Report on the CFP Verification Scheme Committee

Summary of three-year discussion

(Provisional translation)

February 2012

Japanese CFP pilot project

CFP Verification Scheme Committee

Foreword

This is a summary report of the discussions at the CFP Verification Scheme Committee, which have been conducted since FY2009.

This summary report consists of three parts.

- The first part explains the background and the history.
- The second part is a conclusion part of items discussed.
- The last part provides the proposal to the future CFP programme's verification methods.

Supporting materials are attached at the back of this report. Refer to these documents for detailed information.

Contents

1. History

1.1 Purpose

Japanese CFP pilot programme had started in 2008, as one of a countermeasure to global warming. The aim of this programme is to promote the GHG emissions reduction in the area of consuming sectors including office and home, by recognizing the amount of GHG emissions from their purchasing activities.

Generally, CFP system is one of a Type III environmental label and declaration, based on the life cycle assessment (hereafter "LCA") of a product, which treats only "GHG emission" as an environmental impact. Already established International Standards, i.e. ISO 14040 and ISO 14044 for LCA, and ISO 14025 for Type III environmental label and declaration have been used for Japanese CFP pilot programme development (JIS Q 14040, JIS Q 14044, and JIS Q 14025 have also been issued as IDT standards in Japan.)

It was considered important to develop such programme harmonized with these existing International Standards because the globalized production, distribution and selling market will become larger in the coming years and the GHG information will be required by consumers in the market.

As for verification, in ISO 14025, section 9.4, third party verification of data and declaration contents is required, when it is communicated to consumers. However, detailed information on the operation of verification is not provided, thus referring to critical review method in ISO 14040/ISO 14044 and to similar type III programme verification methods such as ECO-Leaf (Japan), EPD (Sweden) and Carbon label (UK), the Japanese CFP pilot programme's verification scheme was developed.

Basic concepts of CFP verification were ;

- to be reliable information for consumers
- but not too much burden for the organizations

1.2 Outline

In FY 2009, together with the start of the Japanese CFP pilot project, Committee for CFP verification methods development was convened until FY 2011.

1.2.1 FY 2009

Similar type III environmental labeling schemes or GHG related projects were studied and a questionnaire to organizations was sent and collected.

(1) Methods of CFP verification/certification

Possible objects for the CFP verification/certification were discussed and 3 experiments were suggested.

- Product-by-Product verification method (hereafter, "P-by-P verification method")
- System certification method (certifies a CFP system developed inside an organization)
- Personnel certification method (certifies CFP verification personnel inside an organization)

(2) Bodies of CFP verification/certification

Possible bodies of the CFP verification/certification were treated.

- Third party individual
- Third party verification or certification body
- First party (quantifier themselves)

ISO 14025 requires third party verification for consumer communication. Also, the result of questionnaire said that the involvement of third party was necessary.

(3) Verification/certification management by a programme holder

Management method of verification or certification of CFP was discussed. It was thought necessary to consider taking the balance between the organization's practicability and efficiency (cost), consumer reliability and programme holder's amount of work.

(4) Competence of verifier/certifier
Competence on CFP verification/certification was discussed referring to International Standards, other type III environmental labeling programmes, and other existing CFP systems. Necessity of putting criteria, evaluation method and its education/training course was claimed.

1.2.2 FY 2010

"CFP system certification method" and "CFP personnel certification method" experiments were conducted following previous year's suggestion. Other issues relating to CFP verification technical aspects were discussed.

(1) Experiment: CFP system certification and personnel certification.
- Experiments were conducted.
- The CFP personnel certification method was found that it was too much dependent on the internal verifier of the organization. Thus, it was concluded to reconsider in the future when the competence criteria and the competent personnel were developed.
- The CFP system certification method was found effective under certain conditions; however, there were still a lot of issues to be solved for its full-scale operation. Thus, it was concluded to conduct further experiment in the next fiscal year, with more applicants.

(2) Bodies of CFP verification
- Usual CFP verification method in the Japanese pilot programme was a P-by-P verification conducted by verifiers managed by the programme holder.
- However, through the pilot programme, it was considered that it will not work when the number of application become larger.
- In order to address the above issue, it was discussed whether verification bodies for GHG, etc., could conduct CFP verification, and decided to conduct experiment on such a CFP verification scheme it in the next year.

(3) Responsibility of verification
It was classified as follows;
- Quantifier: responsibility on the CFP number

- Verifier: responsibility on conducting necessary verification process
- Programme holder: responsibility on establishing the procedures and criteria for the verification.

(4) Actions for further reliability
Necessity to take measures for upgrading and updating competence of verifiers, establishing training courses for quantifiers, and upgrading consultant's skill was discussed.

(5) Others
In addition, issues regarding cost, proper use of permitted CFP information, and period of verification were discussed.

1.2.3. FY 2011
CFP system certification method and P-by-P verification method by verification bodies were tested. Also, other technical issues were discussed.

(1) Experiment on CFP system certification method
6 organizations joined. The result was positive, that this method had the same reliability to the P-by-P verification method, under certain conditions.

(2) Experiment on P-by-P verification method by verification bodies
5 verification bodies joined. The result was also positive, that this method was reliable when a verification body had a certain competence. However, it was requested to define the role and range of the CFP verification clearer.

(3) Others technical issues
Other issues were also discussed parallel to two experiments.

1.3 Results of the meetings

(1) FY 2009, Third-party Certification Scheme Committee
- 1st meeting; 9th Oct. 2009 "Role of this Committee"
- 2nd meeting; 9th Dec. 2009 "Methods of verification"
- 3rd meeting; 28th Jan. 2010 "Result of the questionnaire"
- 4th meeting; 10th Mar. 2010 "Suggestion to next year"

(2) FY 2010, Verification Scheme Committee

- 1st meeting; 9th Jul. 2010 “Schedule and plan of this year”
- 2nd meeting; 8th Sep. 2010 “Experiment plan: in detail”
- 3rd meeting; 28th Jan. 2011 “Experiment results”
- 4th meeting; 1st Mar. 2011 “Suggestion to next year”

In addition to these meetings, “WG on experiment” meeting was held 4 times.

(3) FY 2011, Verification Scheme Committee

- 1st meeting; 7th Jun. 2011 “Schedule and plan of this year”
- 2nd meeting; 30th Nov. 2011 “Report on the result of the verification bodies experiment WG”
- 3rd meeting; 6th Jan. 2012 “Report on the result of the CFP system certification method experiment WG”
- 4th meeting; 9th Feb. 2012 “Wrap up report for 3 years discussion”

In addition to these meetings, “WG on the CFP system certification experiment” meeting was held 5 times and “WG on the verification bodies experiment” meeting was held 3 times.

2. Issues discussed and its conclusions.

In this section, issues discussed in 3 years and its conclusions are listed. They are classified into “(1) Point of discussion” and “(2) Conclusion”.

Issues were;

2.1 Object of verification/certification
2.2 Bodies of verification/certification
2.3 Role and responsibility
2.4 Cost of the verification/certification
2.5 Means for efficient verification/certification
2.6 Means for upgrading the verification/certification reliability

2.1 Object of verification/certification.

2.1.1 Object of verification/certification

- Verification for P-by-P was considered inefficient and burdensome for both organizations and programme holder, when the number of CFP verification becomes larger in the future. The way to reduce such burden was discussed in the view from the object of verification/certification.
- Followings were considered as objects of verification/certification;
  (a) Product (P-by-P verification method)
  (b) CFP quantification, internal verification and disclosing system inside an organization (CFP system certification method)
  (c) Personnel (Personnel certification method which certifies an internal verifier of the organization).

2.1.2 P-by-P verification method

From the beginning of the pilot project, this method has been basic of CFP verification. Actions and efforts have been taken to make the procedures and criteria better through its operations. Thus, the Committee used this as a standard of the Japanese CFP programme verification so as to judge other methods reliability and capability.

2.1.3 CFP system certification method

(1) Point of discussion

- The CFP system includes an establishment of quantifying system, P-by-P internal verification system and disclosing system, inside an organization.
- In 2010, “Requirements for CFP system certification” is established and experiment was conducted with 1 organization. In 2011, 6 organizations took part in.
- Through this experiment, requirements, formats regarding system development, and certification procedure were developed and revised.
- Technical discussions on the range of the system certification were made in the WG.

*Detailed information regarding this experiment, see “Report on the CFP system certification method” and the “Requirements for the CFP system certification method”, which are attached in Annexes.

(2) Conclusion

- According to the experiment, it was found “applicable” to adopt this method to the CFP programme with certain condition (organization’s experience on LCA/CFP).
- Inexperienced organizations did not join this experiment because of the schedule limitation. Further discussion is necessary for inviting such organizations.
- The technical issue regarding the certification range was concluded as
  > not necessary to limit the certification by organization’s scale or type of business.
  > necessary to limit within the certification by the CFP-PCR used for the examination.
- Formats, requirements and examination guidelines will be useful for the CFP programme.

2.1.4. Personnel certification method

(1) Point of discussion

- 2 organizations joined this experiment in 2010. One is well experienced and the other is not, for comparison.
- The result was obvious that the experienced organization could but the

other could not.
- The personnel certification method was affected largely by organization's experience and personnel's competence.

(2) Conclusion
- This method should not be introduced until the organization becomes well experienced and competence of personnel becomes high enough.
- However, in the future, it will be possible to reconsider to introduce when the situation be changed. For introduction, consumer acceptability should be considered.

2.2 Bodies of verification/certification

2.2.1 Participation of third party

(1) Point of discussion
- Generally, first party, second party and third party can be the players of the verification/certification.
- Japanese CFP pilot programme was one of the Type III environmental label and declaration and also business to consumer communication, involvement of third-party was considered necessary.
- Moreover, questionnaire to organizations' result was positive to the third-party examination.

(2) Conclusion
- Involvement of third-party is necessary for the CFP examination.
- However, there are ways to involve third-party in the verification/certification process. (see 2.1)

2.2.2 Possibility to invite verification/certification bodies.

(1) Point of discussion
- In Japanese CFP pilot programme, the number of individual verifiers was small so that it was considered to become a problem when the CFP becomes major in the future.
- The CFP verification needs high competence on LCA and understanding on CFP. Thus, to introduce these bodies, it was considered to make clear the criteria and procedure on CFP verification, which was not so much

vivid at that time.
- Examinations carried in 2011, “P-by-P verification method by verification bodies” and “CFP system certification method”, this point was heavily considered and discussed.
- As for verification bodies’ experiments, guidelines and check lists were made by referring experiences made by individual verifiers.
- As for certification bodies, they were not planned to join the experiment at first, but some organizations wanted to conduct the examination with their business connected certification bodies.

(2) Conclusion

(a) P-by-P verification by verification bodies
- Experiment resulted in success because there was no large point out during the CFP panel examination.
- Conditions are; a verification body has a certain competence, takes training course and has an internal review process.

*See “Report on the P-by-P verification method by verification bodies” which is attached in Annex, for more information.

(b) CFP system certification method conducted by certification bodies
- Certification bodies have enough ability to conduct the CFP system certification.
- However, this was not planned experiment so that the procedure on “internal review” was not set. Thus, it can not be concluded to conduct this examination independently by the certification body.

*See “Report on the CFP system certification method” which is attached in Annex, for more information.

2.2.3 Independent verification by verification bodies.

(1) Point of discussion
- In the course of the P-by-P verification by verification bodies experiment, independently verification was considered.
- Like technical review process during other certification or verification procedure, “CFP internal review process” was established and conducted.
- Participated bodies concluded that it was difficult to prepare enough number and competent personnel for such review process (only few

persons have such LCA/CFP competence at that moment).
- Also, replacement of the function of CFP verification panel with the internal review process considered difficult as their roles were not the same.

Table: Difference in functions

	functions
CFP verification panel	- Expert judgment - Point out mistakes on CFP-PCR with their experience
Internal review process	- Check the result by following CFP-PCR, verification guideline and check list. Can not and will not conduct expert judgment.

(2) Conclusion
- Internal review process was considered necessary because the output from verification bodies with the process considered equal to the usual verification conducted by independent verifiers.
- However, as listed in the “function table”, they can not replace all role of the CFP verification panel.
- To conduct independently verification by verification bodies, following measures shall be prepared.
  > Revise CFP-PCRs more precise to exclude expert judgments
  > Competence evaluation of verification bodies
  > Competence development for internal reviewers

2.2.4 Overall verification/certification structure

(1) Point of discussion
- In Japanese pilot programme, the programme holder organized and managed every case of verification.
- When the number of application is small and when it is necessary to gather information regarding programme sophistication, it is possible and necessary to control at the central; however, this will not work when the number of application becomes large.
- Accreditation scheme to manage such stakeholders may be useful.
- In any case, the programme holder shall be responsible for developing the procedure and rules on quantification and verification of the CFP.

(2) Conclusion

- At the beginning, programme holder shall organize and manage whole verification structure.
- Involvement of accreditation scheme shall be considered from the beginning of the CFP programme so as to transit to better management scheme easily when it is necessary.
- It is important to take into account ISO accreditation system, when mutual recognition with other CFP programme is considered.

2.3 Role and responsibility

2.3.1 Role of the verification

(1) Point of discussion

- During the P-by-P verification method experiment, verification bodies complained of the ambiguousness and blurriness of CFP verification's role. Problems were,
  - > Level of credibility of CFP and CFP verification was not clear.
  - > Necessity of expert judgment which excesses the contents of CFP-PCR is not clear.
  - > Precision of the CFP number required is unclear, thus the depth of evidence check is not clear.
- In addition to this, the function of verification conducted by verification body and the panel was considered different. (see 2.2.3)
- To make everything clear, fundamental discussion regarding CFP verification was made.

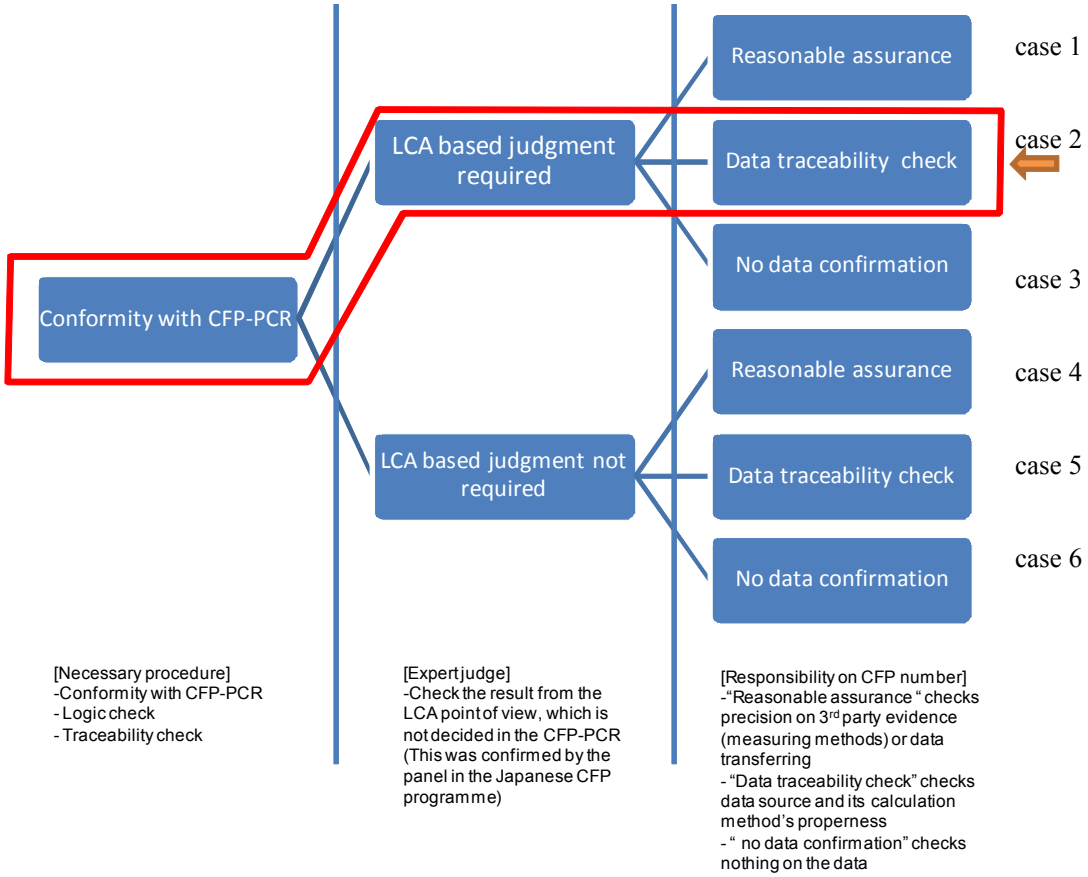
(a) Comparing with other GHG scheme

- Kyoto protocol CDM project, GHG credit scheme or Metropolitan Tokyo's GHG regulation, they have established so called "GHG verification method".
- These schemes precisely assess the reduction amount of GHG emission from the baseline because the decreased amount will be changed into monetary value.
- Also, its objects are limited to "project" and "organization", which is rather easy to set the boundary compare to "life cycle assessment".
- On the other hand, Japanese CFP pilot programme aims to convey GHG

information to consumers. Also LCA method is used.
- Thus, the concept on the verification should be different from above other GHG schemes. The point is that the word “verification” does not mean the same concept every time.

