



A collaborative approach to sustainability in the global dairy value chain

Implementation Guide to delivering the Dairy Sustainability Framework

A support document for members

Publication details

The Global Dairy Agenda for Action would like to express their gratitude to Friesland Campina, Fonterra and Arla Foods for investing so much effort in developing this document as a support resource for other dairy businesses who join the DSF and want to make the most of what they are striving to achieve within the common DSF vision.

Thanks must also go to the SAI Platform Dairy Working Group who provided considerable feedback through the development process to ensure that the document is as useful as possible, regardless of the position of the member's sustainability journey.

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Introduction

1.1 General

While dairy is widely recognized as an important part of a healthy diet, there are real and perceived issues related to the sustainable credentials of milk and dairy product production. Through collaborative action, dairy companies and others in the dairy value chain can successfully address these concerns and build for future growth.

This call for action led dairy associations such as the Global Dairy Platform (GDP), International Dairy Federation (IDF), Sustainable Agriculture Initiative (SAI), European Dairy Association (EDA), and others, in cooperation with a number of dairy companies, to develop the Dairy Sustainability Framework (DSF) in 2013.

This Implementation Guide was created to support the implementation of the DSF regardless of your size or position in the dairy value chain.

This document is intended as useful guidance tool in meeting the membership commitments made by members of the DSF though is not a requirement for membership.

1.2 How the Dairy Sustainability Framework works

The DSF provides an ‘umbrella’ mechanism for organizations to map and connect existing sustainability activities with other similar organizations in a globally recognized, coherent way.

It helps reveal opportunities for the development and prioritization of activities to improve performance and to give greater clarity about the options available for delivering a more sustainable dairy industry. The aim is that the Framework will act as a flexible reference tool for the sector, bringing greater continuity and offering guidance on both individual and collaborative action while allowing for continued innovation in approaches to addressing sustainability on a very local and specific level.



The DSF focuses on eleven key sustainability categories, identified as relevant to the global dairy sector. The scope of the DSF is the total dairy value chain.

These eleven sustainability categories were selected based on an independent and in depth analysis of more than one hundred interviews with global dairy and non dairy stakeholders during DSF research conducted in 2012 and 2013.

In a local context, there may be more specific criteria in addition to these categories.



1.3 Strategic Intents of the DSF

Each of the eleven categories has a strategic intent. Strategic intents are what the dairy sector has agreed to strive towards achieving in undertaking activities under each of the 11 Criteria. These are defined in the DSF as:

Figure	Theme	Strategic intent
	Greenhouse Gas Emissions	GHG emissions across the full value chain ¹ are quantified and reduced through all economically viable mechanisms.
	Soil Nutrients	Nutrient application is managed to minimize the impact on water and air, while maintaining and enhancing soil quality.
	Waste	Waste generation is minimized and, where unavoidable, waste is reused and recycled.
	Water	Water availability, as well as water quality, is managed responsibly throughout the dairy value chain.
	Soil	Soil quality and retention is proactively managed and enhanced to ensure optimal productivity.
	Biodiversity	Direct and indirect biodiversity risks and opportunities are understood, and strategies to maintain or enhance biodiversity are established.
	Market Development	Participants along the dairy value chain are able to build economically viable businesses through the development of transparent and effective markets.

Figure	Theme	Strategic intent
	Rural Economies	The dairy sector contributes to the resilience and economic viability of farmers and rural communities.
	Working Conditions	Across the dairy value chain, workers operate in a safe environment, and their rights (based on internationally accepted declarations) are respected and promoted.
	Product Safety & Quality	The integrity and transparency of the dairy supply chain is safeguarded, so as to ensure the optimal nutrition, quality, and safety of products.
	Animal Care	Dairy animals are treated with care, and are free from hunger and thirst, discomfort, pain, injury and disease, fear and distress, and are able to engage in relatively normal patterns of animal behaviour.

1.4 Membership Commitments

By implementing members and regions providing annual progress reports and ensuring specific metrics are applied, the GDA will be able to provide reporting that demonstrates the sector's performance at a global level. Importantly, the data that is provided will also inform on areas of potentially limited progress by the sector and as such provide a targeted focus to research and development programs.

