CFP Communication Program

Requirements for CFP-PCR

Established on July 2, 2012

Document ID: C-06-01

Japan Environmental Management Association for Industry

This document prescribes requirements for CFP-PCR (Carbon Footprint of Products - Product Category Rules) under the CFP Communication Program (hereinafter called “the CFP Program”), operated and managed by JEMAI (Japan Environmental Management Association for Industry).

1. Requirements of businesses who wish to garner an approval for a CFP-PCR

Businesses who wish to garner an approval for CFP-PCR (hereinafter called “the businesses”) shall meet the following requirements.

(1) The businesses shall be the one which directly engage in a supply chain of the product category targeted by the draft CFP-PCR. It may include the industry group constituted by the businesses which directly engage in the supply chain.

(2) It shall not include any businesses which are inappropriate in view of public order and morals (e.g., a company which has been violating a law).

2. Use of “Sector Guidance for CFP-PCR development”

A set of procedures for CFP-PCR development (e.g., draft development, public comment, reviews, and review panel, etc.) take much time and energy for parties involved. In order to reduce such burdens, the businesses will develop a CFP-PCR by referring to the “Sector Guidance for CFP-PCR development” (hereinafter called “the Sector Guidance”).

The Sector Guidance does not prescribe any requirements for CFP-PCR. There is a possibility that the requirements specific to the target product are required when actually developing a CFP-PCR, thereby the businesses shall firstly confirm the conformity to this document, and then shall change and embody of the contents as appropriate.

The Sector Guidance is developed by analyzing existing approved CFP-PCR, and by consolidating excerpts from common/similar requirements of certain product category.

**Italic types in the following table show examples and explanations of requirements, and they do not show requirements.*

No.	Items	Contents
1	Scope	
1-1	Scope	Scope shall be described.
2	Definitions of product category	
2-1	Product category	Target product shall be defined explicitly so as to identify the product to be included in a target product category. Excerpts from JSCC (the Japan Standard Commodity Classification), JSIC (the Japan Standard Industry Classification), and/or JIS (the Japanese Industrial Standards), can be used for descriptions of the definitions. When specifying product definitions, at least the following items shall be taken into account. - Functions and characteristics - Intended purpose (e.g., for business use, for consumer use, etc.) - Legal regulations (e.g., the Energy Conservation Law, etc.) - Other relative standards (e.g., industry standards, etc.) - Range of responsibility of the businesses Scale of classification for target product category should be set by using JSCC’s classifications of “group (2 digits)” or “class (3 digits)”.

		In principle, the businesses shall set a target product category. The businesses shall investigate existing approved CFP-PCR of this CFP Program, and if they find an overlap of a product to be covered by their CFP-PCR, they shall take into account the contents of the approved CFP-PCR. After finished the examination and consideration, if the businesses wish to apply an approval of the CFP-PCR as another CFP-PCR, they shall describe the reason.
2-2	Functions	Functions covered by quantification shall be described. The functions covered by quantification may be described in statements separately for each case. *When quantifying CFP, it will be required that target functions to be covered shall be clarified by selecting from various product functions. Functions will be set so as to correspond to the purpose of CFP declaration. Note that, even for the same product, there will be different in quantification unit, unit to be labeled, and scope of quantification, according to the functions to be set.*
2-3	Quantification unit (Functional unit)	As quantification unit of a target product category, functional unit which corresponds to the functions covered by quantification shall be described. *There is a case that functional unit is expressed by "product unit," "sales unit," or "volume unit (e.g., per 100g of contents, per 100g of standard weight, etc.)".* Provided that within a scope that the same functional unit can be set in the CFP-PCR, the businesses can define a product classification scale for using as CFP quantification unit. *As an example of such classification scale, beer may be classified as below in the order of scale.* *- Several beers of multiple companies (the average of the multiple companies)* *- The beers of the company A* *- The beers under the brand B of the company A* *- The beer C produced in a plant under the brand B of the company A* *Note that classification scale of a target product corresponds to representativeness of data to be collected. For example, when target product is set as "beers of a company A," all beers sold by the company A shall be taken into account in principle.*
2-4	Components of product	Components of the target product shall be described. Accessories and packing materials used at the time of selling products shall in principle be included in a product system. However, they may not be included in the components of the product, when it is an option and purchaser-selectable item (e.g., promotional options which are temporarily attached to the product, car navigation system when automobile is covered by the assessment, etc.), and also when it is assumed that CO_2 emissions of such item has small contributions to the total CO_2 emissions of an entire life cycle of the product.

