IDDRI
SciencesPo.

NEW ZEALAND
Embassy PARIS
TE AKA AORERE

POLICY BRIEF

N°12/12 SEPTEMBER 2012 | AGRICULTURE

Environmental information and labelling in the food sector

Viviane Gravey, Sébastien Treyer (IDDRI), Hayden Montgomery (New Zealand Embassy)

Report of the expert workshop on environmental labelling organised by IDDRI and the New Zealand Embassy on April 12, 2012 in Paris.

1. INTRODUCTION

The provision of environmental information to consumers, to inform their purchasing decisions, is of growing interest to public and private actors, as demonstrated by a number of initiatives in Europe. Illustrated at first by the contested concept of food miles, the shape and content of environmental information has changed over the years to incorporate a greater variety of environmental indicators and information (Vergez, 2012). After a decade marked by private actors' initiatives in the domain (especially retailers), public actors are starting to play a more active role: experimental processes are currently taking place in France (in accordance with art 54 Grenelle Law 1 and art 228 Grenelle Law 2) and at EU level (within the Food SCP-Roundtable, and within the European Commission Directorate General for Environment).

The food sector is especially concerned by these processes. On the one hand, consumers are particularly sensitive to the environmental credentials of their food due to links, proven or perceived, between its production and environmental or health impacts. On the other hand, food products are already targeted by a wide variety of labels: origin, method of production, etc. Some of these labels are directly linked to "eco-friendly" production matters such as organic agriculture or the Marine Stewardship Council for products from fisheries.

In order to clarify areas of convergence across all stakeholders and to identify the remaining areas of debate, IDDRI and the New Zealand Embassy in Paris convened in April 2012 a workshop on environmental information and labelling, bringing together government representatives, consultants producing the information and labels, retailers, producers of food, consumers organisation, international organisations and academics. This paper presents the main points of the discussion and highlights possible next steps.

www.iddri.org

Institut du développement durable
et des relations internationales
27, rue Saint-Guillaume
75337 Paris cedex 07 France

2. OBJECTIVES

Schemes for the display of environmental information are generally aiming at three objectives: (1) increasing consumers' access to environmental information, (2) triggering a change of practices in the supply chain and at the consumer level, with the objective of (3) yielding a positive environmental impact.

The principal concern of these schemes is to add a substantial part of quantitative information to the qualitative information of more traditional labels (e.g. free range poultry, organic agriculture), as well as the ones concerning eco-gestures (advice on amount of product necessary, on energy-saving practices etc.). It can be debated which kind of information, quantitative or qualitative, is more efficient for achieving the ultimate goal of improving the environmental impact, and/or which one is preferred by consumers, yet it can also be argued that these two kinds of information are complementary—they provide very different information—and can be of interest to different kind of consumers. Some consumers may be more interested in climate change, for which product carbon footprint provides an indicator, while some other may be more interested in production methods *per se*, and their links with e.g. animal welfare.

The rise of quantitative information already made available (from food miles to carbon foot printing—notably for biofuels—, to larger environmental footprint) calls for processes ensuring that information is both robust (in terms of accuracy of data and proper scientific method) and accessible to consumers. A label on the product presenting its environmental footprint is one possible way to communicate information to consumers, but environmental information can be provided in many ways, and its format can include, or choose not to include, absolute numbers. The core issue is not necessarily the creation of a new label but the transmission of environmental information within the supply chain (for Business to Business [B2B] dialogue) and for consumers (Business to Consumers [B2C]).

The second objective of displaying environmental information is to influence consumption practices by allowing consumers, over time, to integrate environmental information in their purchasing behaviour. For some participants, making information available to consumers is seen as fundamental in order to be able to incentivise food producers and processers to change their production and processing practices.[1] It was generally considered useful when schemes to display environmental information would have the ability to demonstrate continuous improvements in the supply chain, therefore not using labels to display static information, but to document the changes and improvements in practices over time along the food chain, and the continuous improvement toward resource efficiency.