Over a four year period, membership reporting commitments to the DSF are indicated below:

Year 1	Year 2	Year 3	Year 4
<ul style="list-style-type: none"> • Endorse the Criteria and Strategic Intents • Establish appropriate governance for the 'delivery' of the DSF within the organization • Prioritize the 11 Criteria and Strategic Intents for the local region • Provide basic company and existing scheme information to the DSF Secretariat including existing sustainability efforts (within 3 months of membership approval) 	<ul style="list-style-type: none"> • Review existing schemes and amend accordingly in line with DSF Criteria and Strategic Intents as prioritized for the local region • Revise or develop new KPIs/targets for existing schemes • Introduce new aligned schemes as appropriate to local needs including KPIs/targets • Report all new activity and KPIs/targets to DSF Secretariat • Provide progress reports to the DSF Secretariat on existing schemes 	<ul style="list-style-type: none"> • Implement new programs with KPIs/targets. • Relevant progress reporting to update existing schemes to DSF Secretariat • Provide required reporting for aggregation and profiling to DSF Secretariat 	<ul style="list-style-type: none"> • Evaluate existing schemes • Reporting to DSF of changes/progress • Provide required reporting for aggregation and profiling to DSF Secretariat

1.5 Regional Implementation Guide

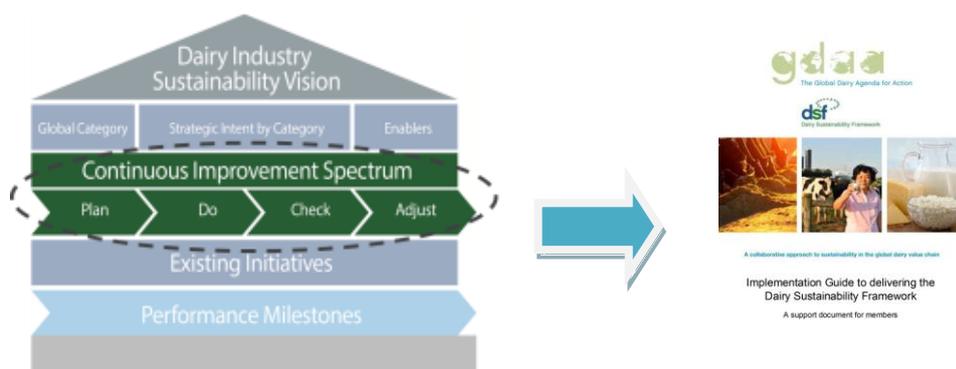
Dairy farming systems and dairy processing systems vary greatly all over the world, with variation particularly apparent between developed and emerging dairy countries. Coupled with this are differences in the local environment, regulations and stakeholder interest.

Rather than striving for a single global 'standard', it makes more sense to seek regional/local implementation, given that regions share similar sustainability challenges and opportunities. The purpose of this guide is to help facilitate the implementation of the DSF at regional/local level. This includes understanding the DSF members' obligation to implement the DSF effectively.

The DSF is taking a different approach to other commodity sustainability programs and as such we need to ensure that there is an appropriate level of robustness within its delivery process to comfort those who have an interest in the sustainability performance of the dairy value chain. A GDAA monitoring model has been developed to collect information about the implementation and subsequent performance of individual initiatives in order to quantify the continuous sustainability performance of the sector as a whole.

The illustration below shows the relationship between the DSF and the Regional Implementation Guide. The Continuous Improvement Spectrum is an essential part of the DSF and is based on the international PDCA, or Plan-do-Check-Adjust, approach.

The phases of the Continuous Improvement Spectrum ('Plan', 'Do', 'Check', 'Adjust') are worked through sequentially in the Regional/local Implementation Guide steps.



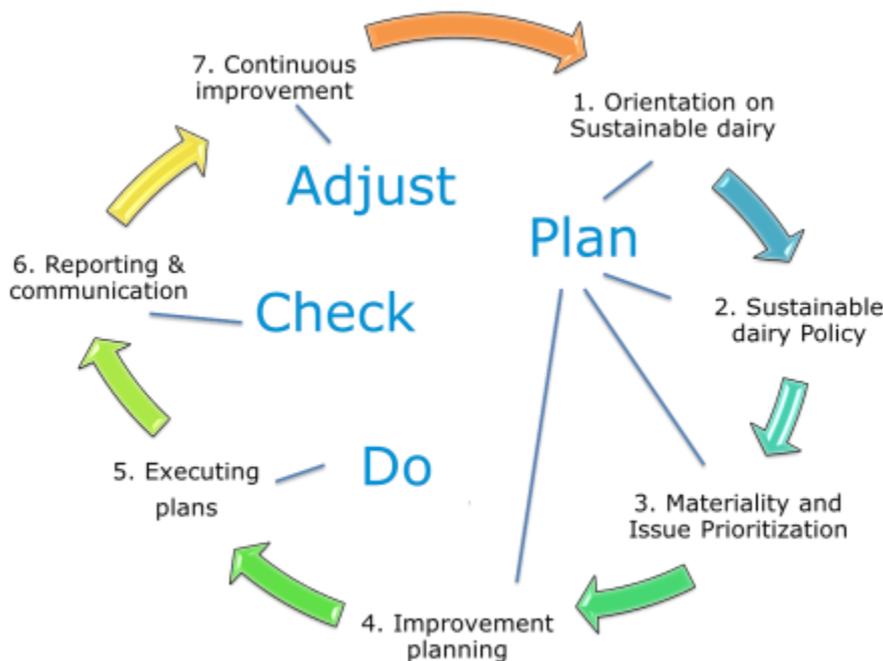
1.6 Regional Activation Steps (and Enablers)

In implementing the DSF, it is suggested that the following seven steps be followed. These steps follow the 'Plan', 'Do', 'Check', 'Adjust' cycle.

