

Environmental Reporting Guidelines 2001
- With Focus on Stakeholders -

June 2001

The Ministry of Economy, Trade and Industry

Environmental Reporting Guidelines 2001

– With Focus on Stakeholders -

June 2001

Edited by: “Environmental Reporting Committee”, Japan Environmental
Management Association for Industry

Published by: Environmental Policy Division, Industrial Science and
Technology Policy and Environment Bureau, The Ministry of
Economy, Trade and Industry

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0. Outline

The guidelines describe procedures for implementing environmental reporting as outlined below:

I. Background and Objectives for Preparation of The Environmental Reporting Guidelines

When implementing environmental reporting, describe basic ideas, history of environmental reporting and global trends.

II. Implementation of Environmental Reporting

Describe basic requirements for environmental reporting and procedures.

III. Environmental Reporting Guidelines (By Stakeholder)

Indicate environmental reporting items by stakeholder. Select contents for environmental reporting among these items.

IV. Environmental Reporting for a Sample Company (Example)

By establishing a sample company, it offers an example of contents for environmental reporting procedures as indicated in Chapters II and III, and the example of items determined under these procedures. Please utilize this example as a reference when there are any unclear points when creating an environmental report.

V. Environmental Reporting and Tools

This chapter gives a summary of tools related to environmental reporting.

VI. Explanation in regard to Revised Edition of The Guidelines

Addresses the future review and revision of the guidelines from the point of view of the Ministry of Economy, Trade and Industry.

I. Background and Objectives for Preparation of The Environmental Reporting Guidelines

1. Present Environmental Reporting Guideline Details and Future View

Presently there are a large number of companies which are not only interested in environmental impacts on the local area as a result of corporate activities, but also are concerned with impacts on a global scale. Taking on a role as a responsible member of society, companies are readily disclosing such information to the public about their activities and detailing their relationship with the environment. In respect to activities of the organization, one method for disclosing environmental information and communication is termed environmental labeling. However, the most representative method for such disclosure and communication is through environmental reports published by each company or organization.

When an environmental report is published, the environmental reporting guidelines are used as a guidebook for the preparation. There are various types of environmental reporting guidelines available. However according to research results, there are essentially few differences in the objectives in any of these guidelines. To reduce environmental impacts caused by activities of an organization, the organization in question is asked to disclose truthful and accurate information (accountability), and moreover, to keep an open line of communication between the organization and stakeholders. There are also other guidelines that include a wider range of its corporate activities such as occupational health and safety, therefore it extends beyond issues dealing solely with the environment.

To comprehend and project the development of environmental reporting guidelines, the following simple chronological chart offers a timeline from past to present:

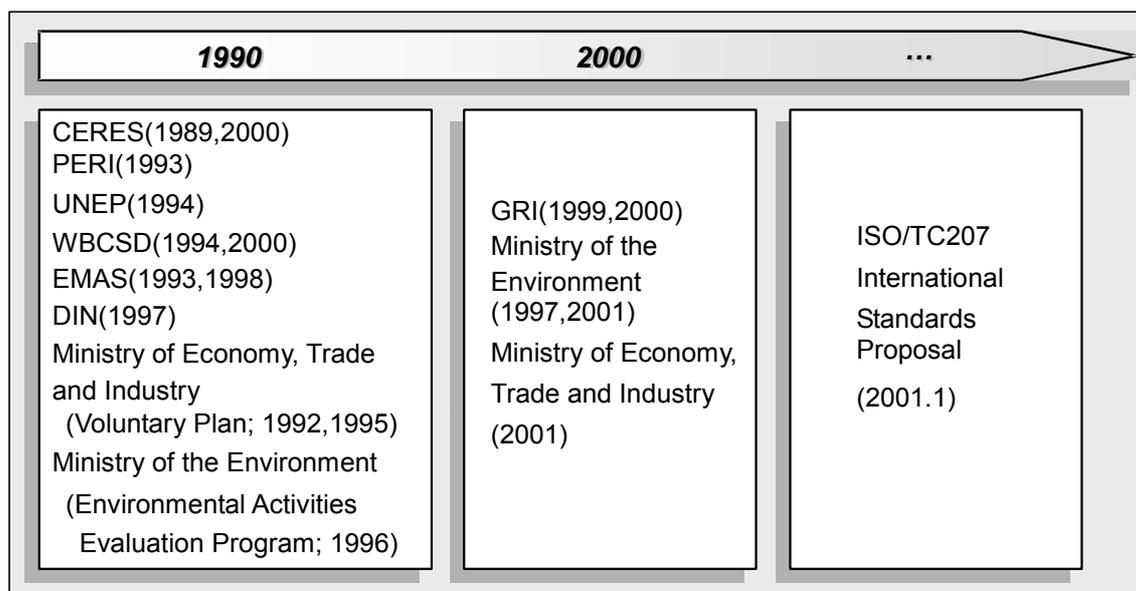


Chart I.1 History of Environmental Reporting Guidelines

CERES (Coalition for Environmentally Responsible Economies)
PERI (Public Environmental Reporting Initiative)
UNEP (United Nations Environment Program)
WBCSD (World Business Council for Sustainable Development)
EMAS (Eco-Management Audit Scheme)
DIN (Deutsches Institute für Noemung)
GRI (Global Reporting Initiative)
ISO/TC207 (Technical Committee regarding environmental management at International Organization for Standardization)

One of the guidelines that mentions the disclosure of environmental information in Japan is called the Voluntary Plan (1992) published by the Ministry of International Trade and Industry. This Voluntary Plan is used to help to prepare a company's environmental action plan. Model plans are included in the Voluntary Plan as a reference, however it should be pointed out this is a type of action plan for the development of an environmental management system. At a later stage as a follow up, another guideline was published (1995) which informed companies to include an environmental performance evaluation. Within this framework, the follow up guidelines requested that companies disclose specific elements of corporate information though this is not an actual part of the guidelines for environmental reporting.

The National Association Promotion of Environmental Conservation then proposed the Environmental Activities Evaluation Program (1996) for the purpose of promotion and enlightenment of environmental activities by medium and small enterprises. Under this program, the environmental activity plan was reported to the National Association Promotion of Environmental Conservation (Type II) and then disclosed to the public (Type I). However, environmental performance information is not included as one of objectives of the program. The Environmental Agency then prepared the "Environmental Reporting Guidelines - How to Prepare a Comprehensive Environmental Report" in June 1997. To respond to the internal and external movement of environmental activities and corporate performance, the Environmental Agency completely revised the guidelines in February 2001.

Meanwhile, from a global perspective, there are basically three different ways to look at it. One is the tendency toward guideline preparation by each country or group under its own initiative. As in the Netherlands and Denmark, environmental reports are regulated under the law. Some countries have followed this example and drawn up their own guidelines.

Secondly, there is a movement to globally standardize environmental guidelines under the frame work of the international standard ISO14000 series for environmental management standards. At the ISO/TC207 Committee in January 2001, there was a proposal put forward to include new work items to standardize environmental reporting guidelines. Thirdly, the movement of standardizing sustainability report by the GRI (the Global Reporting Initiative). The GRI is an organization created by CERES (Coalition for Environmentally Responsible Economies), a non-profit group based in the US. The guidelines developed by the GRI are not only written from an environmental standpoint but from a broader perspective including social and economic performance, advocating sustainability reporting guidelines.

Under such conditions, we predict future trends will aim for the continued preparation of guidelines by each country or group. However, if reports are prepared

using different standards or guidelines, comparisons of environmental reports will lead to confusion owing to difference in the quality of information and ideas. Therefore we consider the process of standardizing environmental report, such as ISO or GRI, to include each country's guidelines will lead the guidelines to be internationally integrated. For the future, each country's reports will be based on standardized, internationally-approved guidelines. If necessary it will take into consideration the country's particular socio-economic circumstances. For this reason, in Japan we are presenting easy-to-use guidelines for our domestic companies based on objectives reflected in international standards. By utilizing these guidelines, it is our intention to make appropriate revisions.

2. Basic Principles in Preparing Guidelines

In Japan, it should be noted that most major companies already published their own environmental reports. In 2000, the number of published reports was approximately 660 in Europe and about 350 in Japan. As a reference, the number publishing an EMAS statement was around 3,800. Due to enhanced interest towards the environment both inside and outside of Japan, we are predicting that more companies are going to publish their own environmental reports in the future. However, to promote and develop this trend, not only for large-scale corporations, but also small and medium enterprises in a wide array of business sectors, it is recommended that a set of guidelines with objectives, well-prepared content and containing a sufficient explanation for readers, i.e. stakeholders, are desired to be developed for report producers

In this committee (the Environmental Reporting Committee, reference on the back page) we have conducted a survey on environmental reporting for the past two years. According to a survey targeted at representative stakeholders (interested parties), it is important to be specific about objectives during the preparation stage of environmental reporting. In addition, it is important to clarify who the target readers are, and for what reasons information is being disclosed about environmentally conscious activities. Another point to consider is that we have come to realize there are clear differences between quantitative and qualitative characteristics of information depending on the type of stakeholder. However, when considering the relationship between stakeholders and the report items, and their contents, these have been written using fairly abstract expressions in previous guidelines. As an example, explanation used in the GRI guidelines regarding the content and method of environmental report and the relationship between report producer and stakeholders is summarized as follows:

“At this stage in GRI reporting, it is premature to identify any single group as the ‘primary’ user group, since potential report users are many and diverse. However, organizations should provide stakeholders with reliable information that is relevant to their needs and interests and that invites further stakeholder dialogue and enquiry. For the reporting organization, the results of research into user needs, as well as continuing interaction with stakeholders, is necessary for determining materiality. In addition, active consultation with stakeholders is an essential part of the process for selecting indicators. Complementary facility, regional, or other disaggregated sub-reports may be appropriate for different stakeholders. Where detailed information is of interest to only a limited number of readers, appendices may be used.”

Even though report producers consciously select major stakeholders and make an attempt to examine the items or contents of a report, existing guidelines invariably offer insufficient information resulting in a practical problem. Under these restricting conditions, the items and contents of a report have to be determined and judged by the report producer based on only a limited discussion with stakeholders. Consequently, for companies or organizations which are considering publishing their own environmental report, it has been determined that guidelines are necessary to help provide direction for the report's target audience, and also to consider what relevant information is required. Therefore, while international standardization is certainly one objective, the guidelines will be primarily established from the stakeholder's point of view.

3. Guideline Characteristics

The guidelines we propose have the following characteristics:

- (1) Stakeholders are classified into a wide range of groups.
- (2) The items and contents in environmental report are weighted depending on the stakeholder group.

In addition

- (3) Reasons are attached in reference to weighted items.
- (4) Environmental performance is shown by using the representative performance indicators (PI) stated in ISO14031.

As mentioned above, the guidelines have prepared weighted items which bear interest for each different type of stakeholder. The organization can use the guidelines only for preparing an environmental report. Even in cases when other guidelines are used, for example the Ministry of the Environment's guidelines, these guidelines can also be of considerable use in clearly understanding the viewpoint of stakeholders.

II. Implementation of Environmental Reporting

1. Basic Requirements of Environmental Reporting

1.1 Requirements of environmental reporting

Organizations are set up consisting of businesses that consume natural resources, i.e. common social overhead capital. Therefore organizations have a responsibility (accountability) to provide information to society about environmental impacts and environmental conservation, and to explain their connection with the environment.

In addition, stakeholders such as the general public and various groups sometimes request publications and disclosure of environmental information from these organizations. “Stakeholders” are defined as concerned parties with some type of interest in the company and its activities, and they are the receivers of such environmental information provided by the organization. (A concrete example of stakeholders will be mentioned in “4.1 Who is the Stakeholder?”). When implementing environmental reporting, it is necessary to examine what type of environmental information should be disclosed, and to analyze the needs of stakeholders.

Environmental reporting will be implemented on the basis of the following two viewpoints: “to enforce responsibility for the explanation of environmental information (accountability)”, and “to fulfill the demand regarding environmental information (responding to stakeholder needs)”.

1.2 Basic principles of environmental reporting

To implement environmental reporting based on the above two points of view such as “accountability” and “responding to stakeholder needs”, it is important to secure the following basic principles of environmental reporting. By securing these basic principles it will enable us to enhance the reliability of environmental reporting.

1.2.1 Completeness

In environmental reporting higher priority items and important items concerning the environment must be disclosed without any omissions. By providing a large amount of environmental information comprehensively, it will enable the organization to disclose essential information without any omissions and fulfill the needs of stakeholders.

To secure completeness it is necessary to fulfill the following elements.

(1) Fairness

It is necessary to disclose the information regarding environmental contribution by the organization and environmental topics from a fair point of view without any intentional biased information presented in environmental report. By disclosing the entire information without any concealment, for example only writing about information regarding environmental contribution or evading the topic of environmental issues, this will enable the organization to enhance the reliability on environmental information.

(2) Relevance

Environmental information enables us to enforce these needs and

accountability by providing information matched with the needs of stakeholders. In addition, by disclosing important environmental information without any omissions concerning characteristics of the organization will lead the organization to enforce accountability. It is hoped that the appropriate information of these two factors are needed for environmental reporting.

(3) Conforming to the reporting guidelines

It is hoped that where possible conforming to the guidelines of environmental reporting is followed both internationally and domestically. Under existing guidelines, general information items are comprehensively covered, so it is possible to fulfill information items requested for environmental reporting by referring to existing guidelines. Also by referring to previous guidelines it will help increase the reliability of environmental reporting.

