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## Environmental Accounting for Environmental Disclosure

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# Efforts of the Japanese Government -Focus on the Role of the Ministry of the Environment-

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Today I would like to introduce the outline of the efforts by the Japanese Government, mainly by the Ministry of the Environment, in promoting environmental accounting.

## 1. Role of environmental accounting in policy making

### i. Transition of environmental issues in Japan

I would first of all like to introduce the background of our efforts in promoting environmental accounting. Environmental issues in Japan can be roughly divided into three phases. The first phase was the high growth period from around 1960 to 1972 when industries served as a source of pollution and Itai-itai disease and Minamata disease became social concerns. The second was the period from 1973 to around 1984, the so-called stable growth period when pollution surfaced as a result of urban-centered life and issues of waste disposal became a major focus for people. The third phase was the period from around 1985 to the present when environmental issues became more complicated and diversified to a global basis and became very difficult to solve. The government looked to deal with these environmental issues throughout these periods by combining various policies.

### ii. Role of environmental accounting in policy making

In the first phase, when industry-associated pollution was significant, a direct approach was the main method to regulate specific causative agents. As pollution issues became more complicated and diversified, however, the government changed its policy to take a more comprehensive approach. Waste problems caused by urbanization, for example, started to be dealt with by

the set up of a framework. The conventional method to regulate a causative agent individually unavoidably places an extremely large burden on both companies and the government.

More recently, economic approaches such as an introduction of an environmental tax and green purchasing have also been incorporated. The government is currently coping with environmental issues based on a concept of the best policy mix, a mixture of various kinds of policies to create the most effective measures to protect the environment. Voluntary cooperation by all parties will serve as one of the most important factors in obtaining the best policy mix.

Since voluntary actions by companies and other organizations help improve their own social behavior, I believe that they are very effective in coping with current environmental issues that are complicated, diversified and widely spread. Some companies may wonder what is included in voluntary cooperation. We have therefore been developing procedures to support and promote their environmental activities as well as measures that facilitate their environmental information disclosure, which we call the "information approach."

The information approach helps all stakeholders to evaluate companies and their products, allowing them to make the right selection. As a result, a company's environmental awareness is expected to rise. Product-based measures for information disclosure include environmental labeling and life cycle assessment. As a company-initiated activity, we are encouraging them

to adopt systems of environmental reporting, environmental accounting and environmental performance indicators. The government is introducing a package of measures for environmental accounting, which is a mixture of other relevant measures.

First of all, companies must improve their environmental management system. To assess the environmental burden, which serves as an index for inner management, an environmental performance indicator should be selected. We are revising the guidelines for environmental performance indicators and seeking public comments.

After selecting an environmental issue and an indicator to explain it, companies collect and analyze data. This data can be used for self-evaluation within the company as well as for disclosing their environmental information by presenting them in their environmental report. Environmental accounting has been developed as a measure that connects financial accounting and environmental issues from the standpoint of cost.

There are two basic functions for environmental accounting: internal and external functions. Internal functions serve as a useful tool for corporate management, where internal staff including both the management and employees will be the receivers of information. Environmental accounting for external use serves as a tool to promote communication with local communities. Through communication, a company may gain a community's trust in its environmental protection activities, allows the community to evaluate its activities, or fulfill accountability. In Japan, an emphasis has been placed on this external function to promote communication with communities. The Ministry of the Environment considers that well-balanced development of internal and external functions is important.

## 2. Measures taken by the government and other organizations

### i. Current prevalence of environmental accounting

Our data concerning environmental accounting is based on information collected from companies listed

on the first and second sections, as well as non-listed companies with 500 employees or more. According to the most recent data, there are 367 companies that publish their environmental accounting information. If those who adopt an environmental accounting system for internal use are included, the number rises to 491. In addition, there are 580 companies that are considering adopting such a system within the next few years. Thus, the total number of companies adopting a system of environmental accounting is therefore expected to soon reach 1,000.