Finally, a third objective (and presumably the ultimate goal of these schemes) would be for these changes of practices to yield positive environmental outcome. Many participants were cautious and considered, looking back on public health campaigns or nutrition labelling, that these changes need to be envisioned over medium to long terms. Others pointed out that the learning process is not always that long: some environment labelling schemes have had quick impact, such as energy efficiency labelling on household electrical appliances. And, even though a long learning process may be necessary for consumers, in the meantime, companies, becoming more familiar with footprinting, would start reducing their impacts, in order to increase their resource efficiency. But, as some participants point out, contrary to electrical appliances, for food products lower environmental impact is not necessarily linked with immediate and private "rewards" for consumers such as better taste, health or lower price.

3. METHODS

Earlier efforts at environmental labelling looked first at food miles, then at carbon footprint. But, by focusing on one type of environmental impact, they ignored other impacts and the potential links between them. Current developments, in France and at EU level, aim to develop environmental footprint (with a wide array of indicators) instead of only the carbon footprint of products. A product's carbon footprint remains key to these efforts: not only does it provide information regarding climate change impact—arguably one of the key environmental impacts motivating the development of environmental information—but it is the indicator with the better developed methodology, to measure emissions, report them and allocate them, a method agreed on internationally. Alongside carbon, water and biodiversity impacts—among other potential impacts such as air pollution, use of limited resources—are often mobilized with regard to agriculture and food: agriculture is the first user of freshwater worldwide; it is also the economic sector occupying the most land. As such agricultural practices have a key impact on water (quantity and quality through pollution) and biodiversity, and transformation of agri-products into food comes at the cost of further environmental impacts.

1. Some participants cautioned that for subsequent changes along the supply chains to be sustainable they would need to address issues on how added-value is shared, and not be limited to technical fixes.

In order to offer quantitative environmental information, sound scientific data is required. The range of methodological questions is wide: what we are trying to measure, on what scale, at what time, at what cost and for whom. Environmental impacts can be both negative and positive: adoption of a new farming technique for example can enhance/favour farmland biodiversity. Life-cycle analysis can take into account both positive and negative information. In order to present a precise picture of environmental impacts, we could gather data at farm levels. But gathering farm level data is a challenge both technically and cost-wise. Technically, it requires a much greater effort in data gathering, broad participation from farmers, and sophisticated accountability to determine e.g. from which farm and from which product processed food items originate. In terms of cost, onerous requirements for gathering of data would create high entry costs for producers, especially small producers and/or from developing countries, leaving them out of the schemes. Thus, most schemes propose some sort of data aggregation, at different scales, for each kind of production: regional level, national level etc.

Ultimately the level of data required and the definition of the product category depends on what you want to discriminate between. Do you want consumers to be able to differentiate between two equivalent products from different regions? Between different brands proposing equivalent products? Between different types of meat or vegetables? Between meat products and alternative vegetarian options? Some of these choices are down to design issues—developed further on—but they are also determined by the data gathered and the gathering methods.

Environmental information offers the possibility for producers to differentiate their products from others' (acting as an incentive to change) as it offers a possibility to show the merits of their own product(s). But differentiation can only work if it is based on sound data and harmonized and shared methods, as otherwise it may lead to litigation between companies opposing each other's methods. The range of uncertainties regarding data within a product category might be greater than what differentiates this product category (of food products) from another. Thus, for many participants, it may be too early to push for comparison between equivalent products. Also, measures to improve communications on uncertainties should continue. For now, there is a tendency among companies experimenting with environmental information not to differentiate between producers of the same product, but there are tools that offer the flexibility to replace general data for a product with a specific company set of data when appropriate.

Once the data is collected, most participants in the workshop agreed that Life Cycle Analysis (LCA) was the best available method to analyse and act on these data. But two questions were raised. LCA has been used for some time for B2B discussions, helping to identify hot spots within supply chains and to monitor improvements over time. Some participants argued that there was an important trade-off between the exhaustiveness of impacts assessment and the cost of displaying environmental information to consumers: the more precise the impacts, the costlier its gathering and ultimately the costlier the information. For some, cost could be reduced if we used simpler methods than LCA. They contended that, as B2C information required less information—just the end product environmental impact, not its allocation at each production phase—it was sensible to use simpler methods. Thus for example, some participants propose to build environmental information on already existing schemes such as the French process of environmental certification for farms. Yet for others, LCA remained the best option: first, LCA could, and should, include "at home" impacts (the use phase), depending on e.g. waste and cooking methods; second, consumers may be only interested in the overall impact, but it may increase their trust in the label if they can see where the final number comes from, and finally, showing these figures to consumers could act as a lever for change along the entire food chain. Beyond the use and misuse of LCA, other methodological questions were mentioned in the seminar. Some affect all indicators; some are specific to one indicator.

