee denied ecosystem vulnerability and human accountability (e.g. A1 and 8), which would indicate the project's influence from WSD or SSD.

However, the anthropocentric points of departure (A1, 6, 7), together with the project's explicit aim to meet the interests of today's consumers and producers, unavoidably devalued environmental criteria (A5, 6). The adaptation to the present state of affairs corresponds to assumptions closely related to MD: consumer autonomy (regarding e.g. cooking and driving habits) and the legitimacy, and even superiority, of economic interests (investment in traffic oriented hypermarkets; the livestock industry, etcetera) (A7).

Furthermore, the project's ambition to meet emerging consumer awareness not only rests on an assumed responsibility and rationality of consumers but also represent a belief in market mechanisms: informed consumers would demand low impact products while managers make responsible changes (A2 and A6). Such beliefs are compatible with WSD, but conventional within MD. The trust in market efficiency, and in individual integrity and self-interest, also matches MD. Hence, despite the recognition of severe problems relating to climate change, the contemporary economic system is largely the frame for solutions, albeit coupled with calls for more responsible economic activity.

In the final analytical step, we return from the parts of the initiative (the approaches) to its entirety and discuss how the discursive embeddedness shaped the outcome. To begin with, environmental problems and climate change is acknowledged by all respondents, but in most areas of debate, the arguments mainly relate to WSD or MD. In this regard, some frames were given by the particularities of the case. Labelling is by definition a market activity, and means and rules for CLF are largely defined by market discourse. Not only does a label seek to communicate with and attract consumers; participation in the process and adoption of the standard are both voluntary, which means that stakeholders from the commercial sector need to be attracted, mainly on the basis of their conventional profit-seeking behaviours.

Hence, the case depicts a solid legitimacy of the economic system and trust in market mechanisms; a representation of the prevailing strength of market discourse (cf. Hudson, 2005). The assumed integrity of market actors further limits the scope for unconventional means or radical ambitions. This is made even clearer when considering positions of power (cf. Mitchell et al., 1997). The more radical statements, for example questioning lifestyles or conventional reason, tended to be voiced by others than the major commercial actors, and were not met in the draft standard. This is not surprising, given problems noted in prior literature on achieving (discursive) change (Hardy et al., 2000; Phillips et al., 2004).

Although the two main partners respond to what they consider an important environmental issue, emphasised by human responsibility for the problem, they are also brand owners. KRAV and Sigill have an interest in protecting their positions on the market, competing for producers and products to join their labels, as well as for shelf-space, consumer recognition, and legitimacy.

While the planned label is intended for consumers, the standard is oriented towards the cooperating organisations' home turf, the primary sector. The momentum for launching

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a label may well have been discovered on the market (through competitors' activities and consumer awareness), but qualified measurement and advanced knowledge from the natural sciences created a legitimate foundation. This, and the orientation towards production systems, may make a label more relevant in relation to its environmental objectives but brings potential communicative problems. One attempt to bridge this alleged gap between science and consumer perceptions is the partial inclusion of transportation to the standard, which again illustrates the market-oriented approach to global warming, typical for WSD. The human rationality and sense of responsibility, assumed in WSD, also means that change can be expected.

Furthermore, the ambitions to cover the food sector vertically and horizontally distribute the potential impact to many change agents. This includes indirect benefits, beyond those following from the application of a label on products (Rubik et al., 2007): We could see a general influence on knowledge and awareness from sustainability discourse; a spread of words via the open process of standard development. At the same time, the broad scope and the process of negotiation resulted in soft criteria and a relatively non-discriminating label, largely in line with WSD (cf. Hopwood et al., 2005).

Despite this pragmatism, and largely due to the referral's further demonstration of critique to the CLF, the label was postponed. Major commercial actors were not ready to accept the draft even though adoption would be voluntary. Such resistance is consistent with MD and a competitive environment, as firms cannot be expected to adapt to external influence if individual benefits are low or uncertain in relation to costs. The environmentally oriented criticism, on the other hand, was largely based on a disapproval with the standalone approach to climate; i.e. the lack of a comprehensive view on our relation with nature.

General lessons from the case

One implication from the case is that the pragmatic – or contradictory – middle way which resulted from the meeting of discourses, did not prove entirely successful in setting targets for new practices. Acknowledging real operational hurdles (not least costs and measurement issues), we focused on supporting and inhibiting dimensions on levels of discourse. As one starting point, a strengthening of sustainability discourse in society supports local change initiatives. What may even be an emerging discourse on climate connects to stakeholders' perceptions about the legitimacy of the issue and urgency of the task (Mitchell et al., 1997).

This widespread interest in climate also influenced the competitive situation, and several actors, including KRAV and Sigill, identified and acted on climate-related business opportunities. Certainly, the CLF also drew on assumptions about ecosystem vulnerability and human accountability but with the aim to change mainstream economic organisation, it was not surprising that the outcome was weak reform (cf. Bulkeley, 2000). First, the average commercial organisation, professional in its deeds, has little motive to involve itself in any change that is not minor and economically sound. Moreover, positions of conservative actors are sustained by the legitimacy of economic interests and the assumed autonomy of managers and consumers on efficient markets (echoing Subhabrata's (2003, p. 143) claim that sustainable development, may be ''very much subsumed under the dominant economic paradigm''.