(b) Role and cost
- In 2010 discussion, Committee concluded that Japanese CFP verification only confirms the methodology with CFP-PCR, not including the number’s precision. As it was considered limitless to check the detail data every line-by-line.
- To avoid unnecessary verification cost, the programme holder shall develop the “materiality” of CFP verification, considering the characteristics of CFP.

(2) Conclusion
- Figure in next page was developed. The Japanese CFP verification method was considered to be classified in the arrow.



Credibility and cost assessment in each case

LCA judgment	yes			no		
number responsibility	Assurance	Traceability	No confirmation	Assurance	Traceability	No confirmation
	case1	case2	case3	case4	case5	case6
credibility	Highest	High	Low	High?	High?	Lowest
cost	Most expensive	relatively expensive	cheap	expensive	cheap	cheapest

2.3.2 Responsibility of verification

(1) Point of discussion

- As mentioned, in 2010, responsibilities regarding CFP verification was discussed and classified.

(2) Conclusion

- Following the classification, it is concluded as follows.
  > Verifiers and verification bodies do not take responsibility on the CFP number but the quantifiers do.
  > Verifiers and verification bodies take responsibility on whether the CFP quantification is conducted following the CFP-PCR and related rules.

2.4 Actual cost of the verification/certification

2.4.1 Man-hour/day labor in P-by-P verification

(1) Point of discussion

- Average man-day labor taken during the verification bodies' verification were,
  > 1-4 man-days for document check
  > 0.5-1 man-day for face to face check
  > 0.5-9 man-days for reviewing and reporting
  > 0.5 man-day after the CFP panel
  > In total, 2-11.5 man-days (average 6 man-days)
- The difference of document check and reviewing and reporting is originated from the verification concept of each body.
  > Detail check in advance
  > Detail check after face to face check
- These differences are based on
  > Applying organization's capability
  > Complexity of the product

(2) Conclusion

- Man-day labor will change by the required precision for CFP number. Too much detailed verification will be a burden for the organization and it may restrict the diffusion of CFP.
- Also, the ability of the quantifier and complexity of the product affects on verification time.
- Considering these situation, the time and cost for the verification shall be decided between the quantifier and verifier/verification body with/without programme holder, in the style of contract.

2.4.2 Man-day labor in CFP system certification

(1) Point of discussion

- For CFP system certification examination, programme holder directed certifier and certification bodies to conduct the certification,
  - > 1.5 man-days for 1st phase examination
  - > 1-2 man-days for main examination
  - > 0.5-1 man-day for site examination
- Next table is the result gathered. Well experienced organization tended to take shorter labor.

Table: Man-hour taken for the examination, step by step

(Unit: man-hour)

	1st step		2nd step			Preparation for panel	Care after panel	total
	Document check	Face to face document check	Main examination (examination on system)	Main examination (P-by-P verification)	site			
Average man-hour	9.5 (3-17)	10.1 (3.5-14)	7.1 (2.5-14)	5.9 (2.5-12)	4.0 (0-10)	7.0 (2-14)	1.7 (0-2)	45.3 (16.5-71)

- Values are aggregated man-hour of the main examiner and the vice-examiner.
- Values in ( ) are min/max of aggregated man-hour.

(2) Conclusion

- There was little difference in the time of CFP system certification (as it was directed).
- Similar to the P-by-P verification, complexity of product or production process may cause the difference. Thus, it should not fix the time of certification but make contract between organization and certification body or programme holder, in advance.
- Even it is “system certification”, but it is not a management system certification such as ISO 14001, whose man-hour labor of examination is decided according to the scale (number of employees).

2.4.3 Man-day labor of CFP system development

(1) Point of discussion

- 6 organizations’ man-hour labor data for the CFP system development was collected and classified into 2 categories.
  - > with LCA/CFP experience and with effective use of existing

management system knowledge.

> with less LCA/CFP experience and without use of existing management system knowledge

- Experience on LCA/CFP relates to capability of the organization, such as knowledge, number of persons who can join the system and maturity of quantifying process. As the CFP system requires providing personnel; quantifier, internal verifier and auditors, time taken to establish this system is heavily affected by their experience.
- Also, use of the existing management system knowledge relates to efficient development of the CFP system, such as having good reference documents, having know-how of writing down the requirements in the system documents.

Table: Man-hour taken for each development phase

(Unit: man-hour)

	- Less LCA/CFP experience, and - Develop the system without existing MS knowledge.	- LCA/CFP experiences, and - Develop the system with existing MS knowledge
Over all preparation	55 (-)*	9 (0-18)**
System development	272 (-)*	34 (15-56)
Quantification process development	265 (-)*	16 (4-39)
Operation	595 (-)*	100 (48-153)
Others	117 (-)*	0 (-)
Total***	1303 (-)*	159 (93-197)

*: Provision of min/max data is avoided because it is 2 applicants average.

**: There is 0 man-hour applicant because one applicant has continuingly participated to this system experiment.

***: Min/max data in "Total" column represent min/max man-hour of each applicant. Not total of each column min/max data.

(2) Conclusion

- Effort for efficient development is necessary for efficient CFP system development.
- Less experienced organization will definitely need support for developing system.

<Advantage of developing CFP system>

- The CFP system certification method is considered to take advantage of the usual CFP P-by-P verification method when the number of product becomes larger. Data were picked up from experiment.
- Noted that the result depends on the applicant's experiences on LCA/CFP, management system experiences, and product's character.

[Conditions]

<Period>

- 3 years: Certification valid period, as same as the similar management system certification.

<Time taken for CFP system development and certification>

- The CFP system development time inside the organization: 160 hours (Result from the experiment. Case, "CFP system developed by well experienced applicants' average data 158.8 hours)
- The time of the certifying process: 80 hours (Result from examiners' hearing, 27.4 hours. From applicant side, 3 persons attend the examination. 27.4*3=82.2 hours)
- Periodic external examination to maintain the certification: 20 hours/year (The P-by-P verification for one product. This was not treated at the experiment thus just an assumption)
- Internal audit time: 20 hours/year (No result from the experiment thus just an assumption)
- Quantification and internal verification for 1 product: 20 hours/product

<Time consumed for CFP P-by-P verification>

- 40 hours/product (Result from hearing of the applicants)

X products are quantified and labeled. Equation is,

160 h + 80 h + 3 y * (20 h+ 20 h) + X * 20 h/p ≦ X * 40 h/p

X ≧ 18

When the CFP system is maintained over 3 years, time taken for development of the CFP system basis becomes relatively small and the merit of the CFP system certification increases.

2.5 Means for efficient verification/certification

2.5.1 Clarification of verification range

(1) Point of discussion

- To make it efficient, role and range of the CFP verification shall be made clear (see 2.3.1).

- After the experiment, the WG discussed following items regarding this.
  (a) Sampling ratio
  (b) Depth of evidence check
  (c) Selection of secondary data
  (d) Necessity of site examination

(2) Conclusions

(a) Sampling ratio

- It is not possible to check whole primary data of traceability, quantification logic including allocation method and quantification itself. Especially, for machinery which contains lots of parts, it is not able to check whole data in a limited verification time.
- Resolutions are
  > put the GHG data in the order of contribution and check important data up to X %.
  > the rest of the data may be checked by random sampling.
- The percentage shall be decided by programme holder considering the necessary reliability of CFP number.

(b) Depth of evidence check

- It was not clear what extent the evidence be checked.
- WG made suggestion after the experiment.
  > check the data traceability up to organization's ordinal documents (document prepared for the CFP quantification is not classified as evidence).

(c) Selection of secondary data

- Judgment regarding secondary data selection may be different by examiners.
- The treatment of such data shall be made clearer in the verification guideline.

(d) Necessity of site examination (See 2.6.4)

2.5.2 Specialty of examiner

(1) Point of discussion

- Generally, any work will be conducted efficiently by repeating it over and over. This happens to the CFP examinations too.
- CFP verifier may conduct efficient examination by checking the same or similar area of applications.

(2) Conclusion

- Assign CFP verification under the same CFP-PCR to certain examiner to make the verification efficient.
- However, careless mistakes from collusion and transparency issues may occur by assigning the same organization again and again. Impartiality assuring method shall be necessary.

2.5.3 Revision of the CFP-PCR

(1) Point of discussion

- CFP-PCR is not always perfect. Ambiguousness, especially newly developed CFP-PCR, were usually included and judgments over the CFP-PCR requirements were made at the CFP panel.
- To address the above issue, "CFP quantification before development of CFP-PCR" became mandatory, to see proper data collection items were covered, in 2011.

(2) Conclusion

- Quantification before development CFP-PCR shall be continued.
- Moreover, measure to easily revise the CFP-PCRs shall be established.

2.6 Means for upgrading the verification/certification reliability

2.6.1 Upgrading the competence of examiner

(a) P-by-P verification

(1) Point of discussion

- Competence differences between examiners where the main problem to be solved since the beginning of this pilot programme. Thus, CFP verification guidelines were developed.

(2) Conclusion

- In addition to the guideline, qualification system or training course for CFP examiners shall be developed and such competences shall be maintained to exceed certain level.

< Example of training course>

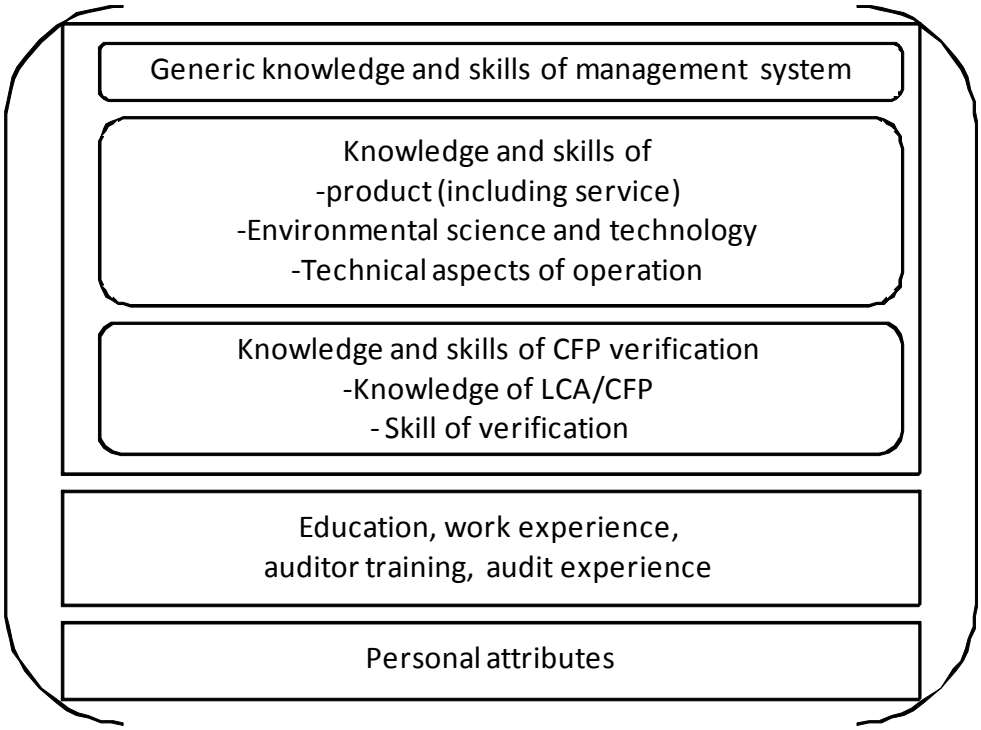
- Duration and contents
  - > Extend to 2 or 3 days curriculum
  - > Take longer time for demonstration
  - > Feedback the result
- Leveling and experience
  - > Main examiner and vice examiner shall be divided by their experiences.
  - > Multi time experience on vice examination shall be required for a main examiner.

(b) CFP system certification method

(1) Point of discussion

- CFP system certification examination was thought to require competence both on CFP verification and on management system certification.
- At the WG, such competence was discussed, and examiners were trained (See nest figure).
- During the experiment, qualification on the competence of the management system was replaced by qualification of ISO 14001's examiner.
- However, CFP is rather similar to product certification such as collecting product's production data, it was considered that the ISO 9001's qualification may be useful.

Figure: competence of CFP system certification verifier



(2) Conclusion

- CFP system certification examiner's competence shall include,
  > qualification, experience and knowledge on P-by-P verification
  > competence of examiner for ISO 9001 or ISO 14001
- Such training courses shall be provided by the programme holder.

2.6.2 Education of quantifier and consultant

(1) Point of discussion

- Difficulty and complexity of LCA method may become a barrier to join the CFP programme.
- There was a tendency on longer examination time when the organization takes first time verification. Usually, organization does not understand the CFP-PCR and related rules enough.

(2) Conclusion

- Training course for organizations and preparation of competent consultants should be developed and provided.
- For example, disclose the CFP verification guidelines and let the

organization know the detailed procedure for the CFP verification.
- In addition, explanatory meeting by the programme holder should be held for better understanding.

2.6.3 Competence upgrading regarding personnel in the CFP system.

(1) Point of discussion
- At the CFP system certification method, persons in charge inside the system are crucial for the system credibility.
- In the 2010 experiment, there were cases that the adaptation to the new rules was difficult for such personnel, because they may not have a chance to get information on new rules.
- At the 2011 examination, programme holder provided training course for the personnel inside the system.
- The competence criteria and qualification method for such persons are thought to be necessary.

(2) Conclusion
- Personnel shall be qualified, either externally or internally. For the internal qualification, competence requirement shall be the same as external qualification.
- In this case, programme holder shall,
  > provide an external qualification scheme
  > provide clear criteria on competence, and
  > provide chances for upgrading their knowledge continuously

2.6.4 Disclosing information regarding examination and examination criteria

(1) Point of discussion
- Consumers who are the receiver of the CFP information may consider the sign “verified” as “the number is totally correct”.
- However, the credibility of number will be changed due to the character of the CFP. (See 2.3.1) Information regarding the verification shall be clearly described and communicated by the programme holder so as to let the consumers understand the programme correctly.

(2) Conclusion

- Programme holder shall provide information regarding verification and certification and its criteria to prevent misusing and misunderstanding of CFPs.

2.6.5 Treatment of site examination.

- "Site", in this pilot programme, means the place where the primary data collection occurs. Not only a factory or a farmland but also an office or any other department where gathers material acquisition data is classified as site.
- To conclude, site examination in the CFP programme is,
  > for P-by-P verification, it is not mandatory. When verifier requested, it may be conducted.
  > for CFP system certification, it is mandatory.

(a) P-by-P verification

(1) Point of discussion

- During the pilot programme, P-by-P verification was conducted face-to-face basis, did not make the site examination mandatory.
- Some verifiers conducted site examinations and found lacked processes or data. Also by watching actual production processes, they conducted efficient verification by having well understanding about the processes to be observed.

(2) Conclusion

- Following the pilot programme's experience, site examination in the P-by-P verification is optional. However, when verifier finds necessity of it, they can ask organization to provide a chance to see the sites.
- The case can be,
  > large contribution in the GHG emission but the organization did not provide evidences properly or explain appropriately.

(b) CFP system certification

(1) Point of discussion

- CFP system certification method allows organization to produce CFP information and label without P-by-P verification conducted by

third-party. Thus, the validity of the system including the data collection procedure is very important and it is confirmed through the main examination step in the 2nd phase of the certification.

