Understanding Environmental Accounting

Introduction to the Environmental Accounting Guidelines

Ministry of the Environment, Japan
Environmental accounting aims at achieving sustainable development, maintaining a favorable relationship with the community, and pursuing effective and efficient environmental conservation activities. These accounting procedures allow a company to identify the cost of environmental conservation during the normal course of business, identify benefit gained from such activities, provide the best possible means of quantitative measurement (in monetary value or physical units) and support the communication of its results.

As one step of a company’s environmental information system, internal function makes it possible to manage environmental conservation cost and analyze the cost of environmental conservation activities versus the benefit obtained, and promotes effective and efficient environmental conservation activities through suitable decision-making.

By disclosing the quantitatively measured results of its environmental conservation activities, external functions allow a company to influence the decision-making of stakeholders, such as consumers, investors, and local residents.
State of Environmental Accounting by Japanese Companies

Based on the results of the “2001 Environment-Conscious Corporate Survey” conducted by the Ministry of the Environment (July, 2002), the survey targeted companies listed on the first and second sections of the Tokyo, Osaka and Nagoya Stock Exchanges and non-listed companies with 500 or more employees (6,360 Companies). http://www.env.go.jp/policy/j-hiroba/kigyo/index.html (Japanese version)

Companies Implementing Environmental Accounting

Of the 2,898 companies which responded to the survey, some 16.9% (491 companies) have adopted environmental accounting, while another 20.0% (580 companies) were considering such measures.

Use of Environmental Accounting Data

In response to the question as to how they use environmental accounting data within the company, 55.6% was used in “Benefit-to-cost analyses of environmental conservation activities” which was also the most common reply given. It was followed by “Management of expense to attain targets of voluntary environmental management” at 45.6% and “Reduction of environmental cost” at 40.3%.

Disclosure of Environmental Accounting Data

Of the 1,351 companies have disclosed environmental data outside their companies, 27.2% or 367 companies have released the environmental accounting data to the general public.

Environmental Accounting Guidelines 2002

In March 2002, the Ministry of the Environment issued “Environmental Accounting Guidelines 2002,” which is a revision of “the Guidelines for Introducing an Environmental Accounting System (2000).” The new guidelines were revised as follows:

A. Greater clarification of external functions;
B. Greater elaboration of environmental conservation cost;
C. Clarification of environmental conservation benefit;
D. Clarification of economic benefit associated with environmental conservation activities.

Overview of Environmental Accounting

<table>
<thead>
<tr>
<th>Financial performance</th>
<th>Environmental performance</th>
</tr>
</thead>
<tbody>
<tr>
<td>(1) Environmental Conservation Cost</td>
<td>(2) Environmental Conservation Benefit</td>
</tr>
<tr>
<td>Business Area Cost</td>
<td>Input of resources into business operations</td>
</tr>
<tr>
<td>Upstream/Downstream Cost</td>
<td>Energy consumption</td>
</tr>
<tr>
<td>Administration Cost</td>
<td>Water usage</td>
</tr>
<tr>
<td>R&amp;D Cost</td>
<td>Input of various resources</td>
</tr>
<tr>
<td>Social Activity Cost</td>
<td>Environmental impact and waste emissions from business operations</td>
</tr>
<tr>
<td>Environmental Remediation Cost</td>
<td>Emissions to the air</td>
</tr>
<tr>
<td>Other Cost</td>
<td>Emissions to water bodies and ground</td>
</tr>
<tr>
<td></td>
<td>Waste emissions</td>
</tr>
<tr>
<td></td>
<td>The goods and services produced by business operations</td>
</tr>
<tr>
<td></td>
<td>Environmental impact during usage and disposal, etc.</td>
</tr>
<tr>
<td></td>
<td>Transports</td>
</tr>
<tr>
<td></td>
<td>Environmental impact caused by transports, etc.</td>
</tr>
<tr>
<td>(3) Economic Benefit Associated with Environmental Conservation Activities</td>
<td></td>
</tr>
<tr>
<td>Actual Benefit</td>
<td></td>
</tr>
<tr>
<td>Revenue</td>
<td></td>
</tr>
<tr>
<td>Expense Saving</td>
<td></td>
</tr>
<tr>
<td>Estimated Benefit</td>
<td></td>
</tr>
</tbody>
</table>
The Guidelines introduce three different formats for that companies may use for environmental accounting disclosure. The following format comprehensive cost and benefit.

