



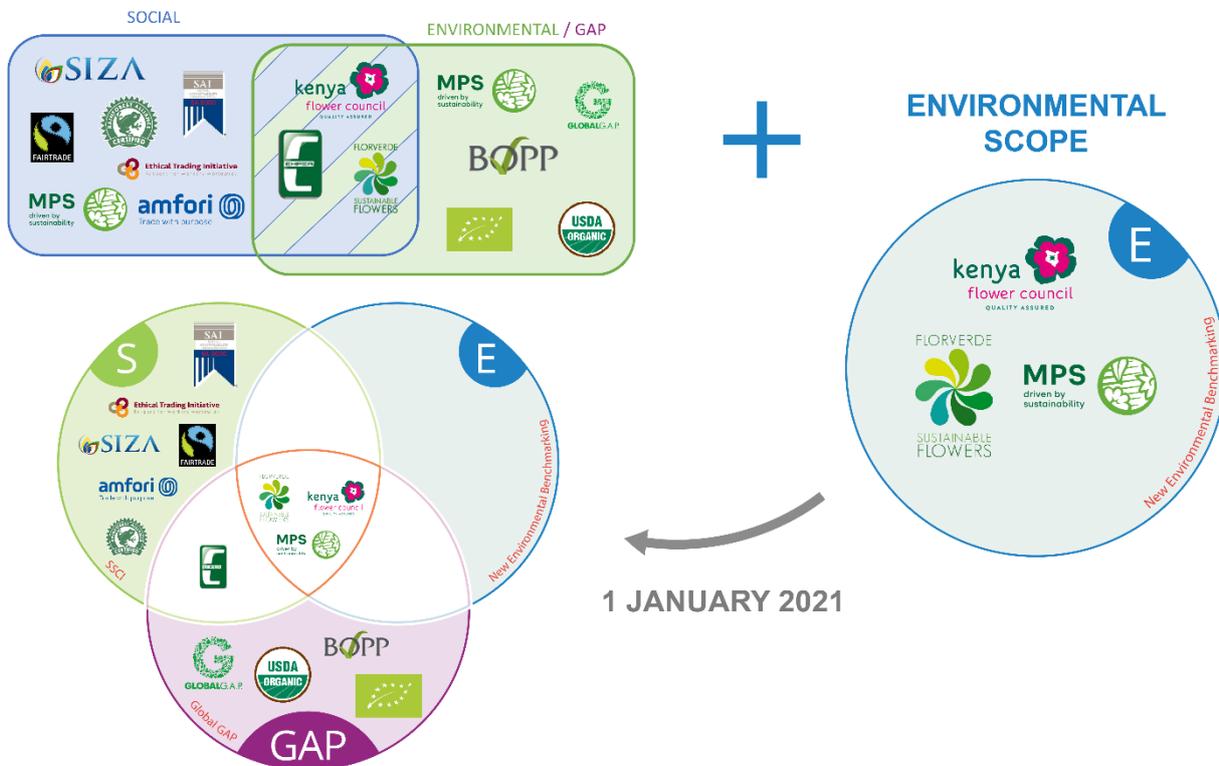
FLORICULTURE SUSTAINABILITY INITIATIVE

EXPLANATORY DOCUMENT ON FSI ENVIRONMENTAL BENCHMARKING

- To the attention of FSI members -

1. Introduction

Currently the FSI Basket of Standards includes a set of 14 benchmarked social and agricultural sustainability compliance standards. It is used as an instrument to identify, measure and promote responsible sources of flowers & plants. Because the FSI benchmark reflects current practice, FSI has updated the Basket towards 2020 by adding environmental benchmarking criteria with an emphasis on reliable data and record-keeping.



2. Objectives

The additional environmental benchmarking is not a new standard nor replacing current benchmarks. It is a set of benchmarking criteria supporting the mainstreaming of environmental principles across compliance standards, strengthening the FSI basket as international reference for sustainability practices. It supplements the existing Social (GSCP/SSCI) and Agricultural (GlobalGAP) benchmarking.

Standards adopting the new criteria contribute to preparing growers and the sector for relevant market demands through:



1. the adoption of standardized record keeping on key inputs;
2. the assurance of quality performance of standards and audits;
3. transparency and the comparison of performance over time and space.