- WG before the actual examination discussed whether to make site examination mandatory or not. Conclusion was not mandatory because it can be impossible to conduct site examination when the site is in other country or at other organization (outsourcing the production to other company).
- Experiment was conducted under this condition. In the course of the examination, one examiner happened to see the site and found lack of processes during the site examination. The examiner concluded that the site examination is necessary.
- The system shall be developed in confidence and the necessity of site examination was considered high compared to the P-by-P verification.
- However, the same problem occurs when it is in other country or at other company.

(2) Conclusion

- Site examination for CFP system certification method shall be,
  > Mandatory
  > It can be replaced when the site is in other country or at other company
    1) Site examination in the organization which has similar process of the product
    2) Detail evidence provision to confirm the data quantification method and its traceability.
- When the site is multiple, site of the major GHG contribution should be selected.
- The detailed method for this site examination shall be reviewed in the future. Generally, production in other country or outsourcing to other company is increasing. The meaning and role of the site examination will be reconsidered reflecting the situation.

2.6.6 Surveillance check in the market

(1) Point of discussion

- The credibility of CFP information in the market shall be confirmed by

the programme holder, if the communication contents follow the examined information.

- Eco-leaf, type III environmental declaration scheme, does not conduct such surveillance. On the other hand, Eco-mark, type I environmental label scheme, is considering inviting surveillance scheme inside the programme because there were a lot of dishonest and injustice use of labeling. In the Eco-mark scheme, followings are being considered;
  > Enforce criteria development, examination and site examination
  > Annual check on the product (to see specification change)
  > Random confirmation at site or products (buy product at market and check if it keeps the allowed condition)
  > Establish penalty for injustice use of the mark and disclosure of such company information

(2) Conclusion

- Products with CFP label are not so much spread in the market at the moment; the market surveillance by the programme holder is not effective.
- However, when it becomes major, countermeasures for injustice use of verified information shall be prepared, referring to Eco-mark scheme's experience, as the programme intends consumer communication.

3. Summary

Three-year technical discussions and conclusions were documented in this report. Desirable future verification scheme in the CFP programme based on these conclusions is described in this section.

(1) Method of examination

- Product-by-product verification method and CFP system certification method were considered to have the same credibility.
- CFP system certification method has merit of
  - > cost reduction effect compared to conduct P-by-P verification for certain number of products
  - > flexible timing of labeling
- But, development of the system costs a lot, by preparing competent personnel, thus for small number of products verification is not suitable for the CFP system certification method.
- Considering convenience of organizations, it is better to provide both methods which can be chosen depending on applying organization needs.

(2) Bodies of examination

(a) Bodies of examination

- Third-party participation is required to keep the reliability.
- Not only from examiners managed by the programme holder, but also from the verification/certification bodies, can provide CFP examination services.
- Programme holder shall consider a total package of the verification/certification scheme, in the beginning of the programme.

(b) Panels

- At the beginning of the pilot programme, the role of the panels was important to normalize the verification/certification result and to find the general problems to be solved regarding CFP-PCR or verification/certification scheme.
- However, continuing the panel style may obstruct timely examination, if the number of meetings is limited.
- After starting the CFP programme, the panel style can be kept for a

while, but it shall be held as much as possible to meet organization's applications. Also, the competence of the panel shall be satisfied.
- In the future, this panel may be broke up or simplified.

(3) Overall verification/certification structure

- In the beginning of the programme, speedy solution provisions are necessary so that the programme holder should have access to all examining processes.
- In the future, to meet the increased demand, cooperation with other verification/certification/accreditation bodies should be considered and such consideration shall be made from the start of the programme.
- In any cases, the responsibility on considering verification/certification structure and establishing the procedure or rules for verification/certification remains the programme holdere.

(4) Responsibility of examination

(a) Responsibility of examination

- In the CFP pilot programme, the responsibilities are classified as follows,
  > quantified result are organization's responsibility
  > examining the procedure and conformation to the criteria are examiner or examination body's responsibility
- The CFP programme should be the same as above, if the purpose of the CFP programme does not change.
- If the purpose will be changed, then the responsibility division will be changed too.

(b) Clarification of examination range

- Examination level (see 2.5.1) shall be clarified by the programme holder and that shall be directed to examiners accurately.

(5) Man-day labor of verification/certification

- Man-day labor will be changed by methods, complexity of the product and organization's experience. Referring to the data listed 2.4.2, the man-day labor (cost or fee) shall be decided between organization and examiner or organization and programme holder, by contract.

- Consulting by examiners shall not be made. Items listed (6) may be necessary to support CFP activities.

(6) Reliability of verification/certification

- To maintain the reliability of the programme, (a)-(f) should be considered. Especially, (a), (c), (d) and (e) should be started with the beginning of the programme. (b) needs to be introduced quickly and (f) should be introduced when the CFP becomes major in the market.

(a) Upgrading the competence of examination
(b) Education of quantifier and consultant
(c) Competence upgrading regarding personnel in CFP system
(d) Disclosing information regarding examination
(e) Treatment of site examination
(f) Proper use of CFP information after examination

(7) Wrap up

Credibility and transparency of CFP programme and CFP information is important because it is a communication to consumers.

It is also important to make clear the purpose and role of the verification and certification. For the clarification, the purpose of the CFP information use shall be clearly defined. Standing on the three-year discussion results, programme holder shall implement and maintain its verification/certification process.

4. Members of the CFP verification scheme committee

4.1 Committee members in the FY 2009

Name	Organization	Title
Dr. Atsushi Inaba	KOGAKUIN UNIVERSITY	Professor
Kenichi Asakawa	JAPAN QUALITY ASSURANCE ORGANIZATION	Manager
Mizue Unno	So-Tech Consulting, Inc	Managing Director
Akihiro Onuma	All JAPAN STATIONERY ASSOCIATION	Managing Director
Makoto Kubo	Japan Accreditation Board	Representative Managing Director
Masato Kumon	Japan Soft Drink Association	Executive Director
Ikuo Komatsu	TOYO SEIKAN KAISHA, LTD.	Manager
Yasunori Shimoi	Japan Audit and Certification for Environment and Qualitiy	President and CEO
Katsuo Seta	National Institute of Technology and Evaluation	Chief Executive, IAJapan
Yoichi Takahashi	HITACHI, LTD.	Deputy General Manager
Kikuko Tatsumi	NIPPON ASSOCIATION OF CONSUMER SPECIALISTS	Board Member
Chie Nakaniwa	Japan Environmental Management Association for Industry	Chief
Toshiya Noami	LAWSON, INC.	Manager
Yuji Noritake	RICOH COMPANY, LTD.	Corporate Councilor
Hiroshi Hasegawa	Dai Nippon Printing Co., Ltd.	Senior Expert
Dr. Nobuaki Hattori	Tokyo University of Agriculture and Technology	Professor
Yutaka Haruyama	Mitsubishi Chemical Corporation	Manager
Dr. Tadayuki Masui	Tokyo City University	Professor

Observers : Ministry of Economy, Trade and Industry, Ministry of Environment, Ministry of Agriculture, Forestry and Fisheries, Ministry of Land, Infrastructure, Transport and Tourism

4.2 Committee member in the FY 2010

Name	Organization	Title
Dr. Atsushi Inaba	KOGAKUIN UNIVERSITY	Professor
Kenichi Asakawa	JAPAN QUALITY ASSURANCE ORGANIZATION	Manager
Mizue Unno	So-Tech Consulting, Inc	Managing Director
Akihiro Onuma	All JAPAN STATIONERY ASSOCIATION	Managing Director
Masatoshi Kimura	Mitsubishi Chemical Corporation	Manager
Makoto Kubo	Japan Accreditation Board	Representative Managing Director
Masato Kumon	Japan Soft Drink Association	Executive Director
Ikuo Komatsu	TOYO SEIKAN KAISHA, LTD.	Manager
Yasunori Shimoi	Japan Audit and Certification for Environment and Qualitiy	President and CEO
Shigeru Suda	Japan Environmental Management Association for Industry	Honorary Councilor
Yoichi Takahashi	HITACHI, LTD.	Deputy General Manager
Kikuko Tatsumi	NIPPON ASSOCIATION OF CONSUMER SPECIALISTS	Board Member
Dr. Koichi Nara	National Institute of Technology and Evaluation	Chief Executive, IAJapan
Toshiya Noami	LAWSON, INC.	Manager
Yuji Noritake	RICOH COMPANY, LTD.	Corporate Councilor
Hiroshi Hasegawa	Dai Nippon Printing Co., Ltd.	Senior Expert
Dr. Nobuaki Hattori	Tokyo University of Agriculture and Technology	Professor
Dr. Tadayuki Masui	Tokyo City University	Professor

Observers：Ministry of Economy, Trade and Industry, Ministry of Environment, Ministry of Agriculture, Forestry and Fisheries, Ministry of Land, Infrastructure, Transport and Tourism

4.3 Committee member in the FY 2011

Name	Organization	Title
Dr. Atsushi Inaba	KOGAKUIN UNIVERSITY	Professor
Kenichi Asakawa	JAPAN QUALITY ASSURANCE ORGANIZATION	Manager
Mizue Unno	So-Tech Consulting, Inc	Managing Director
Akihiro Onuma	All JAPAN STATIONERY ASSOCIATION	Managing Director
Yuji Katayama	LAWSON, INC.	Director
Makoto Kubo	Japan Accreditation Board	Representative Managing Director
Ikuo Komatsu	TOYO SEIKAN KAISHA, LTD.	Manager
Masato Sakurai	Japan Soft Drink Association	Manager
Yasunori Shimoi	Japan Audit and Certification for Environment and Qualitiy	President and CEO
Yoichi Takahashi	HITACHI, LTD.	Deputy General Manager
Kikuko Tatsumi	NIPPON ASSOCIATION OF CONSUMER SPECIALISTS	Board Member
Dr. Koichi Nara	National Institute of Technology and Evaluation	Chief Executive, IAJapan
Yuji Noritake	RICOH COMPANY, LTD.	Corporate Councilor
Hiroshi Hasegawa	Dai Nippon Printing Co., Ltd.	Senior Expert
Dr. Nobuaki Hattori	Tokyo University of Agriculture and Technology	Professor
Hiroyuki Fujii	Mitsubishi Chemical Corporation	Manager
Dr. Tadayuki Masui	Tokyo City University	Professor
Dr. Hiroshi Yokoyama	Japan Environmental Management Association for Industry	Vice President

Observers：Ministry of Economy, Trade and Industry, Ministry of Environment, Ministry of Agriculture, Forestry and Fisheries, Ministry of Land, Infrastructure, Transport and Tourism

5. Appendix

5.1 Working group report on verification by the verification bodies

Working group report on CFP verification by verification bodies
Feb. 2012
Japanese CFP Pilot Project Secretariat

[Back ground]
In the Japanese CFP pilot project, we have operated the "product-by-product" verification method by independent verifiers managed by the programme holder. However, there were several problems in this method, aiming for further growth of the CFP project.

The CFP Verification Scheme Committee which was established to discuss "suitable CFP verification methods for reliable to consumer, but not too much burden on organizations", decided the WG to discuss the possibility of inviting verification bodies to such method.

This is a report from the WG including the method of the experiment, the results, issues to be solved and its solutions.

[Contents]

I. Report on the experiment

1. Objective

In the Japanese CFP pilot project, the product-by-product verification method is basically provided to the applicants and the independent verifiers are selected from experts skilled with LCA, CFP and Eco-Leaf type III environmental declaration's verification.

By inviting the verification bodies to this project, the main anxiety arouse from their ability of verifying the CFP; the result of the LCA. In the GHG credits verification world, they are well known to have such skills. However, we use the same word "verification", there seemed a lot of differences lying between them.

The differences considered were,
- Organization/Project's GHG account vs Life cycle GHG emission of a product
- Purpose of the verification (difference of the data accuracy requirements)

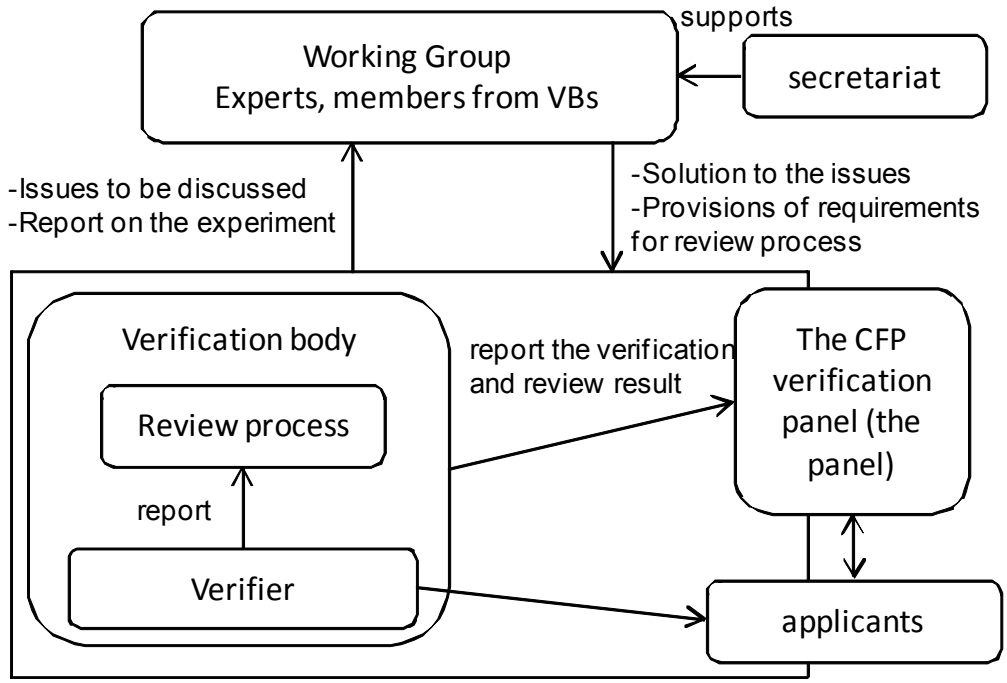
However, to correspond to the future demands for the CFP verifications, it is necessary to invite such verification bodies to the CFP (or LCA) verification world.

Thus, the objective of this experiment is to discuss the problems and develop the necessary documents for the product-by-product verification method conducted by the verification bodies.

2. Outline

(1) Scheme

Working group was established under the Committee to conduct the experiment.
- WG: Arrange the whole experiment
- Verification Bodies (here after "VBs"): Public participation and selection.
- Secretariat: Support WG and arrange the CFP verification panel (hereafter "the panel")



(2) Procedures

The experiment was conducted as follows;

a) Inviting skilled VBs through public participation

b) Training on the CFP product-by-product verification method for verifiers and reviewers in the selected VBs.

c) Developing the "review process" inside the VBs.

d) Conducting the CFP product-by-product verification method by the VBs.

- Firstly, the verifiers and the reviewers take the opportunity of attending to the verification conducted by the skilled verifier (for 1 case) and also attending to the panel examination.
- Secondly, conduct verifications as a vice-verifier (for 2 cases)
- Finally, conduct verifications as a main verifier (for 2 cases)

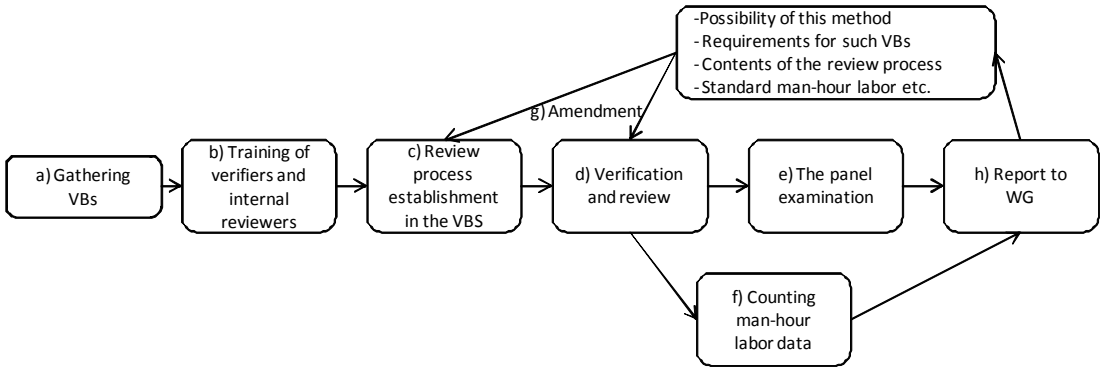
e) Examination at the panel after the VB's review process

f) Collecting man-day data on the experiment

g) Revising the verification and reviewing processes in the VBs, if any.

h) Reporting to the WG by the secretariat

Figure: Stream of the experiment



(3) WG's discussion points

The followings were considered at the WG;

a) Identification of the problems/issues of the CFP product-by-product verification method

b) Developing necessary documents and guidelines for the VB's participation

- The guideline and/or check list for the VB's verification
- Competence related discussions including the training system, the education system and the licensing system of the verifiers and the reviewers.

c) Man-day data collection and its analysis

d) Discussion on the possibility of this method

(4) Selecting the VBs

Through the public participation, VBs were selected.

