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Dairy and the Sustainable Development Goals

The Dairy Sector's Contributions and Opportunities

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The launch of UN sustainability and climate goals in 2015 challenged national governments and industries to review their existing sustainability activities. By setting these goals, the UN is striving to achieve balances across the three sustainability dimensions (environmental, social and economic).

Advancement of the goals requires the implementation of sustainability activities and voluntary reporting on progress with regard to the differences in national circumstances. Various stakeholders have already started to take action and report their progress against sustainability goals, delivering intended nationally determined contributions (measures and plans) towards climate change mitigation.

The dairy sector's global approach to sustainable development is represented by the [Dairy Sustainability Framework \(DSF\)](#), the key pre-competitive and globally recognised sustainability initiative. Collecting various activities under 11 sustainability criteria allows the DSF to facilitate the sharing of solutions with members to ensure the industry continually improves its sustainability. Realising the industry's prior focus on climate-related activities, this study reviewed the dairy sector's approach (based on the DSF 11 sustainability criteria and database) by mapping the DSF criteria across the UN sustainability goals, and highlighting synergies and potential opportunities for further development. Directly or indirectly, these activities aim to solve complex social, economic and environmental challenges, referring to multiple sustainability goals in these three dimensions. The DSF database is constantly growing, and there is a chance to capture more activities in future projects—new links and initiatives can be created at the local and regional level. In addition, the DSF could initiate collaboration with other sustainability networks for joint delivery against the Sustainable Development Goals (SDGs). This study looks at the opportunity for the DSF to contribute towards the delivery of the SDGs, and suggests that recording the existing and new sustainability activities under the DSF criteria would help advance industry performance and improve public perception.

Introduction: (the importance of) global voluntary reporting on delivery against UN goals

The 2030 Agenda for Sustainable Development, adopted by the UN Member States in September 2015, promotes inclusive economic growth, social advancement and environmental protection. As a plan of action, it strives to achieve balances across the three dimensions of sustainability—encompassing people, planet, prosperity, peace and partnership (the 'five Ps' of the SDGs). Its core ideas are unfolded in 17 SDGs, comprising 169 targets. The SDGs represent an internationally recognised integrated approach to sustainability.

Advancing of the SDGs requires voluntary reporting on progress towards continuous improvement by governments. It will help create a common understanding as to how various efforts align against the goals. National governments, along with the public and private sectors, have already started to fit existing programmes, reviewing and following-up their alignment with the goals. A UN global indicator framework was developed in March 2016 to measure delivery against sustainability goals. In this respect, the Paris Agreement on climate change at COP21, submitted in December 2015, extended the SDG13 'Climate Action' with commitments by national governments to record and trace the intended nationally determined contributions (INDCs) that would help keep global warming below 2 degrees. The delivery of INDCs comprising targets, strategies and actions for climate change mitigation and adaptation will differ due to national circumstances.

According to the first published assessment of the OECD countries' reports delivering SDGs (July 2016), most progress has been made in health, water and energy, while gender equality, peace and partnerships are lagging behind. According to the first reporting of the INDCs (July 2016), submitted by 188 countries, agricultural sectors are perceived as playing a pivotal role when it comes to responding to climate change.

The dairy sector's efforts have previously been highly focused on the reporting of climate action activities, since it shares responsibility for environmental impact, as does any form of industry. The launch of UN goals shows a wider range of issues, captured under sustainability, and placed more emphasis on a social dimension by including such levels as peace and partnership.

The DSF—as the key pre-competitive, collaborative and globally recognised initiative—was launched in 2013 and represents the dairy sector's understanding of sustainability under the 11 criteria such as GHG emissions, animal care and market development. Diverse sustainability activities are aggregated in the DSF database, which is in the early stage of the dairy sector's capacity-building. Bringing together the sustainability activities in the dairy value chain under these criteria allows the DSF to provide its member companies with shared solutions to encourage and ensure the industry's better performance.

The aim of the project has been to map the DSF criteria and associated activities against the more recently published SDGs with regard to the global indicator framework, in order to understand how the criteria could be used to quantify and communicate the dairy industry's contribution and opportunities towards the SDGs advancement.

