

Promoting Carbon Footprint Labeling In Regard to Climate Change In Korea

In Young Lee

Kyungpook National University

1.Introduction

carbon footprint labeling is the process in which targets the amount of carbon dioxide greenhouse gas emissions equivalent with the amount of the dose that is brought out.

Abroad, Europe, Japan, and the United States are active in the introduction of carbon footprint labeling systems and industrial products; compared to other carbon-labeling of foods and drinks they are much more actively promoted. Agricultural and seafood domestic manufacturers and distributive are also proactive.

By providing quantitative information to consumers with regards to domestic agricultural and seafood manufacturers we can increase consumer preferences towards less carbon greenhouse emissions along with enhancing the competitiveness of the domestic manufacturing front.

In addition, the environmental information disclosed regarding the active carbon footprint labeling will help customers choose not only choose a more environmentally friendly manufacturer but also enhance the competitiveness of domestic food contributors, especially in the agricultural and seafood sectors.

carbon footprint labeling regulation, rather than just the production of low carbon products, can help facilitate the transition to a market-friendly, carbon reducing economy, the effect being the reduction of carbon emissions.

For labeling of carbon for the process of agricultural output there shall be an established database, similar to one in Europe and the United States that is widely used, although that particular one is not used in business at all.

This reduction of greenhouse gas emissions from carbon footprint labeling contributes to the effort to reduction as a whole, and as climate change reform the new requirements of this specific marketing will be environmentally friendly. From this point 'carbon footprint labeling' for the company helps on how to prevent global warming, and the marketing is effective as the consumer feels they are in the spotlight as helping to fight global warming.

However, due to a lack of publicity, and despite six months of the system in operation, many do not even know the purpose of the system. Getting the report and

knowing the meaning of carbon, and carbon footprint labeling, should be one of the first things to be done. This will help because you will have a basis for knowing about carbon footprint labeling systems.

2. What is carbon footprint labeling System

1) Purpose

The purpose of carbon footprint labeling is to promote a consumer-led purchasing pattern of low carbon goods and to encourage enterprises to develop technologies towards low-carbon goods, thus ultimately contributing to the international efforts to reduce greenhouse gases.

2) Meaning of the Certificate Mark

Carbon footprint system has showed an example last year then ran formally since January 2009. There are two steps of certificates in the carbon footprint labeling: Carbon footprint certification label (Step 1) and low carbon product certificate (Step 2).

(1) Step 1 Greenhouse Gas Emission Certificate

Greenhouse Gas Emission Certificate is certification of carbon footprint for products and can be referred to as carbon emission baseline for the product. Products certified for greenhouse gas emission can have below certificate mark.



Figure 1. Greenhouse Gas Emission Certificate

(2) Step 2 Low Carbon Certificate

The Low Carbon Certificate certifies that the greenhouse gas emission certified goods satisfy the minimum reduction target presented by the government based on the carbon footprint labeling of the good concerned.

Accordingly, a carbon discharge certificate for the good concerned is a necessary prerequisite to a low carbon goods certificate.