[Conditions]

<Mandatory requirements>

- Having the experiences on the LCA critical review or the type III environmental declaration verification, as an organization or by employing such experienced personnel.
- Having the ability to share the recourses for this experiment (personnel (verifiers and reviewers) and review scheme development)

<Optional requirements>

- Having the experiences on the GHG verification in the other scheme
- Having the Guide 65 accreditation in the product certification

[Result of the selection]
- Japan Quality Assurance Organization
- Japan Gas Appliances Inspection Association
- SGS Japan Inc.
- Bureau Veritas Japan Co., Ltd.
- LLOYD'S REGISTER QUALITY ASSURANCE LIMITED

(5) Schedule

Schedule of this experiment;

Table: Schedule

Items		Schedule
Public participation and selection		-6/7
Training I		6/22, 7/26
Explanation to the VBs		End of June – End of July
1st WG		8/11
Training II		Mid of Aug – Beginning of Sep
Verification (including the review process)		Beginning of Sep – End of Nov
Wrap up discussion of the CFP product-by-product verification by the VBs		Mid of Aug – Nov
Opinion exchange meeting		9/27
Reporting	2nd WG	10/31
	3rd WG	11/25
	2nd CFP verification scheme committee	11/30

3. Result

The results of the experiment are followings.

(1) Information on the verifications carried out by the VBs

8 verifiers from 5 VBs conducted 17 CFP product-by-product verifications (10 as a main verifier, 7 as a vice verifier)

Organization (* means first-time applicant)	CFP-PCR (* means the CFP-PCR is used in the first time)	Name of product	Main/vice
* Hitachi Chemical Filtec Inc.	Plastic Containers and Packaging	Food Wrap for Consumer Use <Hitachi Wrap> 30cm×20m	vice
Osaka Towel Industrial association Yawaragi Co., Ltd	Towel products	SenshuTowel	vice
*Kantoh Plastic Industry co.,ltd.	Tableware	Ecolier	vice
*Toyo Ink SC Holdings Co.,Ltd.	Publicity Printings and Printing Products for Business use	Toyo Ink Group Social & Environmental Report 2011	main
MM Plastic Co., Ltd.	Pallet for Cargo and Transportation	MMP Recycled Pallet	main
Dai Nippon Printing Co.,Ltd.	Publicity Printings and Printing Products for Business use	DNP Report	vice
*Chuo Kagaku Co., Ltd.	Plastic Containers and Packaging	Miyama20-12 (Tray for food packaging)	vice
*Shinnihon Kogyo Co.,Ltd	Publicity Printings and Printing Products for Business use	Company Profile (for recruiting)	vice
Kokusai-Kako Co., Ltd.	Tableware	Plates for curry and bowls	main
*Tsujii Lumber co.,LTD.	*Woods and Wood materials	Laminated lumber (HINATA)	main
*NIHON ASUPARAGUS	*Soft Drink	500ml Natural water	main

Co.,Ltd.		（Mt. Iwanaidake in Niseko mountain range）	
HATSUTA SEISAKUSHO CO., LTD.	Fire Extinguishers	Fire Extinguishers	main
*Marutama Industry CO.,LTD	Woods and Wood materials	Marutama needle-leaved tree, structural plywood	vice
*Decos Co., Ltd.	*Insulation Material for Construction	Decos Fiber（Insulation material for construction）	main
*HAYASHI PLYWOOD INDUSTRIAL CO., LTD.	Woods and Wood materials	Plywoods made of Kyoto Cedar	main
*JA ZEN-NOH Tamago Co.,Ltd	*Market poultry eggs	Eggs	both
*HOKUREN JA Kitaharuka	Vegetables and fruits	Fruits tomat, pumpkin	main

(2) Evaluation of the verifiers through the examination process

a) Evaluation by the panel members (Using the "evaluation sheet" for verifiers)

- At the end of the panel, the panel members evaluated each verifiers according to the points listed below, by choosing from 1, 2, 3 evaluation choices (1 is high, 3 is low)
  > Knowledge of the CFP
  > Ability of the verification
  > Ability of the reporting
  > Understanding of the case
  > Presentation skill
  > Ability to deal with the questions

- Evaluations of the verifiers in the VBs were made for 10 cases. The table below shows the comparison of the average with the individual verifiers' results.

( ) is number of the cases	Knowledge of the CFP	Ability of the verification	Ability of the reporting	Understanding of the case	Presentation skill	Ability to deal with the questions
Individual verifiers (37)	1.23	1.31	1.25	1.20	1.30	1.24
Verifiers in the VBs (10)	1.15	1.11	1.16	1.13	1.27	1.15

b) Major comments written on the evaluation sheet

[Negative]
- Not answered enough to the questions
- Not answered enough to the reasons of cut-off and so on.
- Too long explanation.

[Positive]
- Well responded to questions, by talking to the applicant instantly

c) Revisions pointed out at the panel

- Material yield shall be considered at the production stage.
- Electricity used shall be properly allocated (allocation validity check)
- Mass balance of input and output of the production stage shall be confirmed
- Careless mistakes (Sum of each data doesn't match to the total number, English name is not appropriate, misleading disclaimers, and so on)

d) Evaluations by the applicants

Hearing was made to each applicant who had taken both verifications by the VB and the independent verifier.

- VB's verifiers were evaluated positively, such as "verification was conducted very efficiently," "well prepared" and so on. They are good to conduct such certification/verification services (This is as a matter of course).

(3) Man-day data collection

To evaluate the cost of the CFP product-by-product verification method by the VBs, it is crucial to collect the man-day data took for its examinations.

- In advance, the secretariat announced that "4 man-days examination period" should be taken, as same as independent verifier.
- The data were collected. That was,
  > Documents check before face-to-face examination: 1 - 4 man-days
  > Face-to-face examination: 0.5 - 1 man-day
  > Report making including check after face-to-face examination (before the panel): 0.5 – 9 man-days
  > Correction after the panel: less than 0.5 man-day
  >>Average of above whole processes: 6 man-days (min 2 to max 11.5 man-days)
- The review process established inside the VB was held for 30 minutes and also the panel was held for 35 minutes, following to the secretariat direction. The time difference of these processes seemed to be ignorable.
- The reason of the man-day data variation was considered as follows.

> Different concept of the verification processes by each VB, some take long time before face-to-face examination but others take long time after that. There were small differences inside each VB, even if the products

were different, thus, this was considered the VB's concept for the verification.
> One VB which took long time in the document check process. It considered signification that the detail confirmation before face-to-face examination prior to the panel.
> The another VB which took long time in the report making process, happened to conduct detailed examination at the step, because they didn't sufficiently check prior to the face-to-face examination. This was because the CFP applicant didn't understand the CFP quantification processes well and the documents provided were not well organized, thus the VB thought that it would be meaningless to check the documents before the face-to-face examination.
> Three other VBs took about 4 man-days.

(4) Newly developed documents for this experiment
The secretariat developed two new documents; "CFP product-by-product verification check sheet for the VBs" and "format for the review process".
As for the check sheet, after the experiment, it was placed as a "reference document", because it was not useful.

<Comments on the check sheet from the VBs>
- Newly developed check sheet was not useful.
- If it becomes requirement to write this check sheet, it meaninglessly takes long time with little merit.
- However, it may be useful for the review process inside the VB.
- This should be a supporting document.

4. Consideration and conclusion

(1) Possibility of the VB's verification
According to the results, there is no big problem comparing the VB's verification result to the independent verifiers.

Actually, there were some pointing out by the panel, but these were mistakes regarding to the inconformity with the panel judgments which were not sufficiently informed before the examination. As there were no

crucial mistakes regarding to the interpretation of the CFP-PCR.
Also, generally, the first time verification on a certain CFP-PCR takes longer time compared to the frequently used CFP-PCR. Even in such cases, the evaluation on the VB's verifiers was not different so much.

To conclude, the CFP product-by-product verification method conducted by the VBs can be considered possible if the VBs have the abilities, which were required through the public participant selection process, take the training course, and establish the review process.

However, the competence of the verifiers (not only the VB's but also the independent verifiers) and its ensuring method should be considered. (See section II)

(2) Independently verification by the VBs
There were no big corrections on the report made by the VB. However, there were minor corrections so it is early to conclude the independently verification by the VB.

Comments were gathered and there were comments according to the lack of the competent personnel for VB. Also, the comments referred to the different competences required to the panel and the review process. The roles were listed below. In this experiment, it seemed impossible to assigning the whole panel functions to the review process inside the VB.

Table: Comparison of the roles

	Functions
CFP verification panel	- Judgments from the LCA expertise - CFP-PCR can be revised due to the panel request (strong linkage to the programme)
Review inside VB	- Confirmation with the CFP-PCR following procedures prescribed in the guideline. - No judgments from the expertise (This should not be allowed because there will be variance depending on VBs).

NOTE: The experiment was carried out with the review inside the VB because verification bodies or certification bodies usually put such “technical review” process when verifying or certifying cases.
Considering such basic status, this experiment was developed. Thus, the experiment without the review wasn’t carried out.

5. Issues found through the experiment and its solutions

Discussions at the WG reached to issues other than the experiment. They were "the role of the verification" and "the range and the depth of the verification".

(1) Role of the verification in the CFP project.

(a) Issues

During the experiment, some VBs pointed out that the necessity of clarifying the objective of the CFP verification.

Major discussion points were,

- It is unclear what is required for the CFP verification, in its credibility and its objective. Thus it is difficult to tell how much should we examine
- It is unclear what is required. Does the verification need to go beyond checking the conformity to CFP-PCR or beyond the verification guideline? (Should expert judge performed or not?)
- The depth and concreteness of the verification (to what extent the evidences should be checked) are not clarified.

Also, the role of the panel and the internal review process in the VB were not clearly differentiated.

(b)Analysis on the "verification characteristics."

VBs questions were seemed coming from the deviation from the ISO14064s verification concept. Actually, ISO14025 doesn't prescribe the verification concept vividly; it only refers to the necessity of the third-party verification for consumer communication.

<Verification for credits making>

- The GHG verification supporting the "credits" is conducted to ensure the amount of the reduced amount of GHG emission as much as precise and accurate, because it produces value and makes tradable in the market.
- Also, such programmes treat the boundary like "organization" or "project.", limited to the responsible range of the assessor.

<Verification for communication>
- CFP's objective is "fair communication to consumers" not for the tradable credits.
- Its boundary goes over assessor's responsibility, so to speak, the life cycle of a product.

These are considered as the differences and thus, it was necessary to decide the clearer CFP verification concept in the WG.

For information, followings were Fy22's discussion on the responsibility of VB and applicant.

<Fy22 CFP verification Scheme Committee: Suggestions to Fy23> extract
3.1 Verification method in the CFP.
To keep the credibility of the quantified result, third-party check is necessary.

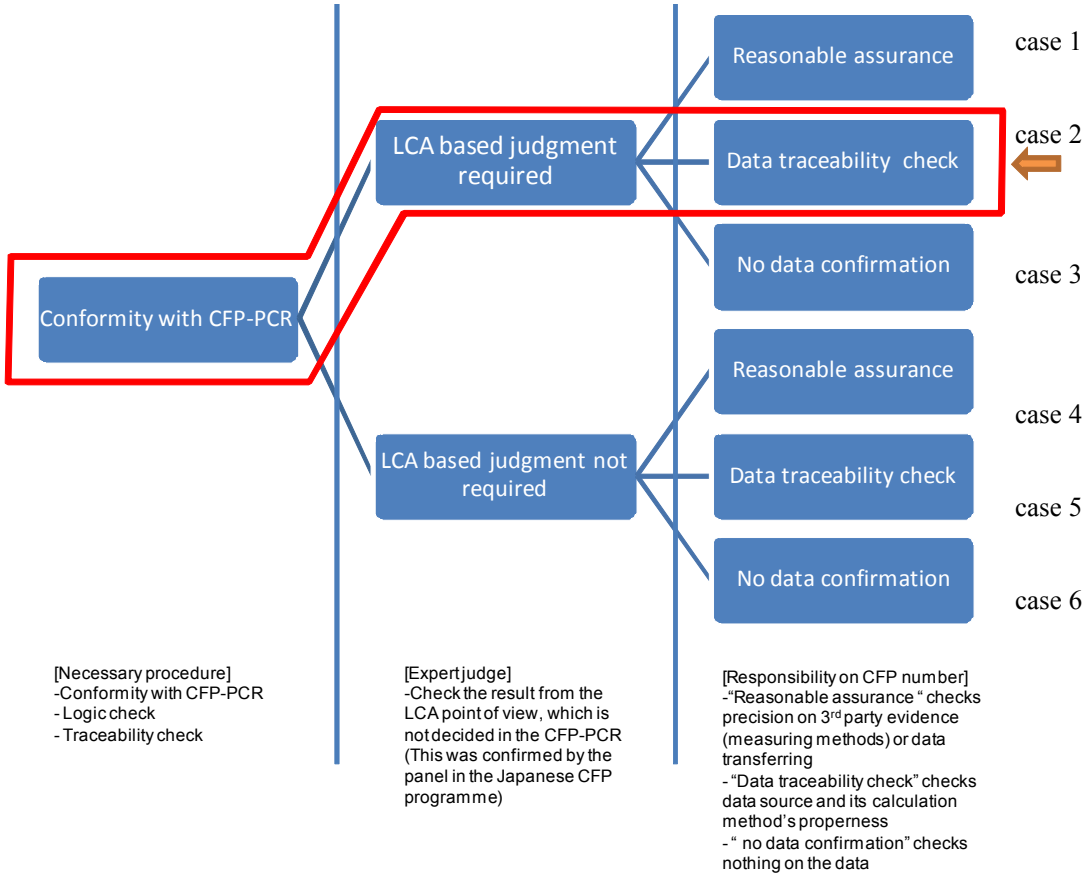
3.3 Responsibility of CFP verification
As CFP is based on life cycle assessment method, it is not possible to have "reasonable level of assurance" on the result (numbers, values). It can be verified in "limited level of assurance".
- Applicant shall be responsible to the numbers or values of the quantified result.
- Verification bodies shall be responsible to carry out the verification following the guideline.

(c) Cost analysis
Conducting the precise verification for making the numbers or values reliable will prevent the CFP diffusion by costing a lot on the applicants. So we needed to decide the "level of precision of the CFP verification" considering the cost and the role of the CFP verification.

(d) Consideration and resolution
As discussed, the CFP verification concepts were divided into following

phases; “Conformity to CFP-PCR”, “Judgment from LCA expert point of view (above CFP-PCR requirements)” and “Number or value precision check”

Japanese CFP verification might be in the arrow case in the figure.



Credibility and cost assessment in each case

LCA judgment	yes			no		
number responsibility	Assurance	Traceability	No confirmation	Assurance	Traceability	No confirmation
	case1	case2	case3	case4	case5	case6
credibility	Highest	High	Low	High?	High?	Lowest
cost	Most expensive	relatively expensive	cheap	expensive	cheap	cheapest

(2) The range and the depth of the verification

(a) Issues

How much and how large the CFP verification shall be performed is not made clear during the CFP project. This caused problems between the verifications. The criteria for the CFP verification were discussed.

Items to be specified were,
- Data sampling ratio
- Depth of the evidence checking
- Necessity of the site examination

(b) Labor of the CFP verification.

In the CFP project, the secretariat controlled the CFP verification labor in 4 man-days (as is the national project, the budget was limited). Thus, the verification in the experiment was also conducted in 4 man-days, it was commented that the 4 man-days labor were not enough, because there were no criteria on the items listed in (a).

(c) Consideration and resolution

1) Data sampling ratio

The VBs insisted that it is difficult to check all data in such a short time, by confirming all primary data's traceability to each evidences and by confirming all allocation and quantification logics. Especially for a machine product, it is impossible to see all data.

Accordingly, the following criteria were suggested;
- Check the high GHG emission data of the traceability and the logics, up to *%
- Rest of the data shall be checked by random sampling.

* % will be decided by considering CFP programme's reliability and verification cost.

