Measurement Methodology for Green Purchasing Networks

2024-12-18

Measurement Methodology for Green Purchasing Networks

1 Scope

This document provides terms and definition, basic principle, monitoring methodology and technical content of performance evaluation for Green Purchasing Network (GPN).

It is intended to measure the implement performance level of Green Purchasing Network (GPN), provide methodology for monitoring sustainable performance of Green Purchasing Network (GPN) in various scale and types.

2 Normative reference

The following documents, in whole or in part, are normatively referenced in this document and are indispensable for its application. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

ISO9000:2015 Quality Management Systems-Requirements -Fundamentals and vocabulary (definitions)

ISO9004:2018 Quality Management-Quality of an Organization-Guidance to Achieve Sustained Success

ISO14031:2021 Environmental Management-Environmental Performance Evaluation-Guidelines

ISO 14050:2020 Environmental Management-Vocabulary

ISO 20400:2017 Sustainable Procurement-Guidance

ISO 22095:2020 Chain of custody-General terminology and models

3 Terms and Definition

For the purposes of this document, the following terms and definitions apply.

3.1 Green Purchasing Network, GPN

An organic organizational system composed of active network connections node including independent organizations or associates, through initiating, promoting, and implementing "green" or "sustainable" or "environmentally preferable" purchasing, in a particular scope such as a single country, or a sub-country, or specific industry, to promote environmentally friendly products and services towards sustainable consumption and production.

[Source: Chinese Big Dictionary, Economic column, Shanghai University of Finance and Economic organized (2015); Networks: A Very Short Introduction, Guido Caldarelli and Michele Catanzaro (2012); IGPN mission (http://www.igpn.org/about/index.html), Revised]

3.2 Green procurement/purchasing

Procurement that has the most positive environmental impacts possible over the entire life cycle.

[Source: ISO 20400:2017, 3.38, Revised]

3.3 Performance

Measurable results.

[Source:ISO9000:2015, 3.7.8, Revised]

3.4 Indicator

Quantitative, qualitative or binary variable that can be measured or described, representing the status of operations, management, conditions or impacts.

[Source: ISO 14050:2020, 3.2.24]

3.5 Key performance indicator (KPI)

Indicator of performance deemed by an organization to be significant and giving prominence and attention to certain aspects of operations, management, conditions or impacts

[Source: ISO 14050:2020, 3.2.25]

3.6 Green Purchasing Action Plan/Initiative

A Green Purchasing/Procurement Action Plan/Initiative is a policy document articulating the priorities and actions a public authority will adopt to support the implementation of green purchasing/procurement.

[Source: SPP Index Methodology: SDG indicator 12.7.1, Version 5.0 Post IAEG–February 2020, revised]

3.7 Chain of custody

Process by which inputs and outputs and associated information are transferred, monitored, and controlled as they move through each step in the relevant supply chain.

[Source: ISO 22095:2020]

3.8 Environmentally Preferable Purchasing

The procurement of products and services that have a lesser or reduced effect on human health and the environment when compared with competing products or services that serve the same purpose.

[Source: Final guidance on environmental preferable purchasing, US EPA, August 1999, revised]

4   Green Purchasing Network Overview

4.1 Concept

Green Purchasing Network is:

a) A network, which is an organic organizational system consisted of active network connections node including independent organizations or associates;

b) Achieve to promote environmentally friendly products and services towards sustainable

consumption and production, through initiating, advocating, and implementing "green" or "sustainable" or "environmentally preferable" purchasing

    c) A particular scope includes:

— Country (Region);

— Sub-country;

— Industry.

4.2 Management and Operation

Figure 1 illustrate the interaction among organizational management, operation, and performance of the Green Purchasing Network through the procurement cycle.

Two sources of GPNs performance can be described:

— Management performance: Performance information relevant with the management process, mostly come from strategy, plan, personnel, procedure, rules etc.;

— Operational performance: Performance information relevant with the operation process, mostly come from the practice activities through input and output

Three pillar indicators of GPNs performance can be described:

— Economic performance indicator: provides the information relevant to promote green purchasing practice, including green product market, membership scale etc.;

— Environmental performance indicator: provides the information relevant to promote green purchasing practice, including pollution elimination, greenhouse gases reduction and promoting biodiversity etc.;