### ii. Governmental policy to promote environmental accounting

I believe a wide adoption of environmental accounting would not have been possible without the support of the government. The fact that we have contributed to promoting environmental accounting in this way is the source of our pride. In the government's Basic Environment Plan, 3-year plan for regulatory reform promotion, and White Paper on the Environment, the governmental policy to further promote environmental accounting is emphasized, showing its intention to provide continuous support that facilitates a company's efforts.

Let me introduce some of the governmental measures. The Ministry of the Environment has developed and published guidelines which have been widely used. While these guidelines are designed for companies that use an environmental accounting system as a tool for sharing their information externally, we continue to do research in cooperation with companies and certified public accountants to make them available for internal use. In addition, the Ministry of Agriculture, Forestry and Fisheries has published manuals for food industries and the Ministry of Economy, Trade and Industry has provided results of studies on methods for the internal use of environmental accounting systems. Associate Professor Nakajima and Professor Kokubu have been the main people conducting these studies.

Chart-1 shows a list of materials published by the government and government agencies. There are also some efforts in the private sector to disclose their

research results.

Publisher	Title	Period
Ministry of the Environment	Environmental Accounting Guidebook 2002 —for understanding of the Environmental Accounting Guidelines 2002—	March 2002
Ministry of Economy, Trade and Industry	Environmental Management Accounting Workbook	June 2002
Food Marketing Research and Information Center	Environmental Accounting Manual for the Food Industry First Step Guide	March 2001
Food Industry Center	Environmental Accounting Manual for the Food Distribution Industry First Step Guide	March 2002
Institute for Global Environmental Strategies	Current Situation and Issues in the Future concerning Practical Environmental Accounting: Based on the outcomes of questionnaire surveys targeting companies that have introduced environmental accounting	September 2002
Institute for Posts and Telecommunications Policy	Surveys concerning environmental accounting in postal services	August 2000

Chart-1

### iii. Development of the environmental accounting guideline

Next, I would like to talk about how the comprehensive environmental accounting guideline has been established by the Ministry of the Environment. The initial consideration was made around 1998, when the term "environmental accounting" was not yet widely known in Japan. The first guideline was published in 2000 and its revised version in 2002. Over the years, we have organized corporate management workshops for leading companies in Japan and conducted joint research with the Japanese Institute of Certified Public Accountants. Through these efforts, we have collected opinions from a wide range of business people and experts and have continued our efforts in seeking improvements.

The framework of environmental accounting presented in the Ministry of the Environment guidelines consists of two parts: financial performance, which can be measured in currency units, and environmental performance, which can be measured in quantity units. This framework is designed to recognize, measure and convey performances as quantitatively as possible. It is unique to put the emphasis not only on cost, but also on cost performance based on the comprehensive understanding of environmental conservation costs as quantity and economic benefits based on currency units.

We also provide a format which has been designed

to be used for external information disclosure. As mentioned above, the framework provided by the government is a combination of the internal function, which is supposed to be used within companies and the external function, which is meant to be used when companies make their information public. This feature has helped develop environmental accounting in Japan.

### 3. Issues to be considered in the future

#### i. Transition in corporate sustainable development management

According to the White Paper on the Environment, the quality of corporate sustainable development management has been changing, as shown in Chart-2.

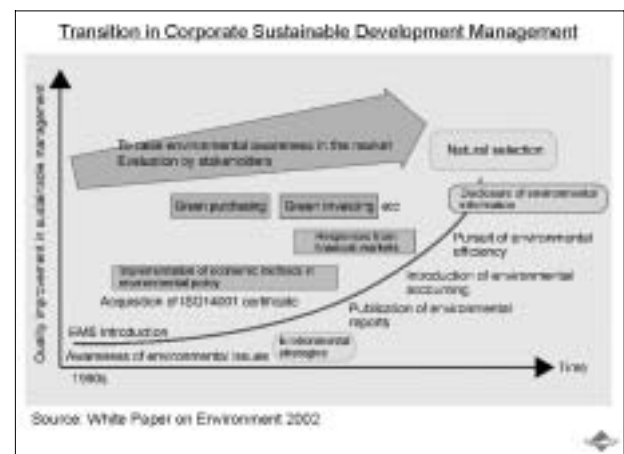


Chart-2

More changes are expected in the future. At which exact point in time of the development we are currently experiencing may differ from case to case. One thing that is commonly recognized is public awareness of environmental issues has rapidly increased since the 90s.