1.2.2 Accuracy

Consideration must be taken to provide accurate environmental information to readers. To obtain accuracy, the following factors need to be fulfilled.

(1) Faithfulness

To implement the process of collecting and compiling information faithfully and correctly. The results of the information have to be accurate. The facts need to be shown precisely, without the information being changed intentionally.

Also when there are inquiries regarding environmental information these have to be handled appropriately.

(2) Clarity

Information has to be revised and edited to be disclosed in a straightforward and understandable manner to readers. Certain technical expressions that may require special knowledge should be avoided in consideration of a wider reader audience.

(3) Timeliness

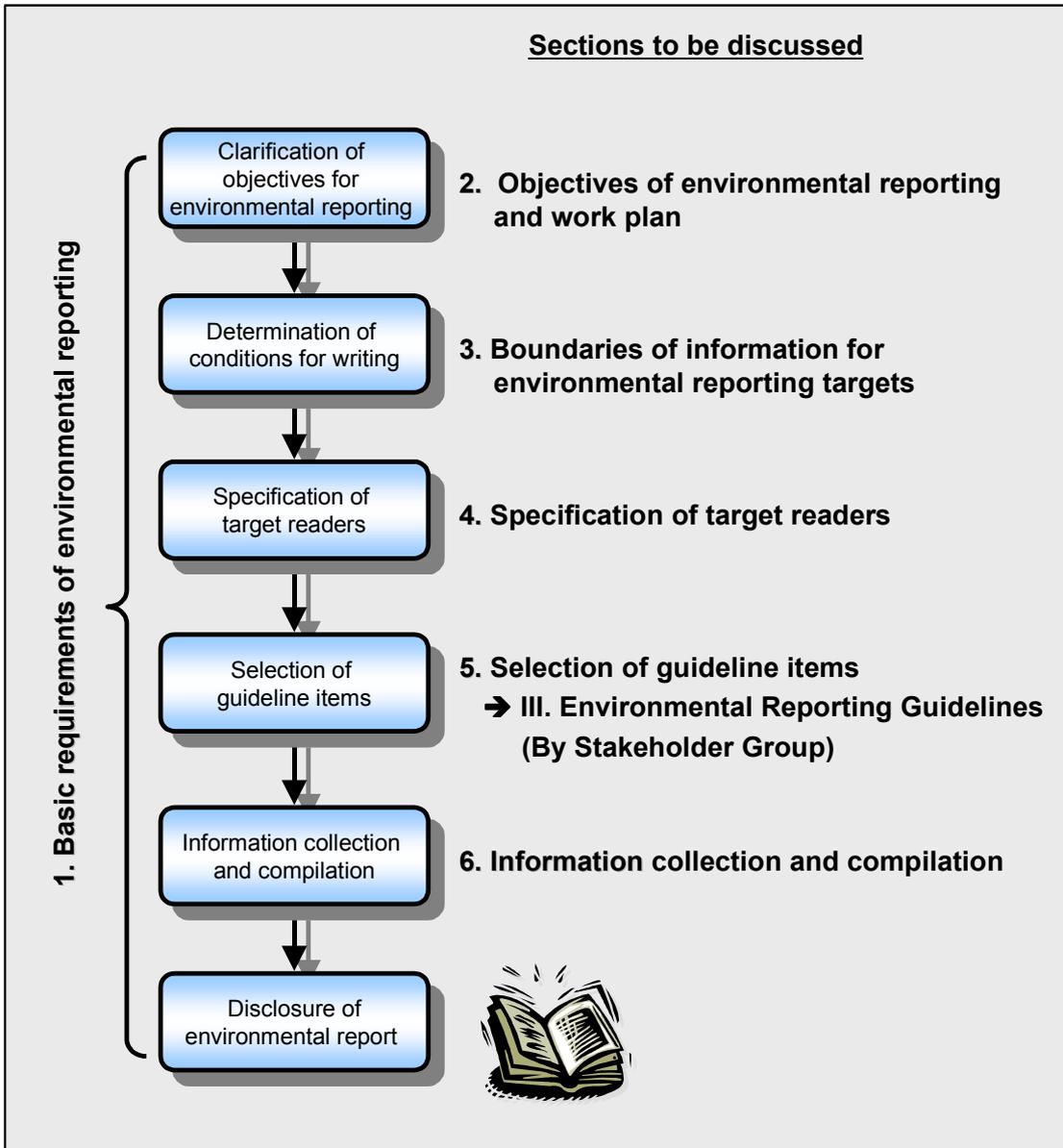
When considering the timing of disclosure of environmental information, it is necessary to present the appropriate period of data. One consideration is to keep in mind that information is not out of date. Moreover up-to-date information should be released promptly and should respond appropriately to the needs of stakeholders.

(4) Comparability

Historical data such as comparative changes in previous years, units and data collecting period need to be adjusted for comparison with achievements in previous years. To be able to compare information with other organizations, when possible a common unit of measurement should be adopted.

2. Objectives of Environmental Reporting and Work Plan

We will compose environmental reporting in accordance with the following procedures for implementation.



[Chart II.1 Implementation Procedure of Environmental Reporting]

2.1 Clarification of objectives for environmental reporting

Environmental reporting is considered to have two roles. "Enforcement of accountability and responding to the needs" and also, "public relation activities of the organization" which disclose the appropriate information to stakeholders.

Both are prerequisites when implementing environmental reporting. However, it is necessary to clarify "for what purpose it is going to be implemented", and "for whom it is to be implemented" when writing detailed environmental report. What is organized is the purpose of environmental reporting. The purpose of environmental reporting is

set within the scope of securing accountability and under the consideration of each organization's conditions.

2.2 Determination of work plan

To properly implement environmental reporting, the responsible position such as a chosen section should be decided to clarify the work plan including task procedure and work schedule, to ensure the smooth handling of environmental reporting. The project should not only be implemented by an appointed section but also by collaborating work of the entire company through each appointed department. The necessary expenses, the preparation of personnel and work schedule should be determined and prepared thoroughly for the actual project work to run smoothly.

3. Boundaries of Information for Environmental Reporting Targets

3.1 Target boundaries

When listing Japanese industries as an example, they are composed of a series of different organizations depending on the process of work activities such as from procurement of resources, production, distribution, consumption, and disposal. For this reason, the implementation of a particular organization's environmental report will not always be able to disclose the information of its business comprehensibly nor accurately.

Presently there are three patterns of target boundaries:

- (1) Environmental activities of reporting organization
- (2) A series of environmental activities including reporting organization (entire organization group)
- (3) Environmental activities in a specific area within reporting organization (specific site)

Environmental report is produced with consideration of the above patterns. Of the aforementioned three items, the most frequent case is "(1) Environmental activities of reporting organization". An ideal situation would be to implement environmental reporting targeting a series of environmental activities (from procurement of resources to disposal). However, sometimes it is difficult to do this because the influence one particular organization has over a series of environmental activities is somewhat limited. Environmental activities in a specific area defined as the target boundary are effective when demands of related parties in the area are strong.

The ideal target boundaries for environmental reporting are set by considering environmental impacts that reporting business has over society (the result of a series of environmental activities such as procurement of resources, production, distribution, consumption, and disposal). In the event there are affiliated companies of reporting organization involved in a series of environmental activities including the parent organization, it is necessary to set boundaries with those organizations being taken into account to consider environmental reporting targets.

3.2 Target period

It is necessary to clarify the target period for this information, which means the period of time that the information is written in environmental report.

Although many environmental reports are actually written only once a year, it is necessary to clarify whether the written information has been recently collected since

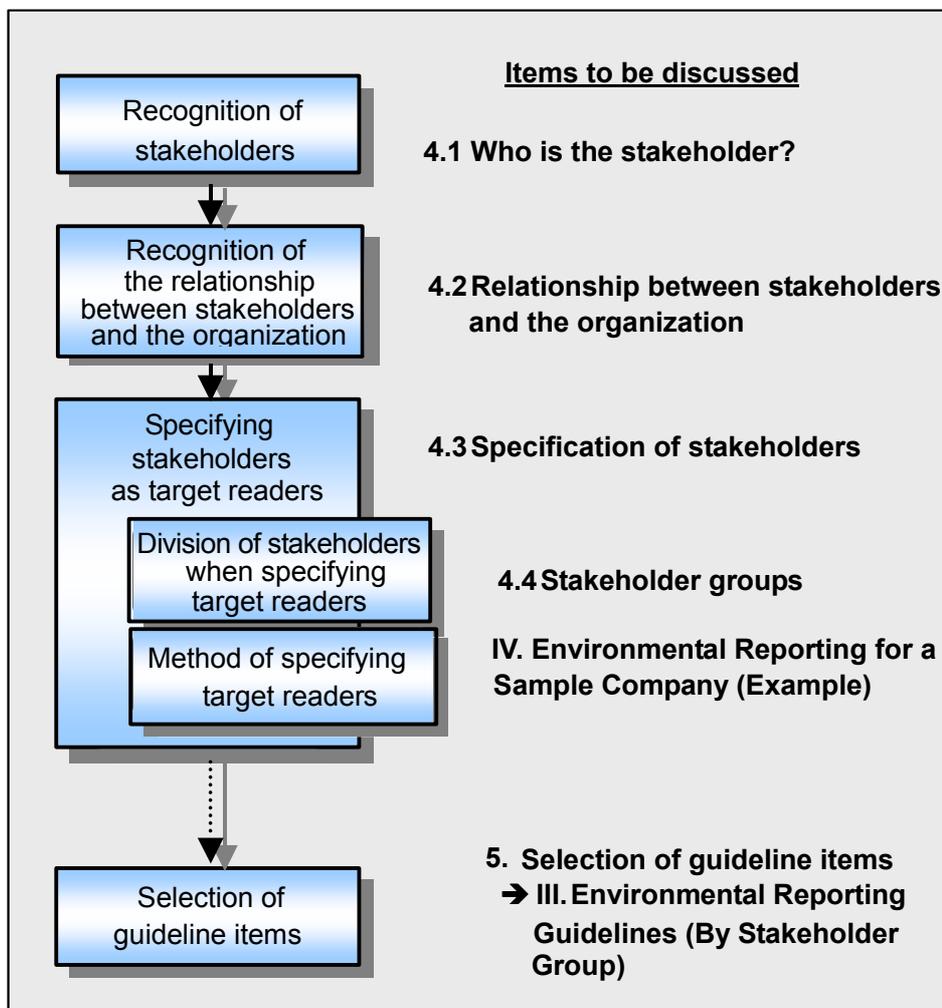
the last report or whether the data that has been collected is an accumulation of compiled data research since the first issue. The disclosure of appropriate information within the issuing period and the frequency that environmental report is issued is essential. In other words “timeliness” should be considered and the disclosure of accumulated information within established target parameters should be followed.

4. Specification of Target Readers

By specifying stakeholders which the organization considers to be the most important in terms of target readers; by clarifying what kind of information is asked for; and then preparing environmental report comprehensively with the above specific information, these three aforementioned points will secure a response to the needs and implementation of accountability thereby increasing the effectiveness of environmental report.

The items that are considered with the needs of readers in mind are shown in “III. Environmental Reporting Guidelines (by Stakeholder Group)”.

The specification of target readers can be implemented by the following procedure.



[Chart II.2 Procedure for Specifying Target Readers]

4.1 Who is the Stakeholder?

"Stakeholder" is defined as an interested party associated with the organization. The organization has various kinds of interested relationships and to build trust with stakeholders, it is important for the organization to develop relations with such stakeholders for its business.

In connection to production of the environmental report, when considering whether or not it is appropriate to state certain kinds of information and whether they should be displayed, there is a necessity to analyze the needs of stakeholders.

The guidelines take into consideration of potential stakeholders who are listed in the part of environmental performance indicators of "ISO14031; Annex A (informative) Supplemental guidance on EPE, A2.1 Potential interested parties".

[Table II.1 Type of Stakeholders]

	Type of stakeholders based on ISO14031	Abbreviation
(1)	Employees	Employees
(2)	Investors and potential investors	Investors
(3)	Customers and suppliers	Customers and suppliers
(4)	Contractors	Contractors
(5)	Lending institutions and insurers	Financial institutions
(6)	Regulatory and legislative bodies	Regulatory bodies
(7)	Neighbouring and regional communities	Regional communities
(8)	Communications media	Communications media
(9)	Business, administrative, academic and research institutions	Administrative
(10)	Environmental groups; consumer interest groups and other non-governmental organizations	NGO and green consumers
(11)	General public	General public

Adopted from and added to ISO14031; 1999 Annex A.2.1

It is conceivable that the abovementioned stakeholders can be considered as reader candidates. It is necessary to disclose information by focusing on a specific "reader" for a particular report out of the range of stakeholders that have been recorded in the table above.

4.2 Relationship between stakeholders and the organization

The information that stakeholders are asking is the information regarding "interested parties" between the organization and stakeholders.

Generally, the interest relationship between the organization and stakeholders are classified into roughly three categories: such as social interests, economic interests, and environmental interests.

(1) Social interests

Between the organization and stakeholders, there are gains and losses of honor/status/social capital and this relationship has an influence on trust, employment, and social status.

