

Global Criteria Indicator Development Report Version 1.0

Prepared for: The Dairy Sustainability Framework



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1. PURPOSE

The Dairy Sustainability Framework (DSF) is in the process of developing high level indicators for the eleven global Sustainability criteria. These indicators will enable the sector to quantify the aggregate global progress across the 11 criteria. Two of the eleven Global Criteria indicators were developed in 2016, and four will be developed in 2018. The five high level indicators included in the 2017 indicator development were:

- Soil – Quality and Retention
- Soil Nutrients
- Biodiversity
- Water Availability and Quality
- Working Conditions

These 11 criteria enable the DSF to align the sector and publicly report global progress of the dairy industry across a range of sustainability landscapes. This process follows a common continuous improvement framework (Figure 1). The DSF will capture existing data from diverse dairy production systems from a range of geographies to benchmark progress against a baseline generated for each of the criteria. The scale of this project demands that the chosen indicators be both meaningful and measurable.

The previous report (Status Assessment of High Level Indicator Reporting Metrics, June 2017) explained the creation and distribution of surveys to the DSF membership and the analysis of survey results for identifying candidate indicators. Surveys were utilized to help inventory and identify the indicators that members felt were most critical to the operation of producers, most important to their customers, and that DSF members currently measure. The survey addressed a total of 49 Indicators across the five Criteria.

This report will focus on selection of final indicators from the list of candidate indicators that were identified through the survey score analysis and efficacy analysis (Figures 2 and 3). Top candidate indicators were scored on the following criteria:

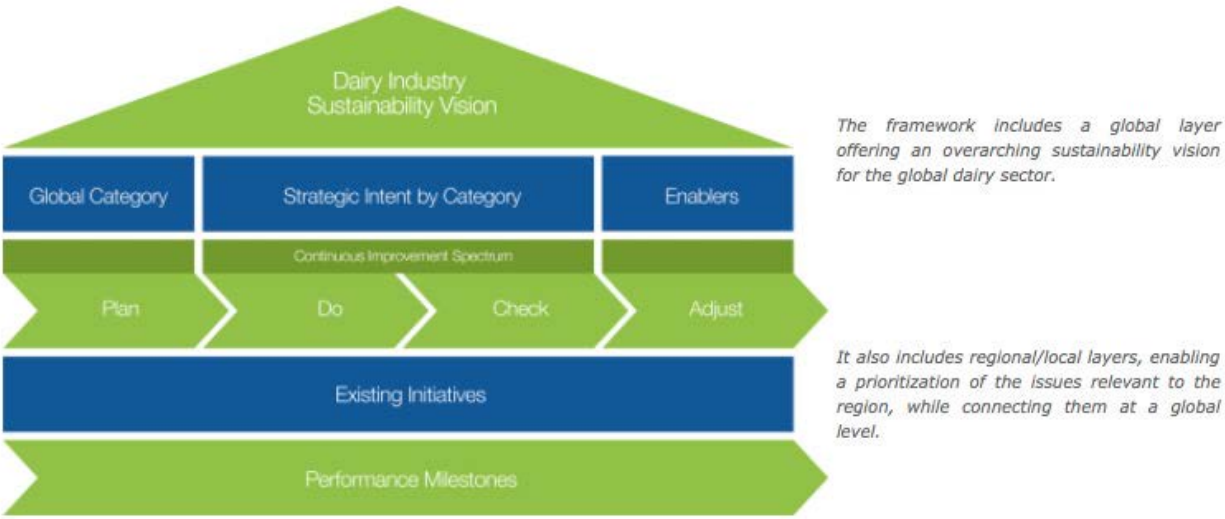
- **Implementability:** Can the indicator be implemented across geographies and production scales?
- **Effectiveness:** Can improving the indicator improve the Global Criteria directly?
- **Precedent:** Are producers collecting data on the Indicator, or is the Indicator used in other dairy or beef reporting efforts?