3	Referenced standards and CFP-PCR	
3-1	Referenced standards and CFP-PCR	For referenced materials, standards already published (e.g., JIS) and CFP-PCR already published can be used. When using such standards/CFP-PCR for quotation, the name of the referenced standards/CFP-PCR shall be described and the excepted part shall be stated clearly. [When quoting CFP-PCR] - Only the name of the referenced CFP-PCR shall be described, and the ID number of the referenced CFP-PCR shall not be described. The latest version of the referenced CFP-PCR shall be used in principle when quantifying CFP, provided that there is any reason that a specific version of the referenced standard/CFP-PCR should be used. - For a process whose associated data is collected by using the referenced CFP-PCR, a notation such as, “Part of the data is collected by referring to the referenced CFP-PCR,” shall be clearly described. - For a life cycle stage and a process which is quoted from other CFP-PCR, when it has small contributions to the total CO_2 emissions of an entire life cycle stages of the product, or when it is difficult for the businesses to collect primary data, the businesses can use secondary data instead of collecting primary data by using referenced CFP-PCR. *[Examples of descriptions about quotation]* *- “Definitions of terms” quoted from “JIS Z xx,”* *- “No.11-4: the disposal and recycling scenario” quoted from “PX-XX xx”*
4	Terms and definitions	
4-1	Terms and definitions	Of terms used in CFP-PCR, sufficient explanations shall be given for special terms unfamiliar to the public and terms which require setting of specific definitions in CFP-PCR. For definitions of terms, terms of already published standard such as JIS should be used. The terms defined in “terms and definitions” under the documents of the CFP Program, and the terms defined in the rules related to CFP quantification and declaration, shall not be defined again in CFP-PCR.
5	Product system (data collection range)	
5-1	Product system (data collection range)	A target product system shall be set by considering an entire life cycle of the product. The product system to be set shall be a range of an entire life cycle which fulfills target product functions which correspond to the purpose of CFP declaration, and also shall include a process which can not ignore in view of scale of contributions to the total CO_2 emissions of an entire life cycle. The life cycle stage included in the product system shall be described. *In principle, life cycle of a product is constituted by the following stage.* *- The raw material acquisition stage* *- The production stage* *- The distribution stage* *- The use and maintenance stage* *- The disposal and recycling stage*

		However, it may be excluded the cases where it is difficult to be divided into the life cycle stages described above (e.g., service area). Moreover, a process which cannot be collected associated data respectively from the raw material stage and the production stage, it may be integrated into either of the stage. When it aims to be quoted in another CFP, the businesses can quantify only a specific life cycle stage or a process, not an entire life cycle. In this case, the calculation results of the CO_2 emissions shall be "partial CFP". When it is treated as partial CFP, it shall be described in the CFP-PCR. Carbon offsetting shall not be included in CFP and partial CFP. *[Sales process]* *(1) Assumptions of sales process* *Life cycles of all products include sales process. Sales process is difficult to reach a consensus on its assessment methodology and difficult to use for improvement based on the calculation results, due to the following backgrounds depending on products: 1) a wide variety of sales pattern can be assumed; 2) they are sold with various products; 3) collecting information is difficult, as sales process is located in the latter part of a supply chain; 4) there is a little storage of data on the sales process; and 5) there is a case that the sales process has too large environmental impacts to ignore.* *However, it is important to take into account sales process for promoting measures to prevent global warming, considering an entire life cycle. Especially for a product which has large impact in its sales process, it is needed to review a sales method, and to collect primary data and to improve challenges in cooperation with purchasers.* *This CFP Program, therefore, require an inclusion of sales process in CFP in principle. However, it should understand that the issues described above have not been dissolved yet and the uncertainty of issues is large.* *(2) Setting of a product system related to sales process* *Inclusion of sales process in a product system shall be set in each CFP-PCR.* *When sales process contribution to the total CO_2 emissions of an entire life cycle is too large to ignore, it shall be included in a product system.* *Sales process can be conducted cut-off, when its contribution to the total life cycle is small, or when a scenario of sales process has high uncertainty and reliable information cannot be obtained.* *[Use and maintenance process]* *There is a variety of usage and maintenance of a product depending on individual users, and thereby volume of CO_2 emissions may significantly increase or decrease depending on how to use the product. Therefore, setting use process or maintenance process in communication with CFP is highly important, since it can have a possibility to change consumer behaviors. Considering these points, use/maintenance process should be*