(2) Economic interests

Between the organization and stakeholders, the situation where there

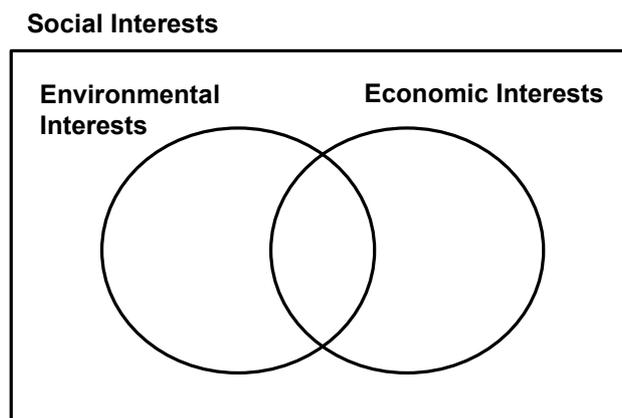
are gains and losses in monetary terms; such as in business transactions with the organization, purchasing and selling, and investment, all these are examples to be found in this category.

(3) Environmental interests

This category has impacts on health and eco-system, for example the seven typical pollution, global warming, ozone layer depletion, acid rain, and waste problems, all these impacts are presented in the environmental interest category.

With the relationship between the organization and stakeholders, the abovementioned three interests exist where environmental interests and economic interests overlap. This is clearly shown in the chart below. The social interests incorporate both environmental and economic interests. Stakeholders do not exist only in one particular category of interests but in environmental, social and economic complex of interests.

Stakeholders who are targeted for environmental reporting will provide information mainly to environmentally interested parties. As in the chart below stakeholders in environmental interests are also related to the social and economic interests in the organization, so it is necessary to disclose environmental information by the abovementioned consideration.



[Chart II.3 Concept of Interests between Organizations and Stakeholders]

4.3 Specification of stakeholders

It is recommended the organization specify the importance related to stakeholders as target readers within the category of interests. An effort should be made to implement environmental reporting by responding sufficiently to the appropriate needs of stakeholders who are specified as target readers. This will, as a result, increase the trustworthiness of target readers.

The term priority target readers are those who are considered as stakeholders who have a greater interest with the organization and thus are thought to have greater importance for the organization. Stakeholders that have a strong interest can possibly influence the business movement of the organization, and it is for this reason that the organization must ensure the implementation of accountability for the benefit of these stakeholders. Based upon this concept the organization will have to specify target readers and implement environmental reporting accordingly.

As some examples of specifying methods of target readers, it is recommended that

some indicators be considered to evaluate the degree of interest between stakeholders and the organization. For example, one should consider distance from the organization, strength of influence, speed of corresponding influence, degree of social interests, number of target members and effect of information disclosure, and by each of these indicators an evaluation can be made utilizing a scoring method. As a result of the evaluation, stakeholders with high scores are considered to be the more interested parties and as a consequence are specified as target readers. The appropriate information for such stakeholders should be described in environmental reporting. The actual example of specifying methods are described in “IV. Environmental Reporting for a Sample Company (Example)”.

When implementing reporting, the organization needs to consider other stakeholders who were not specified as targeted readers. The process of specifying target readers is defined as focusing on the important stakeholders, and thus environmental reporting will be able to respond better to their needs. This method makes it easier for the organization to focus on the information that will be disclosed. As for the preparation of, they should also consider other stakeholders, although the priority should lie with specifying more important stakeholders. The specification of target readers is for the purpose of carefully considering the abovementioned needs.

4.4 Stakeholder groups

Stakeholders are divided into the following groups by specification of their needs in relation to environmental information. Stakeholders can be specified not only by individual under the ISO14031 classification, but by unit of “stakeholder group” who share similar characteristics, as target readers. In the guidelines, we consider the following defined stakeholder groups.

[Table II.2 Specification of Stakeholder Groups]

Classification		Specification of the Group
Stakeholder group	Stakeholder	
Financial institutions	- Financial institutions - Investors	Analyzing the information from environmental report, analyzing investment and finance decisions utilizing risk information such as environmental impacts and environmental regulations and lawsuits. This group is closely related to the economic aspect of the organization
Customers and suppliers	- Customers and suppliers - Contractors	The group which has business relationship with the organization. The business relationship is influenced by activities to reduce environmental impacts of the organization through procurement standards of environmentally conscious products, and it is possible that economic interest may occur. The group asks for environmental information concerning business deals with the organization..
Administrative	- Administrative - Regulatory bodies	The group that is in charge of environmental administration and regulation. This group performs the role of patrolling and regulating environmental management and conditions of the organization. They request information such as environmental laws and regulations, state of the compliance, and health and safety management with regard to the organization.

Regional communities	- Regional communities - NGO - Green consumers	The group that has environmental impacts directly from the organization. The influence of environmental problems related to the organization causes direct health and living environmental problems. As a consequence, the detailed local level environmental impact information is needed and continual communication with the organization is desired. Information regarding the organization's initiatives of these problems and communication are necessary. Furthermore, green consumers make a conscious effort to purchase environmentally conscious products, therefore there is a necessity to explain such environmental products in detail.
General public	- General public - Consumers - Communications media	In comparison to regional communities, distance from the organization is further. Then the group does not have such strong interests toward environmental information. They wish to get hold of information in order to understand the outline easily.
Employees	- Employees	They have a close relationship as members of the organization. The influence by the organization is extremely strong, so it is necessary to explain the details concerning environmental information of the organization.

5. Selection of Guideline Items

Information items to be displayed to target readers can be found in "III. Environmental Reporting Guidelines (By Stakeholder Group)". In Chapter III, the information items by stakeholder are listed. By following the information items of the guidelines, the implementation of accountability and the response to information needs are ensured.

6. Information Collection and Compilation

Following the selected guideline items, the compilation of information through "completeness" and "accuracy" will be adhered to, and a published edition of the environmental report will be prepared based on these criteria.

6.1 Environmental information management and sharing of information

When information is collected, if information compilation system is initially set up within the organization, as a consequence the task will be simplified. If environmental management system (EMS) represented in ISO14001 has already been established within the organization, and environmental information management has already been set, the task of collecting information from each section and class level will be efficiently carried out.

Furthermore, by operating and maintaining a database that accumulates and manages environmental information, it enables the organization to search for information or to be able to take out and adjust this information and thereby accumulate the data with little difficulty, and this in turn helps to secure the continuity of data.

6.2 Medium of environmental reports

When considering the type of media to be used for environmental reports, traditional paper-based and electronic medium are listed.

The paper medium is generally known as environmental report, and it is most often found in a “book” form. One of the merits of paper medium is for readers to be able to review charts and browse through the material at any given time. When readers wish to refer to a particular section or a specific page, as a rule it is generally easier to search through hard copy as opposed to the electronic type. Another point in favor of using paper media is that it is more convenient to use when readers wish to compare between certain pages of a document. However, there is the issue of publishing cost and there is the burden of having to physically send reports. Environmental impacts occur such as utilizing papers for environmental report itself, packaging and distribution. Moreover, waste generation and the use of energy also occurs.

The merits of an electronic medium include the ability to communicate in a smooth manner. Using this medium, users can collect many reports in a short period of time. Also other advantages include the ability to accumulate data easily and disclose information speedily. Through the recent popularity of e-mail, readers are able to interact by sending in opinions and make enquiries concerning environmental reports in a straightforward way. As a result this facilitates writers to be able to respond to their readers promptly. Unlike negative aspects that are found in the paper medium, distribution or packaging process is completely unnecessary. Hence this allows the promotion of resource conservation. On the other hand, it can be somewhat troublesome for readers when they have to convert a report from electronic filing system to hard copy form (paper). Another point to consider is that unlike the paper medium, there is no chance of being able to overview the report.

Each of the above mediums has both merits and demerits, and ultimately it is up to individual readers to evaluate and choose the one that is most suitable for his or her needs.

6.3 Easy comprehension of data

The necessity to edit compiled data in a report while keeping easy comprehension (clarity) of such data in mind is vital. An important point to examine is whether the quantitative data in a report should be displayed as raw data, or if this data should be converted into ratio or index, or whether it should be converted into a unit figure such as unit per sales or unit per CO₂ emissions. All of these methods have to be scrutinized, so that readers can comprehend the information clearly. Accordingly the data should be edited in a style that is most suitable for that purpose.

By displaying data utilizing charts, graphs and photographs to be visually appealing to readers it facilitates the comprehension of the information, and it is considered to be an effective method for this reason. In addition, another thing to bear in mind is that sentences and vocabulary for report should be written in a straightforward manner. By incorporating definitions when introducing technical terms, such consideration will inevitably improve the clarity of report for readers.

Referring to “III. Environmental Reporting Guideline (by Stakeholder Group)”, the clarity will most certainly be improved with appropriate expressions.

6.4 Other information disclosure and consideration of related fields

The information that is targeted in environmental reporting includes annual audits

of the organization and IR (Investor Relations) information which is published annually for shareholders and investors. In the situation where information is disclosed by utilizing a number of different mediums by the organization such as environmental reports, IR materials, corporate brochure, it is recommended that there should be a confirmation of which mediums will be introduced and utilized to best disclose the information in detail. In such circumstances, where there is a necessity to display detailed information in other mediums such as IR (for example financial information) rather than in environmental reports, it is recommended that only summary information should be written in environmental report together with footnotes clarifying where more detailed information is addressed. This will inevitably be of value to readers who request further detailed information, as they will be able to obtain it more easily.

III. Environmental Reporting Guidelines (By Stakeholder Group)

The guidelines rank the importance and thoroughness of information contained in the environmental report in relation to each stakeholder. Three symbols are used to indicate the level of importance or thoroughness, based on a review by the Japan Environment Management Association for Industry's environmental reporting committee.

This evaluation method specifies that the reporting organization discloses environmental information to a stakeholder who marks the item as “+++”. However, this does not mean the information is kept from a stakeholder who marks item as “+”, on the contrary the information also needs to be disclosed to “+” item stakeholder. The guidelines express the idea that it is desirable to disclose environmental information to stakeholders which the organization considers to be of importance.

[Guideline Characteristics]

The guidelines we propose have the following characteristics:

- (2) Stakeholders are classified into a wide range of groups.
- (2) The items and contents in environmental report are weighted depending on the stakeholder group.

In addition

- (3) Reasons are attached in reference to weighted items.
- (4) Environmental performance is shown by using the representative performance indicators (PI) stated in ISO14031.

As mentioned above, the guidelines have prepared weighted items which bear interest for each different type of stakeholder. The organization can use the guidelines only for preparing an environmental report. Even in cases when other guidelines are used, for example the Ministry of the Environment's guidelines, these guidelines can also be of considerable use in clearly understanding the viewpoint of stakeholders.

Items of Environmental Reporting Guidelines

1 Contents

The definition for each term of the guideline items is presented.

2 Explanation

The reasoning behind entering this item and the method adopted.

3 Entry of Recommended Items

Stakeholder group Items	Customers and suppliers	Financial institutions	Administrative	Regional communities	General public	Employees
Desirable items to be entered into environmental report as examples. *1	++	+++	++	+++	++	+++

Definition of marks

- +++: Demands from stakeholders for information are strong. Important items an organization needs to explain should be entered in detail in the environmental report.
- ++: Frequent demands for information from stakeholders. It is desirable that the organization voluntarily enter these items.
- +: Demands for the information are not always strong depending on the type of stakeholder. It is also possible to collect information from other resources, consequently an outline may be written up concerning the items.

<How to express items>

The reasoning behind the contents that have been entered, and special attention remarks and detailed information (+++) shown in the above mentioned *1 “Entry of Recommended Items” is given.

4 Environmental Performance Indicators

Explaining in additional detail information to be entered in “1.3 Entry of Recommended Items”, environmental performance indicators are described for reference of environmental reporting. These indicators are quoted from ISO14031.

Management performance indicators

- Examples of quantitative indicators regarding the management of the organization

Operational performance indicators

- Examples of quantitative indicators involving input and output regarding operations of the organization

* In regard to each of related items that are displayed numerous times

1. CEO Statement

1.1 Contents

The CEO summarizes the significance of environmental reporting and the outline of initiatives, and furthermore pledges to actively promote environmental initiatives and the disclosure of environmental information.

1.2 Explanation

This is an important item which has the function of pledging statements incorporating the CEO's clear ideas, as well as the organization's direction of initiatives for environmental conservation. The use of the word pledge in this context means an official promise to society (commitment) by the CEO.

The organization needs to disclose various environmental activities, to enforce the company's accountability to society. Another point to consider is that due to the CEO statement, the ideas and attitude of the organization to the environment can be better understood by readers.

1.3 Entry of Recommended Items

Stakeholder group Items	Customers and suppliers	Financial institutions	Administrative	Regional communities	General public	Employees
(1)Statement from the CEO *1	++	+++	++	+++	++	+++

< How to express items >

*1 The CEO statement includes the outline of major activities of the organization written in a comprehensible style based on the type of industry and its scale.

- ◇ With regard to financial institutions which evaluate environmental activities of the organization, this will increase the organization's reliability by addressing the pledge of environmental activities found in the CEO statement.
- ◇ For regional communities, it is desirable to make reference to promotion of environmental conservation especially concerning that of the local area.
- ◇ For employees of the organization, the ideas and the direction as an organization regarding the environment are shown, and the pledged items contained in the CEO statement should be universally understood in order for them to be achieved.

2. Profile of the Reporting Organization

2.1 Contents

An overview of the reporting organization should be entered.

2.2 Explanation

The organization should clarify that the information written in environmental report is disclosed by industry. When readers are able to understand the profile of an organization, they can assume to a certain degree how undertakings of the organization need to be implemented. Therefore, basic information of the organization such as business activity, main products and services, scale, address and business performance should be included.