1. How the DSF criteria contribute to UN sustainability goals

The dairy value chain is extremely diverse and as such has the opportunity to support sustainable dairy production by implementing various sustainability programmes and projects. These activities under the DSF criteria are complex, as they are aimed to solve complex social, economic and environmental challenges, and thus can contribute to several SDGs. Programmes and projects under the DSF criteria can directly and indirectly address the sustainability dimensions. This highlights the complexity of sustainability and the limits of focusing on a single-issue approach.

Due to the interdependencies across the sustainability activities of the dairy sector reported by DSF members, one criterion can contribute to several goals and targets. This is partly because some of them repeat certain aspects and depend on the implemented activity. For example, the DSF criterion 'market development', aimed to build economically viable businesses, implies activities intended to create self-reliant inclusive economies (each of the 11 DSF criteria have a 'Strategic Intent' that focuses on the aspirations of dairy sector activity under each criteria). This is referred to in SDGs 1, 2, 4 and 5, and contributes to at least two dimensions of sustainability (social and economic):

- **Social dimension** is addressed by means of professional and gender empowerment, access to local milk and dairy, workforce development and gender equality programmes, social investment through donation and sponsorship into food outreach activities in local communities.
- **Economic dimension** is covered by strengthening farmers economically, making them more attractive for investment, developing the local sourcing of milk, creating and preserving local employment, increasing knowledge transfer, i.e. providing education, scholarship and innovation.

Activities reported under this criterion can indirectly address the environmental dimension as well—for example, by supporting farmers with knowledge, best practices and financial assistance.

Interdependencies and imbalances in advancing socio-economic dimensions

In addressing SDG1 'End Poverty', the activities reported under the DSF criteria 'market development' and 'rural economies' intertwine and overlap: they contribute to similar issues of social and economic importance, i.e. poverty eradication, social inclusion, and market and social development, especially in local communities. For instance, several dairy processors are committed to sourcing local milk, providing consumers with access to more locally produced dairy and providing farmers with access to the market. Food outreach

programmes for communities such as school milk programmes refer to SDGs 1 and 2, as these activities are seen as socially inclusive and as 'ensuring healthy lives', by satisfying nutrition demands of socially vulnerable groups and making dairy nutrition accessible.

The activities under the 'rural economies' criterion appear to focus mainly on community support. The strategic intent of this criterion states that the dairy sector contributes to the resilience and viability of farmers, as well as rural communities. Currently, there is only one programme that contributes to farmer resilience by teaching them effective management of their responsibilities. In that sense, activities reported under the 'market development' criterion contribute more to farmer resilience, because the activities under this criterion align with the strategic intent to create self-reliant economies and economically viable businesses that benefit farmers and dairy plant employees. This is achieved by means of job creation and local employment preservation, professional development (training and workshops), best practices exchange and business support programmes. Professional development activities are also related to the 'working conditions' criterion, meaning these projects may also be relevant when communicating about the 'market development' criterion.

Both the criteria 'market development' and 'working conditions' contribute widely to SDGs 4, 5 and 10 ('Quality Education', 'Gender Equality' and 'Reduced Inequalities') by providing activities for professional empowerment that combine gender equality (women's empowerment) and knowledge transfer. However, women's empowerment could be addressed more in future projects.

Addressing farmers' income and health, animal care and human nutrition to ensure food security and healthy lives

Multiple criteria deliver to SDG2, 'Zero Hunger'. The 'animal care' criterion makes a considerable contribution to this goal. Animal care (through the improved health of the cow) helps to increase productivity, as it contributes to cow productivity and efficient milk production. This strategic intent of the 'animal care' criterion is underpinned by the activities of the 'product safety and quality' criterion. At the same time, some activities focused on animal care can result in lower productivity and/or increased environmental impacts. Another aspect is that food security (the objective of SDG2) can be achieved, not only by increasing the production volume and quality, but also by contributing to farmers' income and the nutritional needs of different age and social groups. The results of these activities are often indirect. For example, farmers' income increases as a result of activities under the 'market development' criterion through, for example, a fixed milk price scheme and professional empowerment.