1. Orientation towards sustainable dairy²
2. Sustainable dairy commitment and policy
3. Materiality and issue prioritization
4. Improvement planning
5. Executing plans
6. Reporting and communicating
7. Continuous improvement

Enablers underpin the steps and are critical to the implementation of the DSF. The two identified DSF enablers are:

1. Organizational governance
2. Stakeholder engagement



The concept of enablers is explained in chapter 2. The implementation steps are explained in chapters 3, 4 and 5.

1.7 Link to ISO 26000

The steps in this Guide are derived from the globally recognized best practice standard ISO 26000. To understand the steps in greater detail, it is recommended that DSF members take time to consider ISO 26000 and publicly available guides to its implementation (see reference list at the end of this Guide). ISO 26000 provides guidance on how organizations can operate in a socially responsible way. This means acting in an ethical and transparent manner that contributes to the health and welfare of society and the environment.

ISO 26000:2010 provides guidance but is not a certification programme. Rather, it helps clarify what social responsibility is, helps organizations translate principles into effective actions and provides examples of best practice. It is aimed at all types of organizations, regardless of their activity, size or location.

2 Enablers

2.1 Organizational governance

To successfully integrate sustainability within your organization, it is essential that decision-making systems are designed and operate to incorporate principles underpinning sustainability. Similar to stakeholder engagement, organizational governance is an ongoing process (not a one-off exercise). This process is essential because it will support efforts to ensure your activities and planning are successfully carried out.

For the implementation of a sustainable dairy approach it is essential to have a good governance structure from the outset. The governance required will differ depending on the organizational structure but in general it is important to have commitment from the board and suppliers, as well as significant 'buy-in' from senior management. When working together in a regional approach, it is also advisable that a steering group be formed, including high-level representatives from milk producers and dairy processors, to support the full process and provide steering possibilities.

2.2 Stakeholder engagement

Stakeholders are individuals or groups who have an interest in any decision or activity undertaken by an organization. The organization should understand its relationships with stakeholders and society (recognizing that stakeholders are part of society and have particular interests). This means taking into account the decisions and activities that impact society, animals and the environment generally, as well as your specific identified stakeholders. In general, it is difficult to describe how many stakeholders should be involved. The first step is to draft an overview of stakeholders based on local and regional knowledge. Prioritizing can be done based on criteria like influence and impact on the business.



Engaging your stakeholders is about having two-way discussions on how best to work together. It is an integral and ongoing part of the activation process and is not a one-off exercise. At each step, it is recommended that you engage with stakeholders and genuinely seek their input. We suggest that users get information from the best practice standard AA1000 Stakeholder Engagement Standard (see reference list). This will provide members with a step-by-step guide to stakeholder engagement. Information about stakeholder engagement is also provided by GRI (Global Reporting Initiative).

While stakeholder engagement may be new and challenging, it can be very rewarding for your business. In fact this is where the power of the DSF is expressed. It is not relying on some high level multi-stakeholder Group sitting in an office with the Governors deciding what is important for your business in sustainability. It is you and your local stakeholders collaborating and agreeing on the issues, the mitigation programs, the measures of success, reporting and evaluation progress together.