2.3 Entry of Recommended Items

Items	Stakeholder group					
	Customers and suppliers	Financial institutions	Administrative	Regional communities	General public	Employees
(1)Name of organization	++	++	++	++	++	++
(2)Management policy*1	++	+++	++	++	++	+
(3)Profile of the organization						
- Profile of business*2	++	++	++	+++	+++	+
- Address*3	++	++	++	+++	+	+
- Activity areas and targets for business deals*4	++	++	++	+++	++	++
- Affiliated companies	++	++	++	++	++	++
- Financial information	++	++	++	++	+	+
- Scale of the organization *5	+++	++	++	+++	++	++
- History of the organization and business activity	++	++	++	++	++	++

<How to express items>

*1 Comprehensive management policies and targets

◇ For financial institutions which evaluate environmental activities of the organization for decision-making for investment and finance, this information acts as a reference to grasp direction and vision of the organization

*2 Main business activity, products and services

◇ For regional communities and general public, a comprehensive outline of business and activities are requested to be addressed.

*3 Address of headquarters and other business sites. Depending on the site, business activities may vary. The main activity for each individual office should be stated.

◇ Regional communities generally request a desire for the site information in their regional areas, therefore individual business

address of each office and affiliated facility should be listed.

*4 The main scope of the organization's business activities and their principle suppliers, type of business of their customers should be stated.

◇ For regional communities who live close to the organization; what kind of business activities the organization is involved are requested (local activities areas of the organization and information about targeted business transactions of the organization.)

*5 Information revealing the scale of the organization, such as total floor area, land area, amount of production, number of employees, should be entered. This type of information will become the basic information when calculating eco-efficiency per certain unit.

◇ For customers and suppliers who have a desire to expand their deals related to the environment and regional communities including environmental NGO compare and study environmental information, this item is of significance.

3. Basic Information of Environmental Report

3.1 Contents

Various conditions for writing and publishing environmental reports

3.2 Explanation

It is necessary for the organization to clarify target boundaries, target period, and the main department in charge of environmental report. Especially clarification of target boundaries of the environmental report is necessary to clarify which parts of the organization for which information is being written about.

Also to write clearly about the corresponding contact, the environmental report should reflect a stance for carrying out full-fledged communications between the organization and stakeholders.

3.3 Entry of Recommended Items

Items	Stakeholder group					
	Customers and suppliers	Financial institutions	Administrative	Regional communities	General public	Employees
(1) Date published	++	++	++	++	++	++
(2) History and future plan of publishing *1	++	+++	++	++	++	++
(3) Main distributing parties	+	+	+	+	+	++
(4) Contact point						
- Main section for publishing report *2	+++	+++	++	++	++	++
- Contact at each site *3	++	++	++	+++	++	++
(5) Other disclosed information and the method of obtainment						
- Environmental materials by other organizations *4	++	++	+++	+++	+++	++
- Homepage address	++	++	++	++	++	+
- Environmental report for overseas	++	++	+	+	++	++
(6) Target boundaries and period of environmental report *5	++	++	+	+++	++	++

< How to express items >

*1 The information will be useful for financial institutions which efficiently make decisions on investment and finance by collecting the latest management information on the organization

*2 It is necessary for financial institutions which conduct evaluations of environmental activities on an organization, in case they wish to obtain more detailed information or to make contacts for inquiries for written

information.

- *3 It should be noted when the main department handling publishing and contact at each site for communication with stakeholders differs.
 - ◇ For regional communities who need to obtain the information from each nearby business site, it is desirable to present the appointed place where the information can be obtained for each individual office.

- *4 To be able to obtain the information of an organization, environmental materials other than the environmental report, such as corporate brochure and annual report, should be entered. Other environmental materials, such as environmental pamphlets and booklets, will be discussed in “12. Environmental Communication”.
 - ◇ For administrative, regional communities and general public which have no connection with business deals, it is necessary to write related materials in detail.

- *5 Target boundaries (target organization, target sites and target period) of the environmental report should be entered so that regional communities including environmental NGO compare and evaluate the eco-efficiency of the organization.

4. Environmental Guidelines and Environmental Plan

4.1 Contents

The direction of environmental activities of the organization and the concrete plans and methods of these activities should be described.

4.2 Explanation

To depict the direction and contents of environmental activities of the organization to the reader, environmental guidelines and environmental plans should be addressed in the environmental report. For the purpose of addressing these guidelines and plans in more concrete terms, it is necessary to describe environmental targets and activities towards the targets.

When environmental guidelines and environmental plans of the organization are examined, it is necessary to consider not only their own business activities but also the entire life cycle. For example, as a manufacturer they should not just consider one aspect such as production and sales, but also environmental impacts that occur in the process of distribution and product usage.

4.3 Entry of Recommended Items

Stakeholder group Items	Customers and suppliers	Financial institutions	Administrative	Regional communities	General public	Employees
(1)Environmental policy *1	++	+++	++	++	++	++
(2)Environmental targets *2	++	+++	++	+++	++	++
(3)Activities to achieve environmental objectives *3	++	+++	++	+++	++	++
(4)Previous year's achievement results*4	+	+++	++	+++	+	++
(5)Present clarification to activity and summary of results *5	++	+++	++	+++	++	+++

<How to express items>

*1 Environmental policy, environmental charter and environmental activity strategy are included in the environmental activity guidelines of the organization. It is desirable that such guidelines are consistent with management policy.

◇ Financial institutions which evaluate environmental activities of the organization also focus on the directions of environmental activities addressed in the environmental policy.

*2 To verify the achievement results and development status, quantified environmental targets should be set and written for both the medium to long term and annual targets. If the previous year's achievement results have been taken as a base, then this base year and its numerical values have to be clearly

noted.

- ◇ The same ideas are applied for financial institutions, as mentioned in *1.
- ◇ For NGO interested in environmental activities and regional communities, this item needs to be written to grasp activities being carried out by the organization to achieve its targets.

*3 The specific activity for achieving targets by an organization should be written.

- ◇ Financial institutions which evaluate environmental activities of the organization and regional communities including NGO attach importance to not only policy or targets but also the information regarding action plan, environmental conservation activity and the possibility of prevention of environmental pollution.

*4 The previous year's achievement results show that targets which were presented to society have been securely implemented and finalized. In cases where targets have not been completely achieved, it is preferable that the reason be given.

- ◇ Financial institutions and regional communities are interested in not only the environmental policy or plans, but also the last fiscal year's environmental activities. This information will be of importance.

*5 Readers can appreciate that the organization has appropriately analyzed environmental activities and that the organization is able to recognize the present situation.

- ◇ For financial institutions that evaluate environmental activities of the organization and regional communities who directly receive environmental impacts, these items are desired to be written.
- ◇ For employees, it is indispensable to have common knowledge within the organization.

4.4 Environmental Performance Indicators

Management performance indicators

- Number of achieved objectives and targets
- Number of organizational units achieving environmental objectives and targets
- Degree of implementation of specified codes of management or operating practice
- Number of prevention of pollution initiatives implemented

5. Outline of Environmental Management System

5.1 Contents

The outline of an environmental management system (EMS), a mechanism to promote environmental activities of the organization and the system should be described.

5.2 Explanation

One of the tools that is used by the organization for environmental activities is environmental management system (EMS). This will describe how an EMS by reporting organization is established and implemented.

EMS includes various types of systems that can be found in almost every type of organizations. Some have been conformed to certain international standards such as ISO14001.

5.3 Entry of Recommended Items

Stakeholder group Items	Customers and suppliers	Financial institutions	Administrative	Regional communities	General public	Employees
(1)Environmental management system						
- Mechanism *1	++	+++	+	++	+	++
- Organization system	++	++	++	++	+	+
- Development and status *2	+++	+++	++	+++	+	++
- Management status of environmental aspects *3	++	+++	++	+++	++	++
- Green purchasing*4	+++	++	++	++	+	++
- Internal environmental audit	+	++	+	++	+	++
- External environmental audit *5	++	+++	+++	++	+	++

<How to express items>

*1 The outline of management cycle, such as P (Plan) D (Do) C (Check) and A (Act), concept charts and flow charts for environmental management should be described.

◇ In order for financial institutions that evaluate environmental activities of the organization to grasp whether the organization has mechanisms for improvement and a system that can effectively respond to environmental risks, it is thought to be preferable to present an outline of the management system.

*2 The status regarding sites where EMS such as ISO14001 has already been established and continual environmental improvement activity has been voluntarily implemented, should be clarified. In addition, sites that are

- establishing EMS and information regarding future EMS plans should also be entered.
- ◇ By revealing the official license acquisition status of the environmental management system, customers and suppliers, financial institutions, and regional communities are able to have a certain understanding of the development of environmental management (EMS development status) throughout the entire organization.
- *3 The organization's activities which cause environmental impacts and the management control method should be entered.
- ◇ For financial institutions which directly suffer from business losses by environmental risks including accidents, such as payment of insurance for accidents and deterioration of business performance of the organization, it is desirable to be informed of the details and status beforehand.
 - ◇ Regional communities who directly suffer from impacts need to have an explanation regarding the details and status.
- *4 Initiatives toward green purchasing, such as purchase of environmentally conscious products, priority trading with environmental conscious organizations, guidelines, and purchase results need to be entered.
- ◇ By promoting the purchase of environmental conscious products, there is a possibility that customers and suppliers will also revise and accept the idea of the environmental view. Thus, details should be entered accordingly.
- *5 Evaluation and audit, method of verification, standards, target boundaries, and member of implementation should be entered. In case that the environmental management system auditing and/or third party auditing of the environmental report are taken, it should be noted in the environmental report.
- ◇ Financial institutions which evaluate environmental activities of the organization and administrative which is in the position to supervise the organization may enhance the evaluation results and reliability of organizations if they adopt outside environmental auditing. Therefore this matter should be written in detail.
- * Regarding the state of compliance with environmental laws and regulations, it will be addressed in "10. Environmental Laws and Regulations, and Lawsuits".
- * Regarding environmental education, it will be addressed in "11. Environmental Education and Environmental Enlightenment Activities".
- * With reference to environmental communication, it will be addressed in "12. Environmental Communication".

5.4 Environmental Performance Indicators

<p>Management performance indicators</p> <ul style="list-style-type: none"> - Number of levels of management with specific environmental responsibilities - Number of employees that have environmental requirements in their job descriptions - Number of suppliers and contractors queried about environmental issues - Number of contracted service providers with an implemented or certified environmental management system

- Number and frequency of specific activities (e.g. audits)
- Number of audits completed versus planned
- Number of audit findings per period
- Number of products with explicit “product stewardship” plans
- Number of products designed for disassembly, recycling or reuse
- Number of products with instructions regarding environmentally safe use and disposal
- Degree of conformance of service providers with requirements and expectations specified by the organization in contracts
- Number of identified corrective actions that have been resolved or that are unresolved
- Frequency of review of operating procedures
- Percentage of emergency preparedness and response drills demonstrating planned readiness
- Number of achieved objectives and targets
- Number of organizational units achieving environmental objectives and targets
- Degree of implementation of specified codes of management or operating practice
- Number of prevention of pollution initiatives implemented

6. Relationship between Business Activities and the Environment

6.1 Contents

Overview of business activities and environmental impacts associated with the organization's activities should be entered.

6.2 Explanation

The organization should clarify the process and flow of business activities and relationships with environmental impacts which causes each of these processes. For readers to comprehend the overview, easy to follow charts and illustrations should be used and entered.

When these are entered, it is necessary to take view of the entire life cycle that is related to the organization. For manufacturers, environmental impacts from manufacturing process, the main business activity, and also from material procurement, use, and disposal should be included.

Regarding the breakdown of detailed environmental impact information, this will be addressed in "7. Business Activities and Present Status of Reducing Environmental Impacts of Products and Services".

6.3 Entry of Recommended Items

Stakeholder group Items	Customers and suppliers	Financial institutions	Administrative	Regional communities	General public	Employees
(1) Relationship between business activities and the environment *1	++	++	++	+++	++	++

<How to express items>

*1 By referring to "ISO14031; Figure A.1 - The organization's operations (with additional detail): entered in the next chapter", the entire life cycle such as input and output, production flow, material flow should be taken into consideration and addressed. Also, in cases where there is difficulty in addressing process flows depending on specification of the type of business, such as non-manufacturing industries, there are other methods that show the overview of entire business services by incorporating charts and illustrations. By revealing business activities and environmental impacts of the organization with the use of overview charts, they facilitate easy comprehension of the outline.

◇ For regional communities around the vicinity of the business site, this information is necessary to grasp what kind of operations are conducted and what kind of environmental impacts are caused.

6.4 Environmental Performance Indicators

Environmental performance indicators are addressed in detail in the next section "7.5 Environmental Performance Indicators".

7. Business Activities and Present Status of Reducing Environmental Impacts of Products and Services

7.1 Contents

Impacts that business activities, their products and services have caused on the environment and initiatives to reduce environmental impacts should be written in detail.

7.2 Explanation

The environmental performance information should be followed by the principles written in “II. 1 1.2 Basic principles of environmental reporting”. However, environmental performance information is greatly varied depending on the industry, and therefore it is not appropriate to specify information to be disclosed only with characteristics of stakeholders, unlike other items. Thus, it is necessary to examine the entry items with the following idea found in Section 7.

- (1) By referring to ISO14031 Environmental Performance Evaluation (Chart III. 1), characteristics of industry of the organization should be considered and preferable environmental performance items should be selected. (7.3)
- (2) Characteristics of the information that is needed by readers should be confirmed, and the display and method of expression concerning the selected environmental performance ought to be examined and then entered in environmental report. (7.4)

The organization needs to enter environmental performance information incorporating the abovementioned reference, and provide comprehensive performance information by considering characteristics of readers. It is hoped that detailed information for the outline addressed in “6. Relationship between Business Activities and the Environment” should be entered accordingly.