A contribution towards nutritional needs (also mentioned in SDG2) is partially delivered in reported activities in order to build consumers' perception of dairy as products of high nutritional quality and by including dairy in national diets, underpinned by food outreach programmes aimed at different age and social groups. From this perspective, DSF member organisations have the opportunity to contribute more to this target of SDG2—and thus to economic and social dimensions of sustainability. It would also help dairy companies in articulating the dairy industry's social value and improving the social perception of dairy, while also giving organisations new insights into product development and advancing their marketing strategies.

Biodiversity, as a part of food security and sustainable agriculture, is mainly addressed in the activities that ensure forest growth and cow feed diversity. The proportion of local breeds was not addressed in the DSF database (i.e. it was not part of the members' current reporting framework, based on their prioritisation of criteria), but could be addressed in the future. From an industry perspective, not all local breeds can contribute to market demands and provide farmers with the income they could potentially generate from their farms. The issue of local breeds may be addressed by the DSF members in the future, although it is more important that farms can operate in balance with its natural environment and the demands of the markets they are serving.

With regard to SDG3, 'Good Health and Wellbeing', the activities reported in the DSF predominantly address the safety of dairy farmers and dairy plant employees. Their physical and mental health as a whole, which contributes to health worker density and essential healthcare services, could, in the future, be addressed by the 'working conditions' criterion

The Dairy Sustainability Framework: Representing the UN's Sustainable Development Goals in the Dairy Sector

17 Partnership for goals

16 Peace, justice & strong institutions

15 Life on land

14 Life below water

13 Climate action

12 Responsible consumption

11 Sustainable cities & communities

10 Reduced inequalities

9 Industry, innovation & infrastructure

Criteria

The DSF reports on the dairy industry's performance using the following 11 criteria:

Economic

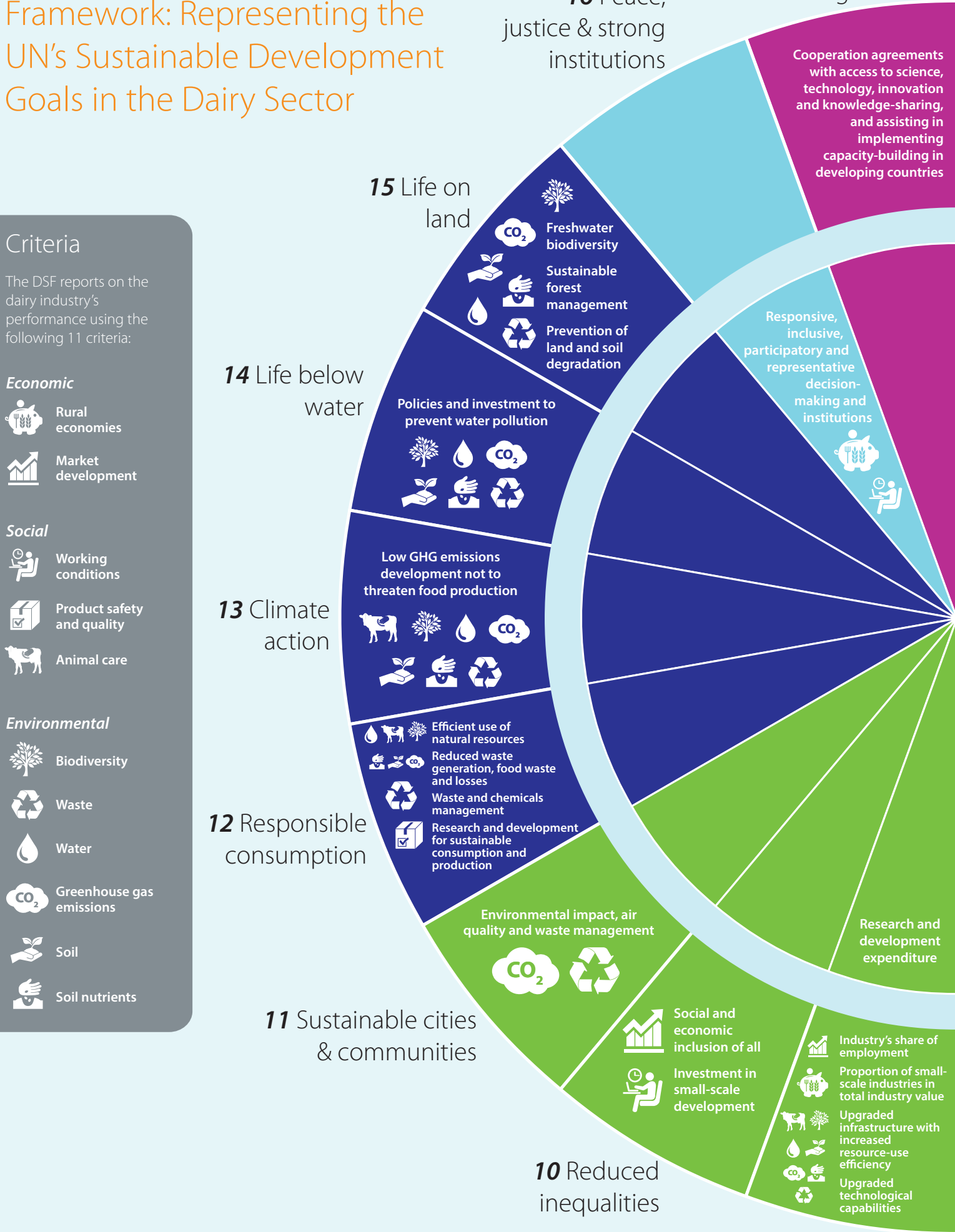
- Rural economies
- Market development

Social

- Working conditions
- Product safety and quality
- Animal care

Environmental

- Biodiversity
- Waste
- Water
- Greenhouse gas emissions
- Soil
- Soil nutrients



1 No poverty

Sustainable Development Goals featured in 5 Ps

- People
- Planet
- Prosperity
- Peace
- Partnership

THE DAIRY SECTOR CONTRIBUTES TO THESE INDICATORS OF THE SDGs

2 Zero hunger

- Social protection floors
- Equal access to basic services

- Level of productivity—and hence production volume
- Number of plant-genetic resources

3 Good health & well-being

THE DAIRY SECTOR IS ENCOURAGED TO CONSIDER REPORTING MORE ON ITS ACTIVITIES TOWARDS THESE INDICATORS OF THE SDGs

- Nutritional needs of different age groups
- Farmers'/ employees' incomes
- Number of animal-genetic resources (local breeds)
- Mortality rate decrease from NCD
- Hazardous chemicals and pollution of natural resources
- Coverage of healthcare services

Education for sustainable development & lifestyles

4 Quality education

- Women's equal rights to economic resources
- Ownership and control over land

5 Gender equality

- Safely treated wastewater
- Recycling and reusable technologies
- Change in water-use efficiency
- Improved water quality

6 Clean water & sanitation

- Economic growth & productivity
- Technological upgrading and innovation
- Job creation & employment productivity
- Safe & secure labour environments
- Resource efficiency in consumption and production
- Access to/investment in energy infrastructure
- Clean energy research and technology
- Renewable energy share in total final energy consumption

7 Affordable & clean energy

8 Decent work & economic growth



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to address the relevant target in SDG3. The potential ability of dairy to reduce the incidence of cardiovascular disease, cancer, obesity and diabetes can be represented as health benefits in the activities under the 'product safety and quality' criterion.

The interlinks among the issues of farmers' income and health, animal care and human nutrition could help contribute to SDGs 2 and 3, by ensuring food security and healthy lives.

Highly featured environmental measures require reporting on research and development

The Environmental dimension of sustainability, spread over the majority of goals (SDG 6-15), is widely addressed by the DSF criteria. The combination of water use efficiency and recycling measures, as well as improved water quality, comply fully with the indicators of SDG6 ('Clean Water and Sanitation') related to dairy.

SDG7 ('Affordable and Clean Energy') is delivered by a combination of activities under the 'animal care' and 'GHG emissions' DSF criteria. The diversity of activities to quantify and reduce GHG emissions uncovers differences in local/regional solutions and approaches. Besides, the activities related to feed efficiency under the 'animal care' (ensuring the animal can operate efficiently and feed is not wasted) criterion also contribute to emissions reduction.

Renewable energy sources and conversion technologies are also attributed to this goal. The activities related to efficient energy use address this goal by moving to biofuel and natural gas, methane and anaerobic digesters, biomass and heat recovery systems, and other efficient forms of energy use in the dairy value chain.