Figure 2. Low Carbon Certificate

(3) Operation System

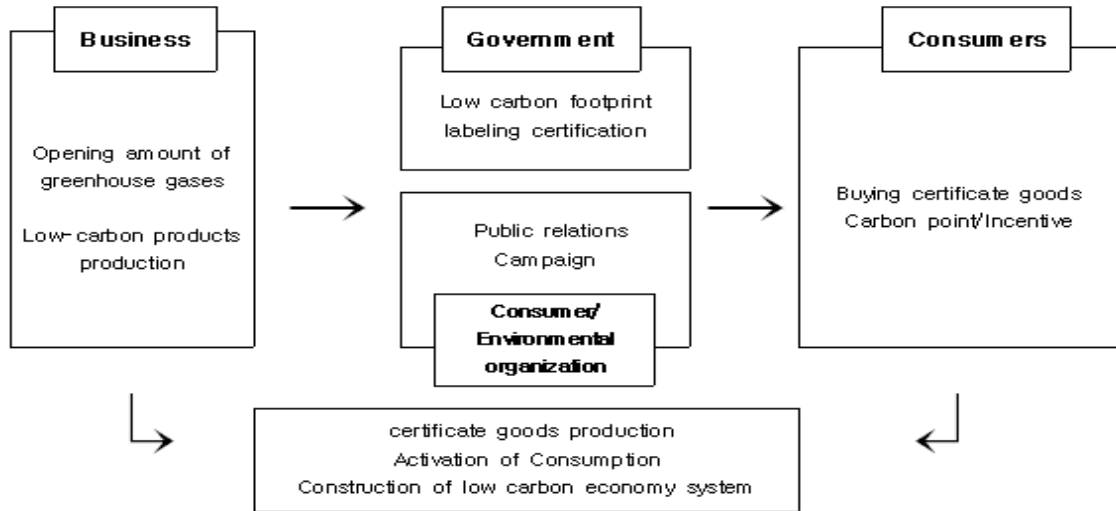


Figure 3. Operation System Of carbon footprint labeling

3. Benefits of carbon footprint labeling

- 1) Enhancement of the image of environmentally-friendly industries through the promotion of goods that are produced to respond to the government's low carbon green growth plan and climate change.
- 2) Promotion and provision of points when goods are sold at large stores that are participants in the Carbon footprint labeling Certificate program.
- 3) Promotion of certified goods through monthly newsletter and other advertisement media
- 4) Recommendation for government awards related to climate change
- 5) Inclusion of 'low carbon product certificate' goods in government-led procurement

4. Characteristics

- 1) The carbon footprint labeling is not a mandatory certification system, but is a system that businesses may participate in on a voluntary basis.
- 2) There are two steps of certificates in the carbon footprint labeling: Carbon footprint certification label (Step 1) and low carbon product certificate (Step 2).
- 3) Acquiring a carbon footprint labeling certificate for goods that do not use energy is easy, as only the common certificate (Product category rules 1) is required. To acquire a certificate for goods that use energy, a common certificate and description scenario for each good (Product category rules 2) are required.

5. Operation Procedure

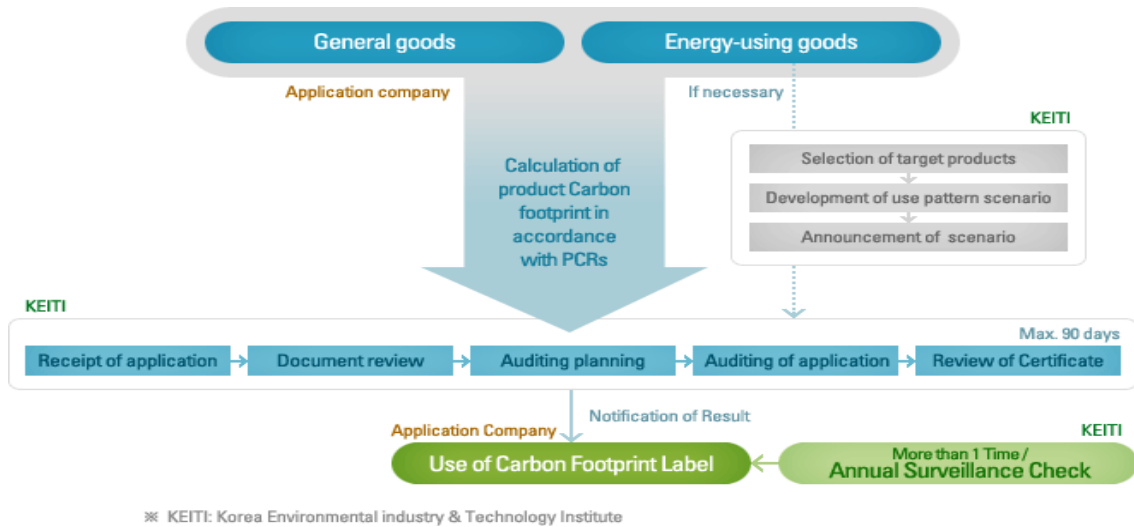


Figure 4. Operation procedure of carbon footprint labeling

6. Certificate Goods

Product Group	Certificate goods	Amount	Unit	Carbon Footprint
Non-durable goods (24)	Cooked rice (210g) 	1	gCO ₂	329
	Bean-curd (275g) 	1	gCO ₂	275
	Coca-Cola (500ml) 	1	gCO ₂	168
energy-non-using durable goods (5)	Wardrobe (Raina 306) 	1	KgCO ₂	213
Production goods (1)	TFT-LCD Glass Substrates 	1	gCO ₂	13.55
Service (1)	Flight service (Kimpo→Haneda) 	One way for 1 people	KgCO ₂	142
	Washing machine 	1	KgCO ₂	601
Energy-using durable goods (4)	Condensing gas boiler 	1	TonCO ₂	31
	Water filter 	1	KgCO ₂	643

Figure 4. List of certificate goods

7. Effective

1) Carbon footprint labeling can contribute strengthen the competitiveness of our domestic agricultural and seafood.