3. Process

After 2020, sustainable production under FSI will be defined according to the combined benchmarks on Agricultural, Social and Environmental practices.

2019 and 2020 will serve as a transition period, during which scheme owners can start adopting the new criteria and already be recognised in the environmental dimension of the FSI Basket of Standards on the basis of a self-declaration. In 2020 a formal benchmark will follow.

Schemes are admitted by undersigning the policy document agreeing on the 2020 criteria for benchmarking and shall provide updates on progress for criteria not already met during 2019-2020.

4. Criteria in scope¹

One (1) general criterion for not already benchmarked Schemes and eight (8) new criteria not already covered by current benchmarks GlobalGAP or in GSCP/SSCI are identified in the new environmental scope. They consist of two main parts:

- **Environmental criteria** that are typically found in codes of conducts (e.g. related to agrochemicals, water etc.) with the clear indication of the format in which data should be recorded;
- **Scheme management criteria:** criteria that ensure a quality performance of standards (e.g. standard setting mechanism) and define the minimum requirements for the audit protocols.

Number	Environmental Criteria	Level
3.8	Demonstrable IPM actions, per crop (IPM plan).	REQUIRED
3.30.	Comply with lists of prohibited pesticides	REQUIRED
4.6	Awareness of water stress	REQUIRED
Number	Scheme Management Criteria	Level
A1.01	Scheme owner entity and accredited audits	REQUIRED
B3.01/09	Auditor competence to evaluate environmental data.	REQUIRED
B4.04	Audits for certificate renewal	REQUIRED

¹ Full technical description of the criteria is available in the ANNEX



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B7.03	Farms to record use of fertilizer, pesticide, water and energy and share data with scheme owner	REQUIRED
B7.04	Scheme owner provides farms with aggregated comparisons	REQUIRED
B7.05	Farmer allows certification body to access data	REQUIRED

- **Optional consideration:** Residue testing for pesticides is offered as an optional means of verification of record keeping.

5. Impact on measuring

This environmental scope is still voluntary, adoption will be required by 2020. Meanwhile, users of the Basket and reporting FSI members can start including the new dimension in their measuring and already show improvements and best practices, as well as encouraging standards and growers to implement the new requirements.



IDH/FSI new environmental benchmarking

*Update V1:
19 OCTOBER 2019*



the sustainable
trade initiative

Agenda



- Reinforce the ambition on environment
- Not a new standard, but new benchmarking criteria
- Systematic process to identify criteria
- Identified benchmarking criteria for 2018
- Next steps

Necessity to increase the ambition on environment



Growers: IPM practices adopted, now time to identify and quantify active ingredients and environmental impact

Best practices:

- Industry standards register data on full scope of pesticide use in a central database
 - Some standards developed their toxic load indicator to evaluate impact
- ➔ Desirability to develop an enhanced FSI environmental benchmark to:
1. Ensure adoption of standardized records keeping of key inputs by growers
 2. Ensure reliable means to verify records and practices during the audit
 3. Enable a comparison of performance over time and space

.... thus the need to work on an enhanced benchmarking system.

For existing benchmarked standards this new system will remain **optional until 2020**, and open for both existing and new standards that already want to be benchmarked.

Process followed to identify criteria

- External consultant (Juan Carlos Isaza-Kasolis) hired in June 2018
- Review of FSI standards
- Reference to GlobalG.A.P criteria as starting point
- Reference to new SSCI criteria on scheme management
- External review done by experts

8 identified criteria in scope for the 2018 benchmarking are specified in the next slides.

Schemes to be recognized for the environmental scope of the FSI Basket can be admitted by undersigning the policy document on **FSI Environmental benchmarking**, agreeing to the 2020 criteria for benchmarking.

For those criteria not already met, Scheme Owners shall provide updates on progress made during 2019 and 2020.

In 2019 and 2020 the criteria could be revisited by the FSI Board and adjusted.