Top candidate indicators were identified to the DSF membership through webinars and on the website dsfglobalcriteria.org. Members were given the opportunity to comment on the top candidate indicators, and those comments will be addressed in this report, along with further details of how the indicators would be developed to meet the requirements of being both meaningful and

measurable across diverse dairy production systems from a range of geographies, whilst appreciating their high level nature.

The framework developed by DSF builds upon existing initiatives across member organizations and regions. This process acknowledges the power of performance milestones developed by national, regional, and/or enterprise level organizations. The process of continuous improvement, Plan-Do-Check-Adjust, is the purview of those member organizations. DSF provides the framework for overarching sustainability vision for the global dairy sector (Figure 1).

Figure 1: DSF Sustainability Assurance Framework



The role of DSF is to provide overarching goals and alignment of global dairy sector's actions on the path to sustainability. The eleven global criteria and associated strategic intents provide common sustainability priorities for the community of dairy producers around the world. These represent the aspirational goals of the global dairy community (Figure 2). These aspirational goals are large in scope, and very general. Aspirational goals are directionally correct in that they suggest improvement, reduction, increasing, and other very general terms to describe the desired outcomes for the dairy community. Strategic goals are time bound with associated quantitative changes; these are the responsibilities of national, regional, and enterprise organizations, and are beyond the scope and mission of DSF to define and implement (Figure 2).

Figure 2: DSF Criteria with Strategic Intent are Aspirational Goals for the Global Dairy Community



2. CANDIDATE SUSTAINABILITY INDICATOR SELECTION

2.1. Multi-Stakeholder Analysis and Deliberation Process

The survey distributed to DSF members included questions about candidate indicators for each of the five Global Criteria. Each criteria can be measured by a variety of indicators, so the number of questions varied by criteria. A total of 49 indicators were addressed in the survey, and a scoring rubric was utilized to score each indicator based on the survey results. Total scores and Matrix Priority scores were calculated from the scoring rubric, and indicators were ranked by these scores for each criteria. Survey analysis was explained in detail in the previous report (Status Assessment of High Level Indicator Reporting Metrics, June 2017).

After survey analysis, the top scoring candidate indicators were ranked on implementability, effectiveness, and precedent to calculate the Efficacy Analysis score (Figure 3). The indicators with the highest efficacy analysis scores were identified as top candidate indicators. These candidate indicators were shared with DSF members and other stakeholders through webinars and a web-based comment period, where respondents provided feedback on each candidate indicator. The comments are summarized in this chapter for each candidate indicator. Detailed comments are provided as an Annex in this report.

1 *Figure 3: Efficacy Scoring Criteria for Top Candidate Indicators.*

Scoring Criteria for Top Candidate Indicators

Implementability: Can the indicator be implemented across geographies and production scales?

High: 3 Medium: 2 Low: 1

Effectiveness: Can improving the indicator improve the Global Criteria directly?