2) Carbon footprint labeling can contribute to the activation of voluntary carbon credits market.

3) Carbon footprint labeling is to promote production and consumption of low carbon products that facilitate the transition to the paradigm.

4) Carbon footprint labeling needs a database for life cycle inventory.

8. Activated carbon footprint labeling system plan

Carbon plans, including the report of the government and the corporate system of local governments, private organizations, and links with consumers.

1) Linked with government and business

(1) Public buying and registration of the main items

Other products use environmentally friendly products or services, through this and such other laws it contributes to the saving of resources and environment.

To reduce environmental pollution for environmentally friendly products the government and public agencies should pursue laws to help for that.

In other words, helping to contribute to reduce the environmental pollution, you should buy a system to facilitate to consumers the low carbon products that are certified. Then you can see which products can help reduce greenhouse gases throughout the world and slow climate change. Because of the target public buying, products may contain an effort at being environmentally friendly. However, the current eco-friendly products within the laws, other than other products of the same purposes, are of a relative emphasis and excellence. To solve this problem, low carbon products and other authentic products can be highlighted. It can be said that this is the most urgent thing. In addition, the less greenhouse gas emissions coming out in the environment the better. This is an environmental issue because it can not be exclusively a single system, and it needs to overcome limitations. The current policy in many countries is to purchase publicly, although the introduction of publicly the purchasing carbon footprint labeling products to include authentication as a policy can be difficult.

But we need a response to the world's climate change, and we need to encourage the government to go out and buy the necessary company products.

(2) Burning Tax related with Carbon Tax

Low carbon emissions for a greener world is one of the ten issues for an environmentally-friendly tax system. Earning money on the Burning Tax is based on trying to switch to a carbon-taxed system. In other words, the process is more efficient. We should increase the carbon emissions corporate tax as companies cut costs, calling this a sort of reduction tax. And environmental improvements after reducing this tax burden will be some of the benefits that can be obtained. Low carbon products produced by carbon, that are certified, will be connected directly to the policy of this kind of government. As an alternative policy, companies can alleviate the burden of authentication, however this is not part of the current system. The company may not say its reducing carbon emissions by reducing emissions of low carbon products from partners. If this is attempted it must be authenticated very carefully.

The policy currently adopted in many countries is that they are trying to start some kind of carbon taxation system, and in some countries there are a limited supply application of incoming products, but it is not very well documented. Therefore, it is still a premature assumption that items of low carbon are necessarily associated with a reduction in carbon tax. However, if the carbon tax is introduced connected with low carbon products it presents a best alternative to the ongoing research, and hopefully will help make efforts to realize our policy.

(3) The connection between the government and the distributors in the promotion of certified products.

There is a common point among distributors, producers, and consumers regarding the carbon footprint labeling certification system. Distributors in various areas, by strengthening the promotion of certified products, will be able to cooperate better in business. In fact, on April 10th 2008 and also in 2009 the Ministry of Environment and leading retailers Shinsegae E-mart and Samsung Home Plus made an operating agreement concerning carbon. The carbon footprint labeling of certified products by distributors for a certain period of time provides incentives for certified products, and strengthens the promotion and certification authority of its own brand products for retailers to provide training free of charge, and the level of authentication is a reduction of fees.



Figure 5. Ministry of Environment and E Mart, Home plus signed a MOU on a carbon labeling

(4) Agreement through mutual recognition between national markets promoting export products.

The ultimate purpose of labeling the same way between countries is to be able to easily recognize the labeling, and that each product uses the same authentication when being exported. Although an international standard was established, there are bitterly opposing interests in regards to a country's environment and products marked by certification. It is only partially certified in particular countries and it is only to promote mutual recognition agreements. In the case of carbon-carbon emissions, labeling the source of this and how to calculate is a difficult point. This same thing applies to international and cross-country mutual recognition over any other labeling system.

