ENVIRONMENTAL GLOBALISM AND GREEN CONSUMERS

Ichiro Kaneda
Niigata Sangyo University, Japan

Keywords: Sustainable development, the LCA (life cycle assessment), the ISO (International Organization for Standardization), the SNA (System of National Accounts), the SEEA (System of Integrated Environmental and Economic Accounting), carbon dioxide, environmental protection activities

Contents

Summary

"Green consumer" movements began in England in 1988, and rapidly spread all over the world as a movement dedicated to choosing the goods safe to the natural environment and the stores that sell such goods.

Individual or personal environmental activities are of course important, but not enough by themselves. With environmental problems, it is very difficult for individual consumers to identify the causality between the origin and the destination of pollutant materials, for example, carbon dioxide. Therefore, the medium connecting individual consumers and global environmental conditions is important. A possible medium is green consumerism.

An indicator, and if possible a standardized indicator, for environmentally sound goods is necessary to make green consumerism more effective, especially from the general and global point of view. "Life cycle assessment" (LCA) is representative of that idea. It is based on the proposal that environmental labels should indicate the total environmental load from production to dumping. On the other hand, the International Organization for Standardization (ISO) 14000 series provides a standardized indicator for purchasing environmentally sound products. Many enterprises are endeavoring to abide by it. In order to be so authorized, it is necessary to satisfy the environmentally severe and strict

conditions that led to and are related to the above-mentioned life cycle assessment. Thus, environmental labels are being arranged in accordance with the international and global standard, and green consumerism itself is being globalized.

Furthermore, in order to make this effective, accounting systems are needed capable of identifying and evaluating or assessing environmental elements. Currently, the System of National Accounts (SNA) and the System of Integrated Environmental and Economic Accounting (SEEA) satisfy those conditions.

Green consumerism is developing, its aim being sustainable development. Individuals are requested to behave for this cause as green consumers.

1. Green Consumerism and Major International Conferences

Green consumer movements seem to have begun in England in 1988, and rapidly spread all over the world as a movement dedicated to choosing goods or products safe to the natural environment and the stores that sell such goods. The background to the movement was the awareness of overuse of natural resources, and environmental pollution or contamination and disruption brought about by economic development after World War II. From the global point of view, the world economy became larger than ever imagined before and grew too large, with developed countries to blame, making people aware of the limit of natural resources and the limit of the capacity of the natural environment to decompose or resolve pollutant materials. This limitation is due, in the final analysis, to the finite nature of the globe.

The concept of "limits to growth" was, as is generally known, first proposed by the Club of Rome in 1972. The basic theme of the United Nations Conference on Environment and Development held in Rio de Janeiro in 1992—also known as the "earth summit"—was "environmentally sound and sustainable development." Since then, people's interest in the relations between economic activities and the natural environment has quickened all over the world. Thus, people's environmental interest has been globalized with the concept of "sustainable development."

In 1997, the Third Conference of Parties of the United Nations Framework Convention on Climate Change was held in Kyoto, Japan. The Kyoto protocol adopted at that conference stipulated that hydrofluorocarbons (CFC), perfluorocarbons (PFC), and sulfur hexafluoride should be added to carbon dioxide, methane, and nitrous oxide as also being greenhouse effect gases. The protocol also set the standard, recognized as legally binding, that between 2008 and 2012 the emission of these gases in all developed countries agreeing to the protocol should be reduced by more than 5.2%, in total, from the total amount emitted in 1990. The Kyoto protocol has strengthened environmental globalism or the common feelings for it among earth dwellers.

