

Towards a Sustainability Framework for Dairy Asia

by

Joachim Otte¹ and Vinod Ahuja²

Introduction

In 2015 the 193 Member States of the United Nations adopted the Sustainable Development Goals (SDGs), a set of 17 aspirational objectives with 169 targets expected to guide development actions of governments, international agencies, civil society and other institutions over the next 15 years (2016-2030). Replacing the Millennium Development Goals, the SDGs of the UN's 2030 Agenda for Sustainable Development (ASD) have become the universally endorsed development objectives accepted by and applicable to all countries. Leading livestock stakeholder groups are now seeking to align their action plans towards the achievement of the 2030 ASD objectives, goals and targets, but gaps in understanding remain and consensus on how this could best be done needs to be achieved.

DairyAsia is an initiative of stakeholders in the Asian dairy sector with the objective of jointly working towards the common vision of '*A socially and environmentally responsible Asian Dairy Sector that enhances rural livelihoods, improves nutrition, and contributes to economic prosperity*'. To this end, the '*Elements of a Regional Strategy for Sustainable Dairy Development in Asia*' (RSSDDA) were identified in a multi-stakeholder consultative meeting held in Bangkok in May 2014. The elements in what may be described as a 'common framework' are intended to provide strategic guidelines to national governments and other stakeholders to help them develop and/or adjust their own strategies and programmes in the light of broader regional and global trends and specific national priorities. As the RSSDDA was formulated before the launch of the SDGs and given that DairyAsia is at its early stages of development, it appears an opportune time to review the RSSDDA in the light of the overarching SDGs so as to best align dairy sector development strategies and actions with global development objectives.

This paper aims to serve as background for multi-stakeholder discussions on the direction and actions of DairyAsia under the umbrella of the *Global Agenda for Sustainable Livestock*. To this end, the paper (a) assesses the correspondence / links between strategic objectives (SOs) of the RSSDDA and global SDGs, (b) identifies the most pertinent links and gaps between the two, (c) suggests revisions of the RSSDDA for closer alignment with the SDGs, and (d) using the global SDGs framework as guide, proposes indicators to benchmark progress towards sustainability of the dairy sector and /or its contribution to selected SDGs.

The paper sets the scene by briefly presenting the UN SDGs and the SOs of the RSSDDA with the associated Key Actions. It then assesses the correspondence / links between the SDGs and SOs and suggests amendments to the SOs to better align with the SDGs. The paper proceeds by identifying the SDG Key Targets that best match the revised SOs

¹ International Consultant, livestock development, Rome, Italy, MIOtte@yahoo.com

² Livestock Policy Officer, FAO RAP, Bangkok, Thailand, Vinod.Ahuja@fao.org

and reviews the relevance / applicability of SDG indicators for the revised SOs. To conclude, the paper proposes a set of indicators, where possible based on established methodologies and standards, to measure progress over time in achieving the SOs of the RSSDDA.

The UN's Sustainable Development Goals

The 17 SDGs aim at eradicating all forms of hunger and poverty while restoring and sustainably managing natural resources. They integrate the three dimensions of sustainable development – economic, social and environmental - with closely interwoven targets. The goals are indivisible – no one goal is separate from the others, and all call for comprehensive and participatory approaches. The 17 SDGs to be achieved by 2030 are:

1. End poverty in all its forms everywhere.
2. End hunger, achieve food security and improved nutrition and promote sustainable agriculture.
3. Ensure healthy lives and promote well-being for all at all ages.
4. Ensure inclusive and equitable quality education.
5. Achieve gender equality and empower all women and girls.
6. Ensure availability and sustainable management of water and sanitation for all.
7. Ensure access to affordable, reliable, sustainable and modern energy for all.
8. Promote sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all.
9. Build resilient infrastructure, promote inclusive and sustainable industrialization and foster innovation.
10. Reduce inequality within and among countries.
11. Make cities and human settlements inclusive, safe, resilient and sustainable.
12. Ensure sustainable consumption and production patterns.
13. Take urgent action to combat climate change and its impacts.
14. Conserve and sustainably use the oceans, seas and marine resources for sustainable development.
15. Reduce inequality within and among countries.
16. Promote peaceful and inclusive societies for sustainable development, provide access to justice for all and build effective, accountable and inclusive institutions at all levels.
17. Strengthen the means of implementation and revitalize the global partnership for sustainable development.