— Social performance indicator: provides the information relevant to promote green purchasing practice, including awareness raising, information disclosure, participation, compliance with ILO, and development of SMEs etc.
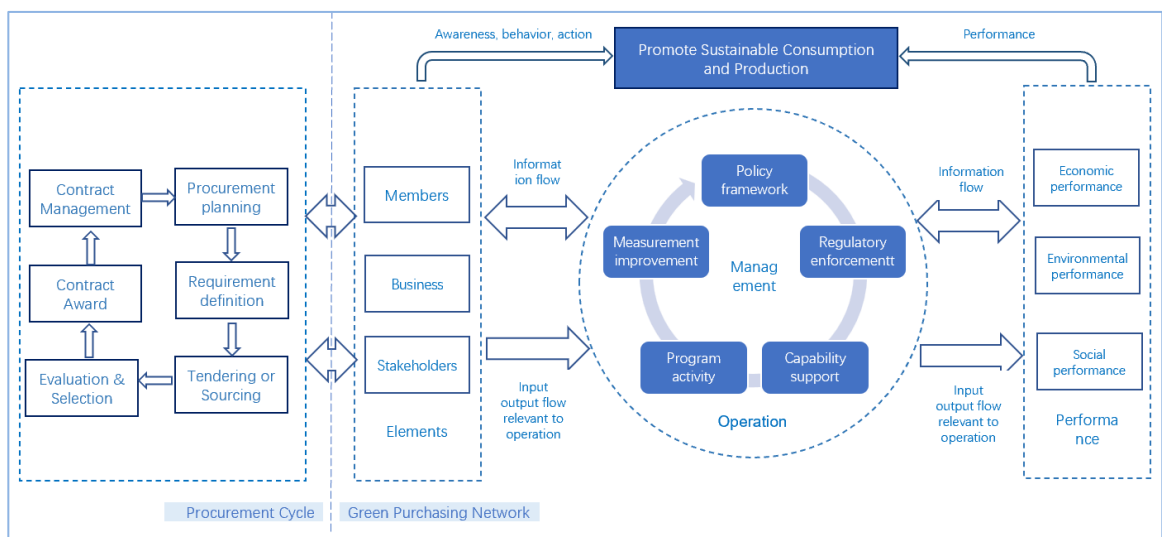

Figure 1 Green Purchasing Network Management and Operation Framework Chart

5 Measurement Principle

Measurement principle of Green Purchasing Network can be described:
— Baseline Principle: Identify the basic requirement of Green Purchasing Network to define the baseline scope;
— Integration Principle: Based on comprehensive reflecting the organization, environmental and social performance, to embody the character of Green Purchasing Network function the green purchasing practice by identifying the key performance indicator;
— Measurable Principle: Through quantitative or qualitive indicators, ensure that statistic tools can be used to measure and draw conclusions;
— Communicative Principle: Relevant data is feasible to collect, easy to operation and apply, and appropriate to report to relevant stakeholders and decision makers as well;
— Continuous improvement Principle: Stimulate continuous improvements by setting different level value to improve, learn and accelerate.

6 Indicator framework

Performance indicators can be described as follows:
— Basic requirement: requirement of legality of the organization or initiative organization;
— Policy framework: requirement of existence of policy, initiative, or action plan on green purchasing;
— Regulatory enforcement requirement of existence of management rules, regulations, by-laws, management, and information disclosure to support policy/initiative/action plan implementation;
— Capacity support: requirement of network governance, resources financial stability, and network engagement to support policy/initiative/action plan implementation;
— Program activity: requirement of the content of green purchasing practice, including technical support, information disclosure, and promotion activities.

7 Measurement improvement: requirement of monitoring sectors, monitoring methods and actual outcome for the policy/initiative/action plan implementation.**Indicator rules**

7.1 Basic requirement

The GPN, or the organization which initiated the GPN have a legitimate legal statue at its country(region).