Let me give you an example with ISO14001. The number of work places in Japan with ISO14001 certification has started rapidly increasing after 1996 and now exceeds 10,000, the only country in the world with this number of certified work places. In the latter half of the 90s, the number of environmental reports issued also started gradually increasing. During the same period, some companies newly adopted an environmental accounting system. In the following years, corporate efforts to seek better environmental efficiency has been promoted since such efforts would

reflect well on the company's business decision-making and would be easier for those outside the company to evaluate.

Some say that the Japanese financial market does not respond well to corporate efforts in sustainable development management. However, some environmentally conscious investment trusts have recently been introduced. In Europe and North America, Socially Responsible Investment (SRI) has become popular. These newly introduced investing methods have made the evaluation of companies more diverse than ever before. In the midst of such diversification, disclosure of environmental information has still remained essential in corporate evaluation. I believe that a time will come in the future when companies and products will be selected by ordinary consumers based on the company's environmental consciousness.

#### ii. Issues to be considered in governmental policy

There are three major issues in governmental environmental policies: further promotion, improvement of comparability and improvement of credibility. The 3-year plan for regulatory reform promotion points out these three issues concern not only environmental accounting but also environmental reporting that incorporates environmental performance indicators. To cope with these issues, the Ministry of the Environment is now considering establishing a voluntary registration system of environmental reporting by companies.

#### iii. Harmonization with international trends

Next, I would like to talk about harmonization with international trends. Expert working group meetings

of the United Nations Division for Sustainable Development (UNSD) has been studying a system similar to the Material Flow Cost Accounting system. They have published a workbook based on the results of the study and the Ministry of the Environment has sent its officials to expert working group meetings to contribute to the study. The Japanese edition of the workbook is soon to be published. The Ministry is considering making use of the study results internally. Professor Kokubu and Professor Wagner have also participated in the expert meetings.

We think that Japan should be responsible for promoting environmental accounting in other parts of Asia. In September 2001, the Environmental Management Accounting Network-Asia Pacific (EMAN-AP) was created with the IGES Kansai Research Center serving as the coordinating office. In cooperation with the Network and other organizations, we are now promoting environmental accounting in the Asia Pacific Region. Korea and Australia are also joining these promotional activities. Having heard that many studies on environmental accounting have recently been performed in Korea and China, we hope that they would further deepen their understanding of Japanese approaches as well.

Regardless of the current situation, environmental accounting is still developing. Compared with conventional financial accounting, it is very difficult to set a strict standard and elaborate on an evaluation method. However, while always in consideration of harmonizing with international trends, we would like to further promote environmental accounting.

# Efforts of the Japanese Institute of Certified Public Accountants (JICPA)

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I wish to take this opportunity to present you the research result on environmental accounting conducted by the Japanese Institute of Certified Public Accountants (JICPA), an effort that is little known in comparison to the initiatives being taken by the Ministry of the Environment and other offices of the Japanese government.

## 1. Environment-related Activities of the JICPA

Please allow me to first explain a little more about the Japanese Institute of Certified Public Accountants. All certified public accountants in Japan are required by law to become a member of the Institute. The Institute has several research study groups that carry out survey research, with the Management Research Study Group being in charge of issues related to the environment. The research study group consists of three groups currently doing research: the Environmental Accounting Research Group, the Environmental Audit Research Group, and the Emission Trading Research Group.

JICPA's Management Research Study Group was established in 1987, and in 1993 the Environmental Audit Subcommittee, the predecessor to the three research groups, was established. The Subcommittee became a Working Group in 1995 and was expanded to form a Research Group in 1998, as the number of constituent members rose. When guidelines from the Ministry of the Environment (MoE) came out in 1999, the research group was split into one section for environmental accounting and another for environmental auditing, and more members joined. The Emission Trading Research Group was newly

established in 2002. The research results from these groups are made public as research reports. The Emission Trading Research Group was formed only recently, so it has not yet produced any reports, but the other two groups have released several reports of their findings. The Environmental Audit Research Group has produced several research reports on the issue concerning the assurance of environmental reports, including "Current Situation and Issues in Environmental Reports Assurance." "Toward the Establishment of an Environmental Accounting System" was published by the Environmental Accounting Research Group in November 2002, which addresses the focal issue of this presentation.