Each of the 17 SDGs is underpinned by a series 5 or more of targets (179 in total). These targets provide more specificity to each SDG and indicators have been developed or are under development for each of the targets (>200 in total).

RSSDDA - Strategic Objectives and Key Actions

The RSSDDA has 6 SOs each associated with a number of key actions. The SOs and key actions, as extracted from the strategic framework document, read as follows:

1. Increase farm **profitability and milk productivity sustainably** to meet the increasing demand for dairy products.
 - Improve genetic stock of dairy animals
 - Improve feed availability and utilization
 - Improve overall farm / animal management

2. Promote **fair and efficient markets**, including institutional structures to integrate small-scale producers in the modern value chain.
 - Enhance the bargaining power and market access of small farmers
 - Strengthen the incentives to deliver quality milk
 - Create fair and transparent pricing systems
 - Reduce losses in the dairy chain
3. Improve dairy food **quality and safety**.
 - Enhance human capacity and promote hygienic practices along the entire dairy value chain (GAP & GMP)
 - Establish effective quality assurance; milk testing and incentive producer payment schemes (for 'modern' as well as 'traditional' products)
 - Improve access to information with respect to pricing and product quality
4. Enhance **consumer education** to enable more informed choices, including emphasis on publicly supported school milk programmes linked to local dairy operations.
 - Support, guidance and enhanced public investment towards linking the development of school milk programmes with local dairy development
 - Strengthening consumer education with respect to milk and milk products
5. Strengthen **stakeholder capacity** to cope with production and market risks and for greater innovation.
 - Deliver effective health care and cattle insurance through community groups, producer institutions and public agencies
 - Strengthen institutional mechanisms for improving regional harmonization and collaboration to promoting more resilient dairy-related livelihoods
6. Minimize the **environmental footprint** of the dairy sector and improve mitigation/adaptation measures of the dairy sector to **climate changes**.
 - Reduce water (and air) pollution
 - Reduce the water footprint of milk production
 - Improve the carbon footprint of the dairy sector (reduce GHG emission intensity)

In a number of SOs the ultimate objective is spelled out in the second half of SO, the means to achieve it coming upfront, thereby appearing to be the objective rather than the tool to achieve it. This detracts from the ultimate objective and has implications for the indicator(s). E.g. SO2:

Promote fair and efficient markets, including institutional structures *to integrate small-scale producers in the modern value chain*.

Presumably the main intent is to integrate small-scale produces in the modern value chain (and thereby to reduce poverty?) and promotion of fair and efficient markets is the means to this end. Similarly, the main intent for SO5 appears to be enhanced resilience (and adaptation capacity) of dairy stakeholders and capacity building is again a means towards this objective.

Recommendation: *For consistency and clarity, revise the formulation of all SOs in such a way that the ultimate 'developmental' objective is stated upfront followed by the principal means for its achievement.*

Correspondence / links between RSSDDA SOs and SDGs

This section reviews the correspondence / linkages between the SOs of the RSSDDA and the UN SDGs. The linkages between the SOs and SDGs can be 'direct', 'indirect', and 'induced':

- **Direct:** There is evidence that a direct causal relationship between livestock factor (x) and a SDG target (y) exists, where event (x) can lead to event (y). Example: Increased smallholder milk production (x) enhances household income / reduces poverty³ (y).
- **Indirect:** There is evidence that an indirect causal relationship between livestock factor (x), and a SDG target (y) exists, through a third factor (z), where (x) leads to (z), and (z) to (y). Example: Increased smallholder milk production (x) enhances household income (z), which can be used to buy food items that provide a nutritious diet and thereby reduce hunger and malnutrition (y).
- **Induced:** There is evidence that a relationship between (x) and (y) exists, where the change in (y) generated by the direct (x) and indirect (z) changes, will over time induce further changes. Example: Increased smallholder milk production (x) enhances household income (z), which stimulate the rural non-farm economy (z) and thereby foster inclusive economic growth and employment in non-dairy enterprises.