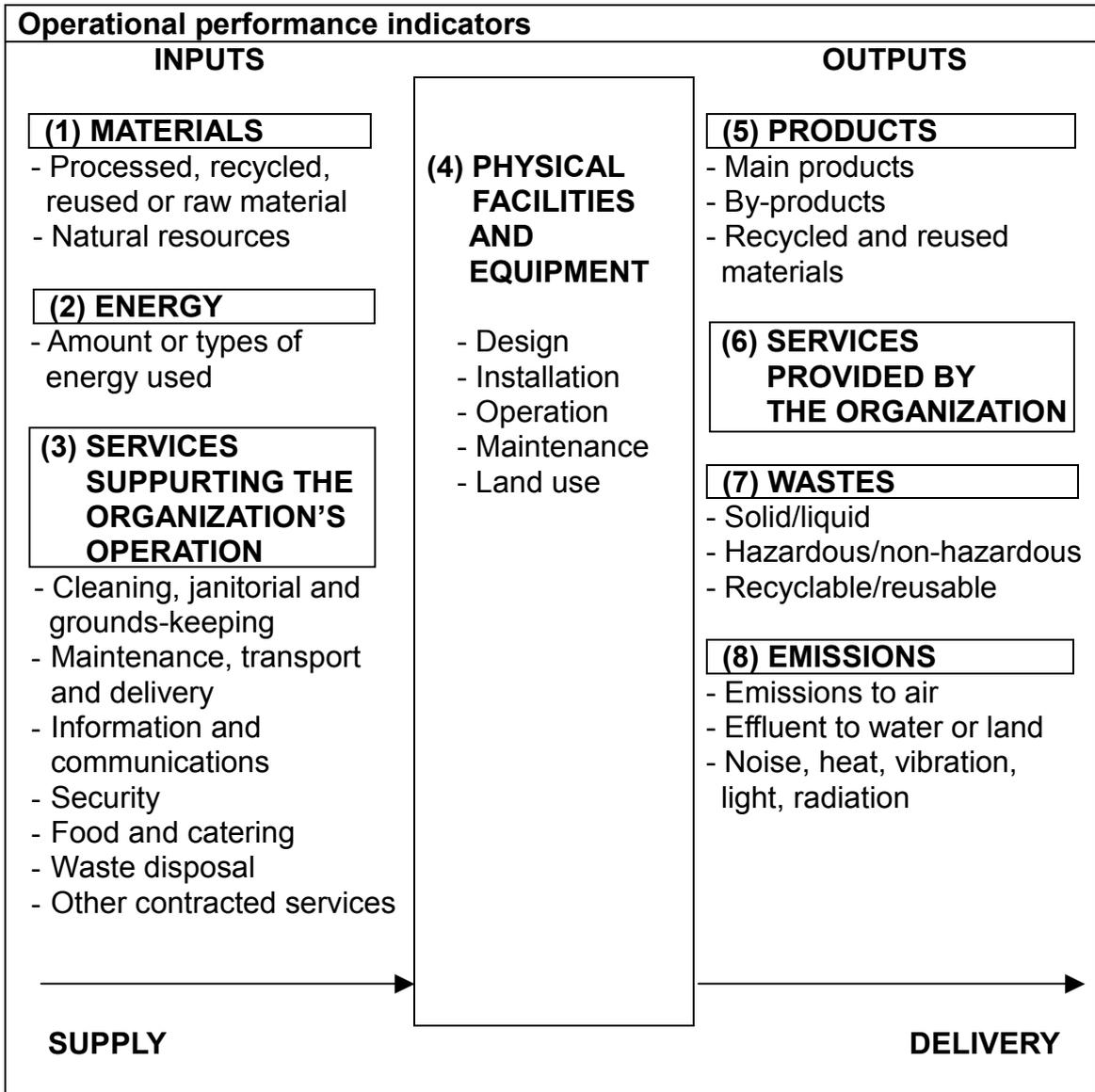


Chart III. 1 ISO14031 Environmental Performance Evaluation - Guidance
Figure A.1 - The organization's operations (with additional detail)

Operational performance indicators can be classified from (1) – (8) as addressed above. In addition, important entry items can be divided into different types of industry (ref. to the chart on the following page)

7.3 Entry of Important Items by Type of Industry

The important items that should be entered are selected by taking into consideration industry characteristics of the organization. It is hoped that industry characteristics for one's own organization, and activities that have large environmental impacts are specified, and environmental performance information regarding those activities should be entered in detail.

The following are given as examples of several types of industries and important entry items that came from them.

Industry	Environmental Performance Item
Construction	A large amount of materials are used to perform construction work utilizing heavy industrial machinery. Unlike the manufacturing industry, there are no installed physical facilities and the construction site is not fixed in one place. Significant environmental impacts also occur when dismantling buildings. Therefore, it is important to enter used materials, equipment, products, wastes, etc.
Basic material	A large amount of raw materials are put into plants for the products and a large amount of energy is consumed during the operation. Therefore it is important to enter the use of raw materials, energy consumption, facilities and equipment, products, wastes, emissions, etc.
Manufacturing and assembly	Manufacturing and assembly are performed by putting raw materials and energy into the production line. In the manufacturing site, waste materials, noise and vibration are emitted with products, and a large amount of environmental impacts occur when these are used and also when they are disposed of. Therefore it is important to enter the use of raw materials, energy consumption, physical facilities and equipment, products, wastes, emissions, etc.
Distribution	Business activities are conducted by using air conditioning and cold storage facilities, and receiving products from wholesalers and manufacturers. Waste materials and noise are emitted from their stores. Therefore, it is important to enter energy consumption, contracted operations, facilities and equipment, services which they provide, wastes, emissions, products, etc.
Transportation	A large amount of energy, including electricity power and fuel, is used, and facilities are owned in stations, airports and distribution centers. From their facilities, noise and vibration are emitted, and it is important to enter energy consumption, physical facilities and emissions.
Energy	Large-scale facilities are owned for electricity generation and energy storage. Business activities are performed utilizing a large amount of raw materials and energy. Therefore it is important to enter raw materials, energy consumption, physical facilities and equipment, etc.

7.4 Information characteristics of stakeholder

The important entry items that were adopted from industry characteristics need to be entered by responding to the information needs of stakeholders. Environmental performance information should be entered by considering the following characteristics of stakeholders:

Stakeholder	Characteristics of information items that stakeholders require
Customers and suppliers	The detailed environmental performance information is needed such as purchasing standards of environmentally conscious products that may have possible factors on their business deals.
Financial institutions	Due to the use of environmental information for evaluating the organization, complete and accurate environmental performance information related to business activities of the organization is needed.
Administrative	Because they are in the position of supervising compliance with environmental laws and regulations, they require environmental performance information that is related to environmental laws and regulations. The information of the administrative targeted area is needed.
Regional communities	There is possibility that activities of the organization exert an influence directly on their everyday lives. Consequently comprehensive environmental performance information of a specific region related to residents is needed.
General public	Profile of the organization together with complete and comprehensive environmental performance information is needed.
Employees	As members of the organization, they can come to know completely entire profile of the organization that they belong to. In addition, the detailed information regarding their assigned division and business site is required.

In the table of “Characteristics of information items that stakeholders require”, disclosure of information on stakeholder characteristics is specified. It is hoped that the specified entry items are mentioned by considering in the final stage how to display information and the method used to express this information. Here in this section, with the following four viewpoints the information will additionally be screened (selected).

The level “ * ” of information entered by each of stakeholder groups are mentioned as follows:

(1) Clarity of environmental performance information

Without using technical terms as much as possible for environmental performance information and disclosing the information with understandable expressions for stakeholders who do not have specific knowledge of the particular industry.

(2) Completeness of environmental performance information

All environmental performance information should be written without any omissions.

(3) Detailed nature of environmental performance information

Environmental performance information should be entered in detail and accurately.

(4) Localization of environmental performance information

Not only environmental performance information of the entire organization, but of the site that is related to stakeholders.

Items \ Stakeholder group	Customers and suppliers	Financial institutions	Administrative	Regional communities	General public	Employees
(1) Clarity of environmental performance information	*	*	*	**	**	*
(2) Completeness of environmental performance information	*	**	*	*	**	**
(3) Detailed nature of environmental performance information	**	*	*	*	*	**
(4) Localization of environmental performance information	*	*	**	**	*	*

Notes: ** --- Information characteristics that specified stakeholders especially require
* --- General information characteristics

7.5 Environmental Performance Indicators

Examples of information that should be entered in the environmental report is referred to operational performance indicators of ISO14031 as follows:

<p>Operational performance indicators</p> <p>(1) Materials</p> <ul style="list-style-type: none"> - Quantity of materials used per unit of product - Quantity of processed, recycled or reused materials used - Quantity of packaging materials discarded or reused per unit of product - Quantity of auxiliary materials recycled or reused - Quantity of raw materials reused in the production process - Quantity of water per unit of product - Quantity of waster reused - Quantity of hazardous materials used in the production process - Quantity of total material input (t) - Quantity of water used (t) - Input of tropical timber (t) - Input of genetically modified organisms (t) - Quantity of water used at the site (t)

<p>(2) Energy</p> <ul style="list-style-type: none"> - Quantity of energy used per year or per unit of product - Quantity of energy used per service or customer - Quantity of each type of energy used - Quantity of energy generated with by-products or process streams - Quantity of energy units saved due to energy conservation programmes - Total energy used (J) - Renewable and natural energy consumption (J) <p>(3) Services Supporting The Organization's Operation</p> <ul style="list-style-type: none"> - Amount of hazardous materials used by contracted service providers - Amount of cleaning agents used by contracted service providers - Amount of recyclable and reusable materials used by contracted service providers
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- Amount or type of wastes generated by contracted service providers

(4) Physical Facilities And Equipment

- Number of pieces of equipment with parts designed for easy disassemble, recycling and reuse
- Number of hours per year a specific piece of equipment is in operation
- Number of emergency events (e.g. explosions) or non-routine operations (e.g. shut-downs) per year
- Total land area used for production purposes
- Land area used to produce a unit of energy
- Average fuel consumption of vehicle fleet
- Number of vehicles in fleet with pollution-abatement technology
- Number of hours of preventive maintenance to equipment per year
- Status of soil and groundwater contamination (state, site and concentration (mg/kg, mg/l))
- Area of tree planting and nature restoration (ha)
- Area of altered natural regions (ha)

(5) Products

- Number of products introduced in the market with reduced hazardous properties
- Number of products which can be reused or recycled
- Percentage of a product's content that can be reused or recycled
- Rate of defective products
- Number of units of by-products generated per unit of product
- Number of units of energy consumed during use of product
- Duration of product use
- Number of products with instructions regarding environmentally safe use and disposal
- Energy consumption efficiency by product group (unit stipulated in the Energy Conservation Law)

- Rate of products conformed to the Energy Conservation Law (%)
- Production quantity and rate of low-emission vehicles (unit, %)
- Total reduction quantity of products (t)
- Content of hazardous substances (t)
- Quantity of containers and packaging reduced (t)
- Average life by product group (year)
- Take-apart time by product group (hour)
- Quantity of reused and recycled used products and containers/ packaging collected (t)

(6) Services Provided By The Organization

- Average fuel consumption of vehicle fleet
- Number of freight deliveries by mode of transportation per day
- Number of vehicles in fleet with pollution-abatement technology
- Number of business trips saved through other means of communication
- Number of business trips by mode of transportation
- Total quantity of transportation (t x km, person x km)
- CO₂ emissions resulting from transportation (t- CO₂)
- NO₂ emissions resulting from transportation (t- NO₂)
- Amount of cleaning agent used per square metre (for a cleaning services organization)
- Amount of fuel consumption (for an organization whose service is transportation)
- Quantity of licenses sold for improved processes (for a technology licensing organization)
- Number of environmentally-related credit risk incidents or insolvencies (for a financial services organization)
- Quantity of materials used during after-sales servicing of products

<p>(7) Wastes</p> <ul style="list-style-type: none"> - Quantity of waste per year or per unit of product - Quantity of hazardous, recyclable or reusable waste produced per year - Total waste for disposal - Quantity of waste stored on site - Quantity of waste controlled by permits - Quantity of waste converted to reusable material per year - Quantity of hazardous waste eliminated due to material substitution - Total quantity of waste generated (t) - Quantity of recyclable resources reused (t) - Quantity of recyclable resources recycled(t) - Quantity of recyclable resources from which heat is recovered (t) - Quantity of waste that go to final disposal (t) - Quantity of hazardous waste (t) - Quantity of substances subject to PRTR (t) <p>(8) Emissions</p> <ul style="list-style-type: none"> - Quantity of specific emissions per year - Quantity of specific emissions per unit of product - Quantity of waste energy released to air - Quantity of air emissions having ozone-depletion potential - Quantity of air emissions having global climate-change potential - Quantity of specific material discharged per year
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<ul style="list-style-type: none"> - Quantity of specific material discharged to water per unit of product - Quantity of waste energy released to water - Quantity of material sent to landfill per unit of product - Quantity of effluent per service or customer - Noise measured at a certain location - Quantity of radiation released - Amount of heat, vibration or light emitted - SO_x emissions (t) - NO_x emissions (t) - VOCs emissions (t) - Concentration of regulated substances, such as SO_x, NO_x, SPM, dioxins, etc. (Maximum concentration [ppm, etc.]) - Concentration of regulated substances, such as benzene, trichloro-ethylene and tetrachloro-ethylene (Maximum concentration [mg/m³N]) - Offensive odor (Maximum value [m³N/min.]) - Total quantity of waste water (m³) - COD, nitrogen, phosphorus (t)
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Note: Units of environmental performance indicators are quoted from “Environmental Reporting Guidelines 2000 by the Ministry of the Environment”

8. Environmental Accounting

8.1 Contents

Costs required for environmental activities and effects obtained from these activities should be entered.