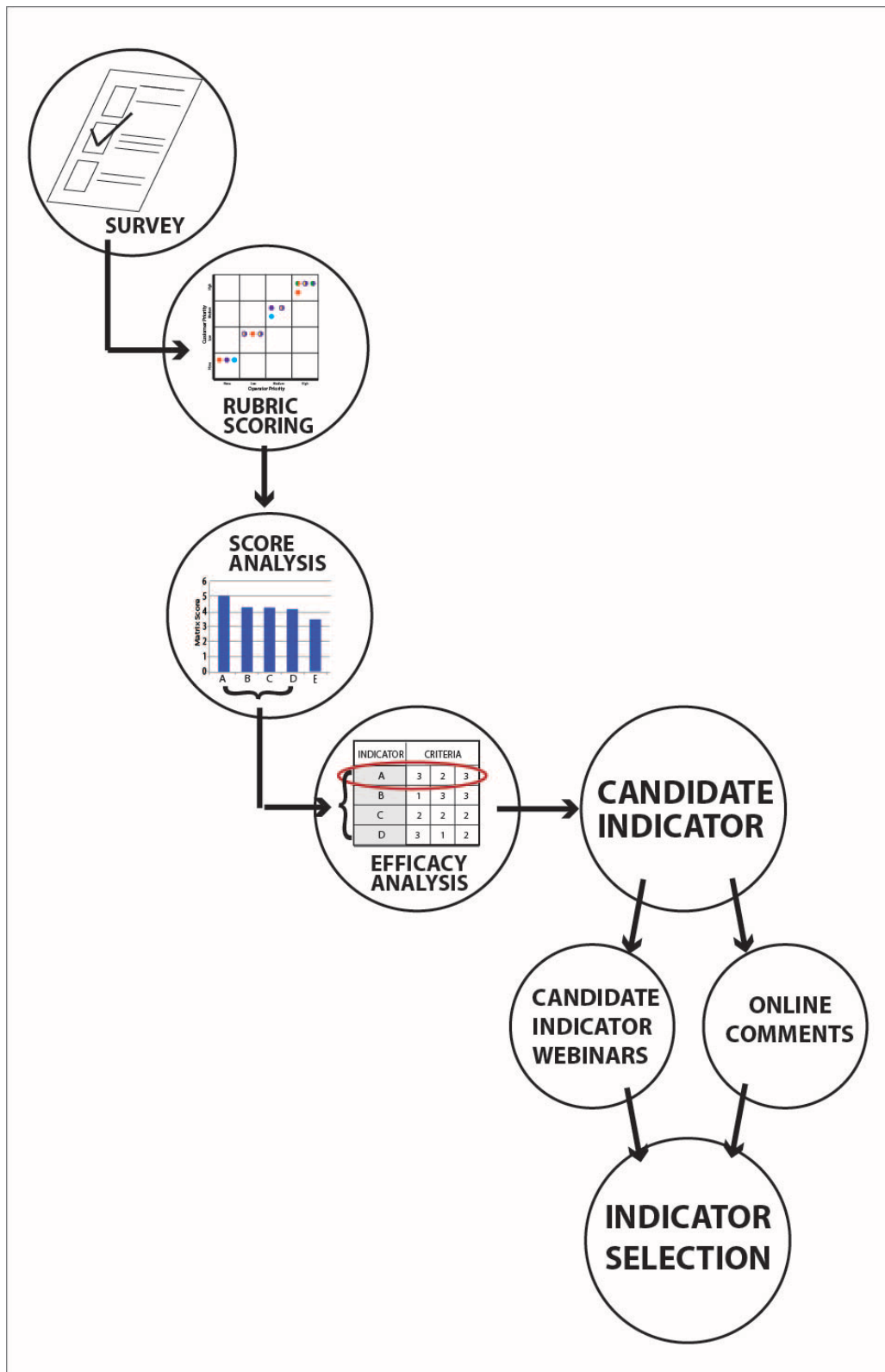
High: 3 Medium: 2 Low: 1

Precedent: Are producers collecting data on Indicator, or is the Indicator used in other dairy or beef reporting efforts?

High (>50%): 3 Medium (25-50%): 2 Low (<25%): 1

2

Figure 4: DSF Candidate Indicator Selection Approach



2.2. Soil Nutrients Candidate Indicator Selection

The scores for the Survey results for the Soil Nutrients Criteria are shown in the table below. Results are arranged from highest to lowest Matrix Priority Score (Table 1). The top scoring metrics were *Percent of suppliers completing nutrient management plan*, *Nutrient management plan in place to optimize nutrient application (C, N, P, K, and S)*, and *Soil nutrient testing is conducted routinely*. The Efficacy Analysis for these three indicators is shown in Table 2.

Table 1: Soil Nutrients Indicator scores based on DSF survey results.