2. Awareness of the Relationship between Consumption and the Environment

Consumers have not always been green consumers. Initially, consumers became conscious that the goods they purchase may pollute and harm their health. What consumers are directly interested in is the quality itself of the goods and not such things

as the production processes. It is quite easy for consumers to become aware of the causality between production processes of certain goods or products and the conditions under which they pollute or contaminate, if the chain of causality is simple and easily recognized. Among such goods or products are primarily foods. However, it could not necessarily be said that the pollution of such products is itself an environmental problem. An environmental problem is brought about when the pollution expands to the natural environment and has repercussions on human beings from the natural environment. The repercussions are not necessarily through the products themselves as objects of production. The repercussions are often through other avenues. For instance, the part of the natural environment polluted by pesticides or insecticides, bactericides, fungicides, and herbicides in agriculture in turn pollutes drinking water and harm human health through the water, not only through the agricultural products themselves. However, in general consumers more easily recognize the chain of causality through the products themselves than through other things.

Pesticides or agricultural chemicals pollute agricultural products initially. At that stage, however, the pollution could not be said to be an environmental problem, as mentioned above, for it is essentially no different from the direct pollution of products caused by bad materials, devices, equipment, etc., for example in a food factory. Pesticides accumulate in due course in the soil and continue to pollute farm products over a long period, even if use of the pesticides is stopped. This sort of pollution could actually be called an environmental problem. The consciousness of consumers as green consumers begins around this point. Pollution of the natural environment itself, or pollution of products through the polluted natural environment is more difficult for humans to recognize and control than the direct and simple pollution not occurring through the natural environment. Hence, the latter case is essentially different from the former and could be labeled an environmental problem.

Chemical fertilizers have also been used in agriculture. The two kinds of chemicals mentioned so far are different from each other by nature. Generally speaking, chemical fertilizers are not as toxic as pesticides, so they do not harm human health by directly polluting agricultural products. Chemical fertilizers, however, cause deterioration in the chemical and physical quality of the soil, and consequently reduce the variety and quantity of nutritive substances or ingredients in agricultural products. Moreover, excessive use of chemical fertilizers weakens the ability of crops to resist blight—noxious insects, molds, bacteria, virus, etc. that cause more excessive use of pesticides. This chain of causality and the mechanisms are not so difficult for consumers to recognize. Thus, the consciousness of consumers as green consumers can expand. The use of organic agriculture is much more widespread nowadays.

Next, the consciousness of green consumers should be expanded through direct and sensory recognition of the simple chains of causality between natural environmental pollution and its harmful repercussions so that they become aware that their consumption could also pollute the natural environment and cause repercussions for them as well as for production. The residuals of consumption often contain harmful materials or create them by combination, for example, polychlorinated biphenyl (PCB; also polychlorobiphenyl) and dioxin are directly harmful to human health; eutrophic materials sometimes cause red tides that are harmful to marine and lake life;

fluorocarbons are destructive to the ozone layer. Consumers also suffer harmful repercussions from production, not only directly through products, but also indirectly through pollution of the natural environment in the production process. The consciousness of those mechanisms prompts consumers to take the initiative, and to cooperate with one another in common and joint consciousness as green consumers, using the Internet if necessary. Such initiatives mean that consumers choose environmentally sound products and eventually producers will not be able to neglect that in production.

Finally, this consciousness of green consumers will become global, for everywhere on earth is closely connected to everywhere else these days. Harmful repercussions are easily conveyed from one place to another across national borders through the movement of harmful or polluted materials, especially when the materials are gaseous. One such material is carbon dioxide, which has been chosen as an appropriate example because of the attention it has received in relation to global warming.

3. Lessening Atmospheric Carbon Dioxide

Originally, gases such as carbon dioxide (CO_2) and methane spread across national borders because of their properties or characteristics. The CO_2 emitted from the residuals derived from the consumption of, for example, paper in households and establishments and from internal-combustion engines, thermoelectric power stations, etc. spreads all over the world, and contributes to global warming through adding to the atmospheric volume of CO_2. Incidentally, it takes rather more time for timber as residuals to be changed into CO_2 than it does paper. All the timber on the globe used in construction is stored carbon or CO_2 that will not be released until the timber is discarded or burnt, and has not contributed so much to the increase of CO_2 in the atmosphere. Many tropical rain forests and mangrove forests have been cut down, especially in the Southeast Asia, and converted into pulp or paper by developed countries, and rather a large quantity of the paper has been burnt and converted into CO_2.