8.2 Explanation

The organization utilizes environmental accounting, to state environmental impact information which is expressed by various units and indicators converted into monetary data. The comprehensive information that is integrated as a monetary unit then can be provided for readers. Each individual organization can grasp costs required for and effects obtained by environmental activities, and so be able to recognize effects verses costs. The methods of cost accounting and the ideas behind calculating effects are varied depending on the organization, so it is necessary to enter the information in the environmental report in as much detail as possible.

In reference to methods of environmental accounting, there are also on going research projects with various institutions.

8.3 Entry of Recommended Items

Items	Stakeholder group					
	Customers and suppliers	Financial institutions	Administrative	Regional communities	General public	Employees
(1) Objectives and contents of environmental accounting	+	++	++	++	+	++
(2) Basic information, such as target boundaries, target period and accounting method	+	++	++	++	+	++
(3) Investments and costs for environmental conservation*1	+	+++	++	++	+	++
(4) Effects verses costs of environmental activities *2	++	+++	++	++	+	++

<How to express items>

*1 Facilities investments related to the environment and costs required for environmental activities should be entered.

- ◇ Environmental investments and costs are also related to financial information, so ideally it is hoped the information should be offered to financial institutions.

*2 In regard to example of ideas and methods, please refer to “Developing an Environmental Accounting System (Year 2000 Report)” by the Ministry of the Environment.

- ◇ Pertinent information should be provided so that financial institutions are able to grasp the efficiency related to environmental activities of the organization.

8.4 Environmental Performance Indicators

Management performance indicators

- Costs (operational and capital) that are associated with a product’s or process’s environmental aspects
- Return on investment for environmental improvement projects
- Saving achieved through reductions in resource usage, prevention of pollution or waste recycling
- Sales revenue attributable to a new product or a by-product designed to meet environmental performance or design objectives
- Research and development funds applied to projects with environmental significance
- Environmental liabilities that may have a material impact on the financial status of the organization
- Number of or costs attributable to fines and penalties

9. Environmental Health and Safety

9.1 Contents

The management of hazardous substances which may exert a possible influence on the environment, and health and safety activities implemented to prevent the occurrence of accidents and emergency situations should be described.

9.2 Explanation

There are some common connections between environmental health and safety issues. When considering accidents related to health and safety such as leakage of hazardous substances and emissions of large amounts of waste materials, it is conceivable that environmental impacts may occur.

Therefore, it is necessary to have a grasp on potential risks related to health and safety, and to endeavor to prepare appropriate precautionary measures and counter measures toward this purpose. The organization should show readers that they are operating and running their business activities under properly managed conditions in respect to health and safety.

9.3 Entry of Recommended Items

Items	Stakeholder group					
	Customers and suppliers	Financial institutions	Administrative	Regional communities	General public	Employees
(1)Employees' health and safety activities regarding the environment	++	++	++	++	++	++
(2)Health and safety facilities regarding the environment	+	++	++	++	+	++
(3)Presumed emergency situations regarding the environment *1	+	++	+++	+++	++	+++
(4)Occurrence of past and present accidents, emergency situations and counter measures.*2	+	++	+++	+++	+	+++

<How to express items>

*1 When an accident occurs, there is a high possibility that direct damage reaches and effects regional communities. Therefore the appropriate information on health and safety management should be entered.

◇ There is the possibility that the response to accidents may cause impacts to surrounding regions, therefore it is important to disclose information to the administrative that is in the position of supervising the

organization and regional communities who might directly suffer from the damage.

- ◇ As for employees, the state of emergency situation conjectured by the organization should be reconfirmed and addressed in order to prevent such a situation from occurring.

- *2 Current accidents that are in the process of recovery and counter measures taken from past accidents and emergency situations should be entered.
 - ◇ In respect to administrative and regional communities, not only the current information regarding accidents and emergency situations but also results of identification regarding cause of past accidents and effective measures to prevent any recurrence should be described.
 - ◇ This is a necessary item for employees, in order to have an understanding in regard to past accidents and also the prevention of recurrence of emergency situations in the future.

- * The lawsuits that came out of this item are addressed in “10. Environmental Laws and Regulations, and Lawsuits”.

- * Education and enlightenment activities regarding this item are addressed in “11. Environmental Education and Environmental Enlightenment Activities”.

9.4 Environmental Performance Indicators

Management performance indicators

- Time to respond to or correct environmental incidents
- Number of emergency drills conducted

10. Environmental Laws and Regulations, and Lawsuits

10.1 Contents

The environmental laws and regulations that correspond to business activities, products and services should be clearly written out. The state of compliance with laws and regulations of specified targeted facilities should be entered. If there are any violations of the environmental laws and regulations or lawsuits stemming from the environment, those should also be entered accordingly.

10.2 Explanation

The environmental laws and regulations represent the bare minimum of rules that should be observed by the organization. It is the responsibility of the organization to inform readers that a system exists that can securely monitor and maintain these rules. If business activities are performed under conditions where there is a possibility of a reduction in the number of violations pertaining to environmental laws and regulations, or if there is a reduction in the number of lawsuits, these are also entered in the environmental report. As a consequence of such an initiative trust can be built up and maintained between the organization and society incorporating surrounding regions.

10.3 Entry of Recommended Items

Items	Stakeholder group					
	Customers and suppliers	Financial institutions	Administrative	Regional communities	General public	Employees
(1) Contents of the environmental laws and regulations and the state of compliance *1	++	+++	+++	+++	++	+++
(2) Violations of the law, occurrence of lawsuits and accidents both past and present, and the countermeasures undertaken *2	++	+++	+++	+++	++	+++
(3) Fines or penalties related to (2) *3	++	+++	++	+++	++	+++
(4) Charters, agreements, declarations, regulations and industry standards that the organization agrees to *4	++	++	++	++	++	+++

<How to express the items>

*1 Applied environmental laws and regulations together with regulation standards, voluntary standards and actual performance should all be entered. The state of compliance with laws and regulations should also be entered.

- ◇ Financial institutions that evaluate environmental activities of the organization require environmental risk information that is associated with the violation of laws and regulations.
 - ◇ Since administration, holds the position of monitoring the organization based on the environmental laws and regulations, it is hoped that the state of compliance will be addressed in detail.
 - ◇ Because regional communities have the possibility of direct influence on environmental impacts associated with certain violations, it is desired that the information for environmental laws and regulations be provided.
 - ◇ In order for employees of the organization to have the opportunity to thoroughly comply with laws and regulations, there is a desire that the information in regard to these regulations should be entered and communicated.
- *2 Violation of laws and the occurrence of lawsuits together with appropriately applied countermeasures should all be entered. By addressing information that has been accumulated concerning the response to situations documented in previous violations, this helps towards building trust with readers.
- ◇ Financial institutions that have responsibility for insurance require this information in order to have an understanding of environmental risk situation of the present conditions. These are based on a number of previous cases from past violations and lawsuits.
 - ◇ Since administrative is in the position of supervising the organization through upholding the laws and regulations, the information of past and present law violations are considered to be important information items.
 - ◇ For regional communities who face very definite possibility of direct damage caused by environmental impacts, there is a necessity to address this concern by primarily focusing on the present issues.
 - ◇ In regard to employees, to prevent the recurrence of legal violations, primarily the past violations should be entered.
- *3 Counter measures in regard to the violation of laws and regulations, the expenses for fines and cleaning measures required for pollutants should all be addressed. In addition, it is sincerely hoped that all of these problems that are completely resolved are reported.
- ◇ Financial institutions need to have a firm grasp on the total cost required to cover fines. These figures should be considered as the standard base for preparing for the possibility of similar fines that may occur in the future.
 - ◇ Under given circumstances, in which environmental damage reached the vicinity of a local area, it is hoped the organization responsible will bear the brunt of recovery costs for regional communities.
 - ◇ As for employees of the organization, by revealing the information pertaining to costs concerning fines and losses, it is believed this will help to prevent the recurrence of such accidents in the future.
- *4 It is necessary that these be entered so that employees are able to reconfirm the importance of social standards together with laws and regulations.
- * Counter measures in regard to accidents and emergency situations, and prevention measures are addressed in “9. Environmental Health and Safety”.
- * Education and training for compliance with environmental laws and regulations is addressed in “11. Environmental Education and Environmental Enlightenment Activities”.

* In regard to complaints of stakeholders, they are addressed in “12. Environmental Communication”

10.4 Environmental Performance Indicators

Management performance indicators

- Degree of compliance with regulations
- Number of or costs attributable to fines and penalties

11. Environmental Education and Environmental Enlightenment Activities

11.1 Contents

The contents and actual achievement of environmental education and enlightenment activities carried out for the benefit of stakeholders both inside and outside of the organization should be entered.

11.2 Explanation

There is a continual expansion and promotion in an effort to raise the consciousness of employees through environmental education. In addition, environmental enlightenment activities also help to promote understanding and cooperation of these environmental activities of the organization.

It is recommended that the organization should include in their environmental report facts about environmental educational systems it has established, that the employees are following appropriate training guidelines, and that they are dedicated to the concept that supports the understanding and cooperation of environmental activities in society.

11.3 Entry of Recommended Items

Stakeholder group Items	Customers and suppliers	Financial institutions	Administrative	Regional communities	General public	Employees
(1) Programs and performance of education and enlightenment *1	++	++	+	++	+	+++
(2) Programs and performance of education and enlightenment for the affiliates *2	+	+	+	+	+	+++
(3) Performance evaluation and award system *3	++	++	++	+	+	+++

<How to express the items>

*1 To deepen understanding regarding the environment of employees, the entire contents of education and enlightenment policies implemented within the organization should be addressed.

*2 Education and enlightenment policies implemented in affiliate companies, by customers and suppliers should be entered. In regard to employees, opportunities arise to work in conjunction with the affiliate companies; therefore it is recommended that specific details of training put into practice should be addressed.

*3 By acknowledging that there is a system that incorporates performance evaluation and an award system for employees who have made active

contributions to environmental activities and voluntary social activities, it is believed that these salient points should be promoted. Moreover, an attempt at improving the level of consciousness pertaining to environmental education should be encouraged.

* Disaster prevention training is addressed in “9. Environmental Health and Safety”.

11.4 Environmental Performance Indicators

Management performance indicators

- Number of employees participating in environmental programmes (e.g. suggestion, recycle, clean-up initiatives or others)
- Number of employees who have obtained reward and recognition in comparison to the total number of employees who participated in the programme
- Number of employees trained versus the number that need training
- Number of contracted individuals trained
- Level of knowledge obtained by training participants
- Number of environmental improvement suggestions from employees
- Results of employee surveys on their knowledge of the organization’s environmental issues

12. Environmental Communication

12.1 Content

Communication tools which are principally employed including the environmental report, in conjunction with systems that are used to correspond environmental information with stakeholders.

12.2 Explanation

It is hoped the organization is able to achieve two-way communications with readers, and then to be able to adopt opinions it receives for the benefit of environmental activities. Also, these opinions can be linked to overall improvement of environmental activities.

From the standpoint of being able to enter into a situation where an open communicative situation exists dealing with requests and demands from readers in environmental report, this is likely to aid towards raising the level of trust of readers.

12.3 Entry of Recommended items

Items	Stakeholder group					
	Customers and suppliers	Financial institutions	Administrative	Regional communities	General public	Employees
(1) Company's internal and external communication systems and the outline	+	++	++	++	++	+
(2) Environmental communication tools *1	++	++	++	+++	+++	++
(3) Demand items, and details of requests, complaints, inquiries and response to situation regarding the environment *2	+	+	+	+++	++	+
(4) Communication with regional communities and consumers *3	+	++	++	+++	++	++

<How to express the items>

*1 In reference to environmental communication tools and in particular environmental pamphlets and booklets, environmental labels, environmental advertisement, these should all be entered.

◇ For regional communities and general public who have no actual direct connection with the organization, and also for communication routes that have as yet to be established, it is desired that the details concerning tools that carry out the information transmission from the organization are revealed.

*2 As regional communities including NGO and green consumers usually have a large number of demands, requests, complaints concerning the

organization, and because there are many that show a strong interest in the organization's attitude in their responses, it is hoped that the organization is able to report the specific types of demands were made and the particular kinds of measures were taken in response.

- *3 Reporting plans for meetings with regional communities, recruiting of participants and the recording of the outcome of communication events are methods to help establish firm communication channels between the organization and targeted members. These then should be entered accordingly.

12.4 Environmental Performance Indicators

Management performance indicators

- Number of inquiries or comments about environmentally related matters
- Number of suppliers and contractors queried about environmental issues
- Number of press reports on the organization's environmental performance
- Number of sites with environmental reports

13. Contribution to Society in regard to the Environment

13.1 Content

Non-profit activities performed by the organization related to the environment should be entered.

13.2 Explanation

The social contribution activities engaged in by the organization consist of international support activities, community involvement, cooperation of NGO, fund raising activities, and so on. The social contribution activities are designed to be a supportive and also a collaborative work primarily for the benefit of stakeholders; therefore this will help to further build a closer cooperative relationship.