Generally speaking, there is a natural temporal succession of effects, with direct effects the most immediate, induced effects extending across long expenditure-income chains, and indirect effects occur somewhere in between.

The following table attempts to establish the correspondence / linkage between the 17 SDGs and 6 SOs and provides the underlying rationale of the linkage.

SDG	SO	Assumption / rationale
Goal 1 End poverty in all its forms everywhere.	SO1; SO2; SO5	Enhanced productivity and access to fair markets raises incomes of actors engaged in dairy value chains while protection from shocks reduces likelihood of falling into poverty. [direct]
Goal 2 End hunger, achieve food security and improved nutrition and promote sustainable agriculture.	SO1; SO2; SO4; SO6	Enhanced productivity increases milk availability; raised incomes increase access; better food choices and school milk programmes improve nutrition; reduced environmental footprint enhances sustainability. [direct & indirect]
Goal 3 Ensure healthy lives and promote well-being for all at all ages.	SO3; SO4	Consumption (of 'right' amounts) of safe dairy products (informed consumer choice) and 'safe' production environments contribute to improved human health and well-being. [direct]
Goal 4 Ensure inclusive and equitable quality education and promote lifelong learning opportunities for all.	---	
Goal 5 Achieve gender equality and empower all women and girls.	---	

³ Irrespective of whether the additional milk is sold or used for home-consumption as in the latter case it would have to be purchased reducing disposable income.

SDG	SO	Assumption / rationale
Goal 6 Ensure availability and sustainable management of water and sanitation for all.	SO6	Reduced water footprint (and less water pollution) increase water availability. [direct]
Goal 7 Ensure access to affordable, reliable, sustainable and modern energy for all.	----	
Goal 8 Promote sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all.	SO2	Integrating small-scale dairy chain actors into 'modern' value chains provides on- and off-farm employment opportunities for unskilled labourers. [direct & indirect]
Goal 9 Build resilient infrastructure, promote inclusive and sustainable industrialization and foster innovation.	----	
Goal 10 Reduce inequality within and between countries.	SO2	Integrating small-scale dairy chain actors into 'modern' value supports SDG 8 and thereby reduces inequality within countries. [induced]
Goal 11 Make cities and human settlements inclusive, safe, resilient and sustainable.	----	
Goal 12 Ensure sustainable consumption and production patterns.	SO1; SO4; SO6	Consumer education towards informed choices, strengthened economic viability and minimized environmental footprint of the dairy sector contribute to sustainable consumption and production patterns. [direct]
Goal 13 Take urgent action to combat climate change and its impacts.	SO6	Reducing GHG emissions in the dairy sector combats CC. [direct]
Goal 14 Conserve and sustainably use the oceans, seas and marine resources for sustainable development	----	
Goal 15 Protect, restore and promote sustainable use of terrestrial ecosystems, sustainably manage forests, combat desertification, and halt and reverse land degradation and halt biodiversity loss	SO6	Minimizing the environmental footprint of the dairy sector protects (and restores?) terrestrial ecosystems. [direct]
Goal 16 Promote peaceful and inclusive societies for sustainable development, provide access to justice for all and build effective, accountable and inclusive institutions at all levels	SO2; SO5	Institutional mechanisms that enhance resilience and risk sharing and fair and transparent pricing systems in the dairy sector contribute to peaceful societies. [induced]
Goal 17 Strengthen the means of implementation and revitalize the Global Partnership for Sustainable Development	----	

The 'correspondence analysis' reveals that:

- Some SDGs are served by more than one SO, which, given the inter-linkages and overlaps between SDGs and between SOs, is to be expected.
- Some SDGs are served directly, some directly and indirectly, and some only via induced (second round) effects.