SOIL NUTRIENTS Key Performance Indicator Metric	Total (T)	Data points (N)	Matrix Priority Score	Currently measure metric (% Yes)
Percent of suppliers completing nutrient management plan	93	17	5.47	47 %
Nutrient management plan in place to optimize nutrient application (C, N, P, K, and S)	97	18	5.39	50 %
Soil nutrient testing is conducted routinely	90	18	5.00	47 %
Soil Test Phosphorus (STP) is analyzed to inform fertilization plans	82	17	4.82	44 %
Total Nitrogen (kg per hectare) is analyzed to inform fertilization plans	85	18	4.72	42 %
Percent of suppliers using an effluent management plan	81	18	4.50	26 %
Soil pH levels are measured	76	17	4.47	44 %

Table 2: Efficacy Analysis scoring for Top Candidate Indicators for the Soil Nutrients High Level Indicator

Soil - Nutrients				
Indicator	Implementability	Effectiveness	Precedent	Score
Nutrient management plan in place to optimize nutrient application (C, N, P, K, & S)	2	3	2	12
Soil nutrient testing is conducted routinely	1	3	2	6
Percent (%) of suppliers using an effluent management plan	2	2	1	4

The Efficacy score for the *Nutrient management plan in place to optimize nutrient application (C, N, P, K, and S)* indicator was much higher than the scores for the next closest indicator candidates. These results indicate that the *Nutrient management plan in place to optimize nutrient application (C, N, P, K, and S)* indicator would be reflective of the strategic intents of the Soil Nutrients Global Criteria.

Comments and Questions

Nine respondents submitted comments to the website (dsfglobalcriteria.org) regarding the applicability of the *Nutrient management plan in place to optimize nutrient application (C, N, P, K, and S)* indicator for the Soil Nutrients Global Criteria. All commenters indicated that the requirements of a Nutrient Management Plan would need to be clearly defined and articulated for the indicator to be meaningful. Two commenters asked if the Nutrient Management Plan would include nutrient budgets to optimize crop production while minimizing environmental losses. Two commenters expressed concern about how the indicator would be verified or evaluated, and one commenter suggested that the processor/distributor sector could utilize “percent of suppliers completing and implementing a nutrient management plan.”

Response to Comments

The next phase of the continuous improvement process is Indicator Implementation, which involves developing supporting guidance for regional and local membership to benchmark, assess, and improve each indicator. The details that commenters requested should be developed and communicated through a Sustainability Assessment Guide (SAG) created for each indicator by the organization that is implementing the indicator. The continuous improvement process adopted by DSF focuses on benchmarking with implementation addressed in the Indicator through national, regional, and/or enterprise level organizations. These may vary across regions, based upon existing infrastructure and support for assessment and reporting.

Recommended Indicator

The recommended indicator for Soil Nutrients Global Criteria is *Implementation of a Nutrient Management Plan*.

2.3. Soil Quality and Retention Candidate Indicator Selection

The scores for the Survey results for the Soil Quality and Retention global criteria are shown in the table below. Results are arranged from highest to lowest Matrix Priority Score. *Soil quality is maintained or improved by good management practices* had the highest score. The Efficacy Analysis for the top four soil quality indicators is shown in Table 4. The Efficacy score for the *Soil quality is maintained or improved by good management practices* indicator was much higher than the scores for the next closest candidates. These results indicate that the *Soil quality is*

maintained or improved by good management practices indicator would be the most appropriate for the Soil Quality and Retention Global Criteria.

Table 3: Soil Quality and Retention indicator scores based on DSF survey results

SOIL QUALITY & RETENTION				
Key Performance Indicator Metric	Total (T)	Data points (N)	Matrix Priority Score	Currently measure metric (% Yes)
Soil quality is maintained or improved by good management practices	91	18	5.06	28%
Total Organic Carbon (TOC), (g/kg) in soil is monitored & maintained	73	17	4.29	22%
Percent (%) of feed grown with sustainability certification	77	18	4.28	12%
Soil Erosion (tons per hectare) is monitored & minimized	75	18	4.17	17%
Soil aggregate stability is monitored & maintained	59	17	3.47	12%

Table 4: Efficacy Analysis scoring for Top Candidate Indicators for the Soil Quality and Retention High Level Indicator