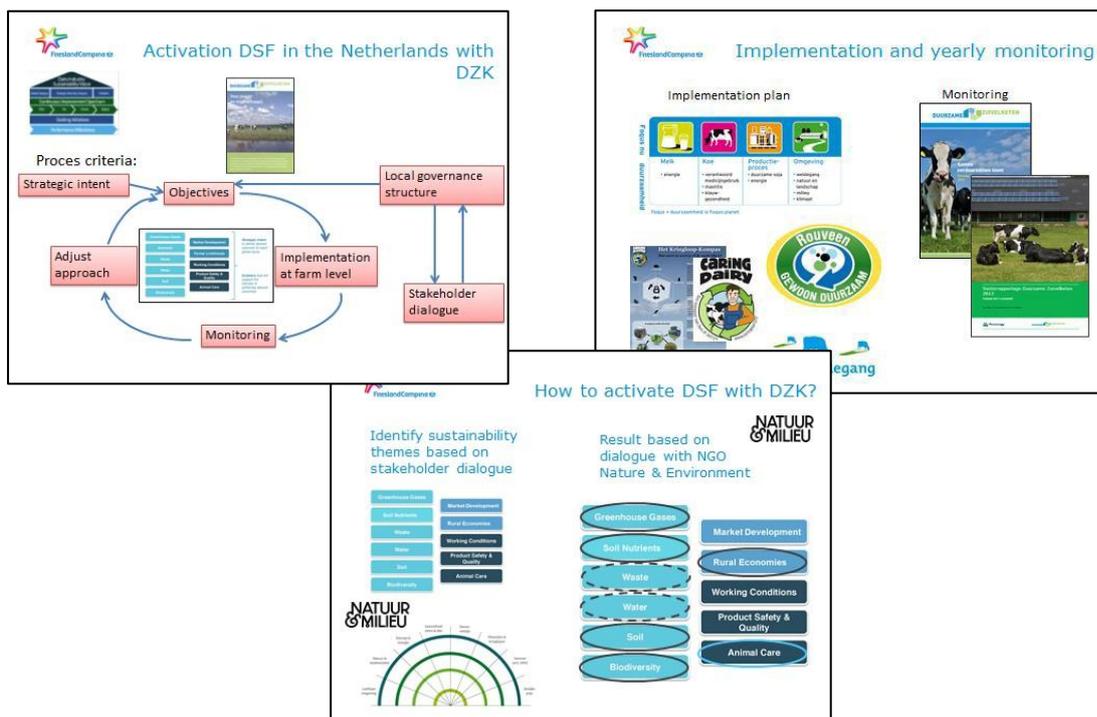
To fully benefit from this process, you first need to make sure management is aware of and comfortable with the ongoing nature of stakeholder engagement. Do not initially attempt to engage all stakeholders on all issues. Instead:

- Systematically group stakeholders and plan engagement.
- Focus on areas where you and your stakeholders can most realistically jointly move forward in the field of sustainability within the limits of your resources as well as theirs.

If you are not engaging your external stakeholders, you are taking risks and missing opportunities. If you communicate your plans, the risks are that the external stakeholders will not agree with your identified sustainability challenges and will seek to undermine your sustainability activities or communicate their concerns to the media. If you engage with your stakeholders, they can support you in your plans and create support in their own communities.

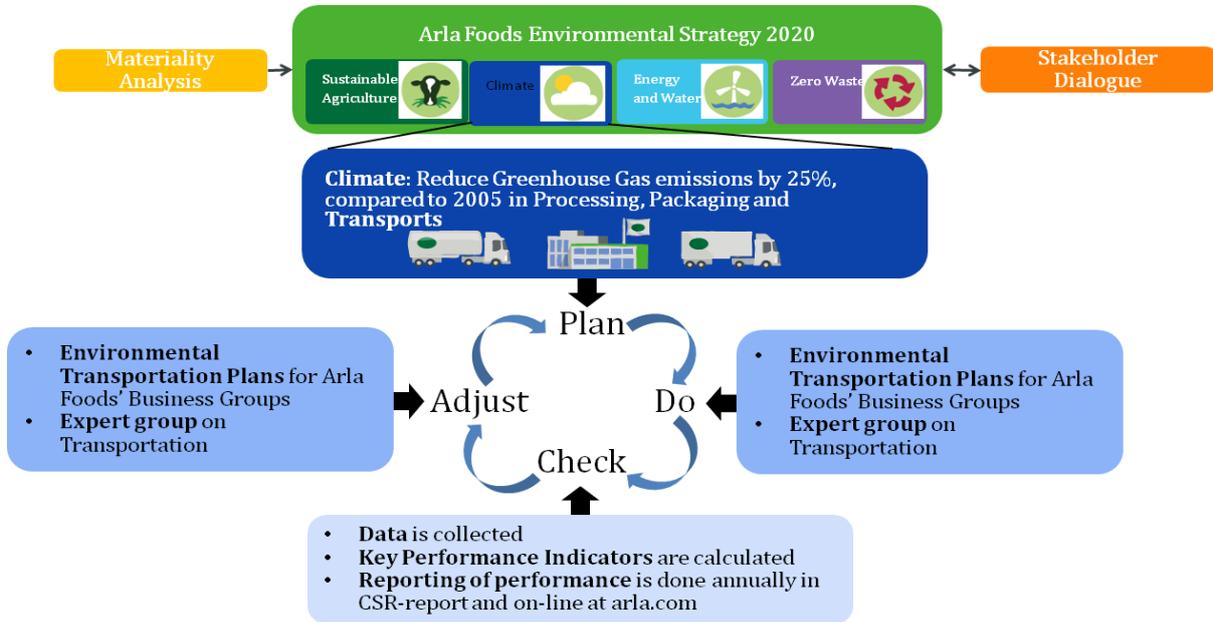
2.3 Some actual examples to support implementation³.

e.g. Dutch Sustainable Dairy Chain



³ Additional examples will come from the pilots that are running as part of the implementation of DSF. These are due for completion late in 2015

e.g. Arla Foods amba - Global Criteria: GHG Emissions



3 Management process

3.1 Orientation towards sustainability

Sustainability encompasses a broad area. For companies with no experience in this area, an orientation phase can be very useful.