As these are conventional assumptions behind the prevailing market discourse, they also characterise the circumstances under which labelling organisations operate; to appear legitimate, a new standard must not contradict the canon of market discourse and disrupt existing systems or established interests. Rather, broad ambitions to attain change in practice may need to adjust to the ways in which the most important actors communicate resistance and opportunities (cf. Phillips et al., 2004).

This stronghold of market discourse may, however, be loosened as climate-related problems and practices become more frequent and acknowledged (cf. Phillips et al., 2004). As noted in the case description, there are several ongoing initiatives like the CLF that may contribute to new knowledge, perspectives and priorities; to influence discourse and change practices. In such a process, the common trust in science could provide a bridge between sustainability discourse and market discourse. As one example, the spread of knowledge about interdependencies between ecosystems and business could contribute to a stepwise deconstruction of the assumed substitutability between man-made and natural capital, with implications for conceptualisations of value and models of value creation.

Although an enhanced understanding of our dependency on natural systems may appear as a trivial step, it has the radical implication of communicating real restrictions for economic activity. This is a strike at the heart of the market discourse, but in such a light, the strength of voluntary standards as instruments for change is questionable, as our case has illustrated. Voluntary standards recognise and address the autonomy of market actors; but global warming is a collective problem: The hand should remain invisible, but its master must be better informed.

Concluding remarks

Global warming calls for new economic practices, a quest pursued by the CLF. The case explains how discourse and discursive activity support and constrain the scope of implementation for low-carbon practices, by illustrating how established actors influence a collaborative initiative with broad ambitions and confines it to the realms of WSD. Although the draft standard did incorporate conclusive environmental criteria, recognition of ecosystem vulnerability and real limits to economic activities, critical arguments from SSD may rather serve to validate the need for the project than to substantially impact on its content and form.

Hence, the case appears as an unavoidable compromise between environmental effectiveness and market efficiency (Bulkeley, 2000; Rubik et al., 2007): on the one hand, ambitions and knowledge rooted in sustainability discourse, and, on the other, the targeting of mainstream actors with market measures. Mainstream ends, such as sales growth and individual consumption, remain untouched, and the legitimacy

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of established interests is illustrated by the decision to avoid comparisons between product categories. However, compromise is part of a labelling organisation's business, together with identifying and acting on strategic opportunities.

Nevertheless, noting the link between change in discourse and change in practice (Heracleous & Barrett, 2001; Phillips et al., 2004), the case indicates some scope for new, low-carbon, practices. A necessary condition appears to be communicative acts using scientific language, explaining processes in nature as well as economic activities, and potentially bridging economic and ecological perspectives. A related condition on the level of deep structures is the emerging awareness and general rhetoric about climate in society. Similarly, on the practice level, ongoing and anticipated climate related activities support interpretations of the legitimacy, and possibly urgency, of change in economic practices. In such a context, efforts such as the CLF, intended to fine-tune conventional systems and activities, may find support among conventional actors.

Due to the need for radical change in business practices, the direct role of voluntary reformist initiatives may be limited, as measures such as taxation and regulation are implemented. The main contribution of initiatives such as CLF could well be in promoting change on levels of discourse, including ontological and ethical assumptions (cf. Barrett et al., 1995; Gergen, 1999; Heracleous & Barrett, 2001), through the spread of knowledge and awareness. Given the complexity of the task, only a short time period was captured by our study, but the number of organisations involved in the CLF process was large, and yet other organisations may be influenced as descriptions of problems and solutions spread between firms, through media, seminars, trade fairs, etcetera (cf. Rubik et al., 2007). This short time frame is a limitation of the study; a longer time period, possibly including standard implementation, would provide more knowledge about the interplay between deep structures, communicative acts and new practices.

Turning to policy implications, voluntary approaches such as labelling have been preferred to regulation due to the assumed efficiency of market solutions, but also due to deeply rooted assumptions about consumer sovereignty and the legitimacy of established economic interests. Our case highlighted such deep structural features as a key to our understanding of the relation between economic activities and climate change. Related is the need, in policy-making, to acknowledge the role of consumers and mainstream business as causes to the climate problem (independent of their possible roles in achieving solutions).

Although a general feature of voluntary change initiatives like the CLF is acceptance of established structures and directions of economic activities, we see potential advantages when considering long-term effects, despite the outcome of weak reform in this case. Addressing mainstream economic activities, voluntary initiatives have the potential to mobilise many actors, influence discourse, and thus broadly facilitate change in practices (through new enterprises and processes); all which may ultimately, also increase acceptance for stricter regulation.

Indeed, due to the magnitude of the climate challenge, stricter regulation is needed; also to stimulate the ambitions of voluntary initiatives and to curb tendencies to non-committing self-regulation in order to avoid stricter governmental regulation (cf. Campbell, 1999; King & Lenox, 2000). A best case scenario, could be a dynamic interplay between regulation and voluntary initiatives, supporting encompassing measures to reduce the carbon footprint of business.

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