Three factors are thought to stop CO_2 adding to the atmospheric volume of CO_2. One is the absorption or reabsorption of the CO_2 by forests. Another is restriction imposed by international authorities or organizations, for instance, the U.N. through its constituent countries, which is related directly to the above-mentioned Kyoto protocol and further to the Earth Summit in Rio de Janeiro. The third is the spontaneous conscious and voluntary activities of individuals and industries, or households and establishments as final or intermediate consumers, which could be often related to and in cooperation with the second case, that is, restriction by international authorities or organizations and the governments of constituent countries. In the final analysis, the consciousness of individuals or households is thought to be the most important and elementary. Their awareness is reflected back on production process through feedback.

Each individual is a *Homo oeconomicus* (an economically rational person), and must seek satisfaction and pursue the maximization of utility, to express it in economics terms. Why do green consumers commit themselves to environmental protection activities that do not directly and explicitly provide them with direct individual

satisfaction or utility? The reason seems to be that the relationship between human behaviors and the changes in the natural environment and environmental repercussions has become much clearer because of the results of scientific research into environmental problems and the development of information systems including the Internet. Next, green consumerism is globalizing, which may be ascribed to the development of global solidarity about the natural environment. The problem of CO_2 is thought to have accelerated recently and this has strengthened that tendency. CO_2 spreads across the borders and can cause worldwide troubles and disasters, which expands environmental consciousness, especially that of green consumers, to a global level.

It is for this reason that the following discussion often alludes to the problems of CO_2.

-
-
-

Bibliography

Kaneda I. (1996). *Economics and Philosophy of Global Organic Production*. Tokyo: Chuo-keizai-sha. [in Japanese.] [This discusses productivity of natural assets, commenting on value theories of traditional economics.]

Makino N. (1998). *Environmental Big Business*. Tokyo: PHP Research Institute. [in Japanese.] [This discusses ecobusiness as a developing industry and green consumerism.]

United Nations. Statistical Office (1992). *Revised System of National Accounts (Provisional)* (ST/ESA/STAT/SER.F/2/REV.4). New York: United Nations. [This represents the internationally standard accounting system for national economic accounting.]

United Nations. Statistical Division. Department for Economic and Social and Policy Analysis (1993). *Integrated Environmental and Economic Accounting: Interim Version* (Handbook of National Accounting. ST/ESA/STAT/SER.F/SER.F/61. Studies in Methods, Series F; No. 61), 182 pp. New York: United Nations. [This represents the standard accounting system to supplement the System of National Accounts (SNA) in treating environmental elements.]

Wada Y., Nakano K., and Yamamoto R. (1996). *Lifestyle Safe to the Environment*. Tokyo: Gihodo. [in Japanese.] [This discusses life cycle assessment (LCA) and ISO.]

Biographical Sketch

Professor Ichiro Kaneda, born February 22, 1934, in Tokyo, Japan, gained his bachelor's degree in Tokyo University in 1962 and his doctorate in Tokyo University in 1982. He is a professor at Niigata Sangyo University and ex-president of the same university, having served as president from 1988 to 1996. His fields of specialization are environmental and food economics, mathematical economics, and regional economics. His main recent scientific publications are Economic, technical and political aspects of LNG carriers in comparison with NG pipelines (based on the paper he was invited to present at the U.N. Symposium on Natural Gas Transport and Utilization in Northeast Asia, Beijing, December 2000), *Bulletin of Niigata Sangyo University* (Faculty of Economics), **23**, June 2001; *NHK-Books: The Japan Sea Economic Rim* (The Economic Region Surrounding the Sea of Japan) [in Japanese] (Tokyo: NHK Publishing, 1997); *Economics and Philosophy of Organic Production by Global Nature* (ecological and

agricultural economics) [in Japanese] (Tokyo: Chuo-keizai-sha Publishing, 1996); and The change of the viewpoint on the Japan sea rim, *DBI Economic Review* [in Korean] (Daegu Korea: Daegu Banking Institute, 1995).