### Disclosure Format

#### Environmental Conservation Benefit

<table>
<thead>
<tr>
<th>Benefit corresponding to business area cost</th>
<th>Indicators</th>
<th>Category</th>
<th>Values</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Benefit obtained from the input of resources into business operations</td>
<td>Energy consumption</td>
<td>Input of various resources</td>
<td></td>
</tr>
<tr>
<td>2. Benefit associated with environmental improvement and waste emissions from business operations</td>
<td>Emissions to the air Emissions to water bodies Land pollution Waste emissions</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. Benefit associated with goods and services produced by business operations</td>
<td>Other</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4. Benefit associated with transports and other operations</td>
<td>Other</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

1. In the event it is difficult to relate environmental conservation benefits to the use, environmental conservation benefits should not be classified as shown in the above table. (1) - (4)
2. For an indication of terms of physical volume, the total difference between the environmental impact during the latest period and the fiscal year under review should be stated. It is also possible to state a comparison of units per site.
3. To calculate the environmental conservation benefits during the use of goods or services already from business activities, and at the time of disposal, the results should be made clear from other results.

#### 2002 Guidelines

**Chapter 1: Revisions to Environmental Accounting Guidelines**

**Chapter 2: Environmental Accounting Guidelines 2002**

**Chapter 3: Understanding the 2002 Guidelines - 1 [Q&A]**

**Chapter 4: Understanding the 2002 Guidelines - 2 [Cases]**

Reference: Latest trends in environmental accounting

Glossary
In order to promote voluntary efforts towards environmental conservation, the Ministry of the Environment has issued the “Environmental Accounting Guidelines 2002,” the “Environmental Reporting Guidelines,” as well as the “Environmental Performance Indicators for Businesses.” The mutual relationship between these three guidelines is indicated as follows:

**Diagram: Relationships between Environmental Report, Environmental Performance Indicators and Environmental Accounting**

- **Production of Environmental Report**
  - **External Functions of Environmental Accounting**
    - Information Disclosure by Environmental Report
  - **Internal Functions of Environmental Accounting**
    - Environmental Conservation Cost & Economic Benefit (Monetary Value)
    - Environmental Conservation Benefit (Physical Units)
  - **Environmental Reporting Guidelines**
- **Internal Environmental Management**
- **Stakeholders (Consumers/Investors/Local Residents)**
  - Communication
- **Data Collection & Analysis**
  - Incorporate
  - Incorporate
  - [Self Evaluation]
- **Selection of Environmental Performance Indicators**
  - Environmental impact indicators
  - Environmental management indicators
- **Environmental Performance Indicators for Businesses**

The diagram shows the flow of information and the integration of these guidelines to support environmental conservation efforts.
Throughout the world various governmental organizations, international organizations, researchers, and corporate accounting specialists are engaged in efforts to research and development of environmental accounting. In Japan, the Ministry of the Environment is following overseas trends while making a direct appeal of the status of environmental accounting in Japan.

† Participate in the UNDSD environmental management accounting initiative.
Since 1999, the Ministry of the Environment has participated in an expert working group on the “Government's role in promoting environmental management accounting” initiated by the United Nations Division for Sustainable Development (UNSD) environmental management accounting initiative. During such meetings, the Ministry of the Environment grasps worldwide trends in this field and gives presentations on the practices in Japan. Detailed information can be found at the following Web site:

† Environmental Management Accounting Network-Asia Pacific (EMAN-AP)
The Environmental Management Accounting Network-Asia Pacific (EMAN-AP) is a network comprising of researchers and practitioners of environmental accounting from 14 countries and regions in the Asian Pacific region, including Japan. Established in September 2001, the network promotes the adoption and use of environmental management accounting methods, and contributes to the promotion of sustainable development in the Asian-Pacific region. In respect to the EMAN-AP project, the Institute for Global Environmental Strategies (IGES) the Kansai Research Center acts as the coordinating office in Japan. Detailed information can be found at the following Web site:
http://www.eman-ap.net/

Liaison for Inquiries Regarding Environmental Accounting and Your Comments

Aiming to produce world-class environmental accounting guidelines, the Ministry of the Environment intends to continue to enhance the methods introduced through such guidelines in cooperation with corporate practitioners and specialists of environmental accounting. We value your comments and welcome any feedback you may have in this connection, and therefore respectfully ask your comments to the following address:

Environmental and Economy Div. of Environmental Policy Bureau, Ministry of the Environment
TEL: +81-(0)3-5521-8240  FAX: +81-(0)3-3580-9568
E-mail: env-acctg@env.go.jp

Issued by Ministry of the Environment  September 2002