In this orientation phase, the content of the sustainability field can be investigated, the expectations of the customers can be explored and the steps of the competitors in the market can be developed.

3.2 Sustainable dairy commitment

It is crucial that management within your organization agrees and commits to sustainability in order to successfully implement the DSF. Management plays a key role in making decisions on strategic direction, planning, policy and standards, resource availability, culture change and budget. These are all important parts of embedding sustainability within an organization and it is therefore crucial that management is supportive and aware of what is required in implementing the DSF.

The commitment to sustainability may already be stated in existing policy, public commitment, positions, documents or past strategies. If this is the case, then check to make sure there is alignment with the DSF's vision and eleven criteria. It is recommended that organizations in the early development phase use the DSF's vision; this provides an appropriate and aligned starting point. (See vision statement below.)

A vibrant dairy sector committed to continuously improving its ability to provide safe and nutritious products from healthy cattle, while:

1. *Preserving natural resources*
2. *Ensuring decent livelihoods across the industry*

3.3 Materiality and issue prioritization

This step is about evaluating each of the eleven DSF categories.

Materiality analyses involve working out what is important to an organization and their stakeholders. Discovering what is 'material' will help the organization focus on what it needs to do in the action planning step. After all, an organization cannot do everything all at once. Some global categories will be more relevant than others and this needs to be determined. The following steps are an example of how to analyze what issues are 'material'.

Step 1: Identification

The first step is, with your management structure including stakeholders, to identify the sustainability issues that are most relevant for your particular situation using the eleven global categories as a starting point. These are comprehensive and provide the structure required to investigate which issues are most pertinent to local or regional circumstances.

Step 2: Prioritization

Once a list of relevant material issues has been identified, the next step is to prioritize these issues. In order to prioritize, a ranking methodology needs to be designed. There are various ways to rank, but whichever method is chosen, stakeholder perspectives need to be considered in this collaborative process.

Step 3: Review

After reducing the list to prioritized issues, management should review and confirm that these are the appropriate issues on which the organization should focus improvements and action planning efforts.

As indicated above, the DSF is not about delivering activity on all eleven criteria simultaneously. It is about identifying with your stakeholders, through a prioritization process, which are the most important, and then collaboratively establishing what is to be done to address these identified and

prioritized Criteria.

3.4 Improvement planning

The next step towards activating the DSF is about creating action plans based on the prioritized issues.

The organization should start by carrying out a current state assessment against the prioritized Criteria, followed by gap closure analysis. Once gap activities have been identified, it is a matter of identifying and focusing before writing a plan for implementation to address the challenging criteria.

To choose which gap activities to implement requires a ranking methodology. Again, as in the process for ranking material issues, it is best practice to collaborate with your stakeholders in this process. There are also many ways to choose activities. Below is one example which involves three steps:

1. Impact – what are the needs of stakeholders and potential benefits, risks and opportunities?
2. Capability – what will these activities cost?
3. Visibility – will these activities create momentum for greater change?

After selecting which activities to pursue, the next step is drafting the action plan. Below are suggestions to consider when drafting the plan:

- Identify the material issues and relevant DSF global Criteria you are addressing.
- Explain the goals you want your plan to achieve.
- Provide descriptions of objectives at farm level and processing level, which allow farmers and processors to use creativity and exercise responsibility. If for example, farmers are unable to achieve the objectives, a list with possible applications can be jointly drawn up.
- Keep the plan realistic.
- Allocate enough resources (money, time, people with authority within your organization) to make it work and to support the farmers and dairy processors with workshops, organizing processes, etc.
- Set a deadline and key milestones for plan completion and evaluation, including reporting back to your stakeholders.

This plan will become part of future public reports and stakeholder engagement. Your management structure, stakeholders, and auditors can use this to evaluate your commitment to continuous progress in implementing the DSF.

4 Operational process

4.1 Implementing the action plan

Implementing your sustainability plan is the key step in the process. After all, without implementation the whole process will only generate a lot of paper. Implementation of gap closure activities involves all partners in the dairy chain. This means producers (farmers) and dairy processors.