Criteria in scope for benchmarking



No.	Scheme Management Criteria	Level
A1.01	Scheme owner entity and accredited audits	REQUIRED
B3.01/09	Auditor competence to evaluate environmental data.	REQUIRED
B4.04	Audits for certificate renewal	REQUIRED
B7.03	Farms to record use of fertilizer, pesticide, water and energy and share data with scheme owner	REQUIRED
B7.04	Scheme owner provides farms with aggregated comparison reports	REQUIRED
B7.05	Producer allows certification body to access data	REQUIRED
Number	Environmental Criteria	Level
3.8	Demonstrable IPM actions, per crop (IPM plan)	REQUIRED
3.30.	Comply with prohibited pesticide lists	REQUIRED
4.6	Awareness of water stress	REQUIRED

Schemes that have not yet been benchmarked against GG and GSCP must adhere to the benchmarking criteria AND:



- A1.01 The Scheme Owner shall be an organization that is a legal entity, which could be held legally responsible for the schemes' operations.
- A1.02 The scheme cannot be managed or owned in whole or in part by an audit firm or group of audit firms to ensure they are not directly engaged in the auditing or certification of the program.
- B1.01 The Scheme Owner shall specify the approach to oversight of audit firms that are approved to audit their scheme. At a minimum, Scheme Owners shall require that audit firms achieve and maintain accreditation against ISO/IEC 17065:2012.

B3.01 / B3.09

The scheme owner shall ensure that audit firms base the recognition of the auditors in relation to the relevant scopes.



- Auditors must be approved by the Certification Body against defined criteria.
- Auditors should have the relevant technical knowledge to perform environmental audits and have a Farming, Agronomy or Environmental sciences diploma.

B3.01 / B3.09

The scheme owner shall ensure that audit firms base the recognition of the auditors in relation to the relevant scopes.

- It is recommended that auditors have the following technical knowledge:
 - Plant nutrition, fertilizer needs and risks, reliability of NP records.
 - Proper handling of PPP risks, reliability of PPP records, residue testing, ability to do good sampling.
 - IPM for crops in the region; determine state of the IPM system.
 - Efficient use of water sources; estimating efficient use of rainwater, technical understanding of irrigation systems, reliability of Water records and estimations (rainwater, efficient use).
 - Estimating / measuring energy use and efficiency, renewable sources, greenhouse gas emissions.
 - Waste management
 - Conservation and biodiversity actions.

B4.04

The scheme owner shall require that audits for certificate renewal take place every year. The audit is complete and includes at least, all obligatory / mandatory scheme requirements.

- A consideration on spacing audits every three (3) years is possible only if it can be justified based on good performance from data surveillance, periodic desk audits and residue testing.
- For those schemes including independent residue testing, the scope and method for sample collection and testing is described in criteria B4.12 (optional residue testing)
- The scheme owner shall require audit firms to carry out periodic surveillance audits at sufficiently close intervals to verify compliance with the standards' requirements.

The rationale behind these intervals shall be clearly defined and transparent.

B7.03

The scheme owner shall require growers to keep records

- Collect and input data on a daily basis for *PPP* and *Fertilizers* and at least on a monthly/4-week intervals basis for *Water* and *Energy*
- Using digital, standardized formats and units for fertilizers, pesticides (including registered bio pesticides), water and energy
- Upload the records to the scheme owner on a monthly/4-week intervals basis

Scheme owners can assist growers with providing services to facilitate the daily/monthly/4-week intervals record keeping.

Standardized formats and units as described in the next slides

B7.03 Shareable fertilizer data

Total N used in the farm per month: N kg/ha.

Total P used in the farm per month: P kg/ha.

Type of Records	What is measured?	Units	Area	Input
Use of fertilizers with Nitrogen	Every fertilizer with N.	Kg of N	Hectare (ha)	Daily/ After application
Use of fertilizers with Phosphorus	Every fertilizer with P.	Kg of P	Hectare (ha)	Daily/ After application

- **Soil and fertilizers expected outcomes:** Optimize use of nutrients. Avoid chemical build up in soil and pollution of water sources.
- **Purpose:** Measure amount of N and P applied.
- **Indicator:** Total number of kilograms of Nitrogen (N) and Phosphorus (P) used / divided by total number of hectares in production.

B7.03

Shareable pesticide data



Names of active ingredients of PPP used.

Total PPP used per crop per month: kg a.i./crop/ha.

Type of records	What is measured?	Units	Area	Input
Names of PPP applied AND Amounts of PPP applied.	Active ingredient of (pesticide)	Kilograms	Hectare (ha)	Daily/ After application

Name of PPP: Trade name, active ingredient, CAS number.
Kg or Liters of commercial product applied
Area of application
Concentration of a.i. (%) of active ingredient in commercial product.