7.2 Measurement indicators rules can be described in table 1.

Table 1. GPN measurement indicators and rules

Indicator	Primary	Secondary	Tertiary	Value
A	Policy framework(20)	A(a) Existence of policy, initiative, or action plan on green purchasing(20)	A.1 Has the approved policy or action plan aimed to fulfill the IGPN mission[1], include: ☐ Promote the spread of environmentally friendly product and service development and green purchasing activities; ☐ Share information and know-how on green purchasing and environmentally friendly products and services; ☐ Indicate the priorities and principles, include the timeline and proposed activities	0-6
			A.2 Has access of the above policy, initiative, or action plan in the website	2
			A.3 the policy, initiative, or action plan update regularly	2
			A.4 The policy, initiative, or action plan designed to consider the sustainable procurement principles (ISO 20400 4.2), include any or more of the following: ☐ Purchasing focus on need ☐ Sustainable/green purchasing in public sector ☐ Sustainable/green purchasing in business sector ☐ Sustainable/green purchasing in consumer sector ☐ Information disclosure of sustainable/green product/service	0-10
B	Regulatory enforcement (20)	B(a) Existence of management rules, regulations, by-laws support policy/initiative/action plan (A.1) implementation (8)	B.1 Has the constitution rules, regulations, or by-laws	2
			B.2 Has the ToR (Term of Reference) to enforce operation	2
			B.3 Has the annual work plan (or equivalent)	2
			B.4 Has monitored the progress annually (or equivalent)	2
		B(b) Management to promote policy/initiative/action plan (A.1) implementation (6)	B.5 Encourage demands of sustainable/green purchasing and sustainable development for members and stakeholders, for example, object declaration, information transparent, call for action	2
			B.6 Strengthen the collaborations of members and stakeholders, for example, set common goal, regular communicate, co-launching the	2

Indicator	Primary	Secondary	Tertiary	Value
			initiative	
			B.7 Increase satisfaction of members and stakeholders for example, survey to identify demand, measuring satisfaction performance	2
		B(c) Information disclosure in organization to promote policy/initiative/action plan (A.1) implementation (6)	B.8 Has continuous information communication for the policy/initiative/action plan (A.1) implementation	2
			B.9 Specific channels used to provide information in and beyond the organization via any or more of the following: ☐ Newsletter, webpage ☐ Social media ☐ Webinar ☐ Other such as live streaming, customer communication	2
			B.10 Information content cover any or more of the following: ☐ Members[2] updates ☐ Stakeholder[3] updates ☐ Knowledge on sustainable/green purchasing, sustainable consumption and production, sustainable development, ☐ Other latest relevant information	2
C	Capacity Support (20)	C(a) Organizational structure and governance to promote policy/initiative/action plan (A.1) implementation (6)	C.1 Being with qualified and effectiveness of leadership team	3
			C.2 Roles and responsibilities are clearly defined and distributed	3
		C(b) Resources and funding financial stability to promote policy/initiative/action plan (A.1) implementation(8)	C.3 Being with available funding sources, and budget allocation	3
			C.4 Being with available expertise, staff and volunteers	3
			C.5 Being with available physical infrastructure, technology, and tools necessary for operations	2
		C(c) Network engagement to promote policy/initiative/action plan (A.1) (6)	C.6 Being with stable and increase membership with external organizations, stakeholders, and experts	3
			C.7 Active involvement members or stakeholders at least take half of the whole membership for a mobilized community	3
D	Program activity (20)	D(a) Content of green purchasing practice (5)	D.1 Practice content directly aligned with the objective of the policy/initiative/action plan (A.1)	2

Indicator	Primary	Secondary	Tertiary	Value
			D.2 Practice content are included ☐ Technical support activity ☐ Information disclosure activity ☐ Promotion activities ☐ Research activities ☐ Supply chain activities ☐ Innovative purchasing, digital passport or other activities	3
		D(b) Technical support green purchasing practice(5)	D.3 Has green purchasing guideline for product or service or supply chain	2
			D.4 The guideline is regularly updated	2
			D.5 Has certain number product or service category being enacted guidelines	1
		D(c) Information disclosure support green purchasing practice(5)	D.6 Has specific green product/service data base	2
			D.7 Data base is regularly updated	2
			D.8 Has included appropriated product or service or supply chain information	1
		D(d) Promotion support green purchasing practice(5)	D.9 Has product promotion activities taken via any or more of the following: ☐ Green purchasing award ☐ Green product exhibition/Green e-commerce platform ☐ News bit event ☐ Others such as sponsor activity, environmental day, ecological day	2
			D.10 Has knowledge promotion activities taken via any or more of the following: ☐ Seminar and workshop ☐ Training and capacity building ☐ Policy research and recommendations ☐ Others such as popular science propaganda	2
			D.11 Has achieved the set target	1
E	Measurement improvement(20)	E(a) Monitoring the policy/initiative/action plan (A.1) implementation (4)	E.1 Monitor the adoption of policy/initiative/action plan (A.1) implementation across the organization	2
			E.2 A specific target has been set for policy/initiative/action plan (A.1) implementation	1
			E.3 If yes, the target has been monitored	1
		E(b) Monitoring requirement of the	E.4 Requirement on: ☐ Economic performance (linked	3