Biodiversity is one of the indicators garnering the most interest: representing impacts on biodiversity is crucial in enabling labels and more broadly environmental information schemes to better reflect environmental impacts. Yet there are a number of methodological pitfalls, highlighted by the variety of biodiversity indicators put forward in the French trial. First, biodiversity impacts are local, but even local impacts can have global consequences (e.g. migratory birds). Thus what matters is not only production method but where it takes place. Second, depending on the location, biodiversity can be reduced or enhanced by a given farming practice: e.g. extensive livestock production in permanent or semi-permanent grassland can yield positive outcomes while if extensive livestock production drives deforestation its impacts can be significant. Third, farm level may not be the most relevant level to measure impacts on biodiversity: water catchment level, or landscape may

be better as animals move between farms, pollen as well etc. Fourth, there is no easy way out of the land-sparing/land-sharing debate: some birds will benefit from bigger forests and be unharmed by more intensive farming techniques, while other birds, dependent on farmlands for habitats will suffer from intensification. Hence, considering the difficulties we still face when trying to measure biodiversity impacts, most participants advocate finding a good proxy: taking into account impact on endangered species, using farmland bird index, using agro-environmental measures (such as fallows, or ecological infrastructures), etc.

Water as an indicator covers quantity and quality aspects, both of which can have differentiated impacts depending on the location of the channeling and the production/processing of the product: high water-use in a drought-ridden region, pollution of a particularly sensitive ecosystem etc. Participants highlighted the difficulties of building a single water indicator despite important research and good data gathering, but there seems to be progress and discussions on ISO 14046 are promising. In the meantime, in the French trial water quantity and quality aspects are kept as separate indicators, and water quality is evaluated through two kinds of pollution: eutrophisation and eco-toxicity.

Finally, transversal methodological challenges touch on different indicators. How impacts are allocated, both along the food chain and between products, by-products and co-products, is particularly important. For B2C communication, there is a growing awareness of the need to use complete LCA, from field to fork (and waste), not just from field to shop, as consumers need to be able to take into account their own impact on products' footprint. But the biggest challenge lies in allocation between different co-products: e.g. between milk, meat and leather, or between soya oil and soybean meal. Different methodologies exist, proposing to split impacts depending on mass of each co-product, or on its price. What particularly matters is that the choice of allocation method, an arbitrary choice, be made in a transparent manner, with the cooperation of all concerned actors. Furthermore, as some agricultural products can also be used for non-food products (e.g. corn, soy, sugar for biofuels) and these have already undergone footprinting, the contemporary environmental labelling of these as food products can benefit from these earlier foot-printing experiences, and need to be consistent with them.

The tension between these different trade-offs may be resolved, and arbitrated on, through a good design of environmental information format (what it looks like) and channel (where it is placed).

4. DESIGN

The form that environmental information should take in order to be of most use for consumers triggered a debate among participants. The French trial does not require environmental information to take the form of a label; labelling is only one way of informing. But most participants in the trial have chosen to use labels, in different ways. The information can be made available directly on the product itself, on the receipt, on the web, through signs in the shop, flash codes and smartphone applications, etc. Different channels of communication can be combined: e.g. simple information on the product and more detailed information online.

These different design solutions have to address three potential pitfalls: the trade-off between sound data and accessible information, the presentation of multiple environmental impacts together, and the organisation of comparison between products.

Information, especially if presented by a label on the product, has to be easily understood by consumers. But information also needs to be trustworthy and the trustworthiness of quantitative information—compared to qualitative information such as "free-range"—relies on the soundness of its data and methodologies. For some participants at the workshop, the origin of data—e.g. only public and transparent data—can guarantee its trustworthiness, for others its accuracy, using increasingly specific data—often private—and building labels for which underpinning methods could be updated was a better guarantee.