SDGs 8 and 9 ('Decent Work and Economic Growth' and 'Industry Innovation and Infrastructure') require the reporting of activities that can foster economic growth and minimise environmental impact through technological upgrading and innovation. Activities under the 'environmental' criteria (animal care, biodiversity, water, GHGE, soil and soil nutrients, and waste) widely address SDGs 12 and 13 ('Responsible Consumption and Production' and 'Climate Action'), and partially SDGs 11, 14 and 15 ('Sustainable Cities and Communities', 'Life below Water' and 'Life on Land'). Expenditure into research and development for efficient use of resources could advance these 'environmental' criteria that could contribute to the SDGs 8, 9 and 12, particularly.

Multi-stakeholder governance and partnerships for capacity building

SDG16 ('Peace, Justice and Strong Institutions') promotes responsive, inclusive, participatory and representative decision-making and institutions through the dairy value chain, especially in emerging dairy regions. The DSF contributes to this goal by requiring members to establish multi-stakeholder governance at local/regional levels and prioritisation of the 11 criteria according to climatic, political, social and economic circumstances/needs. The 'rural economies' and 'working conditions' criteria help to deliver this goal. However, the contribution to this goal could be more represented by reporting the activities of the DSF member companies. A unique programme in the DSF database focuses on decision-making power for small-scale farmers.

The last SDG, 17 ('Partnerships for Goals'), is advanced by a wide variety of partnerships, programmes and networks. By sharing projects on the DSF database, dairy companies provide other members with collaboration and partnership opportunities in the dairy value chain globally. These are based on multi-stakeholder involvement to solve complex social, economic and environmental issues. They relate to farmers' professional empowerment, biodiversity maintenance, recycling and soil management. These activities aim to build local capacity and create business links, and their involvement in knowledge and technology exchange/transfer could be articulated throughout many criteria.

2. Further opportunities for the dairy industry

The activities currently reported under the DSF are more focused on environmental issues—which is a historical reflection of where the sector has come from—whereas nutrition and social equality are equally important in terms of UN sustainability goals. The DSF database is constantly growing, and the opportunities ahead can be captured in better reporting and addressing these elements in future projects, as well as creating new links and initiatives at

a local/regional level. Besides, the DSF could initiate collaboration with other sustainability networks for joint delivery against the SDGs.

While the sustainability dimensions are widely addressed by the DSF criteria and underpinned by the dairy sector's sustainability activities, there are still opportunities ahead to better demonstrate how the sector as a whole delivers on all the DSF criteria and subsequent SDGs.

The DSF members could contribute towards various SDGs when it is relevant to local/regional dairy practices. By linking these with the SDGs' suggested indicators—when designing, capturing and reporting their progress in relation to their existing and new activities—this could result in a very efficient way of monitoring their performance and contribution against both DSF and SDGs. Examples that directly link to the SDG's are:

- **the average income of small-scale producers/employees** (SDG2) under the 'market development' criterion; **coverage of healthcare services** (SDG3) under the 'working conditions' criterion; and **women's equal rights to economic resources, ownership and control over land** (SDG5) under both criteria;
- **the proportion of local breeds** (SDG2) under the 'biodiversity' criterion;
- **the nutritional needs connected to age groups** (SDG2) and **mortality rate decrease from NCD, hazardous chemicals and natural resources pollution** (SDG3) under the 'product safety and quality' criterion;
- **research and development for resource-use efficiency** (SDG9) under various 'environmental' criteria.

The DSF database is growing, and the gaps mentioned will undoubtedly be captured by future projects. The activities can be seen as a means of improving the social perception of dairy. The DSF could encourage members to incorporate any of these activities into their sustainability programmes, and report the existing and new activities when they have them. Local activities might be aligned to the SDGs if these stay obtainable and meaningful. As well as the DSF, there are other networks in the dairy sector, dealing with similar issues and delivering solutions such as pre-competitive nutrition research. The dairy sector could strengthen collaboration with them for the joint delivery against the SDGs.

Although the DSF is set up to create links between member organisations, there could be greater opportunities for links and initiatives at a local/regional level. By collaborating with regional dairy sustainability initiatives in various regions, the DSF will be able to contribute more towards SDG16 by setting up local and multi-stakeholder-based governance, and reporting on that under the 'rural economies' and 'working conditions' criteria. This will help the DSF articulate its role in dairy sustainability networks.