2) Depth of the evidence checking

There was no criterion on the depth of evidence traceability check. Thus, it was depended on each verifier's intention.

The following criterion was suggested;
- The traceability shall be checked up to the evidence source.
- The traceability also shall be checked up to the validity of the allocation and the quantification logic.

For example,
- The numbers were referred from the applicant's business documents (cost calculation sheet, quality control data sheet and so on). The data sheet made for the CFP quantification cannot be the evidence source.
- If the quantification logics were proper, from the view of the LCA. The allocation of the electricity is properly conducted between the products produced in the factory.

3) Necessity of the site examination

The site examination had not been mandatory in the Japanese CFP project. But, its merit was broadly acknowledged, such as finding the lack of data or processes to be included, or having an opportunity for understanding the product and its processes well.

The following was suggested;
- The site examination may be conducted. The verifiers or the VBs have a right to require it when it is necessary.

(3) Explanation and disclosure of these concepts

Explaining these concepts to stakeholders is very important. The person who receives the CFP information should understand what had done as the CFP verification to understand the meaning of the CFP information. Such public relation is crucial so as not to make misunderstandings to the CFP.

(4) The independently verification by the VBs

(a) Issue

As mentioned in 4. (2), it is still difficult to conduct the independently verification by the VBs. However, further diffusion of the CFP, it is necessary to increase the number of the verifiers or the VBs.

(b) Consideration and resolution

Necessary actions should be taken.

- Develop the CFP-PCR more precisely (reduce the multiple interpretations)
- Develop the VB's competence for the CFP verification
- Improve the review function in the VB

II. Other issues related to the CFP verification

Section I refers to experiment. During the discussion, there were several issues related to general CFP verification issues. These were also discussed at the WG.

1. Issues to be resolved until the starting up stage of the CFP programme

(1) Bottom up of the verifiers

Difference of the verification quality and procedure shall be resolved by providing and revising the CFP verification guideline. The verifiers shall follow the guideline, so understanding to the document is essential.

[Suggestion]

The followings should be considered.

- Longer and effective training of the CFP verifiers

The training was one-day curriculum. Change it for more days training, taking longer time for the actual verification practices.

- Verifiers leveling

Verifiers should be divided into two grades, main verifier and vice verifier. The criteria for the level shall depend on their experiences; become vice verifier by * times observer, become main verifier by * times vice verifier.

(2) Education of the applicants

Through the experiment, there was a trend that it took longer time when the applicant was a new comer or had a few experience. This caused longer time of the verification.

[Suggestion]

- Disclose and provide the CFP verification guideline to the applicant.
- Explanatory meetings for new comers shall be held.

2. Future issues

(1) Expert verifiers of a certain product category

Generally, experience makes procedures efficient.

[Suggestion]
- Verifiers should be categorized by their strong product category, such as categories of vegetable, livestock, machinery and service.
- If the verifier verifies the same applicant over and over, the loss of the impartiality shall be considered. Countermeasures shall be necessary.

(2) Competence improvement of the VBs
Through the experiment, it was found that VBs has the ability of conducting verification, when the VB satisfies some conditions.

[Suggestion]
- The programme holder shall control on the VBs by managing their competence.

(3) Revision of the CFP-PCR
It is still necessary to reduce the ambiguous requirements written in the CFP-PCRs. Especially, newly developed CFP-PCR tends to have such problems.

[Suggestion]
- It is necessary to develop the easy and fast but reliable process to revise the CFP-PCRs.

3. Role of the verification
The verification concept discussed through this report is based on “not too much burden on the applicants but reliable to consumers as much as possible”, for the wide spread of the CFP.
In the future, the object of the CFP programme may be changed. The role of the verification should be revised and fit to the programme concept flexible.

5. Appendix

5.2 Working group report on CFP system certification

Working group report on CFP System Certification

Feb. 2012

Japanese CFP Pilot Project Secretariat

[Back ground]

In the Japanese CFP pilot project, “product-by-product” verification method has been provided to organizations. For further growth of the CFP project, the CFP Verification Scheme Committee was established in the project to discuss “suitable CFP verification methods for reliable to consumer, but not too much burden on organizations”.

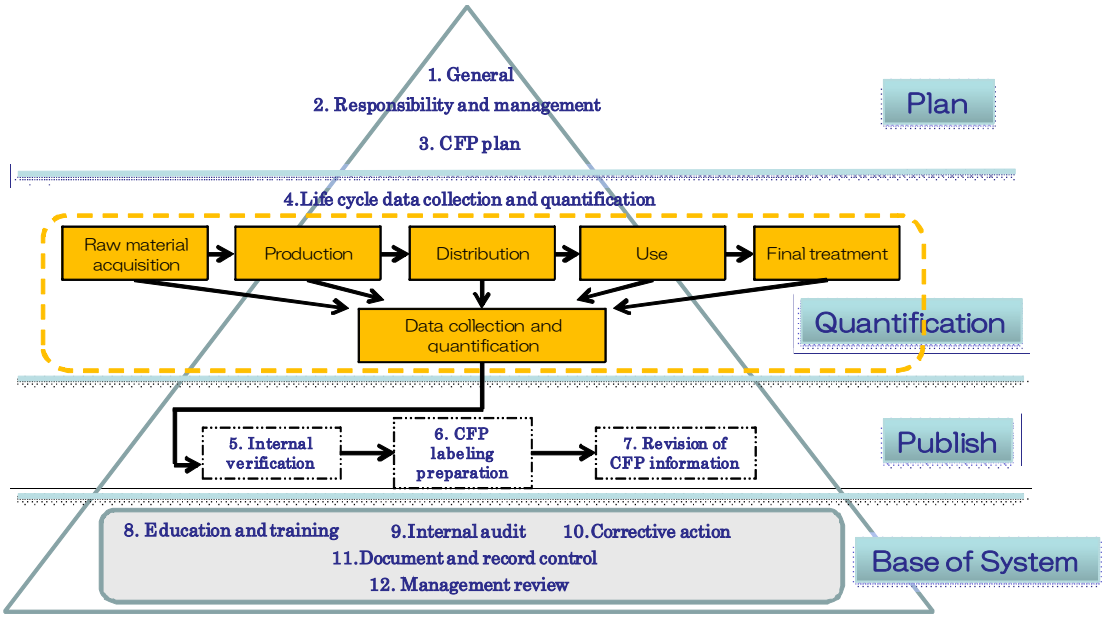
This is a report on “CFP system certification method” written by the WG, put under the Committee, to explain the result of its discussions and experiment.

(Thus, this report is not the final conclusion of the Committee, but provides useful information for judging the method’s effectiveness and issues to be solved.)

[What is the “CFP system certification method”?]

The concepts are;

- Organization establishes a system, following “Requirements for the CFP quantification, internal verification and labeling system (hereafter “the CFP system requirements”)”.
- After established such system, organization can apply to take a certification by an independent third-party examiner (or a certification body in the future)
- The requirements include following aspects;



[Merit/Demerit of CFP system certification]

1. Merit
   - Organization can produce CFP labels anytime when they want.
   - Organization can develop a solid data collection and management structure which may contribute to other usage of data.
2. Demerit
   - Organization must prepare larger resources for developing and maintaining the CFP system certification compare to taking the product-by-product verification.

- Organization must take costs on developing and maintaining the competence of personnel, such as CFP quantifiers, CFP internal verifiers.

Contents

1. Purpose of the experiment

Through developing such system inside the organizations and through its examining process by third-party examiners and certification panel, it was aimed to find out problems, its solutions and conclusion this method validity.

Especially, followings are mainly considered;

(1) Possible range and condition of the system to be certified

(2) Attain the same reliability compare to the product-by-product verification method

- By structuring solid system
- By establishing skilled internal verification process

(3) Revision of the CFP system requirements

(4) Conclusion this method's validation

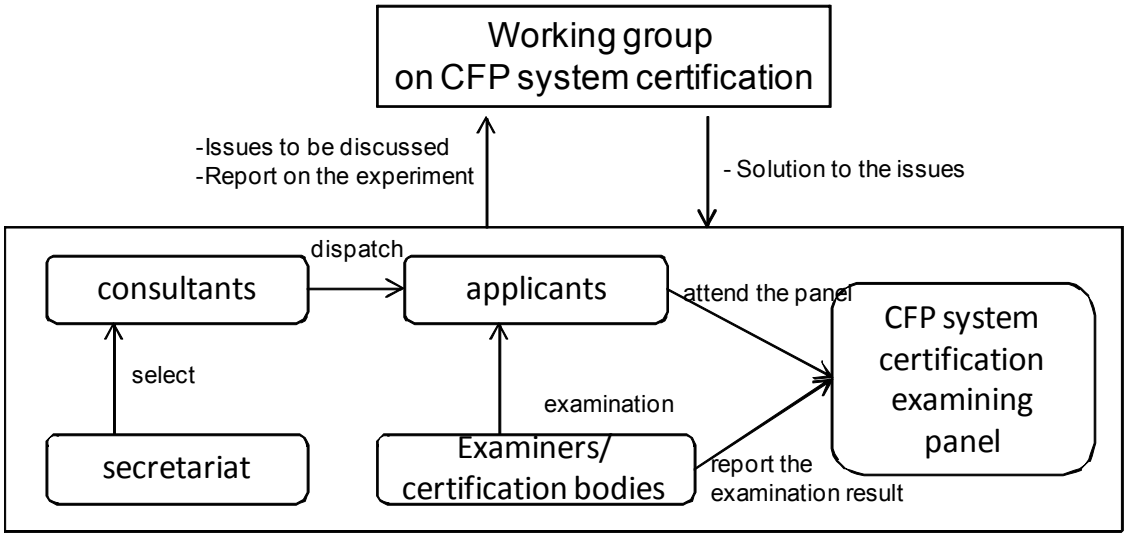
2. Outline of the experiment

(1) Scheme of the experiment

To organize the experiment, following scheme was developed.

- WG: manages the whole experiment and develops detailed schedule and CFP system certification examining method.
- Secretariat: gathers applicants, dispatches consultants to the applicants and helps general problems occur during the experiment. Also, establishes actual examining processes following GW discussion, and develops a training course for examiners and the panel members.

Figure: Scheme of the experiment



(2)Procedures

The experiment proceeded as follows;

a) Gathering applicants

b) Training of internal verifiers and auditors in the applicants

c) Meeting with applicant and consultant.

d) System development at the applicants

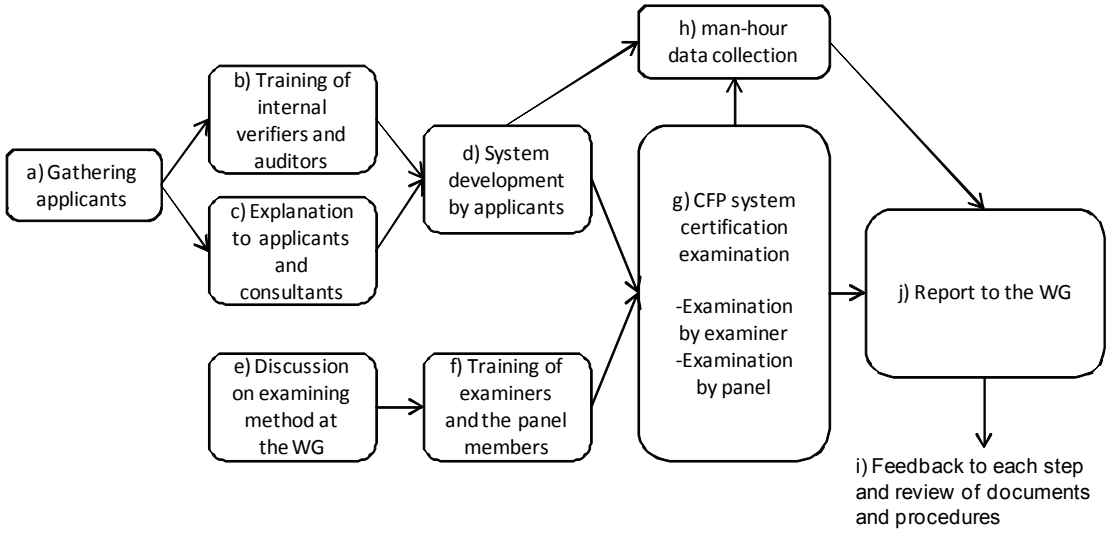
*Part of the organizations established the system without consultant.

e) Determining the CFP system certification examining method at the WG

f) Training of the examiners and the panel members

g) Examination
h) Collecting man-hour data
i) Reporting to the WG
j) Reviewing the methods established

Figure: Stream of the experiment



(3) Issues to be discussed at the WG
a) Finding general problems on this method and discuss to solve them
b) Establishing the examining method
c) Finding the proper range of the system
d) Considering a superiority of this method, based on the collected man-hour data.
e) Finding measures to keep the same reliability to the product-by-product CFP verification method.
- Reliability by establishing solid system
- Reliability by providing credible internal verification and audit
f) Preparing the necessary documents
g) Concluding this method's validity

Of course, additional issues found through the experiment were discussed. They are written in "5. Issues to be solved and its solution" section.

(4) Applicants gathering

Announcement was made on the CFP website in April 2011, and 6 organizations were selected. The selection criteria were;

- Diversity of the type of an organization (business sector, scale, experience)
- Experiences on other management system development
- Experience on the CFP pilot project or other type III environmental declaration programme
- Expectations to quantify and label several products in the future
- Ability to provide human resources; 1 CFP manager, 1 CFP internal verifier, 1 auditor and 1 CFP quantifier (at least 4 people)

(5) Schedule

items		schedule (2011-2012)
Selection of applicants		7, June
System Certification WG	1st WG	14, June
Training for internal verifier and auditor		22, June
Explanation to sets of organization and consultant	Selection of and contract with consultant	Bottom of June
	Explanation to consultants	6, July
System development		From June to September
Development of examining method	Discussion	until end of July
	Supporting documents/guidelines for system certification	Mid July: Draft guideline discussion Mid August: Guideline established Mid September: Formats for application established
Training for examiners	Discussions on competence	Mid July: Draft competence of CFP system examiners and their training documents.
	Training	Beginning of September: Selection of examiners
System Certification WG	2nd WG	Discussion on examining processes
System Certification WG	3rd WG	Discussion on examining documents and decision on examining method

Examination	Decision of members of the panel	Beginning of July
	Examination	September – November
	Panel	18, November and 2 December
Summary of experiment	System Certification WG (4th WG)	9, November
	System Certification WG (5th WG)	21, December
	Committee on verification scheme (3rd)	6, January, 2012
	Committee on verification scheme (4th)	9, February, 2012

(6) Discussion on the examination method

Procedures and criteria for this method, both by the examiners and the panel, were developed, referring to the similar Type III environmental labeling method.

The examination process was mainly divided into two phases; the examination by the examiner and the examination by the panel.

<1st step: Examination by the examiner>

This process is also divided into 2 steps like other examination procedures in the management system certification such as ISO 9000/ISO14001.

<2nd step: Examination by the panel>

After the examiners examination, the panel composed of experts checks the result, reported by the examiner.

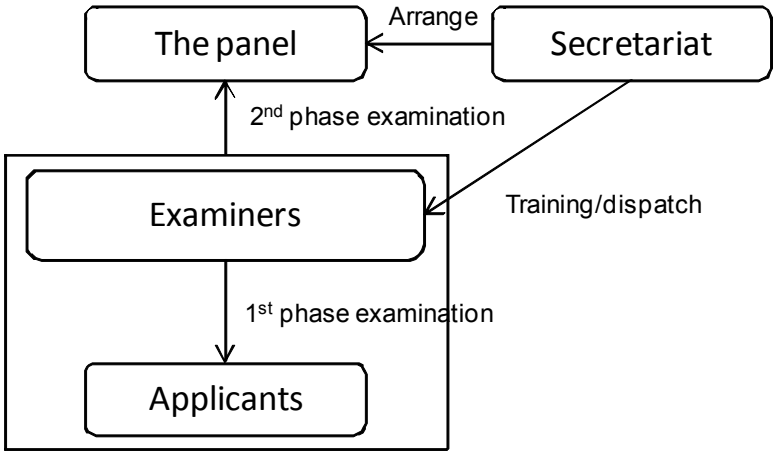
Each phases and steps' role were as follows;

			How & where	Contents
1st Phase; by the examiner	1st step (document check)		Document check. Following face to face examination	- Check the provided documents on paper and point out the mistakes. - Decide schedule on 2nd step examination.
	2nd step	Main examination	Face to face at office or site	- Check the system operation to persons who are in charge of the part of the system according to the provided system documents - Conduct CFP third party verification to check if the quantification, internal verification and audit were properly carried out. Point out the problems.