It is easy to promote agreement, but this is not the obstacle for the products. In order to calculate the carbon emissions per unit of production of raw materials or energy sources called the amount of activity. This corresponds to a coefficient calculation of carbon emissions which should be selected. However, in the case of coefficient carbon emissions and provided to each country such as the case in Europe, but most is sold commercially and available in most countries and in Korea. At this time, that is the source of coefficient emissions. Where that can vary depends on the value of the coefficient discharge for each country, so that carbon emissions in the relative nations can not be easily admitted. But ultimately these problems in the process of producing the raw materials and energy sources used can be applied to any electrical coefficient of carbon emissions depending on the difference of carbon emissions, primarily because of the electricity provided to each mutually recognized individual country's coefficient carbon emissions. This can be a urgent problem.

The other measures that exporters want to obtain certification of carbon footprint labeling are certification authority of the country's manufactured products in the production of carbon footprint labeling with regards to shipment to and use and disposal of products to an authenticated exporter to perform certification authority. Also they want to shorten the time required for certification and reduce the burden on exporters as a viable alternative.

2) The connection between the government and private sector.

(1) Bonus points connected with carbon

First consider giving a survey of consumers on what products they will buy. Customers will always consider the price first. Then at that time decide what products customers will buy and consider the environment. Some customers do care much

about the environment and in this situation you can raise the price competitively of the products. If the market is to include the private sector and public sector together, you can increase the purchasing power for the products in an environmentally sound manner. This is a great alternative to the current increase in price, and one can get a rebate with the same point value. Carbon-carbon grading of certified



Figure 6. Shinsegae points connected with carbon

products by a point cover system can be connected to the problem of fund providers. To resolve this, companies can provide the funds as a most realistic alternative, but company participation such as this must be approached carefully. For a rebate such as this to succeed, there should be confidence that the company can gain some sort of profit. Success stories such as rebates are positive and can cover the problem of active carbon. Policy alternatives for this realization are insufficient now, but can occur with sufficient research and demonstration projects. It would be enough to solve the problem and not too late at that too.

(2) Strengthening the education of consumers regarding climate change.

Of a certain low-fat milk, one price is more expensive than the other two, but more expensive to sell. The income level at the time of the product purchase has to be considered with regards to the safety of the products. Consumers emphasis on safety and environment of more and more products, outweighing the cost, can be seen in consumers thoughts on climate change education as well. We can also strengthen the education of low carbon by educating children about climate change. It is important that these measures can be implemented.

(3) Other activities

Environmental groups or companies can offset carbon in the case of tree planting ceremonies. Planting trees can be covered by money from certified products bought by consumers. Getting people and companies to participate and broad consumer PR campaigns should be attempted as well. Find a way that you as an individual can make a difference.

Policy measure		Main contents
Position 1	Position 2	
Government and certification authority	Business	▶Public buying and registration of the main items
		▶Burning Tax related with Carbon Tax
		▶The connection between the government and the distributors in the promotion of certified products.
		▶Agreement through mutual recognition between national markets promoting export products.
Government and certification authority	Private sector	▶Bonus points connected with carbon.
		▶Strengthening the education of consumers regarding climate change.
		▶Strengthening campaign relate with private organization and international organization
		▶Strengthening campaign relate with a broadcasting station and newspaper

Figure 7. Activated carbon footprint labeling system plan

3) What can we do

- (1) Eco campus campaign
- (2) Inviting the public to paper on environment
- (3) Promoting consume of certificate goods at university

9. Conclusion

Even though carbon footprint labeling has good purpose for environment it does not give satisfactory results. Because there is not so much benefit for company and consumer. we impose more duty to company and give more benefit to consumer.

In reality the results of the carbon footprint labeling system, the economic incentives that are provided to facilitate the promotion of this have led to a spread of the consumer culture for low carbon steel products.

10. Reference

- Business Institute for Sustainable Development, Direction for improving carbon footprint labeling, 2009, <http://www.bisd.or.kr>
- Chung-won Lee, green growth politic propulsion direction, 2009, p18
- Green growth of committee, Green growth forum establishment workshop data, 2008, www.greengrowth.go.kr
- Ministry of Agriculture and Forestry, Low carbon and green growth policy plan, 2008
- Ministry of Environment, Carbon footprint labeling, 2008
- Noh-hyun Im, carbon footprint labeling authentication trends, Ecosian, 2009 www.ecosian.com
- Song-taek Im, Agricultural food and seafood sector of carbon footprint labeling, GS&J Institute, 2009