Soil - Quality & Retention				
Indicator	Implementability	Effectiveness	Precedent	Score
Soil quality is maintained or improved by good management practices	2	3	2	12
Total Organic Carbon (TOC), (g/kg) in soil is monitored and maintained	1	3	1	3
Percent of feed grown with sustainability certification	1	2	1	2
Soil erosion (tons/ha) is monitored & minimized	1	3	1	3

Comments and Questions

Nine respondents submitted comments to the website (dsfglobalcriteria.org) regarding the applicability of the *Soil quality is maintained or improved by good management practices* indicator for the Soil Quality and Retention criteria. All commenters indicated that the indicator was very vague and would need to be clearly defined and articulated for the indicator to be meaningful. Commenters recommended definitions of “good soil quality” and “good management practices.” Several commenters expressed concern about the global applicability of the indicator unless

1 regional practices and standards were addressed. One commenter suggested that the soil quality
2 and retention be combined with the soil nutrients global criteria and further indicated it could be
3 helpful to reflect the impact of climate change on soil carbon. One commenter suggested that
4 “Evidence of soil health tests are available and records of management practices performed to
5 enhance soil quality are kept” as an alternative indicator.

6 **Response to Comments**

7 The adoption of good management practices for soil quality is a vague indicator, as the
8 comments suggested. That is because selection and implementation of good soil management
9 practices is very context specific, and must be developed by local stakeholders with knowledge of
10 specific conditions that occur within the affected region. Supporting guidance for regional and
11 local membership to define good management practices for soil quality should be developed by
12 the implementing party. One respondent suggested combining the two global criteria for soil – soil
13 nutrients and soil quality. These criteria do represent similar characteristics in soil systems, and
14 could be combined without loss of impact.

15 **Recommended Indicator**

16 The recommended indicator for the Soil Quality and Retention Global Criteria is *Soil quality is*
17 *maintained or improved by good management practices.*

18 **2.4. Biodiversity Candidate Indicator Selection**

19 The scores for the Survey results for the Biodiversity Global Criteria are shown in Table 5. Results
20 are arranged from highest to lowest Matrix Priority Score. The *Native vegetation is preserved*
21 *where possible, to improve on-farm biodiversity* indicator had the highest score. The Efficacy
22 Analysis for the top six indicators is shown in Table 6. The Efficacy score for the *Native vegetation*
23 *is preserved where possible, to improve on-farm biodiversity* indicator was much higher than the
24 scores for the next closest indicator candidates. These results suggest that the *Native vegetation is*
25 *preserved where possible, to improve on-farm biodiversity* indicator would be the most appropriate
26 to represent the Biodiversity Global Criteria.

Table 5: Biodiversity Indicator scores based on DSF survey results

BIODIVERSITY	Total	Data points	Matrix Priority Score	Currently measure metric (% Yes)
Key Performance Indicator Metric	(T)	(N)		
Native vegetation is preserved where possible, to improve on-farm biodiversity	76	15	5.07	33%
“No Net Loss” principles for critical habitat are followed	72	15	4.80	13%
No hunting of rare, threatened or endangered species takes place on the property	76	16	4.75	29%
Riparian zones left undisturbed (% of suppliers)	66	14	4.71	27%
Environmental management programs utilized (% of suppliers)	80	17	4.71	38%
Percent (%) of feed grown with sustainability certification	74	16	4.63	6%
Area of native trees (hectares) left undisturbed or planted	65	15	4.33	27%
FSC packaging used (% of total packaging purchased)	60	14	4.29	27%
Shelterbelt planting zones utilized (% of suppliers)	57	14	4.07	13%
Habitat corridors utilized (% of suppliers)	52	14	3.71	7%

Table 6: Efficacy Analysis scoring for Top Candidate Indicators for the Biodiversity Global Criteria

Biodiversity				
Indicator	Implementability	Effectiveness	Precedent	Score
Native vegetation is preserved where possible, to improve on-farm biodiversity	3	3	2	18
“No Net Loss” principles for critical habitat are followed	3	3	1	9
No hunting of rare, threatened or endangered species takes place on the property	3	2	2	12
Riparian zones left undisturbed (% of suppliers)	3	2	2	12
Environmental management programs utilized (% of suppliers)	2	2	2	8
Percent (%) of feed grown with sustainability certification	1	2	1	2