		Site* examination	Face to face at the site	- Supporting to the main examination, go to the place of primary data collection and see the data collection method and data items. - In addition to above, ask correspondents for their CFP educational level.
2nd Phase; by the panel			Face to face at panel	- Examiner presents the result of his/her 1st phase examination. After that, discussions conducted by panel members.

*"Site" is defined as "the place where the primary data collected". Thus the site does not mean only a factory or a farm land but also an office where collecting distribution stage primary data.

Figure: Examination scheme



The role of the examiners and the panels were clearly defined as follows, so as not to repeat meaningless discussion over and over.

Table: Role of the examiners and the panel

Issues	By the examiner	By the panel
Range of the system	Whether the developed system includes; - Necessary elements of the product. - Necessary organizations related to the system	-The same as the left box (as it is experiment)
Examination of management system	Whether the followings are satisfied; - System documents established by the applicants conform to the CFP system requirements - System operation conducted by the applicants conforms to the CFP system requirements and the established documents	- Checks the validity of the examiners examination result - Judges the unexpected issues (Cased by immaturity of requirements and supporting criteria.)

CFP verification	As a product-by-product verification for chosen product, - Conformance to the CFP-PCR - Check the data evidence and its traceability	- Checks the validity of examiners examination result - Judges the unexpected issues on CFP basic rules or CFP-PCR.
Others		- Stabilize the examination results - Find problems on this method and its examining method

Table: Documents for the examination (applicant prepares).

Documents	Contents
Application form	- Date of application - Contact information
System basic information	- The CFP-PCR used, - Range of the CFP system by using a figure, - Names and positions of CFP manager, CFP auditor and CFP internal verifier, - List of system documents by using a figure or a table, - Sites information
Documents related to internal verification	- Sets of documents used at the internal verification - Reports on the result of the internal verification and the audit
System documents	- CFP system manual - Other procedural documents for the CFP system

3. Result of the experiment

(1) General information on the applicants.

Table: The companies selected for this experiment

Name	Used CFP-PCR	Experience of the product-by-product verification
AEON Co., Ltd.	Vegetables and Fruits	1 product of the CFP-PCR. 18 other CFP experience on 7 other CFP-PCRs.
SANSHIN-KAKO.CO.LTD	Tableware	20 products
CHIKUMA&CO.,LTD.	Uniform	51 products
TOSO COMPANY, LIMITED	Curtain Rails	1 product
Nippon Meat Packers Inc.	Hams and Sausages	20 products
RICOH COMPANY, LTD.	Broadly-applicable CFP-PCR (Energy-using Consumer Goods)*, limited to copying machines	0 product (18 products under ECO-LEAF Japanese Type III environmental labeling programme)

* Treatment of the broadly-applicable CFP-PCR

The system certification using the broadly-applicable CFP-PCR doesn't intend to get a conclusion on "the possibility of system certification using the broadly-applicable CFP-PCR". Because the application of this CFP-PCR itself is also experimental issue under the CFP project. Moreover, the availability of the CFP-PCR will be discussed and concluded at the Rule Committee (in the different committee in the CFP project.)

Thus, in this experiment, the scope of the CFP-PCR is limited to "copying machines", not allowing un-scoped products.

(2) Result of the panel examination

There was no big correction pointed out to the CFP systems developed by applicants at the panel examination. According to this, the applicants were certified with little conditions, and later with some modifications, they had got the complete certifications.

<Major comments at the panel examination>

- Add a periodical review process to the CFP system manual documents, to confirm that the CFP quantifier uses the latest version of the

CFP-PCR, by the CFP manager,

- Add a periodical review process (e.g. annually) to the CFP system manual documents, to confirm that the CFP data collection items are correct,
- Add a usage of the CFP data collection sheets in the sheets so as to get the same result when the CFP quantifier or the CFP data collection personnel are changed,
- Add a procedure of a corrective action in the CFP system manual, after the internal verification, (Secretariat comment: Format prepared by the secretariat made mistake writing as it is unnecessary. This is the reason applicants didn't document the necessary actions.)
- Add a procedure of revising the system documents so as to reflect and correct minor mistakes, such as mistake occurred during transferring raw data to the CFP data collection sheets, pointed out the internal verification process and the external examining process,
- Add necessary procedures in the documents in a very clear manner, even if the system is operated without any problem. Writing down such know-how information is important,
- Add a procedure to check the secondary data appropriateness, when using the data provided by others.

The panel didn't make comments on tendencies of differences on "CFP experiences," "scale of the company" and "used CFP-PCR".

(3) Man-hour data of the CFP system development and its examination

a) CFP system development labor by the applicants.

Secretariat collected data by hearing to the applicants. The result was considered to be divided into two groups.

One is a group with experiences on LCA or CFP and used their knowledge of developing other management system.

The other is a group with less experience on LCA or CFP and not using knowledge of other management system (newly established the CFP system).

The experiences on LCA or CFP mean that the organization has skilled staffs or has already established data gathering structure inside the

company. As this experiment required to prepare staffs for quantification, internal verification and auditor, so the applicants past experience affect on the result very much.

The knowledge of developing other management system means that the organization has know-how to "write down" system documents from the CFP system requirements and thus that affected very much on developing the CFP system.

Table: Hour took for each development phase

(Unit: man-hour)

	- Less LCA/CFP experience, and - Develop the system without existing MS knowledge.	- LCA/CFP experiences, and - Develop the system with existing MS knowledge
Over all preparation	55 (-)*	9 (0-18)**
System development	272 (-)*	34 (15-56)
Quantification process development	265 (-)*	16 (4-39)
Operation	595 (-)*	100 (48-153)
Others	117 (-)*	0 (-)
Total***	1303 (-)*	159 (93-197)

*: Provision of min/max data is avoided because it is 2 applicants average.

**: There is 0 man-hour applicant because one applicant has continuingly participated to this system experiment.

***: Min/max data in "Total" column represent min/max man-hour of each applicant. Not total of each column min/max data.

b) Examination process labor by the examiners

Before starting the process, secretariat presented to examiners a recommended length of time; 1st step 1.5 man-days, 2nd step (main examination) 1-2 man-days and 2nd step (Site examination) 0.5-1 man-day. (1 man-day = 7.5 hours)

Because of this condition, there was no big difference in time between the examiners. However, a gap existed but it was considered as originated from the applicant's experience.

About a management system certification such as ISO14001, man-hour labor of the examination is decided according to the organization's scale (number of employees). However, for CFP system examination, it may be considered to be proportional to the product's complexity such as number of parts or data collection processes.

Table: Hour took for the examination, step by step

(Unit: man-hour)

	1st step		2nd step			Preparation for panel	Care after panel	total
	Document check	Face to face document check	Main examination (examination on system)	Main examination (product-by-product verification)	site			
Average man-hour	9.5 (3-17)	10.1 (3.5-14)	7.1 (2.5-14)	5.9 (2.5-12)	4.0 (0-10)	7.0 (2-14)	1.7 (0-2)	45.3 (16.5-71)

- Values are aggregated man-hour of the main examiner and the vice-examiner.
- Values in ( ) are min/max of aggregated man-hour.

(4) Preparation of the necessary guidelines and formats for CFP system certification

The following documents were prepared during the experiments.

"Procedure for label application in CFP system certification" and documents related to periodic examination were not made.

Table: Necessary documents for the CFP system certification method

		Documents	Formats
Basic guideline and formats	system development	- CFP system certification requirements	- Format and example of CFP system documents
	system operation	- Guideline for internal verification - Check list for internal verification	- CFP quantification and labeling application form - Internal verification report
	application	- Procedures for CFP system certification application (Product-by-product application rules were used)	- CFP system certification application form

Guidelines and formats for 1st phase examination	- Guideline for CFP system certification examination (new/renew examination) - Criteria of the confirmation to CFP system certification requirements - Competence criteria on CFP system certification examiners (incl. test/training)	- Format of CFP system certification: 1st phase examination - Format of the result of 1st phase examination
Guideline and format for2nd phase examination (panel)	- Procedures for panel operation (PCR certification panel and CFP verification panel's procedures were diverted)	- Format of the result of panel examination
After examination	- Procedures for label application in CFP system certification	- Label application form for CFP system certification

(5) Comment from the participants

Secretariat organized hearings and opinion exchange meetings with the panel members, the examiners, the applicants and the consultants, regarding the possibility and technical issues of the CFP system certification method.

a) Possibility and reliability

<Panel members>

- The CFP system certification method is possible and should be promoted.
- The CFP system certification method is applicable to any organization, as long as credible data collection is assured, even in the cases of relying the primary data collection to outside the organization.
- It can be said that the established CFP system has a short-term reliability because the experiment was for one-year period. In other words, it is not sure whether it has long-term reliability. Further discussions and development of a mechanism for keeping ling-term reliability are necessary and crucial.

<Examiners>

- CFP system certification method is possible. It gives a large merit to the organizations.
- The panel function is necessary until the method is well established.

b) Range and condition of the CFP system

<Panel members>

- Few differences in the credibility among the established CFP system, regardless of the business scale or the CFP experience.
- Experienced applicants tend to establish the system lightly, such as less explanatory materials in the documents.

<Applicants/Consultants>

- It is possible to certify the CFP system with a rather large scope CFP-PCR, such as “Vegetables and Fruits”, by requiring the “product-by-product quantification planning sheets”.
- Restricting CFP-PCRs’ range inside the CFP-PCR reduces the merits.

c) The panel operation

<Panel members>

- Product-by-product quantification planning sheets shall be brought into the panel. The CFP system varies according to applicants and their concept, thus the panel is necessary to understand it to conduct the CFP system examination.
- The format of internal verification report can be flexible. Not necessarily be fixed.
- “Examination judgment logs” should be open so as to reduce similar mistakes made by the applicants.

<Examiners>

- The panel examination should refer and consider the applicant’s internal verification and audit documents. The reports from the examiners are not including enough information.
- Role of the panel shall be clearly defined.

c) Site examination

<Examiners>

- Site examination should be conducted because if the applicant doesn’t understand the CFP well, racks of data collections are highly expected.
- The site examination requirements should be clearly defined.
- A guideline for the site examination should be prepared.
- Site examination may be replaced by high credible evidences.

d) Certification update and periodic examination

<Applicants/Consultants>

- Annual examination will cost organizations too much and the merit decreases.

<Examiners>

- Internal verification and audit may lose its functions because education and training operated by the well experienced staffs may lead every staffs to have the similar way of thinking. At least a simple annual third-party check should be done to avoid the situation.

e) Competence of the internal verifiers and auditors

<Applicants/Consultants>

- The CFP internal verifiers are vital to this method. If the CFP quantifier makes a mistake, the internal verifier can stop disclosing the result. Thus, a personnel certification scheme should be prepared.
- But, it should not be mandatory to employ such personnel in the CFP system. Organization internal competence management scheme also should be permitted, as same as the management system (ISO14001 or ISO9001).
- Establishing the solid CFP system by preparing the detailed CFP system manual and related documents will decrease the dependency of each personnel's competence. This is another way of having credibility in the CFP system.

f) CFP system examination guideline

<Examiners>

- There are "major" and "minor" evaluation indexes in the guideline. However, in both cases, applicants shall take corrective action anyway. Then, these indexes can be unified.

4. Considerations and conclusions

Considerations and conclusions of the topics listed in “1. Purpose of the experiment” are as follows.

(1) Range and condition of the CFP system

At the beginning of the experiment, following points were discussed at the WG.

- Whether the certification is limited within the range of CFP-PCR or certain product (e.g. application was made for a “banana”. Then, certification should be limited only to the banana or does it allow quantifying a carrot, as the used CFP-PCR for the certification is “Vegetables and Fruits”)
- Organization to be included in the CFP system (Is it necessary to cover up-stream supplier inside the CFP system?)
- Relation of the organization to be included in the CFP system and the primary data collection requirements in the CFP-PCR (Is it necessary to include all primary data required items in the CFP system?)
- Is the certified CFP system can use different CFP-PCRs which are not used for the system developing? (Theoretically the CFP system certification certifies the organization’s ability of CFP quantification, internal verification and labeling. Then, the difference of CFP-PCRs could be ignored)

Through discussions, the WG decided to conduct the experiment only limiting the fourth item because, theoretically it may be true but considered “way too forward” at this stage.

After fixed such a “free restriction”, 6 applicants developed the CFP systems which were of very diversity. Some applicants collect almost all primary data from outside the CFP system; however, they developed the reliability managing procedures by providing educations to the CFP data suppliers or by establishing a supplied data review process. At the panel, these ideas were confirmed to be effective.

No concerns were shown to this topic at the panel. Thus, it is concluded that the CFP system will be developed without rigid limitations.

(2) Reliability of the CFP system certification method

The CFP system certification method includes the product-by-product verification during its examination process.

At the panel, there was no big mistake pointed out. Accordingly, through the examining process, the credibility of the CFP number and label is maintained.

(3) Revision of the CFP system requirements

According to this topic, the applicants didn't have any opinion, but the examiners who used the CFP system requirements had opinions to amend the "CFP policy", "internal audit" and "management review" requirements. The reason was that the requirements were too strict and meaningless.

Following above discussions, the WG was considered the amendment and decided not to change the requirements on the internal audit, because limiting the role of the internal audit will conduct a careless system operation.

Revisions are;

[2.1 Top management, b)]

<Before>

b) Top management shall ensure that the CFP policy includes commitments on the objective of the CFP system, human resources and reliabilities and be disclosed inside the organization and to the public.

<After>

b) Top management shall ensure that the CFP policy includes commitments on the objective of the CFP system, human resources and reliabilities and be disclosed inside the organization and to the public. <u>Also top management shall ensure that this policy to be well informed inside the organization and properly carried out.</u>

[12. Management review]

<Before>

Top management shall review the CFP system to ensure that the CFP

system's validity and effectiveness, in certain period.

…….

Outputs from the management review shall contain the decision for changing the CFP system, if necessary.

<After>

Top management shall review the CFP system to ensure that the CFP system's validity and effectiveness, in certain period and take action for changing the CFP system, if necessary..

NOTICE: "7. Revision of CFP information" is provided to conduct this experiment tentatively; however, this will be revised according to the superior requirements in the programme documents. Moreover, when a programme instruction is revised, this CFP system certification requirement shall also be revised accordingly.

(4) Possibility of the CFP system certification

According to the results, there is no evidence to stop implementing the CFP system certification method, as long as the applicant has some experience on the CFP quantification and labeling.

(5) Merit of this method, in numbers

The CFP system certification method is considered to take advantage to the usual CFP product-by-product verification method when the number of verified products becomes larger.

Assumption was conducted by calculating data based on the experiment. Noted that the result depends on the applicant's experiences on LCA/CFP or management system development and the characteristics of the product.

[Conditions]

<Period>

- 3 years for the certification valid period, as same as the similar management system certification.

<Time consumed for the CFP system certification>

- The CFP system development time inside the organization: 160 hours (Result from the experiment. Case, “CFP system developed by well experienced applicants’ average data 158.8 hours)
- The time of the certifying process: 80 hours (Result from examiners’ hearing, 27.4 hours. From applicant side, 3 persons attend the examination. 27.4*3=82.2 hours)
- Periodic external examination to maintain the certification: 20 hours/year (The product-by-product verification for one product. This wasn’t treated at the experiment thus just an assumption)
- Internal audit time: 20 hours/year (No result from the experiment thus just an assumption)
- Quantification and internal verification for 1 product: 20 hours/product

<Time consumed for CFP product-by-product verification>

- 40 hours/product (Result from hearing of the applicants)

X products are quantified and labeled. Equation is,

$160\ h + 80\ h + 3\ y * (20\ h + 20\ h) + X * 20\ h/p \leqq X * 40\ h/p$

$X \geqq 18$

When the CFP system is maintained over 3 years, time took for development of the CFP system basis becomes relatively small and that increases the merit of the CFP system certification method.

5. Issues to be solved and its solutions

The WG discussed issues which were found though the experiment.

(1) Necessity of the site examination

a) Discussions

The CFP system certification method allows organizations to quantify and to produce the CFP label for a certain period. Therefore, the validity of its data collection method in the CFP system is crucial. From the point, the treatment of the site examination came up for discussion, whether it will be mandatory or optional.