		included in a product system in the cases described below. *- When reduction is possible by the businesses' efforts, and also when it is assumed that there is impact by the characteristics of target product.* *- When reduction is possible by consumers' efforts, and also when it is assumed that there is impact by the usage specific to target product.* *- When it is considered that the information is needed in communication by the businesses.* *[Disposal and recycling process]* *A product system is completed by properly treating a product after finished provisions of its product functions. Therefore, disposal/recycling process of the product/service which provided its functions shall be included in the scope of assessment. Note that there could be differences between the scope of disposal/recycling process of used product and the scope of the product treated as wastes under the Waste Management Law.*
5-2	Cut-off criteria and cut-off target	For cut-off criteria, the businesses shall follow "Requirements for CFP quantification and declaration" and shall concretely describe items to be conducted cut-off. Cut-off criteria in CFP quantification can be embodied as appropriate, within a range which meets the cut-off criteria of "Requirements for CFP quantification and declaration".
5-3	Life cycle flow chart	Life cycle flow chart, which is a schematic diagram of major processes and flows included in the product system, shall be shown. The format of a life cycle flow chart shall follow Annex A (informative).
6	CFP quantification method applied to all stages	
6-1	Criteria of setting range of primary data collection	Range of primary data collection shall be set. In principle, process activities (e.g., input amounts of each input, transport volume, emissions volume of wastes) within a range of business operations shall be included in the range of primary data collection. Important data collection items, in view of the purpose of CFP declaration, shall be included in the range of primary data collection, even if it is out of business operations. However, when it is not viable in reality to collect data by the businesses in CFP quantification, or when it has small contributions to an entire life cycle, it may not be included in the range of primary data collection, but the reason shall be described clearly. A process or a flow which has large contributions to an entire life cycle should be included in the range of primary data collection *(e.g., transport by sea or air when its environmental impact is large, or treatment process of wastes which require special treatment). In addition, it should be decided whether such process/flow is included in the range of primary data collection or not, after examining data collection methods in detail to clarify whether it can be collected as primary data.* A process or a flow, which the businesses judge as effective to reduce CFP, should be included in the range of primary data collection. When it is out of a range of business operations but the businesses can easily collect primary data, it should be included in the range of primary

<table>
<tr><td></td><td></td><td>data collection (e.g., transportation route which can be easily identified, such as from production site of goods to distribution center, etc.).

The following table shows the scope for setting a range of primary data collection.