Making the plan 'real' requires support from stakeholders and the community. It is generally best practice to first create awareness of the plan or activities among farmers, processors and stakeholders, and to then follow up by constantly demonstrating progress and 'easy wins', such as on-farm and factory cost savings (e.g., energy efficiency gains). Carried out effectively, these will, over time, build buy-in for the plan and momentum for the adoption of other sustainability initiatives.

You can communicate your progress (through your self imposed evaluation process) and success to a large group of producers via newsletters, farmers' and processors magazines and well-chosen written materials. Farmers and processors who successfully implement cost-saving measures are good ambassadors.

Organizing farmer-to-farmer meetings highlighting special sustainability topics (energy reduction, animal welfare improvements, etc.) is a useful way to spread the essentials of the plan. In addition, exchanging non-competitive sustainability information among the dairy value chain helps to improve sustainability performance for dairy overall!

5 Control processes

5.1 Measuring, reporting and communication

Measuring and recording KPIs (Key Performance Indicators) is an essential part of the process of embedding sustainability. A valid KPI measurement system needs to be established to provide objective evidence that the activities undertaken are meeting the strategic intent statement of the DSF global Criteria.

KPI measurements are also important for a number of external reporting platforms such as the Dow Jones Sustainability Index, the GRI, CDP, as well as reporting requirements for customers and consumers. It is recommended that the KPIs be derived from the SAI agreed Principles and Practices (refer <http://www.saiplatform.org/uploads/Library/PPsDairy2009-2.pdf>).

The table below provides an example of a KPI, per Criteria, that is used in the Netherlands. Other projects/initiatives apply different measures as agreed by the Management structure that the member has established.

Figure	Theme	KPI ⁴	KPI SAI P&P	Objectives	Relevant area
	Greenhouse Gas Emissions	CO ₂ eq /kg milk (Based on IDF methodology)		Reduce CO ₂ eq in relative and absolute sense	Production Processing
	Soil Nutrients	Surplus/deficit of nutrients (N and P) in kilograms per hectare (kg/ha)		Soil nutrient equilibrium	Production
	Waste	% recycled or reused volume to landfill		Reduce landfill, by recycling and reusing	Production Processing
	Water	Litre / kg milk, related to water scarcity (based on IDF methodology)			Production Processing
	Soil	% Soil Organic Matter in the top 30 cm of the soil		Reduce erosion of C in soil and improve where possible	Production
	Biodiversity	Global: % critical cattle feed that fulfil the international sustainability criteria ⁵ (soy, palm oil kernel) Local: maintain natural capital; a score based on efforts to maintain and enhance biodiversity ⁶ .		Avoid loss of biodiversity at global (eq tropical forest) and local	

Figure	Theme	KPI ⁴	KPI SAI P&P	Objectives	Relevant area
	Market Development	Process-based criteria, such as supporting farmers, using own website to spread information about markets			Production Processing
	Rural Economies	% of farmers with income above minimum level, based on international standards			Production
	Working Conditions	Numbers of LTA LTA % The provision of appropriate protective gear, health and safety training		As low as possible	Production Processing
	Product Safety & Quality	# recalls		As low as possible	Production Processing
	Animal Care	Longevity of cows Somatic cell account Locomotion score			Production

⁴These KPIs are examples of actual KPIs used in the Netherlands

⁵ Examples of international criteria are RSPO (palm oil) or RTRS (soy) or equivalent schemes.

⁶ The methodology of No Net Loss can be used as a starting point.

5.2 Reporting and communication

We recommend that your management structure begin the public phase of your DSF implementation with a regular report (for example, annually) that honestly and accurately describes your current situation. This report is in itself an act of social responsibility. The primary goal of reporting is to publicly establish your commitment to social responsibility. Keep your report brief, accessible and reader-friendly. Identify the audience(s). The report can be used to engage shareholders, investors, customers, stakeholders and the local community. It is important to publish or distribute the report in an accessible manner (online; print copies for those who lack electronic access, etc.)

The report documents your DSF commitments and action plan to meet your identified material issues, and improvements initiatives over time. Creating the report provides an opportunity to reflect, evaluate and assess your DSF efforts. At the same time, you can make suggestions and changes to your plans for the years ahead. Your report not only serves to help others understand your business, it also helps you to link your current efforts to the future. Public reporting is an important step in continuous improvement.