This tension between the soundness of the data and the readability of the information is also found in the discussion between labels showcasing multiple criteria and labels producing an aggregate result. For some, an aggregate result—incorporating different environmental impacts, or even beyond, socio-economic impacts—was the better way to reach consumers. For others it was important for consumers to be shown the multi-faceted aspects of environmental impacts. At the core of this discussion was the question of weighting between impacts: should companies decide that e.g. "high" carbon impact is as bad as "high" biodiversity impact, or should consumers be left to decide by themselves which environmental degradation they care more about? Label design gives a certain value to different environmental—or broader—impacts. These values should be attributed in a transparent manner—clear weighting, clear aggregation method available to all. Similarly, label design can also ease, or render more difficult, certain comparisons. For example, having only one scale for impact (aggregated, or for carbon) with all food products mean that all meats and fishes

will be lumped together at the "worse impact" end of the scale. This delivers a message—meat and fish products have greater environmental impacts than vegetables or cereals—but it prevents comparison within the categories, e.g. between chicken and beef or between mango and apple. In order to answer that need for comparison within categories, some participants propose to use a double scale, one in general for all food products, one for comparison between equivalent/substitutable food items.

A further question is how you decide to group together products: should there be an equal distribution among all grades (i.e. 5 products earning an A grade, 5 earning a B grade etc.) or should outliers and actual distributions be highlighted (most products are C, one is A, one is E)? Should your grading system be dependent on the products' results (the best of the set gets an A) or be set independently (only products resulting in less GHG emission than a certain figure can get an A, even though maybe no products will meet the standards)? All these decisions matter in terms of how consumers will react to the label, and create different incentives for producers.

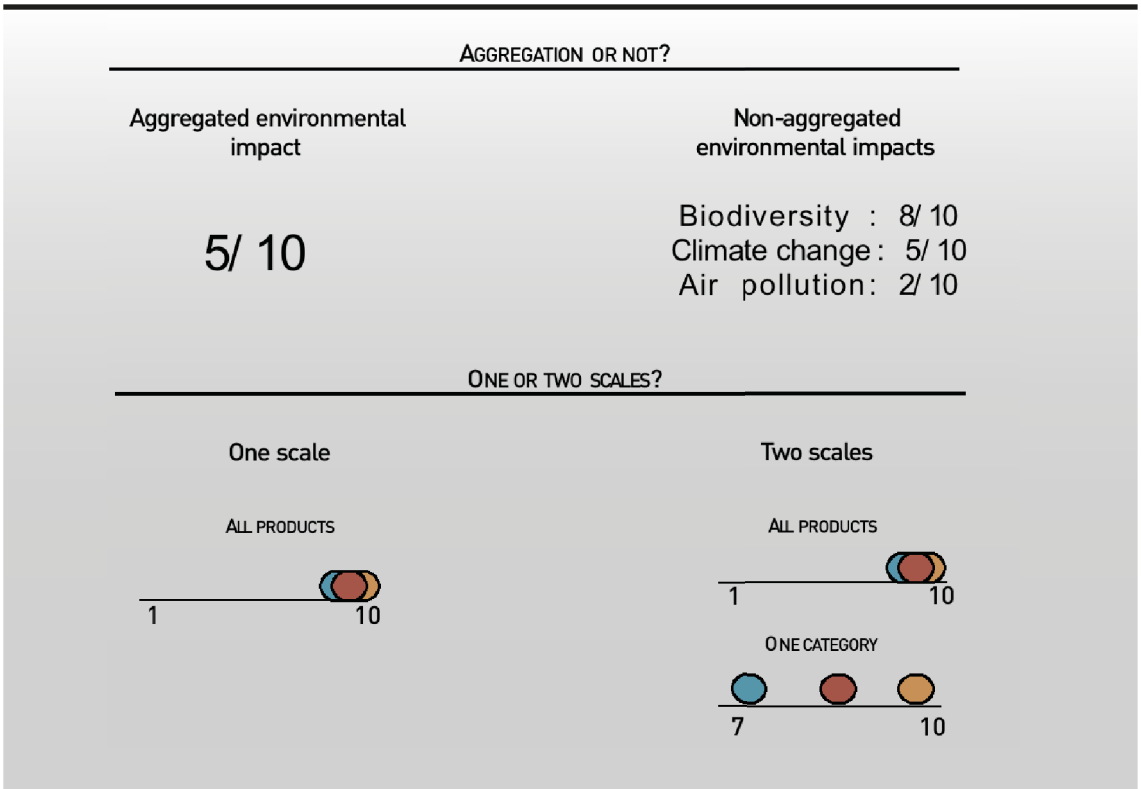
This debate on the design of labels is only starting. The French trial has permitted the emergence of a wide variety of labels from which we have much to learn. In addition, participants highlighted that we needed to learn from other labels that have managed to impact consumers' behaviour: nutrition labels, regional labels etc. As a note of caution, it was said that even though labels address the cognitive part of our brains, research on buying behaviour has shown that most of our food purchases are motivated by the non-cognitive part of our brain, for which the mere appearance of a label—irrespective of the grade, good or bad—is often sufficient to prompt consumers to purchase the item.