Table: Criteria for setting a range of primary data collection
<table>
<tr><th></th><th>When it is not viable in reality for data collection by businesses in CFP quantification</th><th>When it has small contribution to an entire life cycle</th><th>Other than the cases listed on the left</th></tr>
<tr><td>Process within a range of the business operations</td><td colspan="2" rowspan="2">In principle, they shall be included in the range of primary data collection. When not be included, its reason shall be clearly described.</td><td rowspan="2">They shall be included in the range of primary data collection</td></tr>
<tr><td>Important data collection items in view of the purpose of CFP declaration</td></tr>
<tr><td>Process which has large contribution to CO_2 emissions</td><td colspan="2" rowspan="3"></td><td rowspan="3">They are recommended to be included in the range of primary data collection</td></tr>
<tr><td>Process which is effective for reducing CFP</td></tr>
<tr><td>Process whose primary data is easily collected</td></tr>
</table></td></tr>
<tr><td>6-2</td><td>Quality of primary data</td><td>Criteria on data quality required when collecting primary data shall follow “Requirements for CFP quantification and declaration”. Within a range which meets the “Requirements for CFP quantification and declaration,” rules can be embodied as appropriate.</td></tr>
<tr><td>6-3</td><td>Primary data collection method</td><td>Primary data collection method shall follow “Requirements for CFP quantification and declaration”. Within a range which meets the “Requirements for CFP quantification and declaration,” the rules can be embodied as appropriate</td></tr>
<tr><td>6-4</td><td>Quality of secondary data</td><td>Criteria on data quality required when collecting secondary data shall follow “Requirements for CFP quantification and declaration”. Within a range which meets the “Requirements for CFP quantification and declaration,” rules can be embodied as appropriate.</td></tr>
<tr><td>6-5</td><td>Secondary data collection method</td><td>Secondary data collection method shall follow “Requirements for CFP quantification and declaration”. Within a range which meets the “Requirements for CFP quantification and declaration,” the rules can be embodied as appropriate. For example, priority of database to be used can be set. Emission factor data to be used in CFP-PCR can be specified.</td></tr>
</table>

6-6	Allocation	For an important process which requires allocation, the allocation method and the method for avoiding allocation shall be described.
6-7	Scenario	(1) Setting of transport scenario Assuming the case when primary data is difficult to be collected, transport scenario according to product characteristics shall be set. Transport scenario should be set by using the ton-kilometer method (including the improved ton-kilometer method). In addition, assumptions of setting transport scenario should be described. *The following is an example of the assumptions: note that whether loading ratio is overestimation or not, in the case of a product which has large volume but small weight.* (2) Setting of a scenario of wastes treatment Assuming the case when primary data is difficult to be collected, wastes treatment scenario according to product characteristics shall be set. In addition, assumptions of setting wastes treatment scenario should be described.
6-8	Other	Of the items related to CFP quantification method and are commonly applied to all stages, the rule which is not described in No.6-1 to No.6-7 can be described here. However, in principle, contents described in “Requirements for CFP quantification and declaration” shall not be described here again. [Examples of contents to be described] - Handling of series product - When labeling additional statements on deduction of alternative product system, its range and conditions, etc.
7	Requirements for the raw material acquisition stage	
7-1	Range of the processes	Processes included in the range of data collection (No.5-1) shall be described based on the criteria of setting a product system. The processes here shall be corresponded to a life cycle flow chart.
7-2	Data collection items	Data collection items shall be described for each process identified in No.7-1. In descriptions of such items, activities shall be categorized into the items to be collected as primary data, the items which may be collected as secondary data, and the items to be collected for scenario.
7-3	Primary data collection method and requirements	For primary data collection items identified in No.7-2, rules on its collection method and conditions shall be described.
7-4	Scenario	Rules on scenario may be described.
7-5	Other	When there are differences of contents between requirements in No.6 (general requirements applied to all stages) and requirements for each stage, a section of “exceptions related to XXX” may be created and the exceptions may be described in this No.7-5.
8	Requirements for the production stage	
8-1	Range of the processes	Processes included in the range of data collection (No.5-1) shall be described based on the criteria of setting a product system. The processes here shall be corresponded to a life cycle flow chart.
8-2	Data collection items	Data collection items shall be described for each process identified in No.8-1. In descriptions of such items, activities shall be categorized into the items to be collected as primary data, the items which may be