## 2. Concept of "Toward the Establishment of an Environmental Accounting System"

### (1) Background for the Concept

I shall now explain the research report entitled "Toward the Establishment of an Environmental Accounting System." The full text in Japanese has been provided for more details.

First, JICPA proposes the use of a new term (and concept) "environmental accounting statement." Conventional environmental accounting provides no detailed criteria for the creation of reports or the disclosure of information, so it has all been based on voluntary corporate efforts, with an emphasis placed on free expression. However, as Mr. Sawami described earlier, we now have a thousand companies in Japan producing environmental reports, and as Professor Kokubu pointed out, most of those companies that are introducing environmental accounting now place

too much emphasis on independent expression, raising the concern that the reports they produce will be largely unusable as externally reviewable accounting. We therefore felt it necessary to take a new look at environmental accounting as a system of accounting and build a new system. The environmental accounting statement is part of this new concept that we are proposing.

## (2) Corporate Evaluation in Terms of Environmental Conservation

In regards to environmental issues and the role of the JICPA, I feel there is a need for accountants, who are professionals in the field of accounting, to become engaged in environmental conservation efforts in accounting. Conventional financial accounting provides information to the market that indicates a company's business performance, financial condition, and cash flow-basic information necessary for proper corporate evaluation. This existing data does not, however, provide any basis for corporate evaluation in terms of environmental conservation. That is where environmental accounting comes in.

Environmental conservation activities are voluntary corporate efforts, and incorporating them into management is known as "environmental management" or "corporate sustainable management." Corporate management is sustainable when a company gives ultimate consideration to conserving the environment in order to help establish a sustainable society through its business activities. Societal mechanisms need to be established that enable corporations to implement sustainable management, thereby contributing to a sustainable society and becoming sustainable themselves. A social trend is now emerging that calls for corporate evaluation based on corporate sustainable management. Corporations and society as a whole are starting to work together in regard to the environment. Social investment and eco funds are just getting started in Japan, and while the trend is still quite small it will surely grow stronger over time.

## (3) Role of Environmental Accounting in the Evaluation of Environmental Performance

How we measure environmental performance is a

big issue. At present, the Nikkei Shimbun has performed several corporate sustainable management evaluations using its own environmental performance surveys and other techniques. Most of this was done through questionnaires designed by the newspaper company itself. The results of any questionnaire will vary depending on how the answers are given and the style of expression. Differences in how questions are interpreted and other discrepancies can also change the evaluation of a corporation. All of these things bring the issue of consistency.

We therefore considered the conditions for a proper evaluation of corporate sustainable management in terms of the information that must be provided as a requisite for evaluation. We came up with the following two points. One is the establishment of standards generally accepted as fair and appropriate, and the other is the assurance of the reliability of the information to be used for evaluation.

Environmental accounting has a role to play here. Environmental accounting information should form the core of the information used to evaluate a corporation's sustainable management. Having different evaluative bodies conduct independent questionnaires incurs a social cost-it is an enormous waste of time and money. Even without independent questionnaires, if you make sure you obtain all the basic data and evaluate the data, interviews can always be conducted later as an easy way to obtain independent evaluation. We think that the basic data should be the information obtained through environmental accounting.

## (4) Environmental Accounting: The Way to Proceed

Looking at current environmental accounting practices closely, you will soon find the lack of information. Two facing pages of an environmental report do not provide enough analytical and complete information of a corporation. Also, due to the absence of detailed environmental accounting criteria for the creation of reports or the information disclosure, companies have included different kinds of information under the same account headings, according to their own criteria. Concerns also remain as to what items should be

included and how things are defined and classified.