Indicator	Primary	Secondary	Tertiary	Value
		outcome and output (6)	with E.6) ☐ Environmental performance (linked with E.7) ☐ Social performance (linked with E.8)	
			E.5 How are monitored: ☐ Via internal, such as survey, self-assessment, annual report, ☐ Via external report	3
		E(c) Actual outcome (10)	E.6 Actual economic performance result for green products application: ☐ 1 points: 61–70% of the similar product procurement scale ☐ 2 points:71–80% of the similar product procurement scale ☐ 3 points:81–90% of the similar product procurement scale ☐ 4 points: ≥91% of the similar product procurement scale [Note: the calculation formula is The priority procurement of green products scale/the procurement scale of similar products×100%]	4
			E.7 Actual environmental performance result: ☐ GHG emission reduction ☐ Pollution reduction ☐ Resources efficiency ☐ Others such as circularity	2
			E.8 Actual social performance ☐ Impact: Company green transition promotion, Adoption rate for policy recommendation, or stakeholder satisfaction rate, or labelled company number increase rate ☐ Credibility: Number of positive reported by media, or endorsed or acceptance rate by international organizations or third party ☐ Traceability and chain of custody ☐ Compliance with national labor regulation or ILO ☐ Promote SMEs	2
			E.9 Use any form of benefit calculator to measure: ☐ Environmental economic performance;	2

Indicator	Primary	Secondary	Tertiary	Value
			☐ Social economic performance	

Note:

1. *IGPN mission is: Globally promote the spread of environmentally friendly product and service development and Green Purchasing activities; Internationally share information and know-how on Green Purchasing and environmentally friendly products and services; Harmonize the efforts of Green Purchasing and the development of environmentally friendly products and services from a global viewpoint. http://www.igpn.org/about/index.html;*
2. *Member here refer those who are eligible with the duty and responsibility of the membership for the GPN.*
3. *Stakeholder here refer: all relevant parties, agencies, or person who have activity with the GPN .*

8 Measurement formula

Measurement formular is

$$S=\sum_{n=A}^{E} n \text{ / } S=A+B+C+D+E \quad \ldots\ldots（1）$$

S——Sum value

A——Policy framework

B——Organizational management

C——Capacity support

D——Program activity

E——Measurement improvement

9 Measurement criterion

The measurement criterion can be concluded by the value according the table 1 and formular 1.

The specific measurement criterion will be defined according the table 1 through the pilot testing results by <GPN measurement methodology questionnaire>, It could be identified as different mature level based on different scores (table 2).

Table 2. GPN measurement level

Level	Score
Advanced	80-100
Medium	60-80

10 Reporting

10.1 The IGPN Secretariat conduct GPN measurement methodology reporting in regular basis(Every 2 years).

10.2 Each GPN members self-evaluate its implementation statue according the <GPN

measurement methodology questionnaire>, and provide to the IGPN Secretariat.

10.3 The IGPN Secretariat review the results of the filled <GPN measurement methodology questionnaire> according to < the Measurement methodology for Green Purchasing Networks>, and confirm with each GPN members of the re-evaluated results.

10.4 The final results will be collected in an overall <Data collection report for GPNs measurement methodology(XXXX Year)> and released by the IGPN Secretariat.

Annex: GPN Measurement Methodology Questionnaire

IGPN Secretariat

China Environmental United Certification Center

GPN Measurement Methodology Questionnaire			
INDICATORS AND QUESTIONS	**SCORE**	**RESPONSE**	**DESCRIBE AND PROVIDE THE SUPPORT DOCUMENTS**
Basic Requirement			
The legality statue of the organization or initiative organization			
☐ If the GPN is an organization, does it have a legitimate legal statue in the country(region)?	/	Yes/No	
☐ If the GPN is an initiative, does the organization which initiate the GPN have a legitimate legal statusin the country(region)?	/	Yes/No	
A: Policy Framework			
A(a) Existence of policy, initiative, or action plan on green purchasing			
A.1 Has the approved policy or action plan aimed to fulfill the IGPN mission[1] ,include: ☐ Promote the spread of environmentally friendly product and service development and green purchasing ☐ Share information and know-how on green purchasing and environmentally friendly products and services ☐ Indicate the priorities and principles, include the timeline and proposed activities	6	Yes/No (Each item score is 2)	
A.2 Are the above policy, initiative, or action plan accessible in the website?	2	Yes/No	