Comments and Questions

Ten respondents submitted comments to the website (dsfglobalcriteria.org) regarding the applicability of the *Native vegetation is preserved where possible, to improve on-farm biodiversity* indicator for the Biodiversity Global Criteria. All commenters indicated that the indicator was very vague and would need to be clearly defined and articulated for the indicator to be meaningful. Commenters indicated the need for clarification of “native vegetation,” “where possible” and “good management practices.” Several commenters expressed concern about the global applicability of the indicator unless regional practices and standards were addressed, and about how this indicator would be reported and verified. Several commenters requested that the IDF Guide on biodiversity be utilized for this indicator. One commenter suggested an alternative metric of “Percent of permanent grassland and land not in production (woodland, hedges, waterways),” and another suggested “Percent of land related to the total land that is maintained in cooperation with a nature conservation association.”

Response to Comments

Biodiversity is one of the most complicated and integrated criteria in sustainability systems. The indicator is not intended to be a prescriptive method but rather a common strategy for driving the criteria’s strategic intent. The details that commenters called for are reasonable, and should be developed as a local SAG. The IDF Guide on Biodiversity recommended by several commenters is one possible framework that could meet this criteria. The IDF protocol might have limited application in some regions where farm-scale data are difficult to aggregate and analyze.

Recommended Indicator

The recommended indicator for the Biodiversity Global Criteria is *Native vegetation is preserved where possible, to improve on-farm biodiversity*.

2.5. Water Availability and Quality Candidate Indicator Selection

The scores for the Survey results for the Water Availability and Quality Global Criteria are shown in the table below. Results are arranged from highest to lowest Matrix Priority Score. The indicator *Water Quality testing is routinely conducted* had the highest matrix priority score. The Efficacy Analysis for the top six candidate indicators is shown in Table 8.

Table 7: Water Availability & Quality Candidate Indicator scores based on DSF survey results

WATER AVAILABILITY & QUALITY	Total (T)	Data points (N)	Matrix Priority Score	Currently measure metric (% Yes)
Key Performance Indicator Metric				
Water quality testing is routinely conducted	87	15	5.80	73%
Effluent management plan in place to minimize impacts to water quality	86	15	5.73	56%
Nutrient management plan in place to minimize impacts to water quality	82	15	5.47	40%
Any localized contamination of ground or surface water is reported to local authorities	81	15	5.40	67%
The quality & supply of surface & ground water is maintained and improved	75	14	5.36	50%
Water consumption (L/kg of finished product) is monitored and a plan is in place to minimize consumption	80	15	5.33	56%
Water recycling and re-use implemented	84	16	5.25	53%
Natural wetlands are not drained and native vegetation is maintained	69	14	4.93	27%
Riparian plans are in place and implemented for waterways & wetlands	66	14	4.71	40%
Blue water footprint (L per unit product) is monitored to reduce wasteful water use	70	15	4.67	31%
Good irrigation management practices are used to improve water use efficiency and reduce waste	74	16	4.63	50%
Fertilizer application and irrigation scheduling coordinated with weather	73	16	4.56	31%
Waterways are fenced off to exclude stock	67	15	4.47	40%
Incidents of algal bloom or water pollution directly related to production are monitored and a plan is in place to minimize events	59	14	4.21	33%
WRI aquaduct is utilized for planning & assessment	39	14	2.79	6%

Table 8: Efficacy Analysis scoring for Top Candidate Indicators for the Water Availability & Quality High Level Indicator

Water Availability & Quality				
Indicator	Implementability	Effectiveness	Precedent	Score
Water quality testing is routinely conducted	3	3	3	27
Effluent management plan in place to minimize impacts to water quality	3	3	3	27
Nutrient management plan in place to minimize impacts to water quality	3	2	2	12
Any localized contamination of ground or surface water is reported to local authorities	3	2	3	18
Water consumption (L/kg of finished product) is monitored and a plan is in place to minimize consumption	3	2	3	18
Water recycling and re-use implemented	2	2	3	12

The Efficacy scores for *Water quality testing is routinely conducted* and *Effluent management plan in place to minimize impacts to water quality* were both 27. These values were much higher than the next ranking efficacy scores. Effluent management plans include water quality testing regimes, and thus the recommended indicator for water quality is adoption of effluent management plans. The Water Availability and Quality Global Criteria represent two types of measurement: volume and quality. The highest scoring indicator for water volume was *Water Consumption is monitored and a plan is in place to minimize consumption*.