It is recommended that your report:

- Identifies the DSF categories and issues that are relevant to your organization (material issues) and the process involved in their identification (the prioritization process);
- Describes your DSF achievements in each of the eleven DSF global categories. Based on your prioritization, some of the 11 DSF categories can be described more in detail than

others. If you choose not to report on some of the categories at this time, give a brief explanation of why not, and commit to examining this area at a specific time in the future, which may of course be already captured in the earlier point explaining your prioritization process);

- Establishes your credibility by identifying (and not avoiding) problem areas;
- Describes how and when stakeholders have been involved in your social responsibility efforts;
- Explains plans for improvement in a section such as “The Way Forward”. Future reports can discuss your progress. This section should also detail any changes that you are making to the current program as a result of the review process.

5.3 Continuous improvement (performance)

The measuring, analyzing and reporting process leads to information about the next challenges in implementing the DSF. Improvement can involve small steps or large steps - the main goal is that there is improvement.

Working on sustainability is an ongoing process, which can only be followed by continuous improvement. The frequency of revision must be discussed in the governance group. Some programmes have good experience with refining the programme once every three years. Experience shows that it takes time to start up programmes, monitor and evaluate the results.

6 To conclude

Producing dairy products in a more sustainable way is a never-ending process. Please do not expect to achieve everything all at once; it takes time and dedicated resources.

Meanwhile, your material issues will change as society and the environment changes, so it is important to remember that the steps to implementation outlined in this guidance document should be re-evaluated annually.

7 Annexes

Annex 1: Overview of SAI Platform Principles & Practices (revised)

<http://www.saipatform.org/uploads/Library/PPsDairy2009-2.pdf>

Principles and Practices for Sustainable Dairy Farming (version 2015)

Dairy producers aim to ensure that the safety and quality of their raw milk will satisfy the highest expectations of the food industry and consumers. In addition, on-farm practices should ensure that milk is produced by healthy cattle under sustainable economic, social and environmental conditions.

To that aim, this document provides a set of Principles and suggested Practices for Sustainable Dairy Farming for the mainstream market in all regions of the world. It is designed to be dynamic and revised regularly (this edition is the 2015 edition) on the basis of practical experience and new knowledge generation. Furthermore, it is meant to be 'delivered' with specific guidelines and practical tools relevant to local innovations and prevailing conditions (according to the region and its climate, ecological variables, farming systems, cultures etc) as well as respecting national laws and regulations.

This 2015 review has also taken the Principles to another level in that it has been aligned with the Global Dairy Agenda for Action program known as the Dairy Sustainability Framework (DSF) which was launched in October 2013. Firstly a gap analysis was undertaken to identify any gaps in the coverage of the Principles that will support the dairy sector in working towards the Criteria and Strategic Intents of the DSF and these have been addressed. The SAI Dairy Working Group have not only aligned the Principles though have also ensured the Principles and Practices have been updated to capture new knowledge that can support the sector in working to the common vision of the Global Dairy Agenda For Action.

As a basis for its work on sustainability, the Sustainable Agriculture Initiative (SAI) Dairy Working Group has adopted the updated version of the *Guide to Good Dairy Farming Practice* - a joint publication of the International Dairy Federation (IDF) and the Food and Agriculture Organization of the United Nations (FAO), published in 2011 (2nd edition). This SAI Platform document supplements the IDF/FAO Guide with particular elements of economic, environmental and social sustainability. It is important to note that the focus of these Principles and Practices is on the desired outcomes, rather than on specific, prescriptive actions/processes. Other valuable references are incorporated throughout the document at the appropriate Principles.

The **Basic framework** looks as follows:

1. **Item**. An item refers to an *object of management*.
2. **Principles** identify the objective(s) of what should be accomplished with regard to an individual item.
3. **Recommended Practices** provide a set of identified non-exclusive suggested guidance, tools and measures that can be implemented to achieve the objective(s) of individual principles.

It is important to note that good management of any farming system constitutes the grassroots of the system's economic, environmental and social sustainability. Therefore, it first pays attention to effective planning and managing of the overall farm system. This document's scope of management action is limited to what farmers or groups of farmers themselves can achieve at the farm level.

Training:

Recognizing the importance of skills development in dairy farming systems, there are many references to training and education throughout this document. Training and skills development is necessary for all that have responsibilities in the husbandry of cattle and the process of milk production i.e. it is not just the 'farmer', staff also require the skills and knowledge to undertake their tasks in a responsible and sustainable manner.

Records:

SAI Platform is not wanting to increase levels of bureaucracy in agriculture, though would like to stress the importance of records to the farming business. These records are not only important as 'evidence' for supply agreements or legal responsibilities; they are also an invaluable resource for the quantification of the continuous sustainability performance and improvement of the production unit. Records even at their most basic can be used as a benchmark/comparator for year on year performance based on varying levels of input/practices. Without these it is extremely difficult to appreciate output performance changes. References to records throughout this document are included in support of producers sustainably developing their production systems and promoting continuous improvement.