The WG concluded to proceed without mandatory site examination in this examination, because it was difficult to conduct during the limited time of the examination, considering the cases that the site is located at other country or the organization doesn't control on the site such as outsourcing production process to outside.

The opinion exchange meeting held after the examination process, one of examiners commented on the necessity of the site examination. He, by chance, examined the site during the main examination and found some lacked processes in the CFP system documents. Responding this comment, other examiners suggested deciding the clear meanings and the concrete procedures of the site examination.

b) Solution and recommendation

The CFP system certification method becomes credible by confirming validity of its data collection items and its procedures. As this method does not confirm every product by the third-party verification, it is crucial to make the CFP system more credible by the site examination.

However, requiring this to all cases will make the examination rather impractical according to the site location (international) and the organization control (outsourcing).

To conclude, the site examination should be treated as follows;

I. Site examination is mandatory.

II. However, when it is not practicable such as the site is located at oversea or is outside the organization, it may be omitted. When it is

omitted, following procedures shall be taken to compensate the site examination.

> Site examination of the applicant's plant which has similar process, or

> Check the evidence clearly indicates and ensures the data traceability.

III. When there are multiple sites, major sites can represent the whole sites. (Majority can be defined by programme holder)

Contents of the site examination were expected as2. (6), but it should be revised according to the future experiences.

In general, the oversea production and the outsourcing of products are increasing in Japanese economy, and it will get much larger in the future. The site examination in the CFP system certification method should reflect such situations.

(2) Simultaneous examination with other management system

a) Discussions

The management system certification such as ISO9001 or ISO14001 is now popular in Japan. The WG considered the possibility of efficient examination method by conducting management system certification and the CFP system certification at the same time.

2 applicants tackled this. Results were as follows;

<Merit >

- By sharing system documents, man-hour labor on developing the CFP system can be reduced.

<Attention >

- Generally, if one side fails, then another side cannot be certified (risk)
- The management system and the CFP system tend to be operated at the different department of the organization. Therefore, the exact-same-time examination is hard to arrange.

b) Solution and recommendation

The simultaneous examination cannot be denied but needs careful consideration and arrangement before carrying out.

If applicant desires to take this method, examiner/examiner belongs to certification body which is in charge of certification of management system, programme holder and the applicant should take enough time for an efficient and an effective way of the examination.

Regarding the CFP system certification requirements, it should be established resembling to existing management standards structure.

(3) Renewal and periodic examination of the CFP system certification

a) Discussions

As it is system certification, it is necessary to ensure if the system is operated within the qualified level. The frequency of renewal and periodic examinations was discussed in WG.

By the way, the experiment was conducted in such a short term; long term reliability of the CFP system certification wasn't demonstrated. Also, in the opinion exchange meeting, there was a recommendation that the renewal full examination shall be conducted in every 3 years and the periodic light examination in every year, because there was worry about the long term reliability, such as the personnel rotations in the organization.

(Reference)

- ISO9001 and ISO14001 require annual periodic examination and renewal examination in every 3 years.
- ECO LEAF environmental labeling's system examination requires renewal examination in every 3 years.
- Swedish EPD process certification requires annual examination.

b) Solution and recommendation

Renewal examination shall be in every 3 years and periodic examination shall be annually conducted.

The level of the renewal examination shall be as same as the first time examination.

The annual periodic examination may be carried out as follows, considering reducing applicant's load.

- The product-by-product verification for one or more products by the examiner, or
- Easy examination by programme holder; record samplings or competence check, etc.

(4) Competence of the internal verifier and the auditor

a) Discussions

The competence of the internal verifier and the auditor is crucial for the CFP system certification method.

Through the experiment, secretariat provided training course to keep the ability of the internal verifiers and the auditors.

In the opinion exchange meeting, examiners commented;

- Training course should be held by programme holder, but should not exclude the possibility of holding such training course by the applicant.
- Licensing should not be mandatory.
- Observation to the examiners examination might be helpful to keep the internal verifier's skill.

(Reference)

- ISO9001 and ISO14001 require appointing skilled auditor but external licensing is not mandatory.
- ECO Leaf environmental labeling's system examination requires appointing skilled internal verifier as same as the examiner (independent verifier) and the external licensing by test is mandatory.
- Swedish EPD process certification doesn't require external licensing.

b) Solution and recommendation

Licensing the internal verifiers and the auditors is desired; however, an internal training programme established in the CFP system may be

permitted.

In this case, following items should be considered.

- Programme holder prepares the licensing programme for the internal verifiers and the auditors.
- Clarify the CFP internal verifier's and auditor's competence criteria so that examiners can judge it.
- The internal verifier may fall in lack of the latest knowledge on the CFP verification criteria or procedures. To prevent happening this, the programme holder should provide chances for maintaining such competence by arranging opinion exchange with other verifiers or observation of other verifier.

(5) Competence and competence criteria for CFP system examiner

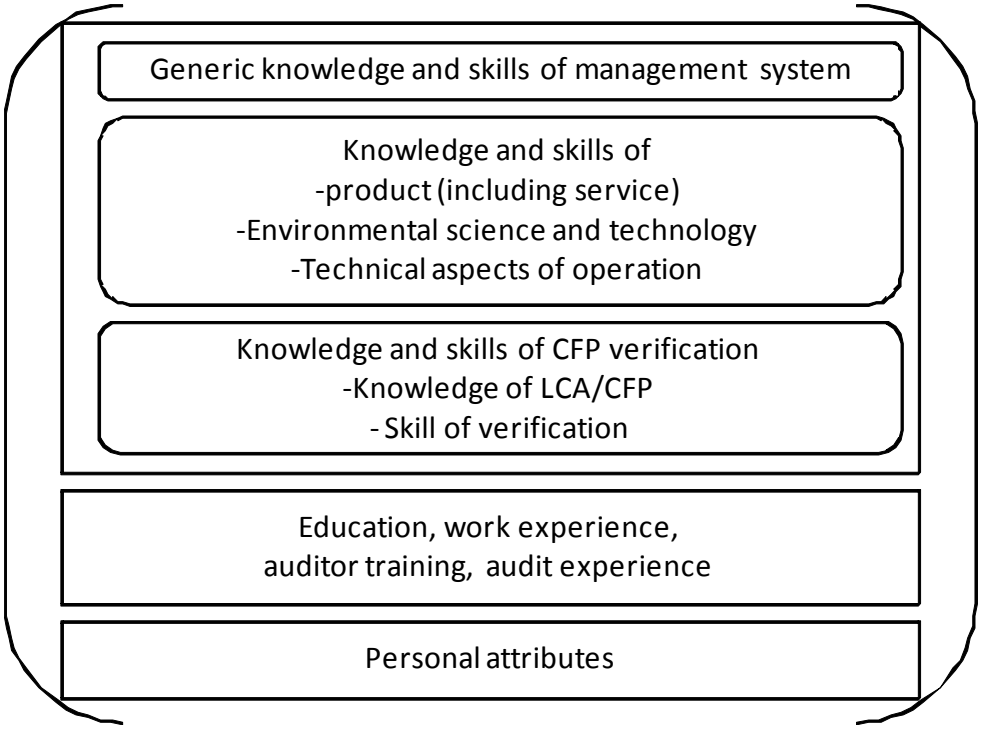
a) Discussions

Competence of the examiners shall be established and such competent examiners shall be prepared. In this experiment, competence criteria were sat referring to the existing management system standard such as ISO14001 and environmental labeling ISO14025, and the necessary training was carried out.

There was a discussion that ISO9001's certification competence may be used because CFP data collection is based significantly on product aspect.

Evaluation of the examiners was not conducted in this examination.

Figure competence of CFP system certification verifier



b) Solution and recommendation

It will be reasonable to set a combined competence based on ISO9001 or ISO14001 and the CFP product-by-product verification.

To deal with future further demands from applicants, it is necessary to establish efficient and effective training programme for the examiners and the examining teams.

(6) Refining the examination procedures

a) Discussions

The examiners and the panel members pointed out that there was some ambiguousness in the examining process and the examining criteria. Similar to the CFP product-by-product verification, experiences will make those issues clearer. So they recommended keeping the panel method to extract the problems and resolve them.

During the experiment, the panel members requested applicants to provide the CFP system documents including the detailed CFP data

collection sheets and procedures, to make a discussion at the panel session sufficiently.

b) Solution and recommendation

For a certain period, the panel method should be continued. However, following should be noted;

- The panel shall not be becoming mere place. The panel's competence is very important.
- Number of times of the panel shall meet applicants' demand.

As mentioned in a), provision of applicant's documents about detailed CFP collection sheets and procedures shall be required.

(7) Independent CFP system certification by examiner without the panel

a) Discussions

Few corrections were pointed out at the panel about the examination carried out by the certification bodies, but, there existed some corrections on CFP system manual and CFP labeling. Therefore, it is still early to get a conclusion on this topic.

b) Solution and recommendation

In the future, after proper ability and structure of CFP system certification method is acquired, the role of the panel may end and the certification bodies will conduct the examination.

5. Appendix

5.3 Requirements for the CFP system certification

This document is intended for the CFP system development and its certification.

Requirements for Quantification, Internal Verification and Disclosure System of Carbon Footprint of Products

Revised: Feb. 2012

Original: Mar. 2011

Information

To make CFP verification processes more timely and flexible for applying organizations, Japanese CFP pilot project has been trying to develop a system certification method including CFP quantification, internal verification and disclosure. 2 years have been spent and now here we have a set of operating documents.

This document is one of the documents for such system, providing requirements for an organization which tries to have the system and also providing criteria for a certifying body, team or person. There are other operating documents, which you can find on the CFP pilot project website.

This document needs to be sophisticated through our future experiences and operations. We are still in the middle of the way for completion. Discussions are welcomed. Any inquiries, contact to secretariat.

Secretariat

Contents

Foreword

This document prescribes one of the CFP verification methods "Requirements for Quantification, Internal Verification and Disclosure System of Carbon Footprint of Products" in the Japanese Carbon Footprint Pilot Project.

Requirements in this document will be reviewed through CFP experiences.

Requirements for Quantification, Internal Verification and Disclosure System of Carbon Footprint of Products

0.1 Introduction

Reliability and transparency of the CFP information; values and labels, is crucial for consumer communications. At the same time, reduction of time and cost of the CFP verification is also important for applying organizations.

CFP Verification Committee, held under the Japanese CFP Pilot Project, has been discussing on this topic through demonstrations and experiments. One of them, “system certification method” has been considered, which reduces organization’s time and cost for verifications by developing quantification, internal verification and disclosure system inside the organization and by being certified by eligible third party.

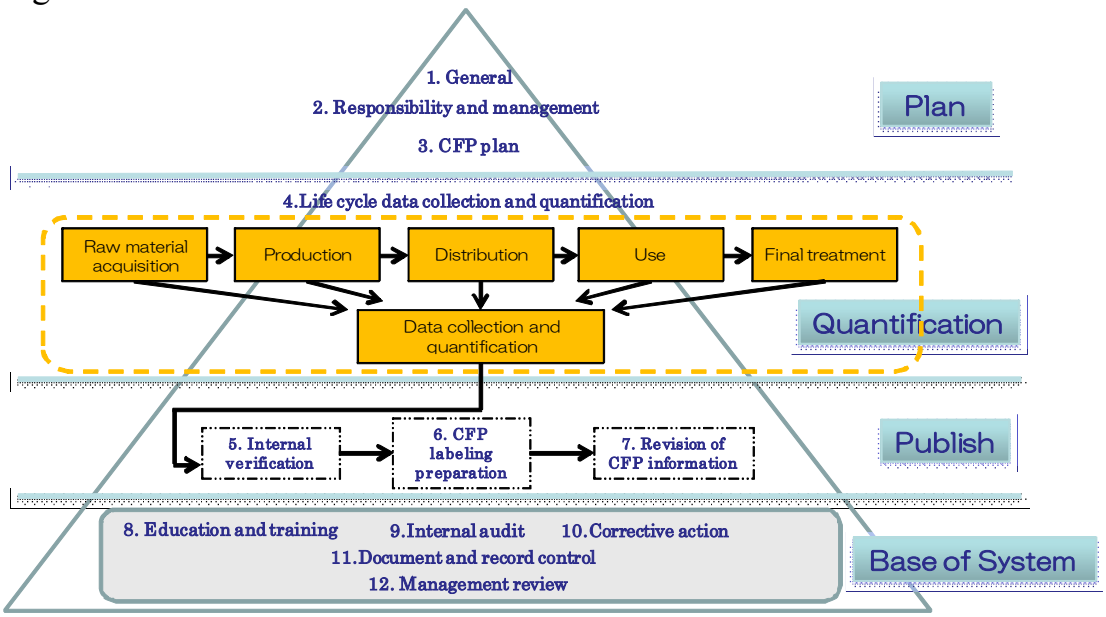
This system certification method for CFP is expected to benefit organization, compared to product-by-product verification method.

- taking short time for CFP quantification, verification and labeling
- getting flexibility in application procedure
- enabling labeling to many products with less cost
- enabling other GHG related activities by developing life cycle GHG data managing structure

Moreover, this set of requirements is designed for integrated certification with QMS, EMS and other management systems. Organizations which have already operated the management system are benefited in developing this system by referring related documents.

The structure of the requirements is illustrated in figure 1. Requirements are classified into four groups; “Plan” for implementation, “Quantification” for collection and quantification of life cycle data, “Publish” for publish and revision through internal verification, and “System basis” for system operation.

Figure 1



0.2 Scope

This set of requirements is applicable to any organizations, regardless of its business, form, size and product, where PCR exists.

This set of requirements does not prescribe legislative standards or criteria.

0.3 Normative reference

The following referenced documents are indispensable for the application of this document.

a) Basic Guideline of the Carbon Footprint of Products
b) Specifications of CFP Label and Displaying Other Information
c) CFP-PCR

0.4 Terms and definitions

For the purposes of this document, the following applies.

0.4.1 Terms related life cycle assessment (LCA)
0.4.1.1 Life cycle assessment (LCA)
Compilation and evaluation of the inputs, outputs and the potential

environmental impacts of a product system throughout its life cycle
[ISO14044:2006, 3.2]

0.4.1.2 Carbon footprint of product-product category rule (CFP-PCR)
Set of specific rules, requirements and guidelines for quantification and communication of the CFP for one or more product categories.

0.4.1.3 Life cycle
Consecutive and interlinked stages of a product system, from raw material acquisition or generation from natural resources to final disposal
[ISO 14044:2006, 3.1]

0.4.1.4 Cut-off criteria
Specification of the amount of material or energy flow or the level of significance associated with unit processes or product system to be excluded from a CFP study
[ISO14044:2006, 3.18]

0.4.1.5 Allocation
Method for dividing inputs and outputs of a unit process between the product system and other product system sharing the unit process.

0.4.1.6 Primary data
Data obtained from a direct measurement or a calculation based on direct measurements at its original source

0.4.1.7 Secondary data
Data obtained from a direct measurement or a calculation based on direct measurements at its original source.

0.4.1.8 Common database for basic materials
Database of GHG Emission Factors for the CFP Pilot Project (tentative) owned by the Pilot Project's secretariat.

0.4.1.9 Product
Any goods or services

[ISO14044:2006, 3.9]

0.4.2 Terms related to Japanese CFP Pilot Project
0.4.2.1 Carbon footprint of product (CFP)
Sum of greenhouse gas emissions and removals in a product system, expressed as CO2 equivalent and based on a life cycle assessment

0.4.2.2 CFP quantification
Sum of multiplication data of collected data and emission factors, based on PCR.

0.4.2.3 CFP verification
Confirmation of the validity of an environmental claim using PCR and procedures independent from CFP quantifier.

0.4.2.4 CFP information
The CFP label put on the product, website or leaflet, and the CFP detailed information sheet disclosed on the CFP website.

0.2.4.5 CFP disclosure
Enabling the CFP information to the public

0.4.2.6 Revision of CFP information
To maintain the disclosed CFP information in a proper status

0.4.3 Terms related to management system
0.4.3.1 CFP manual
Document or set of documents prescribe the system contents

0.4.3.2 Top management
Person or group of people who directs and controls an organization at the highest level

0.4.3.3 CFP policy
Overall intentions and direction of an organization (3.16) related to its CFP as formally expressed by top management

0.4.3.4 Internal verification
CFP verification by verifier inside the organization

0.4.3.5 Competence
Demonstrated ability to apply knowledge and skills

0.4.3.6 Internal audit
Systematic, independent and documented process for obtaining audit evidence and evaluating it objectively to determine the extent to which the environmental management system audit criteria set by the organization are fulfilled

0.4.3.7 Corrective action
Action to eliminate the cause of a detected nonconformity

0.4.3.8 Nonconformity
Non-fulfilment of a requirement

1. General

The organization shall establish, document, implement and maintain the CFP quantification, internal verification and disclosure system (hereafter, "CFP system") in accordance with this requirements.