Comments and Questions

Eight respondents submitted comments to the website (dsfglobalcriteria.org) regarding the applicability of the *Water quality testing is routinely conducted* indicator for the Water Availability and Quality Global Criteria. All commenters suggested that the indicator was vague and would need to be clearly defined and articulated for the indicator to be meaningful. Commenters indicated that clarification was needed regarding whether water testing was for incoming or outgoing water. Several commenters further expressed the need for identification of testing parameters, frequency of testing, and location of testing. Some commenters also wondered if this indicator was more appropriate for processors than for producers.

Three DSF members submitted comments regarding the applicability of the *Effluent management plan in place to minimize impacts to water quality* indicator. All commenters indicated that the indicator needed further clarification. Commenters wondered if the indicator would align with local and regional effluent regulations or if there would be extra requirements beyond meeting those regulations.

Response Comments

Reviewers suggested differences in water quality and quantity require two indicators. For *Water Availability and Quality*, the candidate indicators for water quality that had the highest efficacy scores were *Effluent management plan in place to minimize impacts to water quality*, and *Water quality testing is routinely conducted* to indicate the condition of water quality. These two indicators apply to discharged water quality from the dairy production process. Effluent management plans include water quality testing, so encompass the more limited indicator. The details that member commenters requested should be developed and communicated through a SAG created for effluent management plans. The issues associated with water consumption can be difficult, since inefficient water use and expanding water scarcity are the issues of concern. Water consumption is not a desirable indicator as there should always be adequate quantities of clean water available to the cow for consumption to support animal health and welfare. The larger issue is water waste associated with the entire operation. Therefore, a more targeted indicator would be *Water Use Efficiency for Production*, which includes wash-down, cleanout, and other water resource demands, with the eye to efficiency without compromising animal health or process sanitation. The strategies for increasing water use efficiency may vary across regions, based upon existing infrastructure and support for assessment and reporting.

Recommended Indicator

The recommended indicators for the Water Availability and Quality Global Criteria are *Effluent management plan in place to minimize impacts to water quality*, and *Water Use Efficiency for Production*.

2.6. Working Conditions Candidate Indicator Selection

The scores for the Survey results for the Working Conditions Global Criteria are shown in the table below. Results are arranged from highest to lowest Matrix Priority Score. The metric *Employees are paid a living wage* had the highest matrix priority score. The Efficacy Analysis for the top six candidate indicators is shown in Table 10.

1 *Table 9: Working Conditions Candidate Indicator scores based on DSF*
2 *survey results*

WORKING CONDITIONS	Total (T)	Data points (N)	Matrix Priority Score	Currently measure metric (% Yes)
Key Performance Indicator Metric				
Employees are paid a living wage	82	14	5.86	67%
Number of accidents per year monitored	75	13	5.77	60%
Equal opportunities assessed (% gender balance)	74	13	5.69	50%
Percent (%) of suppliers enrolled in National QA (Quality Assurance) programs	88	16	5.50	65%
Number of lost work days per year due to accidents or injuries monitored	70	13	5.38	47%
Plans are in place to reduce the risk of employee exposure to pesticides and chemicals	69	13	5.31	53%
Employee benefits provided	63	13	4.85	43%
A plan is in place to improve Employee retention	63	13	4.85	43%
Number of employees enrolled in professional development courses monitored	66	14	4.71	50%
Number of employees engaged in health & safety management	55	12	4.58	53%
Staff trained in harassment prevention (%)	55	12	4.58	14%
Labor hours per unit production assessed	55	13	4.23	40%