For this reason there is a movement in environmental accounting that aims to standardize the criteria, starting with examples common to a large number of corporations, such as current environmental conservation costs, etc. There are still many areas that are not so easily standardized, particularly in environmental conservation effects and environmental indicators. For these matters, corporate ideas created in the past years will be taken into account.

### (5) Concept of the Environmental Accounting System

Under such circumstances we have taken the first step of proposing an environmental accounting system. The basic concept is to establish a system based on statements to provide more comprehensive environmental accounting information for the evaluation of corporate sustainable management, encompassing the current environmental accounting guidelines.

This system would not contravene the environmental accounting guidelines from MoE that are being widely adopted, but would subsume them into an even broader concept. Moreover, a statement system presupposes having an environmental accounting system made up of multiple reports containing a variety of environmental information.

The environmental accounting system being studied by the Institute is limited to external reports only, which further requires that the target audience be identified to determine the information that needs to be included. So we narrowed the field of readers. Instead of aiming to make the information accessible to just anyone, we focused on making it readily understandable for people who need the information.

In other words, once detailed information that can stand up to analysis is disclosed, numerical processing makes it possible to read the information in a variety of ways and enables comparisons of corporations in the same industry and the same corporation over time, things that are said to be extremely difficult to assure

at present. To make this possible, it will require the clarification of numerical calculation criteria and a standardized form of disclosure.

### (6) Environmental Accounting System in Detail

The specific content of the environmental accounting system is still under review at the present. Let me give you an example of the kind of things we are reviewing. Basically the system must include information in terms of both currency and quantity units, as well as the flow and stock information for each. An example of the flow information measured in currency is environmental conservation cost, which is covered under public environmental accounting based on the current MoE guidelines. Examples of flow information would include PRTR information and material flow cost accounting information, which is the theme for the 2nd session in this afternoon.

The concept of environmental assets and liabilities falls under stock information measured in monetary units, while soil pollution falls under stock information measured in quantity units. By linking, for example, the quantitative data for greenhouses gases with the financial data of energy costs and emissions trading through accounting methods, the data is no longer disparate and disjointed, but can be analyzed in a number of ways. In addition to this, a significant accounting policy (a term used in financial accounting) must also be disclosed. This entails the calculation criteria for the main data, and other information that is requisite for users to correctly understand the data.

In terms of the relationship between the environmental accounting system and environmental reports, the information on environmental accounting is an important part of the environmental report, and I believe it can also be treated separately and used as an independent system.

### 3. Requirements for Corporate Evaluation

Earlier I mentioned the establishment of standards and the assurance of reliability as the two conditions for evaluating corporate sustainable management. The first condition-the establishment of standards- is generally



based on comparing differences, but exactly what is to be compared is not specified, and they are highly arbitrary. The measuring criteria listed in the current MoE guidelines are just such an example. These standards need to be established urgently.

The other condition, assurance of the reliability of information, usually, the person with primary responsibility for creating the environmental accounting report is the corporate manager. Therefore, the corporate manager first must declare that the report is sufficiently reliable. Next, you need to have a mechanism by which to verify the reliability of the information, such as an internally controlled system within the company for producing the information, and you need to verify that the system is working effectively. Based on this, you then need to have verification by an external third party. This is currently being carried out, but still there is a lot of disparity and disjointedness in the process, and at JICPA we are still investigating this issue within the Environmental Audit Research Group. Nonetheless, I feel that we must raise the standards of verification (assurance) by an external third party if we intend to increase the reliability of

information.

#### 4. Future Issues

Please be reminded that this research report is only an interim report, proposing conceptual framework of an environmental accounting statement. The issue of what kind of accounting statement should be included in the accounting system is still on the table, along with many other issues. The important things are to stay focused on building the kind of system that is required, keeping a lookout for signs of progress in actual business practices, and to continue resolving specific problems.

Today I first pointed out the conditions for a proper evaluation of corporate sustainable management and then proposed an environmental accounting system to provide better information for such evaluation. As this is only an interim report, we plan to issue further reports. That concludes my summary explanation of environmental accounting from the accounting point of view.

Thank you very much.