GPN Measurement Methodology Questionnaire			
INDICATORS AND QUESTIONS	SCORE	RESPONSE	DESCRIBE AND PROVIDE THE SUPPORT DOCUMENTS
A.3 Does the policy, initiative, or action plan update regularly?	2	Yes/No	
A.4 Does the policy, initiative, or action plan designed to consider the sustainable procurement principles (ISO 20400 4.2), include any of following: ☐ Purchasing focus on need ☐ Sustainable/green purchasing in public sector ☐ Sustainable/green purchasing in business sector ☐ Sustainable/green purchasing in consumer sector ☐ Information disclosure of sustainable/green product/service	10	Yes/No (Each item score is 2)	
B: Regulatory enforcement			
B(a) Existence of management rules, regulations, by-laws support the policy/initiative/action plan (A.1) implementation			
B.1 Does it have the constitution rules, regulations, or by-laws?	2	Yes/No	
B.2 Does it have the ToR (Term of Reference) to enforce operation?	2	Yes/No	
B.3 Does it have the annual work plan (or equivalent)?	2	Yes/No	
B.4 Does it have monitored the progress annually (or equivalent)?	2	Yes/No	

GPN Measurement Methodology Questionnaire			
INDICATORS AND QUESTIONS	SCORE	RESPONSE	DESCRIBE AND PROVIDE THE SUPPORT DOCUMENTS
B(b) Management to promote the policy/initiative/action plan (A.1) implementation			
B.5 Does it take measures (for example object declaration, information transparent, call for action) to encourage demands of sustainable/green purchasing and sustainable development for members and stakeholders?	2	Yes/No	
B.6 Does it have approaches for example, set common goal, regular communicate, co-launching the initiative to strengthen the collaborations of members and stakeholders?	2	Yes/No	
B.7 Does it have intervention for example, survey to identify demand, measuring satisfaction performance to promote satisfaction of members and stakeholders?	2	Yes/No	
B(c) Information disclosure in organization to promote the policy/initiative/action plan (A.1) implementation			
B.8 Are continuous information communication for the policy/initiative/action plan (A.1) implementation?	2	Yes/No	
B.9 Are specific channels used to provide information in and beyond the organization via any of following: ☐　Newsletter, webpage ☐　Social media ☐　Webinar ☐　Other such as live streaming, customer communication	2	Yes/No (Each item score is 0.5)	

INDICATORS AND QUESTIONS	SCORE	RESPONSE	DESCRIBE AND PROVIDE THE SUPPORT DOCUMENTS
GPN Measurement Methodology Questionnaire			
B.10 Does information content cover: ☐ Members[2] updates, OR; ☐ Stakeholder[3] updates, OR; ☐ Knowledge on sustainable/green purchasing, sustainable consumption and production, sustainable development, OR; ☐ Other latest relevant information	2	Yes/No (Each item score is 0.5)	
C: Capacity Support			
C(a) Organizational structure and governance to promote the policy/initiative/action plan (A.1) implementation			
C.1 Are with qualified and effectiveness of leadership team?	3	Yes/No	
C.2 Are roles and responsibilities clearly defined and distributed?	3	Yes/No	
C(b) Resources and funding financial stability to promote the policy/initiative/action plan (A.1) implementation			
C.3 Are with available funding sources, and budget allocation?	3	Yes/No	
C.4 Are with available expertise, staff and volunteer?	3	Yes/No	
C.5 Are with available physical infrastructure, technology, and tools necessary for operation?	2	Yes/No	

GPN Measurement Methodology Questionnaire			
INDICATORS AND QUESTIONS	SCORE	RESPONSE	DESCRIBE AND PROVIDE THE SUPPORT DOCUMENTS
C(c) Network engagement to promote the policy/initiative/action plan (A.1) implementation			
C.6 Are with stable and increase membership with external organizations, stakeholders, and experts?	3	Yes/No	
C.7 Are active involvement members or stakeholders at least take half of the whole membership for a mobilized community?	3	Yes/No	
D: Program activity			
D(a) Content of green purchasing practice			
D.1 Is the practice content directly aligned with the objective of the policy/initiative/action plan (A.1) implementation?	2	Yes/No	
D.2 What kind of practice content are included: ☐ Technical support activity, OR ☐ Information disclosure activity, OR ☐ Promotion activities, OR ☐ Research activities, OR ☐ Supply chain activities, OR ☐ Innovative purchasing, digital passport or other activities	3	Yes/No (Each item score is 0.5)	
D(b) Technical support green purchasing practice			

