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Japan Begins Voluntary Carbon Footprint Labeling Scheme

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Approved by:
Stephen Wixom
U.S. Embassy

Prepared by:
Yuichi Hayashi and Stephen Wixom

Report Highlights: In October 2008 Japan released a proposal for voluntary carbon footprint (CF) labeling and will begin a pilot project in 2009. The proposal calls for a label that bears a numerical rating based on an estimate of CO2 emissions created during the life of a product from procurement of raw materials through production, distribution, use, and eventual disposal.

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Background

On October 8, 2008, the Ministry of Economy, Trade and Industry (METI) announced its intent to begin a voluntary carbon footprint (CF) labeling program in 2009. The labeling would initially be applicable to consumer products, including foods, and would rate products based on CO2 emitted during the life of the product from the procurement of raw materials through production, distribution, use, and eventual disposal. CF labeling can be applied to a wide variety of products and services and these could eventually be included in the voluntary labeling scheme.

The announcement of a CO2 labeling program coincided with the July 2008 release of Prime Minister Yasuo Fukuda's Action Plan for Achieving a Low-Carbon Society. The proposal complements Japan's commitments made under the Kyoto protocol to reduce CO2 emission to 6 percent of 1990 levels by 2012. The government has been eager to find ways to achieve this goal, which with just four years remaining is proving increasingly difficult to attain.

The Ministry of Economy, Technology, and Industry (METI) is formulating these guidelines; however other agencies such as the Ministry of Agriculture, Fisheries, and Forestry (MAFF), the Ministry of Environment (MOE), the Ministry of Land, Infrastructure, Transport, and Tourism (MLIT) and the Ministry of Health, Labor, and Welfare (MHLW) are also contributing to the effort. With a number of ministries involved it is not clear at this point how the labeling scheme will ultimately evolve; one complication is that MOE is working on separate guidelines that could result in a different label from that being devised by METI. MAFF for its part is working closely in support of both METI and MOE labeling proposals. Carbon labeling matches MAFF's general goal of reducing greenhouse gas emissions and MAFF officials have stated that they would like to see consumers change their lifestyles in a way that results in fewer CO2 emissions. In preparation MAFF has tasked three committees specifically related to the agriculture, forestry and fishery industries with examining the proposals and will release a report of their findings by March 2009. It can be assumed that MAFF believes that domestic products will have a smaller carbon footprint than imported equivalents.

METI has worked with other countries considering similar regulations including France and Germany, and has an agreement with the United Kingdom to cooperate and share information on the issue. The GOJ has indicated that it will work to develop international standards for carbon labeling through the International Organization for Standardization (ISO).

Japan recognizes a number of other programs that evaluate the eco-friendliness of agricultural and forestry products such as the "food mileage" program, the MSC (Marine Steward Council) and Marine Eco Label Japan (MEL Japan) programs for seafood, and various "forest certification" programs such as the Forest Stewardship Council (FSC), Sustainable Forestry Initiative (SFI), Program for the Endorsement of Forest Certification (PEFC), and Sustainable Green Eco-Council (SGEC). In addition, there is "legally harvested wood" programs that are designed to comply with Japan's Green Procurement Policies.

Specifics of the Proposal

The METI CF proposal calls for rating products using a CO2 equivalent of green house gases (GHG) emissions which include CO2, CH4, N2O, HFCs, PFCs and SF6. The label will list emissions as CO2 equivalent grams, kilograms or tons in absolute values. The labeling would employ the Life Cycle Assessment (LCA) method which covers procurement, manufacturing, distribution/sales, use and waste, and recycling.