13.3 Entry of Recommended Items

Stakeholder group Items	Customers and suppliers	Financial institutions	Administrative	Regional communities	General public	Employees
(1) Projects concerning social contribution, and international support	+	++	+	++	++	+
(2) Regional community involvement *1	+	++	+++	+++	++	++
(3) Participation or support of environmental group	+	++	++	++	++	++
(4) Fund raising activities	+	++	+	++	++	++
(5) Support of social contribution activities of employees *2	+	++	++	++	++	+++

<How to express the items>

*1 The organization essentially reveals its attitude towards how it addresses environmental issues in respect to administrative and regional communities that they are closely related to, by presenting the contents of their social contribution activities in regard to the particular regional areas.

*2 Support systems for social activities, such as volunteer leave, that the organization has established for its employees should be entered.

◇ The organization can show their understanding towards their social contribution activities and encourage the employees to show their own initiative in respect of such social contributions.

13.4 Environmental Performance Indicators

Management performance indicators

- Number of environmental educational programmes or materials provided for the community
- Resources applied to support of community environmental programmes

- Number of sites with wildlife programmes
- Progress on local remediation activities
- Number of local cleanup or recycling initiatives, sponsored or self-implemented
- Favourability ratings from community surveys
- Number of employees participating in environmental programmes (e.g. suggestion, recycle, clean-up initiatives or others)

IV. Environmental Reporting for a Sample Company (Example)

This chapter illustrates how to carry out environmental reporting based on these guidelines, using a sample company to give examples of concrete tasks and report content. Refer to this as supplemental information to better understand the tasks involved and to ensure smooth progress in the creation of the environmental report.

The sample company uses these guidelines to implement its environmental reporting. The report prepared by the sample company is shown herein.

The procedures and set items shown in this chapter are only for reference and are not a requirement to every companies environmental reporting. Environmental reporting should be carried out in a manner most suitable to each individual company.

1. Establishment of The Sample Company

By making the assumption that the sample company is implementing environmental reporting under the following conditions, task procedures and set items are shown below as an example.

[Name]	Company E, Ltd.
[Type of industry]	Metal parts maker. The main business is metal plating (press processing). There is a washing process involved during production.
[Site location]	Outskirts of a major city. The site is composed of two buildings incorporating a factory plant that is adjacent to the head office building.
[Scale]	Total number of employees is 150. The stocks are unlisted and the capital is wholly independent.
[Customer]	40% of total sales are related to a major machinery maker Company A. The request for promotion of environmentally conscious initiative originates from Company A.
[Environmental management]	ISO14001 was registered one and a half years ago. Two members of the company have been elected as environmental management staff in the ISO office.
[Objectives]	In Company E, ISO14001 was registered one and a half years ago and it has been actively promoting environmental management. As an environmental policy, 'social responsibility in regard to the environment as a company' is vigorously stressed, and the president of the company decided to announce environmental information of Company E on a wide scale in order to uphold their social responsibility to society. In addition, environmentally conscious initiative is also an important element when securing business deals, and it is conceivable that through such environmental consideration this initiative helps to expand their business. Therefore, it is for this reason Company E has determined to implement environmental reporting for the purpose of PR in regard to environmentally conscious initiative and the implementation of social responsibility.
[Preparation staff]	As a representative of environmental management, the Executive Director X holds the position as the environmental representative. In addition, three members are selected as preparation staff in the ISO office (one member works as an input operator).

[Target boundary]	By referring to “Environmental Activities of the Organization” that is entered in the guidelines, the head office and main factory, the same that can be found in ISO14001, the registered site is set as a target boundary. The target period is determined to be one year in term, because the plan is to issue environmental report after the annual financial results have been settled. The conclusion as to whether or not the issuance of environmental report should be after the financial results of each year is as yet undecided. In the case that environmental report is published every two years, then it has been decided that the target period will be two years.
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2. Specification of Target Readers

As for Company E, the important stakeholders are considered to possibly have some influence on residents in the surrounding area of the head office, and also since PR is addressed for the sake of sales promotion for environmental reporting, their customers and suppliers are also considered to be important stakeholders. To examine important stakeholders as target readers, stakeholders are evaluated through a scoring method by referring to the environmental impact evaluation method addressed in ISO14004 as follows:

Evaluation Method for Relationship between Environmental Reporting Organization and Stakeholders (Example)

In reference to stakeholders who are listed in “ISO14031 Environmental Performance Evaluation”, based on the following evaluation indicators, points will be given accordingly. Stakeholders who score the highest marks are determined to be the most important stakeholders for the organization. These stakeholders are specified as target readers and the organization will implement environmental reporting by taking into consideration their needs for information.

Evaluation Indicators

The scoring for each of evaluation indicators is in five grades consisting from 1 to 5 points for each relative evaluation stage. Stakeholders with the highest total scores of each indicator will be specified as target readers.

- Distance from the organization closeness to the organization.
- Strength of influence..... size and impacts of environmental interests that result between the organization and stakeholders
- Speed of corresponding influence..... influence of the length of time on stakeholders

* The above three indicators; distance to the organization, strength of the influence and speed of corresponding influence, are the factors that show interested relationship between the organization and stakeholders. For stakeholders in close proximity to the organization (the relationship is close), having a strong influence (being influenced strongly) and corresponding to the influence quickly, it is hoped to disclose environmental information and to have

come to an understanding about the particular organization. With these three factors in mind the relationship with stakeholders needs to be numerically valued, and the information needs to be disclosed to those stakeholders who scored highly.

- Degree of social interests..... importance of the relationship between the organization and stakeholder which is seen from a social viewpoint. From the perspective of general public, stakeholders who are considered to have a significant relationship with the company should have importance attached.
- Number of target members..... number of targeted members that information is disclosed to. The more members there are the greater the significance of environmental information disclosure.
- Effect of information disclosure..... expected response when disclosing information and the scale of predicted effect.

[Table IV. 1 Evaluation Results of Stakeholder for Specifying Target Readers]

Stakeholder Evaluation criteria	Employees	Investors	Suppliers	Contractors	NGO	Regional communities	Administrative
Distance from the organization	5	1	4	3	1	5	3
Strength of influence	5	2	5	1	2	4	2
Speed of corresponding influence	5	2	4	3	1	4	1
Degree of social interests	2	2	4	1	3	5	1
Number of target members	3	1	3	2	1	4	1
Effect of information disclosure	5	2	3	2	3	4	2
Total	25	10	23	12	11	26	10

* In Company E, stakeholders are determined by the examination regarding the above mentioned seven criteria (ref. Table II.2)

By following results given above, the highest scoring “regional communities” are specified as target readers. Since there is almost no difference between customers/suppliers and employees, it should be taken into consideration that all categories of stakeholders have the possibility of being readers of environmental report. The preparation of environmental report is also determined by taking into account other stakeholders.

3. Selection of Guideline Items

The items that are entered in environmental report are selected from “III. Environmental Reporting Guidelines (By Stakeholder Group)”.

The set up of chapters and framework of environmental report have become more clearly defined, and based on this the information has been collected.

Ex. 1. Case of Specification of Regional Communities as Target Readers

Environmental reporting guideline items	Consideration points for target readers (regional communities)
1. CEO Statement	
Statement by the CEO of the organization	Based on the declaration and commitment of the CEO, environmental activities implemented incorporating the accountability is shown to regional communities. (III. 1. 1.3)
2. Profile of the Reporting Organization	
Name of the organization, business profile, site location, activity area and target transaction, together with scale of the organization	In order to promote understanding of the organization to regional communities, the basic information of the company should be provided. (III. 2. 2.3)
3. Basic Information of Environmental Report	
Date of issue, record of issue and plans for the future, reception office for communication in each place of business, homepage address, target boundary and target period of environmental report	Target boundary and target organization, and contact address should particularly be clearly shown as basic information items in environmental report (III. 3. 3.3)
4. Environmental Guidelines and Environmental Plan	
Environmental policy, environmental targets, activities to attain the targets, previous year’s achievement results, acknowledgment of the present status of initiative and the summary	Present activities of the organization, and their achievement results should be addressed and particularly to what degree environmental activities are actually performed should be concretely observed. (III. 4. 4.3)
5. Outline of Environmental Management System	
Organization system of environmental management system, progress status, management status of environmental aspects	How the organization manages environmental activities under environmental management system developed, together with environmental aspects as a management target, these status should be concretely addressed. (III. 5. 5.3)
6. Relationship Between Business Activities and the Environment	
Summary chart which shows relationship between business activities and the environment	Relationship between the organization’s entire business activities and environmental aspects should be shown with a summary chart, in order to have a firm grasp on the whole picture. (III. 6. 6.3)

7. Business Activities and Present Status of Reducing Environmental Impacts of Products and Services <Environmental performance indicators to be entered>	
Materials Total quantity of recycled raw material, quantity of water used, total used quantity of raw metal materials, the total amount of cleaning materials, etc.	Environmental performance indicators for regional communities are necessary in order to be able to understand fundamentally achievement results related to the local area and to comprehend the actual status easily. (III. 7. 7.3, 7.4, 7.5) * Performance information should be disclosed within the scope that the organization currently obtains. By gradually expanding the collection range boundary, they should try to increase the amount of information disclosed in the future. * Environmental activities content regarding environmental performance indicators should be entered individually. It is necessary to inform regional communities of relevant specific local information. For example, the conditions and concerns in regard to water pollution should be illustrated
Energy Total consumption of electricity, gasoline, etc.	
Services supporting the organization's operation Consumption of gasoline related to transportation of procurement and product delivery	
Physical facilities and equipment Noise and vibration emissions	
Products Number of environmental conscious products, etc.	
Services provided by the organization No special information to be entered.	
Wastes Recycling rate and total amount of waste, total amount of industrial waste, etc.	
Emissions Situation of soil contamination, water pollution, etc.	
8. Environmental Accounting	
Investment and cost for environmental conservation	Attitude of the organization to regional communities should be described by addressing amount of funds spent. (III. 8. 8.3)
9. Environmental Health and Safety	
Presumed emergency situations in regard to the environment, accidents from the past and present, occurrence of emergency situations and the counter measures	Presumed emergency situations, accidents from the past and present should be addressed. Potential risks to regional communities should be detailed. (III. 9. 9.3)
10. Environmental Laws and Regulations, and Lawsuits	
State of compliance with laws and regulations on the environment, lawsuits, occurrence and circumstances of accidents and their counter measures, fines or penalties	State of compliance with laws and regulations and violation of law and payment of fines in the past should be concretely addressed, in order to inform the organization's environmental management status and risks. (III. 10. 10.3)

11. Environmental Education and Environmental Enlightenment Activities	
Programs and performance of education and enlightenment	Appropriate education is carried out in order to implement environmental activities in the organization and should be revealed to regional communities (III. 11. 11.3)
12. Environmental Communication	
Environmental communication tools, demand items, and the details of requests, complaints, inquiries and the response to the situation regarding the environment, communication with regional communities	An indication of the situation where communication of the information transmission from the organization should be addressed, in order to expand communication with regional communities. (III. 12. 12.3)
13. Contribution to Society in regard to the Environment	
Regional community involvement	The organization performance concerning contribution activities related to regional communities should be addressed, in order to show the organization's awareness of collaboration with regional communities. (III. 13. 13.3)

Ex. 2. Case of Specification of Employees as Target Readers

Environmental reporting guideline items	Consideration points for target readers (the employees)
1. CEO Statement	
Statement by the CEO of the organization	Attitude toward environmental activities by the entire organization should be addressed, and the promotion of employees' awareness of environmental activities should be entered. (III. 1. 1.3)
2. Profile of the Reporting Organization	
Name of the organization, business profile, site location, activity area and target transaction, and scale of the organization	It is not necessary to address the basic information of the company again in environmental report in detail for employees. Therefore instead, the contents of summary are sufficient. (III. 2. 2.3)
3. Basic Information of Environmental Report	
Date of issue, record of issue and future plans, contact point for communication in each place of business, homepage address, target boundary and target period of environmental report	Guideline items of the basic information for environmental report should be comprehensively entered. (III. 3. 3.3)
4. Environmental Guidelines and Environmental Plan	
Environmental policy, environmental targets, activities to attain the targets (which are implemented in the existing EMS), previous year's achievement results, acknowledgment of the present status of initiative and summary	Acknowledgment of the present status of initiative and summary' can be interpreted as the results of environmental activities that are being performed at present by the employees can help toward the future improvement and promotion of the environment; therefore it should be entered in detail. (III. 4. 4.3)

5. Outline of Environmental Management System	
Organization system of environmental management system, progress status, management status of environmental aspects, green purchasing	Since employees must acknowledge the outline of environmental management system, the contents should be addressed comprehensively. It should be prepared to be used for education of those employees who are transferred, and newcomers. (III. 5. 5.3)
6. Relationship Between Business Activities and the Environment	
Summary chart which shows the relationship between business activities and the environment	Material flow chart of the entire business activities should be illustrated in order to recognize the relationship between individual task and environmental impacts. (III. 6. 6.3)
7. Business Activities and Present Status of Reducing Environmental Impacts of Products and Services <Environmental performance indicators to be entered>	
Materials Quantity of iron, copper, aluminum materials, quantity of recycled metal materials, quantity of organic solvents for washing, quantity of kinds of grease (lubricating oil for cutting, etc.) for the manufacturing process, quantity of water-soluble coating materials, quantity of container packaging materials, etc.	<p>In regard to environmental performance indicators, in order that employees are able to acknowledge the information related to their own appointed tasks in detail, the information is presented in a broad scope and detailed as comprehensibly as possible, and this then should be entered accordingly. (III. 7. 7.3, 7.4, 7.5)</p> <p>* Performance information should be disclosed within the scope that the organization currently obtains. By gradually expanding the collection range boundary, they should try to increase the amount of information disclosed in the future.</p> <p>* Environmental activities content regarding environmental performance indicators should be entered individually.</p> <p>Because employees stress the importance on details and comprehensibility of the above mentioned performance information, it is necessary to clearly indicate, for example, electricity consumption in each section and in each building. Also, in regard to waste, each category of waste should be described and itemized in detail.</p>
Energy Consumption of electricity, gas, heavy oil, gasoline, etc.	
Services supporting the organization's operation Energy consumption regarding consignment of (metal plate) press processing and a rough estimate value of the total amount of chemical substances, consumption of energy related to the transportation of procurement and product delivery, etc.	
Physical facilities and equipment Noise and vibration emissions from the press (metal plate) processing machinery	
Products Number of implementations of Design for the Environment (DfE), rate of defected products, etc.	
Services provided by the organization No special information to be entered	
Wastes Quantity of scrap metals, recycling rate of scrap, emissions of waste packaging materials, quantity of substances subject to PRTR, quantity of hazardous waste, etc.	
Emissions Quantity of volatile organic solvent discharged to the air, emissions of NOx and CO2 from the boilers, etc.	