The organization shall define the scope of the CFP system according to the objected products and CFP-PCR.

The CFP system shall ensure the implementation of the objected CFP-PCR.

The CFP system may be developed with or within other management system.

2. Responsibility and management

The organization shall document the role, the responsibility and the authority for implementing the CFP system, including 2.1 and 2.2.

2.1 Top management

The top management shall;

a) Ensure resources for the implementation of the CFP system. Human resources, expert skills and funds are included.

b) Establish and disclose the CFP policy including commitments on the objective, the human resources and the reliabilities of CFP, and also ensure that the CFP policy is well known and implemented in the organization.

c) Appoint a CFP manager and shall give a role, responsibility and authority, listed 2.2.

2.2 CFP manager

The CFP manager shall;

a) Ensure the establishment implementation and maintenance of the CFP system.

b) Report the condition of the CFP system to the top management

c) Ensure that the personnel's understand the CFP well.

The CFP manager should make effort to foster the understanding of the meaning of the CFP by the data suppliers and consumers.

3. CFP Planning

The organization shall ensure to develop a CFP plan for each CFP quantification, which provide information on the timing of publish, the human resources and etc. The plan shall include the followings, at least;

a) Name of the product
b) The CFP-PCR used
c) Human resources and team members
d) Schedule

4. Life cycle data collection and quantification

4.1 General

The organization shall make clear that the data to be collected in each life cycle stages and shall establish, document and implement the reliable processes for such data collection and quantification, based on the CFP-PCR.

The organization shall make followings clear to ensure the CFP activity;

a) Components of the product, i.e. raw materials and parts
b) Life cycle flow chart which prescribes life cycle stages and data collection processes.
c) Classification of the primary/secondary data, the cut-off criteria, the allocation procedure and others necessary for the CFP quantification.

Continuous data collection process may be effective.

4.2 Data collection request

The CFP quantifier, who is in charge of the CFP quantification, shall ensure the followings.

a) Send the specification including the data collection range and precision and other necessary requirements. The CFP quantifier should give guidance, if necessary.
b) Determine the specification before sending to the CFP data supplier.

If the continuous data collection process is established, this section may be omitted.

4.3 Data collection and provision

The CFP data supplier shall ensure the followings.

a) Collect the required data and send it back to the CFP quantifier in the form of a document, such as e-mail, as soon as possible.
b) Immediately question to the CFP quantifier when he/she finds an ambiguous request.
c) Check the data validity (evidence appropriateness and traceability) and ask approval to the person in charge by writing his/her name on the document.
d) Be responsible for explaining the data in detail.

The CFP quantifier shall consider taking enough time for such data presenting in the case he/she asks it to outside the organization.

4.4 CFP quantification

The CFP quantifier shall confirm the validity of the collected data and quantify the CFP.

The CFP quantifier shall ensure followings.

a) Prepare necessary documents for the CFP quantification and the internal verification.
b) Check the result, such as by referring similar results, if available.
c) Classify and store the data sheets and its evidences.
d) Store the data collected from the CFP data suppliers properly.

4.5 Development of CFP information

The CFP quantifier shall make the draft CFP label and the draft detailed CFP information sheet based on the result and the requirements in the CFP-PCR and “Specification of the CFP Label and Displaying Other Information”.

5. CFP internal verification

The organization shall conduct the internal verification by the internal verifier so that the organization can request the permission on the CFP label to the programme holder.

The organization shall ensure that the draft CFP label and the draft detailed CPF information sheet satisfy followings.

a) Conformation to the proper version of the CFP-PCR
b) Conformation to "Basic Guideline of the Carbon Footprint of Products," "Specifications of CFP Label and Displaying Other Information," "ISO 14040" and "ISO14044".
c) Conformation to the data collection and quantification processes established in the CFP system.

The organization shall ensure followings when conducting the internal verification;

d) The internal verifier has the knowledge of LCA and CFP and the competence of data collection and quantification.
e) The internal verifier is independent from the CFP data supplier and the CFP quantifier.
f) The internal verifier records the result of the internal verification. Records established to provide the evidence of the conformity to requirements and of the effective operation of the internal verification shall be controlled.
g) The result of the internal verification is report to the CFP manager.
h) The responsibility of the verification result remains at the organization, when outsourcing the internal verification.

6. Attaining CFP label permission

The organization shall attain the permission from the programme holder to make the CFP information publicly available.
The organization shall decide the criteria, the role, the responsibility and the authority of applying such permission.

7. Revision of published CFP information

The organization shall set the criteria for revision of the published CFP information and watch the necessity of revising it. When revising, the organization shall report the revised information and the reason of the revision. Followings are some of the cases of the revision of the CFP information.

a) Changing data from the assumption data (design data/plan data) to the

measured data.
b) Data changed by a converting production line.
c) Data changed by an increase/decrease of production amount
d) Changing data to more precise data such as converting the secondary data to the primary data
e) Finding error in the published CFP information
f) Programme holder's request.

8. Education and training

The organization shall ensure that the directly engaged member of the CFP system (CFP quantifier, CFP internal verifier and CFP internal auditor) has a proper competence.
The organization shall provide the education chances and/or the training course on CFP and LCA or establish the personnel certification scheme inside the organization, to maintain the member competence. Also, the organization should provide such chances to the CFP data suppliers.

9. CFP internal audit

The organization shall implement the internal audit in a certain period.
The organization shall ensure to satisfy followings when conducting the internal audit;

a) Conformation of the CFP system to this CFP system requirement.
b) Conformation of the CFP system operation to the established CFP system documents.
c) Effective implementation and maintenance of the CFP system.

The organization shall ensure followings for the internal audit;

d) The internal auditor's competence of the CFP knowledge and the ability of demonstrating management system audit.
e) Keep the impartiality in the internal auditor selection process and its implementation.
f) The own work can not be audited.
g) Record the audit result.
h) The result to be reported to the CFP manager and the top management.

i) The responsibility of the internal audit result remains at the organization, when outsourcing the internal audit.

10. Corrective action

The organization shall take a corrective action when it finds any unconformity in the process of the CFP internal verification, the internal audit, the third-party system certification process or after publishing the CFP information.

The organization shall review the effect of the corrective action taken and record it.

11. Documentation and control of records

11.1 Documentation

The organization shall develop and maintain the documents necessary for the CFP system.

The organization shall ensure that the documents are kept in a proper status.

The development and maintenance of the system documents shall be in conformance with the proper edition of the following external documents;

a) Basic Guideline of the Carbon Footprint of Products (Programme instruction)
b) Specifications of CFP Label and Displaying Other Information (Programme instruction)
c) Requirements for Quantification, Internal Verification and Disclosure System of Carbon Footprint of Products
d) Other operating rules provided by programme holder
e) Common database and reference data base for basic materials
f) Application form of CFP quantification and labeling
g) Related CFP-PCR

11.2 Control of records

The organization shall record following information and keep them in traceable condition for a certain period.

a) Documents of the CFP plan
b) Documents of preparation for the CFP quantification
c) Documents used for the CFP quantification and the internal verification
d) Documents of the CFP data collection
e) Documents of evidences for the CFP data collection
f) Documents of the result of the internal verification
g) Document of the result of the internal audit
h) Record of the education and the training
i) Record of the corrective action
j) Document relating to the measuring instrument
k) Record of the management review

12. Management review

The top management shall review the CFP system to ensure that the CFP system's validity and effectiveness, in a certain period.

Inputs to the management review should include followings;

a) Status of the CFP quantification and publication
b) Result of the internal audit
c) Status of the stakeholder communication
d) Status of the corrective action
e) Follow up of the last management review
f) Change of the CFP (in numbers)
g) Change of the circumstance
h) Proposal to the improvement

Outputs from the management review shall contain the decision for changing or not changing the CFP system.

Annex A (informative)　Guideline of the requirement

The purpose of this annex is to avoid the misinterpretation of the requirements.
This information doesn't intend to add, to reduce or to change the requirements.

A1. General

The organization is required to develop the CFP system documents (hereafter "the documents") so that everyone can understand them easily. The documents clearly specify how these requirements are fulfilled. The structure of the documents may include figures or tables and not necessarily be gathered into a single book. The system documents depend on the organization's scale and/or the product's complexity so that the detail of the contents of the documents varies organization by organization.

To decide the scope of the CFP system, e.g. the products and the departments to be included, it is useful to refer to the CFP-PCR.

The organization may develop the CFP system with or within the ISO 9001, ISO 14001 or other management system.

A2. Responsibilities and management

To make the system operation successful, the clarification of the roles, responsibilities and rights is highly important. The operation of the CFP system includes, the top management, the CFP manager, the CFP quantifier(s), the CFP data suppliers, the internal verifier(s), the CFP auditor(s) and etc.

Especially, the commitment by the top management is crucial. To show such commitment, the CFP plan developed will be disclosed to both inside or outside the organization.

The top management is the highest of the CFP system and should be the person who is in charge of its management.

Along with the commitment, the top management designates the CFP manager who is in charge of the CFP system. Multiple CFP managers may be appointed in a large or a complex organization.

The CFP manager manages the whole CFP system, makes efforts on the well understanding of the CFP both inside or outside the organization and communicates with the top management when necessary, including “12. Management review”.

A3. CFP planning

To proceed the CFP effectively and efficiently, it is important to develop the CFP plan before starting the CFP quantification. The plan includes resources (how much human resources will be necessary in what timing), operating structures, schedule and so on.

The detail of the CFP plan will be different by the scale of the organization or the objected product. For example, if the requirement c) should include the names of the CFP data suppliers or not, or if the requirement d) should include the detailed information such as the data collection requests, the data collection itself, the quantification, the internal verification and so on. The level of the detail will be decided by the organization.

A4. Life cycle data collection and quantification

A4.1 General

The life cycle data collection and quantification is the most important step in the CFP system. Accordingly, it is very important to decide the most proper methods on the CFP system documents.

The life cycle data collection and quantification includes, generally, the data collection request, the data collection and provision, the CFP quantification and the development of the CFP information.

Also, to efficiently proceed them, the components of the product, the development of the life cycle flow chart, the classification of the primary/secondary data, the availability of conducting the cut-off and the detail of the allocation method are to be considered and to be clarified. This

will avoid unnecessary process in the CFP quantification such as repeating the same actions.

To conduct the CFP data collection efficiently and constantly, the development of the data collection system from the production control information or the design information is desirable.

A4.2 Data collection request

To attain the necessary data, it is critical to give precise directions to the CFP data suppliers. The CFP data supplier's performance highly depends on the information on the data collection period, range, sampling method and criteria for measuring appliance.

A4.3 Data collection and provision

The CFP data supplier, regardless of the belonging, should collect the data requested as soon as possible; however, once he/she finds questions, he/she should ask to the CFP quantifier rather making judgment by themselves so as not to repeat unnecessary process of the CFP data collection.

When collecting the primary data, it is important to keep the precision of the data considering the necessary data precision in the CFP quantification. However, this doesn't mean that the CFP data supplier shall prepare for the report of the proof on the measuring appliance by the calibration laboratory.

It is possible to use data which is already collected for other purpose when it satisfies the requirements requested from the CFP quantifier.

In the course of the CFP internal verification, the evidences on each collected data will be based on the data provided by the CFP data supplier. Thus, the information on the data responsibility is important during the CFP internal verification. Especially, when the data is provided from outside the organization, the communication between the CFP quantifier and the CFP data suppliers are also important.

A4.4 CFP quantification

This is a step of quantifying the collected CFP data into the CFP. Firstly,

confirm if the collected data is not far different from its estimation by checking each data column or comparing to the similar product's CFP. Secondly, classify the evidences in order for the process of the CFP internal verification. The method to properly treat such data is also crucial because, usually, the data contains confidential information.

A4.5 Development of CFP information

Following the CFP-PCR and the "Specifications of CFP Label and Displaying Other Information", develop the CFP label (including additional information) and the detailed CFP information sheet. Especially, the CFP information is rather underestimated compared to the CFP quantification itself, it is very important to check the contents included in the information, such as the proper usage of the Japanese language, misinterpretation to English and so on.

As consumers, who receive the information, are not well understood the meaning of the CFP at the moment, the expressions used in the CFP information should not lead to their misunderstandings.

A5. CFP internal verification

The CFP internal verification is the important process for checking the result of the CFP quantification and the CFP information. Thus, the CFP internal verifier should have the knowledge on LCA/CFP and on the product and its production processes, and should be impartial.

The independency is secured by showing that the CFP internal verifier is not the person who engaged in the CFP quantifier or the CFP data supplier.

The CFP internal verification can be outsourced but the responsibility remains inside the organization.

The "proper version" mostly means the "latest". The case when it is not the latest version used is that the CFP internal re-verification after "7. Revision of published CFP information". The old CFP information may be developed in accordance with the old version of the CFP-PCR. At this time, the CFP internal re-verification should be conducted referring to the old CFP-PCR.

A6. Attaining CFP label permission
The permission to use the CFP label, the organization shall apply to the programme holder (the detail of this process will be decided by the programme holder).

The criteria and the procedures for this application and the role for this application (who applies, who disclose the CFP information after permission and who is responsible for whole these processes) should be clarified.

A7. Revision of published CFP information
There are cases that the published CFP information to be changed due to the modification of the production methods or etc. Thus, the criteria and the procedures for revising, including the establishment of the difference watching, of the criteria to revise or not, or of the procedures, should be developed.

The revision should include the all CFP information, even the additional information.

A8. Education and training
The personnel in the CFP system, the CFP quantifier, the CFP internal verifier and the CFP auditor, should have competence to conduct their works. The competence criteria should be developed referring to the experience on CFP or LCA, the attendance to the training courses, the license of the auditor of the management system (ISO 14001 etc) and related experiences.

Current Japanese CFP system doesn't provide such training courses, the proof of the certificate is not required.

A9. CFP internal audit
The CFP internal audit periodically checks the condition of the CFP system established and its operation. Through the CFP internal audit process, the audit of the CFP internal verification process is conducted by performing another CFP internal verification by the CFP internal auditor.

The CFP internal auditor is required to have the knowledge of both CFP and management system. The competence of the management system audit is ensured by the license of ISO 9001 or ISO 14001's auditors.

The independency of the CFP auditor is secured by followings;
- The CFP auditor is not the top management or the CFP manager.
- The CFP auditor can not carry out the audit, when he/she quantified the particular CFP. (Can not audit one's own work.)

The CFP internal audit can be outsourced but the responsibility remains inside the organization.

A10. Corrective action

Unconformity is found in the CFP system, the number of the CFP, the CFP information and etc.
To prevent repeating the fault, it is important to get rid of the reasons, and to add a preventive system into the CFP system. However; this doesn't mean to add something "heavy" system to the existing CFP system. For example, it may be enough to add the specific action to check the fault somewhere in the CFP system documents.

A11. Documentation and control of records

A11.1 Documentation

The minimum documents to be prepared are "the CFP documents" and "the CFP procedural documents for the life cycle data collection and quantification".

The CFP documents provide the overall adoption to the CFP system requirements and the organization's fundamental information.

The CFP procedural documents include the detailed methods (who, how, when) on the CFP data collection. The CFP procedural documents may contain the data sheets, the quantification sheets, the unit factor data lists and so on.

To develop such documents, refer to the external documents listed in 11.1.

These external documents should be properly controlled so as not to misuse the improper version.

The “proper version” mostly means “the latest version”. However, during the CFP information is used in the market, it is necessary to manage these documents even if they are not the latest.

A11.2 Control of records

The records which certifies the conformity to this requirement and which provides the CFP data and its evidences should be prepared. These records should be managed properly to correspond to the CFP internal verification or the CFP audit immediately.

The period of keeping the records will be decided according to the renewal period of the CFP system certification.

A12. Management review

The management review process should include both the input to the management and the output (designation) from the management.

The management review process may be a good opportunity for the communication to the top management.

The management review process may be a good opportunities for collecting or exchanging the strategic use of the CFP information.