Farmers need to consider the application of these principles & practices to the whole farm system within a philosophy of continuous improvement, starting with the livestock in scope. The following headings and bullets summarize the sections and objectives when applied to a whole farm system. The individual sections in the document contain greater detail of practices.

Sustainable Farming Systems (chapter 1)

- Farm site – The site selected needs to be appropriate for dairy farming activities from both a historical and continuous improvement perspective
- Feed production – Sustainable farming practices in terms of arable feed production (cultivation/fertilizer management) are to be implemented
- Milking hygiene and storage – Milk is to be protected from any contamination from the time of milking through to delivery.

Dairy Cow Care (Chapter 1B)

- Animal Genetics – Breed selection as appropriate to market needs as well as geographical and climatic conditions
- Health planning and bio-security – Planning to promote the health of the animals under the farmers care
- Animal Husbandry – Provision for the animal of appropriate feed, water, housing, space and behavioral/comfort as defined by the '5 Freedoms'

Economic sustainability (chapter 2)

- Viability of the farming business – Considering the potential of increasing output, mix of farming enterprises, food safety and quality, market opportunities and access

Social Sustainability (chapter 3)

- Social & Human capital – Ensuring that all that have responsibilities on the farm have the appropriate skills and knowledge to deliver on their responsibilities and have an appropriate and legal working environment
- Local community /economy - The farming business must look for ways to contribute to the resilience and vibrancy of the local community

Environmental sustainability (chapter 4)

- Soil fertility/soil loss – Ensuring that soil structure and fertility is maintained and that the possibility of erosion is limited through farming practices employed
- Water – Water use and quality management is proactively and strategically managed in a sustainable manner.
- Biodiversity – Dairy farming practices should preserve and improve the habitat for animal and plant species as well as biodiversity on and around the farm.
- Energy – Continually seek to optimize energy use with a focus on prioritizing renewable energy inputs to the farming system
- Waste – The dairy farm is to reduce, reuse, and where necessary recycle or dispose of waste in a safe and manner that does not cause pollution.

Annex 2: Examples of potential additional measures at production and processing level⁷

Figure	Theme	Dairy production measures	Dairy processing measures
	Greenhouse Gas Emissions	<ul style="list-style-type: none"> • Improve yield • Increase feed efficiency • Reduce energy • Achieve sustainable energy production 	To achieve energy reduction and sustainable energy production, implement a systematic approach to energy efficiency improvement, e.g. ISO 14001 and ISO 50001
	Soil Nutrients	<ul style="list-style-type: none"> • Monitor mineral balance at farm level • Reprocess minerals in manure to e.g. biophosphates • Effective fertilizer planning 	Reduce phosphate and nitrate levels in wastewater through prevention; implement purification
	Waste	<ul style="list-style-type: none"> • Focus on reducing waste • Separate waste into categories to increase re-use and recycling • Minimise landfill 	Separate waste into categories Increase re-use and recycling Minimise landfill
	Water	<ul style="list-style-type: none"> • Look for opportunities to reduce water input to the system • Water re-use • Wastewater purification • Prevent runoff of pesticides into surface water 	Prevent discharge of wastewater into surface water Increase water re-use Wastewater purification
	Soil	<ul style="list-style-type: none"> • Improve carbon content in soil • Plant riparian strips for soil retention 	
	Biodiversity	<p>Global:</p> <ul style="list-style-type: none"> • Draw up a set of requirements for feed materials related to international sustainability • Understand the biodiversity impacted by your production system. • criteria (e.g. for sustainable soy or sustainable palm oil kernel) <p>Local:</p> <ul style="list-style-type: none"> • Increase biodiversity in non- production areas to preserve the landscape 	Increase biodiversity in non-production areas

Figure	Theme	Dairy production measures	Dairy processing measures
	Market Development	<ul style="list-style-type: none"> Encourage farmers collaborative working 	Implement fair and robust contracts of supply
	Rural Economies/ farmer livelihood	<ul style="list-style-type: none"> Farmers are paid appropriately for their product keeping them in milk production. 	Invest in dairy development programmes to improve farmer livelihood Spread knowledge
	Working Conditions	<ul style="list-style-type: none"> Take inventory of dangerous situations and suggest an improvement plan 	Implement a systematic approach to occupational health & safety, e.g. using OHSAS 18001
	Product Safety & Quality	<ul style="list-style-type: none"> Staff training on use of chemicals and anti-microbials 	Install HACCP programmes, e.g. ISO 22000
	Animal Care	<ul style="list-style-type: none"> Training for cow managers to ensure they have the skills required to manage cows in modern production systems 	N/A

⁷ Additional measures are available in reports to improve sustainable dairy production and processing. The GDA database also has several examples of improvement programmes in all areas.