- **Pest control expected outcomes:** Minimize the use of chemical pesticides. Improve knowledge-based capacity to manage pests based on IPM. Avoid pollution of the environment.
- **Purpose:** measure intensity of input use (PPP). /hectare/ month.
- **Indicator:** Per crop, per farm possible, especially in cases where a farm has multiple crops in small areas.

B7.03 Shareable water data

Percentage of water abstracted of total water used (%)

Type of Records	What is measured?	Units	Time period
Abstraction	Total water abstracted from a source per week or month. Percentage that is applied as irrigation.	M3	monthly /4-week intervals
Irrigation applied	Total water used in crop irrigation per week or month.	M3	monthly /4-week intervals

- **Water expected outcomes:** Minimize water abstraction and maximise rainwater capture and water recycling. Avoid pollution of water courses.
- **Purpose:** Measure efficiency in use of water resources.
- **Indicator :** Ratio of volumes of water withdrawn within total volumes of water used in irrigation, or main use.

B7.03 Shareable energy data

Total energy used in the farm per month: kWh/ha.



Type of Records	What is measured?	Units	Area	Time period
Total energy used in production	Sum of all energy used from electricity, fuel, others, distinguish between renewable and non-renewable sources.	kWh	Hectares (ha)	monthly /4-week intervals

- **Energy expected outcome:** Efficient use. Reduce use of non-renewable sources.
- **Purpose:** Measure energy use per hectare (in production and processing).
- **Indicators:**
- Include all sources. Conversion factors available at farm.
- Data measured directly, or assessed from fuel records.

B7.04

The scheme owner shall aggregate the information and prepare comparison reports for the participants.

Consolidated reports will be presented electronically for comparison on a monthly/4-week intervals basis, names of individual flower growers will be kept confidential.

B7.05

The producer shall authorize Certification Bodies access to records for the purpose of confirming evidence as found during on-site audits.

3.8 The standard shall require that the farm has a documented IPM plan describing the strategies being adopted.

- The document describes **per crop** the pests (including insects, diseases and weeds) of economic importance. For each pest, there are images showing how it can be **recognized**, including **symptoms** on an affected plant, description of the **life cycle**, of the **favorable** conditions for propagation of the pest and the (economic) intervention threshold. The plan should include possible **preventive** measures and those employed, as well as, the pest **monitoring** methods used and records of the monitorings made. Interventions, should be listed and those used, based on **threshold**, should be recorded, with justification (e.g. reason for PPP choice). Measures to avoid the buildup of PPP **resistance** (e.g. **rotation** of PPP mode of action) should be explained.

3.30.

The standard shall require that producers do not use:

- PPP banned by the appropriate governmental organization for use in the country
- PPP not registered for use on the crop against the target pest (where this is required in the country's registration process)

And

- Advice growers on minimizing PPP listed as persistent organic pollutants, in Annex A of the Stockholm Convention and Extremely hazardous PPP as listed under the WHO 1a
- Send growers a warning when a PPP has been used on a crop where it is not registered for use

An updated list of approved PPP in the country and allowed PPP per crop as indicated by the appropriate governmental authority must be kept at the farm.

4.6 "Where information is known to be available, the standard shall require that producers are aware of regional concerns on water sources under stress."

Some water sources are identified to be under stress. The producer must be aware of regional concerns and mindful of the interests of other users.

B4.12 OPTIONAL

The Scheme Owner can offer multi residue testing for pesticides as an additional means of verification of record keeping.

- The lab test results will reinforce records of pesticide use.
- The pesticide residue testing should cover a broad spectrum of active ingredients, including non-approved products
- The scheme owner will inform the grower about the sample taking, its purpose, method and when/how the results will be shared with the grower.
- The purpose for sample taking is to validate record keeping and a check on legal and permitted use of pesticides.
- The sample taker can be the auditor, a scheme owner delegate or a lab employee. The sample taker follows the instructions on sample taking and collection method and avoiding contamination given by the scheme owner.
- The sample taking itself will be un-announced, or at least not be announced more than 5 days in advance.
- The sample will be taken from the main crop, randomly selected and ideally composed of a variety of leaves and at least 200 grams in total.
- Laboratories performing the residue tests must be ISO 17025 accredited or nationally approved for the purpose of the test being done.