Table 10: Efficacy Analysis scoring for Top Candidate Indicators for the Working Conditions High Level Indicator

Working Conditions				
Indicator	Implementability	Effectiveness	Precedent	Score
Employees are paid a living wage	3	3	3	27
Number of accidents per year monitored	3	3	3	27
Equal opportunities assessed (% gender balance)	2	2	3	12
Percent (%) of suppliers enrolled in National QA (Quality Assurance) programs	2	3	3	18
Number of lost work days per year due to accidents or injuries monitored	3	3	2	18
Plans are in place to reduce the risk of employee exposure to pesticides and chemicals	3	3	3	27

The Efficacy scores for *Employees are paid a living wage*, *Number of accidents per year monitored*, and *Plans are in place to reduce the risk of employee exposure to pesticides and chemicals* were all 27. These values were much higher than the next ranking efficacy scores. These results indicate that one of these indicators could be the most appropriate for the Working Conditions Global Criteria.

DSF Member comments and questions

Seven DSF members submitted comments to the website (dsfglobalcriteria.org) regarding the applicability of the top indicators for the Working Conditions Global Criteria. All commenters indicated that *Employees are paid a living wage* needed further definition and clarification. Commenters mentioned the regional aspect of wages, which could make this indicator complicated for global companies. Several commenters mentioned that wage is less accurate of a measure for those suppliers who provide benefits like housing, transportation, or health care in addition to wages. Some commenters indicated that wages are often regulated by governments so they felt the indicator was already addressed at that level. Several commenters preferred the indicators that addressed worker safety over wages.

Four DSF members submitted comments regarding the *Number of accidents per year monitored* indicator. Commenters indicated that the indicator would need further development and clarification regarding the threshold definition of “accident.” Commenters indicated that the indicator would need further context of the total number of employees and number of working hours per day to be meaningful. One commenter suggested that “lost work days per total work days due to accidents” could be a more meaningful indicator.

Two commenters addressed the *Plans are in place to reduce the risk of employee exposure to pesticides and chemicals* indicator. Commenters indicated that the indicator was vague and

would need further development regarding plan requirements. Commenters suggested that this indicator could be combined with the *Number of accidents per year monitored* as a requirement for a Safety Plan that covers accidents and exposure.

Response to DSF Member Comments

The concerns over the three candidate indicators expressed by commenters were evaluated and resulted in a new candidate indicator. Commenters recommended that living wages would not be an effective indicator because wages paid did not include other methods of compensation such as housing, and because regional living wages are not well defined across global member nations. The other two indicators were suggested to be incomplete but captured a common value – worker safety. These comments resulted in development of a consolidated indicator: *Farm Safety Plan is in place to ensure worker safety*. The definition of the Farm Safety Plan should include requirements regarding both accident monitoring and reducing employee exposure risks.

Recommended Indicator

The recommended indicator for the Working Conditions Global Criteria is *Farm Safety Plan is in place to ensure worker safety* or *Employee Safety Plan is in place to ensure worker safety*.

3. NEXT STEPS IN INDICATOR DEVELOPMENT

The role of DSF in the continuous improvement process is to provide common indicators across the 11 global criteria, and to align benchmarking for those indicators. Improvement processes within each indicator are the responsibility and authority of national, regional, and/or enterprise organizations (Figure 4). The purpose of the indicators is to provide the DSF membership with a common strategy for benchmarking each of the five priority global criteria. It is not the intention of DSF to set strategic goals for each indicator, or to create or implement a process of improvement for each indicator. That role belongs to the national, regional, or enterprise-level organizations that support DSF.

One mechanism DSF members could use for this implementation is to develop a portfolio of Sustainability Application Guides (SAGS) for each indicator. These SAGS could be used to standardize measurements, educate participants, and drive change across the global dairy industry. While these activities are outside the scope of DSF, the Global Criteria and Indicators developed through this document provide a common framework for DSF members to apply to creating a more sustainable global dairy supply chain.