INDICATORS AND QUESTIONS	SCORE	RESPONSE	DESCRIBE AND PROVIDE THE SUPPORT DOCUMENTS
GPN Measurement Methodology Questionnaire			
D.3 Are there green purchasing guideline for product or service or supply chain?	2	Yes/No	
D.4 Are regularly updated?	2	Yes/No	
D.5 Are certain number products or service category available being enacted guidelines?	1	Yes/No	
D(c) Information disclosure support green purchasing practice			
D.6 Does it have specific green product/service/supply chain data base?	2	Yes/No	
D.7 Are regularly updated?	2	Yes/No	
D.8 Are appropriate products or service category available for the data base?	1	Yes/No	
D(d) Promotion support green purchasing practice			
D.9 Are product promotion activities taken via any of following: ☐ Green purchasing award ☐ Green product exhibition/Green e-commerce platform ☐ News bit event ☐ Others such as sponsor activity, environmental day, ecological day	2	Yes/No (Each item score is 0.5)	

GPN Measurement Methodology Questionnaire			
INDICATORS AND QUESTIONS	SCORE	RESPONSE	DESCRIBE AND PROVIDE THE SUPPORT DOCUMENTS
D.10 Are knowledge promotion activities taken via any of following: ☐ Seminar and workshop ☐ Training and capacity building ☐ Policy research and recommendations ☐ Others such as popular science propaganda	2	Yes/No (Each item score is 0.5)	
D.11 Does the promotion activities achieve the set target?	1	Yes/No	
E: Existence of monitoring system			
E(a) Monitoring the policy/initiative/action plan (A.1) implementation			
E.1 Does monitor the adoption of policy/initiative/action plan (A.1) implementation across the organization?	2	Yes/No	
E.2 Has a specific target been set for policy/initiative/action plan (A.1) implementation?	1	Yes/No	
E.3 If yes, is the target monitored?	1	Yes/No	
E(b) Monitoring requirement of the outcome and output			
E.4 Does monitor performance include any of the following sectors: ☐ Economic performance (linked with E.6) ☐ Environmental performance (linked with E.7) ☐ Social performance (linked with E.8)	3	Yes/No (Each item score is 1)	

GPN Measurement Methodology Questionnaire			
INDICATORS AND QUESTIONS	SCORE	RESPONSE	DESCRIBE AND PROVIDE THE SUPPORT DOCUMENTS
E.5 How are monitored: 　Please choose: 　☐　Via internal, such as survey, self-assessment, annual report 　☐　Via external report	3	Yes/No (Each item score is 1.5)	
E(c) Actual outcome			
E.6 Actual economic performance result for green products application: 　☐　1 point: 61-70% of the similar product procurement scale 　☐　2 points:71-80% of the similar product procurement scale 　☐　3 points:81-90% of the similar product procurement scale 　☐　4 points: ≥ 91% of the similar product procurement scale [Note: The calculating formular is The priority procurement of green products scale/the procurement scale of similar products×100%]	4	Each item score is 1	
E.7 Actual environmental performance result for the green products application: 　☐　GHG emission reduction 　☐　Pollution reduction 　☐　Resources efficiency 　☐　Others such as circularity	2	Each item score is 0.5	

GPN Measurement Methodology Questionnaire			
INDICATORS AND QUESTIONS	SCORE	RESPONSE	DESCRIBE AND PROVIDE THE SUPPORT DOCUMENTS
E.8 Actual social performance ☐ Impact: Company green transition promotion, adoption rate for policy recommendation, or stakeholder satisfaction rate, or labelled company number increase rate ☐ Credibility: Number of positive reported by media, endorsed or acceptance by international organizations or third party ☐ Traceability and chain of custody ☐ Compliance with national labor regulation or ILO ☐ Promote SMEs	2	Each item score is 0.4	
E.9 Does use any form of benefit calculator to measure: ☐ Environmental economic performance ☐ Social economic performance	2	Each item score is 1	
Note: 1.IGPN mission is: Globally promote the spread of environmentally friendly product and service development and Green Purchasing activities; Internationally share information and know-how on Green Purchasing and environmentally friendly products and services; Harmonize the efforts of Green Purchasing and the development of environmentally friendly products and services from a global viewpoint. http://www.igpn.org/about/index.html; 2.Member here refer those who are eligible with the duty and responsibility of the membership for the GPN. 3.Stakeholder here refer: all relevant parties, agencies, or person who have activity with the GPN.			