3. Recording sustainability activities would advance industry performance

The dairy sector contributes substantially to the goals of environmental, social and economic dimensions. There appears to be an opportunity to communicate the activities under the 'people' and 'peace' sustainability levels more widely. The dairy industry's regional and national sustainability initiatives are encouraged to record as much detail as possible in reporting to the DSF on existing and new activities and their continuous improvement over time, helping to enhance the industry's position. The role of the DSF as a driver of change by means of capacity-building and reporting the sector's performance could help advance continuous improvement towards achieving the goals of sustainable development.

The dairy sector contributes widely, and at the same time, there is a need to balance activities across all three sustainability dimensions. It seems that, currently, priority is given to the goals of environmental and economic dimensions, although there is an opportunity to communicate the activities under the social dimension more widely. Regarding the 'five Ps' of sustainable development (people, planet, prosperity, peace and partnership), the social level 'people' reveals multiple opportunities for the dairy sector's better performance (*see infographic*).

Considering imbalances in power distribution within sustainability networks, the capacity of the DSF members to set up a local, multi-stakeholder governance is especially important in providing accountable and inclusive institutions, which is ensured by a commitment of the DSF membership. This would help perform against the social level 'peace', referred to in

SDG16. The role of the DSF might be greater, as the number and variety of sustainability activities implemented by members is expected to grow over time, scaling up across the social and institutional levels of sustainable development.

As discussed before, sustainability activities that fall under one DSF criterion can contribute to several SDG goals and targets. With regard to interdependencies and overlaps between sustainability activities in delivery towards the SDGs, the DSF Governance or Advisory Council could deliberate on which of the activities reinforce and contradict each other (using grading according to seven interaction types), and which of the opportunities outlined in this report they would consider to further advance the DSF's strategy of continuous improvement.

Limitations

As this study was undertaken in the early phase of DSF delivery, data collection was limited to the DSF database in which member companies voluntarily submit their sustainability activities. As the database is constantly updated, the study observed all of the initiatives in the period from 7 June to 7 July 2016. Beyond the database, more activities are captured (or not) by in companies' CSR reports and publicity. This means that the actual performance of the dairy sector might already cover some of the outlined opportunities.

Furthermore, the activities in the DSF database reflect the declared intentions of the members and do not, at this stage of the framework's development, show the measured outcomes. Reaching the intended target of reflecting real performance of the sector and its delivery against UN goals will enhance the value of shared reporting to the sector. Finally, the database does not provide information as to how the established activities were applied by other DSF members and how successful they were. It can be concluded that actual performance data would show delivery and opportunities towards sustainable development more precisely. Maximising the amount of performance data will allow the dairy sector to communicate benefits more clearly.

Conclusion

The DSF: capacity-building and driving change

This mapping procedure identified clear links and synergies between the SDGs and the DSF criteria. The activities reported under the DSF criteria are well aligned with SDGs, and there is no need to adjust the framework. Reporting on activities supporting the DSF criteria is, however, at an early stage and has focused more on activities addressing environmental issues. Although social dimension currently appears to be underrepresented in the DSF database, there is an opportunity for the dairy sector to contribute towards it in the future. Given the importance of dairy production for rural economies, this could be an area in which the sector can distinguish itself.

This report stresses the importance of connecting the sustainability efforts of various actors in the dairy value chain in order to meet the challenges of sustainable development. The report is aimed to encourage the DSF members, along with regional and national sustainability initiatives, to record and report more to the DSF on existing and new activities, particularly of the social dimension. Reporting could address such issues as health and nutrition, breed diversity and social equality, and investment in research and development that could improve industry performance. By aggregating sustainability initiatives and providing exchange of them among member companies, the DSF can strengthen its role in capacity-building. By integrating the measured achievements in annual reports, the DSF, as a driver of change, could communicate its overall continuous improvement on behalf of the industry, as well as the reasons why the delivery of certain targets is not feasible. The increasing role of the DSF and its capacity in setting up locally based multi-stakeholder governance can help ensure accountable and inclusive institutions.

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