5. PROCESS AND GOVERNANCE

Product environmental information and labelling schemes are increasingly being developed. Beyond discussing the objectives and methods that should underpin these schemes, the workshop also addressed issues of process and governance.

A first point was made on the need for broad participation. At the level of the workshop alone, the variety of experiences enabled a better understanding of what the unresolved issues are, and where we had moved forward and actually reached a workable consensus. With regard to information and labelling processes, participation is necessary first because it increases the legitimacy of the outputs—some transparent arbitrage

Figure 1. An example of design options



is needed, e.g. on allocation, and requires broad participation—and second because it enables to harness all creativities and produce a better label.

The French trial, by giving some minimal guidelines to companies, letting them free to follow their own intuition about what a label should look like, incorporate, etc., led to a broad set of propositions from which we can learn. Not all the data, nor the methodologies are perfect (indeed some are far from perfect)—more work is required on both aspects, and is on-going at French, European and International levels—, but by allowing this "right to fail" and "learning by doing" approach, the trial shed light on some major issues—e.g. the continued controversy on how to measure biodiversity impacts—that may have remained side-lined otherwise. It enabled some producers and retailers (and consumers to a certain extent) to become more familiar with environmental information and labelling and to have a direct, constructive and transparent input into policy-making.

But the French experimentation, coming as it does after private initiatives in France and other countries, has reopened the debate on the kind of governance required and the level where it should take place. The role of public authorities and private companies, the need for a uniform label or conversely for a variety of approaches, the better level for action (national, European, international), and issues of WTO compliance are questions that remain open.

CONCLUSION & NEXT STEPS

By bringing together a diverse set of interested parties (consultants, producers, retailers, consumer organisations, international organisations, public authorities, academics), the workshop led to open discussions on objectives, methods, design and processes regarding environmental information display. Some consensus areas were identified, while some issues remained unresolved. On the consensus side, we can identify:

- The necessity, when contemplating the display of product environmental information, to take into account not only a carbon footprint but an environmental footprint.
- The need for better data gathering—and for a harmonization of methodologies overtime.
- The need to harness all creativities, and bring together a wide variety of actors in—public, private, civil society—on these discussions.
- The usefulness of a trial in illustrating potential pitfalls and solutions.
- The usefulness of learning from previous labelling experience—quality environmental labelling, nutrition labelling—, and environmental information: biofuel footprint, etc.

On the points where debates remain important, we can identify a set of issues requiring further research and innovation, and some for which a (political/private?) choice is needed:

- The benefits of environmental labelling and other forms of environmental information display as a way to change consumers practice (*vis-à-vis* e.g. eco-gestures) or to change producers practice (*vis-à-vis* B2B only LCAs, or the fear of a potential high entry cost of labelling).
- Methodology on biodiversity: for this impact in particular there is room for innovation and for thinking of a better indicator (e.g. an adequate proxy).
- The design of the label: label or other kind of information, aggregation or not, one or two scales, on or off product—all design options had their supporters.
- The respective role for public and private actors: should public authorities merely steer private actors' initiatives, or should they take the lead? What instruments should be used?
- The respective role for national, European and global initiatives and institutions: if all agree that European, and ultimately global action would be preferable, does this mean that all local, national projects should halt until global agreement has been reached (e.g. within the WTO), or should they proceed?

Building on the work done within this first workshop, IDDRI and the New Zealand Embassy in Paris will strive to further participate in the discussions on environmental labelling at French and EU level through the organisation of a second workshop in the next months.

BIBLIOGRAPHY

Vergez, A. (2012). Display of the environmental footprint of products: French developments in the food sector. http://www.developpement-durable.gouv.fr/IMG/pdf/ED64EN.pdf