8. Environmental Accounting	
Investment and cost for environmental conservation	Amount of funds spent should be addressed by revealing the cost of environmental conservation, in order to promote self awareness and improvement of consciousness. (III. 8. 8.3)
9. Environmental Health and Safety	
Presumed emergency situations in regard to the environment, accidents from the past and present, occurrence of emergency situations and the counter measures	By showing emergency situations in regard to appointed task and previous emergency situations and their response, consciousness to environmental risk management should be implemented. (III. 9. 9.3)
10. Environmental Laws and Regulations, and Lawsuits	
Status of compliance with environmental laws and regulations, lawsuits, occurrence and circumstances of accidents and their counter measures, etc.	In order to acknowledge the environmental laws and regulations related to the organization and the importance of compliance, the information and explanation should be entered in detail. (III. 10. 10.3)
11. Environmental Education and Environmental Enlightenment Activities	
Programs of education and enlightenment, and education and enlightenment for employees of consigned companies	In order to enhance the effects of education by understanding of the targets and meaning of on going educational activities, general information regarding education should be entered in detail. (III. 11. 11.3)
12. Environmental Communication	
Environmental communication tools, demand items and inquiries and the response to situation regarding the environment	Outline of internal and external communication system to environmental information should be expressed. (III. 12. 12.3)
13. Contribution to Society in regard to the Environment	
Regional community involvement, supporting employees' social contribution activities	Programs and results of on going social contribution activities by employees themselves are addressed, and this effect should be communicated. (III. 13. 13.3)

For each of the information items above, the degree of detail for information to be entered has been individually examined and established. As environmental performance indicators regarding specification of the metal press processing, noise and vibration caused by machinery parts and the use of chemical substances such as organic solvents are considered vital information, such comprehensive information was entered in detail.

4. Information Collection and Compilation

Based on the selected guideline items, information is collected. In regard to information collection, actual performance value and activities for achieving targets collected from each division through the systems of ISO14001 were the base standard. If there is insufficient information available, then additional research is conducted and supplementary information is collected as much as possible. The method of how to

express data is not entered directly by using raw data, but it is expressed by establishing ratios, such as per part, per employee, per sales. One of the important aspects is that the disclosure method for data takes readers into consideration and this enables them to envisage and comprehend the data more clearly.

The draft environmental report has been prepared by collecting and compiling the information based on the guideline items.

It has been examined with involvement of third party opinions concerning environmental reporting. At the present stage, the company obtains advice from consultants regarding ISO14001 registration and operational management. They have decided not to adopt a third party review since this is the first trial for their environmental report.

After rewriting and printing, the environmental report is then finalized. It is subsequently distributed to regional communities, main customers and suppliers and also it is even used as a material for the purpose of employees' education. For visitors and those coming to plants for observation, it has become a rule to hand out finalized environmental reports as a PR tool. Also, as for these visitors, a summary version of environmental report that mentions the key points is distributed covering both sides of an A3 size sheet of paper.

Since the collected information for most parts exists as an electronic file (e-file), environmental information database in connection with appointed divisions has been established. Based on this database, a plan for the disclosure of environmental information to be displayed on a homepage is in the pipeline.

V. Environmental Reporting and Tools

1. Third Party Opinions

1.1 Outline of third party opinions

According to the committee survey, approximately 15% of published environmental reports contain opinions stemming from third party sources to enhance the reliability of the report.

The third party opinions contained in environmental reports indicate that the environmental report is evaluated by following appropriate procedures.

The third party opinions of the existing environmental report can be roughly divided into four categories: (1)Evaluation and verification of completeness. (2)Evaluation and verification of accuracy. (3)Evaluation and verification of environmental performance achieved. (4)Evaluation and verification utilizing all of the above three elements:

- (1) **Completeness:** As to whether the important information that is concerned with environmental impacts are completely covered without any omissions, the third party opinions that relate to the completeness should be confirmed. In addition, the report should be appropriate to the information needs of readers.
- (2) **Accuracy:** Accuracy should be confirmed for the calculation process involving numerical value information and also as to whether the information supplied contains errors.
- (3) **Environmental performance achieved:** The third party opinions that correspond to environmental achievement include whether the numerical value information shown in environmental performance achieved is expressed as a result of environmental measures, whether or not there is room for improvement, or whether the measures are insufficient or not. The information has been evaluated by incorporating views of the above mentioned environmental measures, and objectives are useful in recognizing problems and to help resolve them in the future.

Organizations which play a role of the third party review in environmental report are experts coming from various fields, such as audit companies, environmental consulting companies and intellectuals.

However, the evaluation procedure of review differs from the targets of the third party opinions (completeness, accuracy and environmental performance achieved). Furthermore, evaluation methods are also different depending on verification body conducting the third party review. Therefore the reality is that contents of the third party's evaluation procedure have large discrepancies.

1.2 Views regarding the third party opinions

It is conceivable that one of effective methods to enhance the reliability of environmental report is to include the third party opinions in the report.

However, just as under present conditions, the procedure and evaluation criteria are different depending on examined evaluation by a verification body. Therefore, it is difficult to assert the completeness and accuracy of basic principles of the environmental report under present conditions, and the third party's written opinions

are considered not to work sufficiently. Consequently, it is necessary to examine further social systems regarding third party opinions given in an environmental report. Also it is necessary to examine the standardization of procedure among verification bodies, including acknowledgement of third party opinions.

2. Environmental Reporting and Related Tools

Various environmental activities of the organization are carried out on the basis of certain types of systems (EMS: environmental management system) that manage the environment. Among numerous types of EMS, ISO14001 is the international standard, and therefore many organizations show they are adapting EMS based on ISO14001 by entering the information concerning the acquisition of ISO14001 in their environmental reports

Environmental report becomes a tool that expresses achievement results of the organization's various environmental activities (mainly based on EMS) to response to demands and requests of stakeholders, and future plans.

However, the method that expresses the result of various environmental activities by the organization is not only limited to environmental report.

The disclosure of environmental information of products which the organization has developed or manufactured (environmental label), the disclosure of the information of chemical substance management (PRTR), and the disclosure of economical information regarding various environmental activities (environmental accounting) exist. Also, as for environmental report, there are many varieties of information disclosure in electronic form (on the web), the information disclosure in a summary version of environmental report which is outlined by needs of stakeholders.

2.1 Information disclosure of environmental management system -- Issuance of environmental report

One method of environmental reporting is the issuance of environmental report that was addressed previously.

In the event where environmental information is aimed at being disclosed on a broadline basis to entire stakeholder groups and not just to stakeholders that have been specified as target readers, it is effective to prepare and use the summarized version of an environmental report as a disclosure tool. Since the summarized version of an environmental report is targeted at a large spectrum of unspecified readers, the summary of environmental information of the organization should be entered in broad terms, thus a conscious effort is made in avoiding the use of technical terms as much as possible, and thus enabling easy comprehension of the main points by readers.

There is the possibility that even stakeholders who do not show a special interest in environmental information of the organization, these stakeholders may have a big influence on the organization in the future. Also, from the point of view of enlightenment and the implementation of accountability, it will be necessary to disclose environmental information widely to various types of stakeholders.

2.2 Environmental information disclosure of products -- Environmental labeling

The disclosure of information by environmental report is mainly the information in regard to environmental management by the organization. On the contrary, environmental labels are for the purpose of environmental information disclosure of 'products'. The volume of environmental information that is related to each individual product is vast and so it is very difficult to disclose the entire data in detail in environmental report. However, by attaching an environmental label symbol mark to the products, it is possible to show that the products have satisfied the requirements of certain environment standards. Also, depending on environmental labeling, it is possible to show the existence of a large amount of a product's environmental information that cannot be entered in the environmental report, and also this information is examined by following a specific standard. Therefore, even people who do not have detailed knowledge concerning the environment are able to recognize at a glance that the products are environmentally conscious, so this will be one of the communication tools for environmental information that ties the organization that manufactures the product to consumers.

At present, the measures regarding ISO/TR 14025 quantitative environmental information label Type III are being implemented. Environmental impacts of the organization and the products are clarified by the method of ISO14040 Life Cycle Assessment (LCA), and it should be shown that environmental information of the products through LCA exists in database by attaching the labels. The information that was calculated by LCA is detailed environmental impact information regarding the products, and therefore can be used as reference information when consumers and organizations are engaged in the action of purchasing and basic information for promoting the concept of environmental consciousness.

2.3 Information disclosure of chemical substance management -- PRTR Law

PRTR Law (Pollutant Release and Transfer Register Law; Law Concerning Reporting, etc. of Releases to the Environment of Specific Chemical Substances and Promoting Improvements in Their Management), to assure the completeness of information regarding manufacturing and transferring of chemical substances and the subsequent reports are obligated by law. It is assumed that to have knowledge about transfer of chemical substances by issuing a MSDS (Material Safety Data Sheet) is to have a grasp on environmental risk information involving the discharge of chemical substances into the environment and its storage. Since PRTR information will be managed by MSDS through electronic means as well, it will enable the performance of information management, disclosing information easily through the use of databases.

2.4 Information disclosure of investments and effects in regard to environmental measures -- Environmental accounting

As for environmental accounting, it enables the clarification of costs of the organization regarding environmental conservation and its effects. By expressing costs of the organization's initiatives, environmental risks and environmental measures on monetary basis, the organization can provide readers with the information in a realistic and reader friendly style of data. Also, through the use of monetary value of costs and effects regarding the organization's environmental management, implementation of environmental risk management and costs of environmental measures will become possible. The information calculated by environmental accounting will clarify

environmental measures and the effects, the promotion of environmental management and environmentally conscious action will then be able to proceed.

In environmental accounting, there are some areas not yet firmly established. Therefore, as a social tendency, there are some initiatives to develop methods of environmental accounting and information disclosure.

2.5 Phased implementation of environmental reporting model -- Model of Small and Medium Enterprises (SMEs)

Environmental report should be revised by phases, as it is important to enhance the reliability.

The following is the phased implemented model when SMEs employ environmental reporting. This model is used as an example and therefore it would be acceptable for prepared tasks to be initiated mid way through the phase, also it is possible that these tasks can revert to the previous phase.

<ul style="list-style-type: none"> - Compliance with environmental laws and regulations - Implementation of environmental initiatives - Enhancement of eco-efficiency improvement 	<ul style="list-style-type: none"> - Development of environmental management system - Development of environmental information system 	<ul style="list-style-type: none"> - Disclosure of environmental information - Communication with stakeholders
Phase 1 Measurement to the Environment	Phase 2 Development of Environmental Management System	Phase 3 Use of Environmental Information

[Chart V.1 Phased Implementation of Environmental Reporting Model]

2.6 Establishing communication with stakeholders

By disclosing environmental information and communication with stakeholders, it would be possible to have a firm grasp of needs of stakeholders. Also, it assumed that a relationship of trust can be established, and as a result the accountability in regard to environmental information will be achieved.

By initiating discussions directly with stakeholders, opinions from outside the organization can be adopted. Moreover the promotion of environmental conscious actions, and the adoption of environmental improvement will become more of a reality.

VI. Explanation in regard to Revised Edition of The Guidelines

1. Review and Revision

The guidelines address the framework for a theory on environmental reporting. Therefore, there is little need to update the information constantly, and so the contents will not be inappropriate or out-of-date as time passes.

However, it is inevitable that the quality of environmental reporting will definitely improve greatly in the future, and furthermore the demands of society will significantly increase.

If more detailed analysis of stakeholders continues to be developed, and the information disclosure to stakeholders by more concrete procedures is possible, future guidelines will be examined for the possibility of amendment. By reviewing and revising the guidelines to match with more detailed task procedures and social demands, then the contents will improve and it will act as a guide for the implementation of more progressive environmental reporting.

2. Relationship with Other Guidelines

Recently various environmental reporting guidelines have been issued, such as GRI, PERI, CERES, UNEP, WBCSD, EMAS, DIN, the Ministry of the Environment in Japan and so on. In the planning process of the guidelines, the essential information from these existing guidelines are adopted as much as possible, and close attention paid to any consistency to correspond with other guidelines.

Quoting useful sections from this and other guidelines, and making referring to other guidelines to implement environmental reporting at the same time, they are an effective method of using the guidelines. As the guidelines have mentioned, based on basic principles of environmental reporting, it is hoped that a high quality environmental report can be prepared by referring liberally to the various guidelines under the decisions of the organization.

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