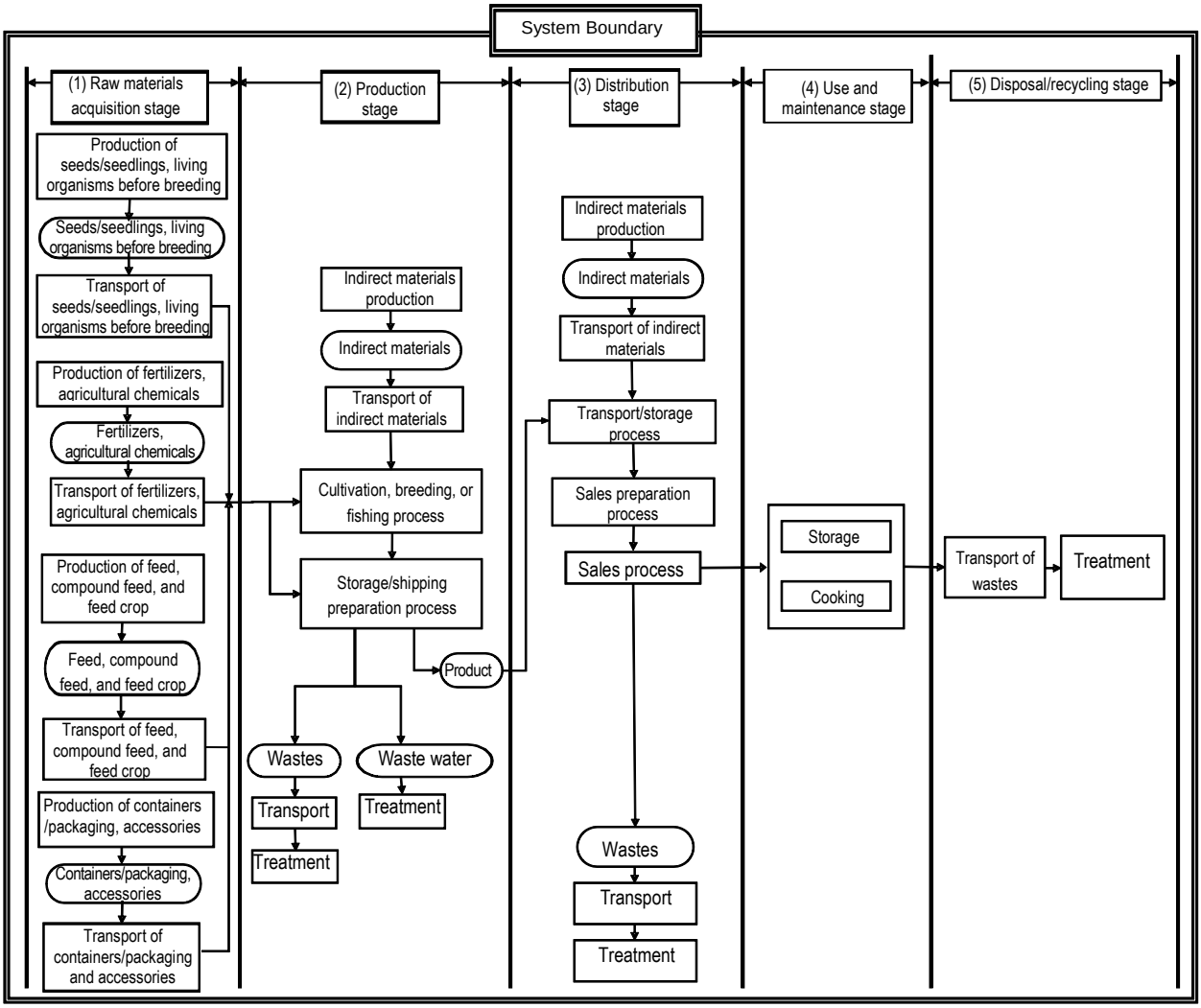
		collected as secondary data, and the items to be collected for scenario.
8-3	Primary data collection method and requirements	For primary data collection items identified in No.8-2, rules on its collection method and conditions shall be described.
8-4	Scenario	Rules on scenario may be described.
8-5	Other	When there are differences of contents between requirements in No.6 (general requirements applied to all stages) and requirements for each stage, a section of “exceptions related to XXX” may be created and the exceptions may be described in this No.8-5.
9	Requirements for the distribution stage	
9-1	Range of the processes	Processes included in the range of data collection (No.5-1) shall be described based on the criteria of setting a product system. The processes here shall be corresponded to a life cycle flow chart.
9-2	Data collection items	Data collection items shall be described for each process identified in No.9-1. In descriptions of such items, activities shall be categorized into the items to be collected as primary data, the items which may be collected as secondary data, and the items to be collected for scenario. *(1) Data collection items of sales process* *Two types of data related to “setting of sales method” and “setting of emission factor for each sales method” shall be collected. In setting of sales method, the sales methods at retail store (e.g., room temperature sale, cold storage sale, or mail-order sale) shall be identified, then decide a constituent ratio of sales methods.* *When setting of emissions factor for each sales method, emission factor corresponding to sales method shall be decided. GHG emissions per product in sales process can be shown by using the following equation.* *[Equation] Σ (Sales method i x Emission factor for each sales method i)* *[Setting of sales method]* *1. In the case that a constituent ratio of representative sales methods is decided in CFP-PCR* *e.g.1) Assumed “store (room temperature)” as 5%, “store (cold storage)” as 90%, and “mail-order” as 5%* *e.g.2) Assumed “mail-order” as 100%, since the product is mainly sold by mail-order.* *2. In the case that a method for setting a constituent ratio of representative sales methods is shown in CFP-PCR, and the businesses set a constituent ratio by using the method in each CFP quantification.* *e.g.) For a constituent ratio of “room temperature sale,” “cold storage sale,” and “mail-order sale,” the businesses shall decide by interviewing their top purchasers.* *3. In the case that no sales method is set in CFP-PCR, and that the businesses set an appropriate scenario based on primary data in each CFP quantification* *e.g.) In this PCR, it is difficult to set a representative sales method due to characteristics of a target product group, thereby it is set in CFP quantification.*