Carbon Labeling Pilot Project

METI will begin a one-year pilot project for CF labeling in the spring or summer of 2009. GOJ will ask companies to cut emissions as a condition of participation, but will not set mandatory reduction targets. Currently 30 domestic companies, most of which are food related, have agreed to participate in the project. For example, Sapporo Breweries will begin attaching CF labels on their Black Label beer (please see photo below). Many of the major food retailers including Aeon, Seven-Eleven, and Lawson will also participate. A standard label will not be created until sometime in 2009, and companies have created 49 sample labels so far. At this point all of the products participating in the project are manufactured domestically though some undoubtedly contain imported ingredients. GOJ has indicated that they will consider allowing foreign companies to participate in the pilot project. Whether participating in the pilot project directly or just offering comments or suggestions on the guidelines, AgTokyo encourages companies to engage with the GOJ in order to ensure that the guidelines are developed in a way that does not place imported goods at any disadvantage.

Examples of Carbon Foot Print Labeling
(Source of the right picture: Japan Agricultural News Paper, Jan. 7, 2009 edition)

Aeon, one of Japan's largest national supermarket chains, has announced it will begin trial sales of seven products with CO2 labeling. These items include rice, carrots, and onions. Following a trial period in ten stores in January the project will be expanded to 43 agricultural and commercial products, including some imported foods.

Public Outreach

METI has held several outreach events to share information on the project with consumers and industry. METI held a public comment period in October 2008 and is expected to soon release a final report. The labeling scheme could be significantly affected by the domestic food industry's reaction to the guidelines and trial period. METI also conducted a consumer survey on the scheme at the tenth Eco-Products 2008 Exhibition held from December 11 to 13. METI had a booth with a number of companies exhibiting product package prototypes. The booth, which was extremely well attended, explained the meaning and purpose of CF labeling.

Implications for Carbon Footprint Labeling

One of the main challenges associated with CF labeling is the difficulty in creating a calculation for green house gas (GHG) emissions that is consistent and accurate. A given product can have different scores based on the calculation employed. The main reason for

the disparity is the great number of data points involved. For example, CO2 emissions can vary widely depending on the production or use of the product [for example, cooking and refrigeration] and the energy source involved [gas versus electric]. At best, the calculation is an rough estimate based on a number of approximations rather than concrete measurements.

Calculating GHG emissions for the multiple leather, dairy, and meat products produced from a single cow, for example, demonstrates the complexities involved in producing precise measurements. A cow is a significant source of GHG emissions, especially methane. In addition, it would have to be determined is whether a cow is grass fed or grain fed. Feed can be a significant CO2 contributor due to the use of petroleum based agrochemicals and fertilizers. An estimate of CO2 emissions would require quantifying and allocating total emissions among all the sources.

Japan's CO2 labeling proposal calls for creating a basic methodology with specific items falling under several broad categories. Under the pilot, industry associations will create their own labeling proposals. It will allow companies to develop different methodologies that will be subject to review and approval by a number of committees. Japan has also proposed the use of a third party audit system to ensure that the guidelines are being consistently followed.

Consumer Impact

CO2 labeling can be useful to consumers as a general guideline. However, with the calculation complexities involved, CF labels are inevitably oversimplified and can lead to consumer misunderstanding and ultimately cynicism. A lack of space on CF labels will prevent enough information from being presented for a consumer to fully understand the product. On the other hand, too much information on the label would create extra confusion.

Industry Impact

Certain products will be at a competitive disadvantage with CF labeling. In general, items that are minimally processed such as fruits and vegetables will have lower CO2 emissions than those subject to greater processing. Plant based products may have better scores than meat and seafood products due to the mitigating effects of the plant on CO2 in the atmosphere. CO2 emissions can vary depending upon the area or climate produced. Fruits raised in orchards could be associated with less CO2 emissions than those raised in greenhouses. Packaging can be a major contributor to an item's CO2 output such as the aluminum cans used for beverages. It is generally thought that transportation of items can be a significant source of emissions, especially for items that are transported by air. This is a potential disadvantage for internationally traded product; however, in some cases shipping may prove comparable or advantageous to other forms of transport such as trucking depending on conditions and distance.

Frequent changes in ingredients could necessitate costly relabeling and recalculation of CO2 emissions. This is a potential problem for manufacturers of processed foods since they generally contain different ingredients depending upon season and price.