		[Setting of emission factor for each sales method] *4. In the case that emission factor for each sales method is set for individual product family* *e.g.) Emission factor per Yen of ballpoint pens in selling at store* *Emission factor per Yen of erasers in selling at store* *5. In the case that a uniform and representative emission factor for each sales method is set* *e.g.) Emission factor per stationery in selling at store* *6. In the case that emission factor is set by using detailed input parameters* *e.g.) In the case of "store (cold storage)," it is calculated as below:* *["Product installation area" (m^2) / "Showcase area" (m^2) x "Electricity consumption per day" (kWh) x "Number of days left at store" (day)].* *Average values are set as follows: when the showcase area is "X m^2," the electricity consumption per day as "XkWh," and the number of days left at store as "X days". When there is an expiration date, "number of days up to the expiration date" is set as the number of days left at store.* *7. In the case that no emission factor is set in CFP-PCR, and that the businesses collect data as primary data in CFP quantification*
9-3	Primary data collection method and requirements	For primary data collection items identified in No.9-2, rules on its collection method and conditions shall be described.
9-4	Scenario	Rules on scenario may be described.
9-5	Other	When there are differences of contents between requirements in No.6 (general requirements applied to all stages) and requirements for each stage, a section of "exceptions related to XXX" may be created and the exceptions may be described in this No.9-5.
10	Requirements for the use and maintenance stage	
10-1	Range of the processes	Processes included in the range of data collection (No.5-1) shall be described based on the criteria of setting a product system. The processes here shall be corresponded to a life cycle flow chart.
10-2	Data collection items	Data collection items shall be described for each process identified in No.10-1. In descriptions of such items, activities shall be categorized into the items to be collected as primary data, the items which may be collected as secondary data, and the items to be collected for scenario.
10-3	Primary data collection method and requirements	For primary data collection items identified in No.10-2, rules on its collection method and conditions shall be described.
10-4	Scenario	Rules on scenario may be described. Especially for use/maintenance patterns of products, various cases are assumed depending on users. Therefore, use/maintenance scenario shall be set. This scenario shall be set based on the following requirements. - It shall be linked to functional unit. - When various usage patterns are assumed, standard, representative, or average scenario shall be set based on objective evidence. The concrete examples of such evidence shall be any descriptions related to the scenarios, such as from published international standards, published domestic guideline, published industry guideline, published paper or report, or use method/example which exist in a product containers/packaging. - Especially when any descriptions for use method/example exist in a

		product containers/packaging, the scenario to be set shall not be conflicted with the descriptions, to avoid misunderstanding by general consumers. - When any rules are required in other laws/regulations, the scenario to be set shall not be conflict with the rules. For example, the Food Sanitation Law requires a food to be heated for a given degree. In this case, it should include a scenario for heating of the food. This scenario should be set by the following requirements. - For a part available to be reduced CO_2 emissions by efforts of businesses and/or consumers, the scenario shall be developed so as to reflect such efforts. - For a part not available to be reduced CO_2 emissions by efforts of businesses and/or consumers, a uniformed scenario shall be developed.
10-5	Other	When there are differences of contents between requirements in No.6 (general requirements applied to all stages) and requirements for each stage, a section of “exceptions related to XXX” may be created and the exceptions may be described in this No.10-5.
11	Requirements for the disposal and recycling stage	
11-1	Range of the processes	Processes included in the range of data collection (No.5-1) shall be described based on the criteria of setting a product system. The processes here shall be corresponded to a life cycle flow chart.
11-2	Data collection items	Data collection items shall be described for each process identified in No.11-1. In descriptions of such items, activities shall be categorized into the items to be collected as primary data, the items which may be collected as secondary data, and the items to be collected for scenario.
11-3	Primary data collection method and requirements	For primary data collection items identified in No.11-2, rules on its collection method and conditions shall be described.
11-4	Scenario	Rules on scenario may be described. Especially for disposal/recycling method of products, multiple cases are assumed depending on its product characteristics. Therefore, disposal/recycling scenario shall be set. This scenario shall be set based on the following requirements. - It shall be linked to functional unit. - When various disposal/recycling methods are assumed, standard, representative, or average scenario shall be set based on objective evidence. The concrete examples of such evidence shall be any descriptions related to the scenarios, such as from published international standards, published domestic guideline, published industry guideline, published paper or report, or use method/example which exist in a product containers/packaging. - Especially when rules of disposal/recycling method are stipulated by laws/regulations, the scenario to be set shall not be conflicted with the rules. - When any descriptions for disposal/recycling method exist in a product containers/packaging, the scenario to be set shall not be conflicted with the descriptions, to avoid misunderstanding by general consumers.

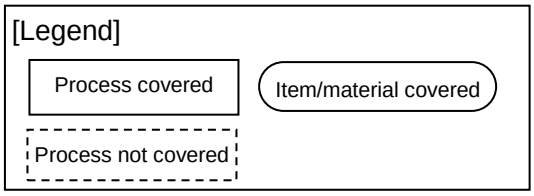
		This scenario should be set by the following requirements. - For a part available to be reduced CO_2 emissions by efforts of businesses and/or consumers, the scenario shall be developed so as to reflect such efforts. - For a part not available to be reduced CO_2 emissions by efforts of businesses and/or consumers, a uniformed scenario shall be developed.
11-5	Other	When there are differences of contents between requirements in No.6 (general requirements applied to all stages) and requirements for each stage, a section of “exceptions related to XXX” may be created and the exceptions may be described in this No.11-5.
12	CFP declaration method	
12-1	Additional information	Additional information shall follow “Requirements for CFP quantification and declaration”. Within a range which meets the “Requirements for CFP quantification and declaration,” the rules can be embodied as appropriate.
12-2	Registration information	Registration information to be published in the CFP website shall follow “Requirements for CFP quantification and declaration”. Within a range which meets the “Requirements for CFP quantification and declaration,” the rules can be embodied as appropriate.
12-3	Other	The rules, which are related to CPF declaration method and which are not described in No.12-1 and No.12-2, can be described here. In principle, the contents described in “Requirements for CFP quantification and declaration” shall not be described here again. *[Example of contents to be described]* *- Comparability conditions when comparing between products*

Annex A (informative): Example of life cycle flow chart



* All processes related to supply and use of energy and water are omitted from this flow chart.

* This flow chart shows an overview of representative life cycle flow chart of perishable foods.
  This is created based on product category.



Supplementary provisions

This document shall come to effect as from July 2, 2012.
Date of release: July 2, 2012 (C-06-01)