- Some SDGs are not or only marginally served, namely: SDG 4 (education), SDG 5 (gender equality), SDG 7 (clean energy), SDG 9 (infrastructure & industrialization), SDG 11 (resilience of cities), SDG 14 (marine resources), and SDG 17 (the global partnership)

It would be unrealistic to expect the dairy sector to make major contributions to each and every SDG. However, it seems that the dairy sector provides relevant support to some of the ‘neglected’ SDGs, namely SDGs 4, 5, 7, and 17.

Recommendation: Consider broadening the scope of the RSSDDA and add explicit SOs in support of SDGs, to which the dairy sector can make important contributions, namely SDGs 4, 5, 7, and 17.

Recommendation: Limit formulation of SOs to support SDGs to which a direct or short indirect link to the dairy sector can be established as ‘induced’ effects are contingent on too many factors outside the dairy sector.

Suggested amendments to RSSDDA SOs

Based on the findings of the review of the SOs and their correspondence with the SDGs, the following presents suggestions for (i) reformulation of SOs to enhance consistency and clarity and (ii) additional SOs to serve ‘neglected’ SDGs.

Reformulation of current SOs

SO1, which aims at increasing supply of milk and milk products, and thereby perhaps to reducing hunger and malnutrition (SDG2), could be rephrased from

Increase farm profitability and milk productivity sustainably to meet the increasing demand for dairy products.

to

Meet rising demand for dairy products by sustainable increases in milk productivity and farm profitability.

SO2 could be reformulated along the lines of the example below.

Integrate small-scale producers in the modern value chain through promotion of fair and efficient markets (including institutional structures).

SO3, “Improve dairy food quality and safety”, unlike SOs 1 and 2, does not have an explicit purpose statement. SO3 could be linked to SDG3 (health and well-being) as follows:

Protect and enhance human health by improving dairy food quality and safety.

SO4 addresses consumers’ ability to make informed food choices, but it does not provide a reason for doing so. Rather, it meshes this with publicly supported school milk programmes linked to local dairy operations.

Enhance consumer education *to enable more informed choices*, including emphasis on publicly supported school milk programmes linked to local dairy operations.

SO4 thus has a nutrition education component, a nutrition enhancement component and a producer support component. Perhaps it would be better to restrict SO4 to ‘nutrition education’, place school milk programmes under the SO dealing with ‘making milk available’ and move the ‘linking SMPs to local dairy operations’ to the SO covering the integration of small-scale producers into modern value chain. A re-formulated version of SO4, linked to SDG3, could read as follows:

Improve human health by informed choices on the benefits and risks of dairy products as part of the diet.

Given SO3 and SO4 now both aim at improving human health, one from the supply side and one from the consumer side, they could be combined into 1 SO as follows:

Protect and enhance human health by improving dairy food quality and safety and by enabling consumers to make informed choices on the benefits and risks of dairy products as part of the diet.

SO5, “Strengthen stakeholder capacity to cope with production and market risks and for greater innovation” aims at increasing resilience and adaptability of dairy systems, ultimately protecting livelihoods, and thereby supporting SDG1. The SO could be reformulated as follows:

Enhance resilience and adaptability of dairy systems by strengthening stakeholder capacity to cope with market and production risks (which would include climate risks) and for greater innovation.

SO6 covers SDGs 13 and 15 and it might be worth to consider splitting SO6 accordingly so as to explicitly serve each of these SDGs, for example:

SO6a – **Protect and restore terrestrial ecosystems** by minimizing the dairy sector’s environmental footprint (other than GHGs).

SO6b - **Combat climate change** by reducing GHG emissions along the dairy chain.

Formulation of additional SOs

The dairy sector can make relevant contributions to some SDGs, namely education, women empowerment, clean energy and the global partnership, which currently do not prominently figure in the SOs of the RSSDDA. The following additional SOs are proposed for consideration:

- SO in support of SDG 4: **Enhance levels of education** through school milk programmes and transfer of knowledge and best practices to all actors involved in the dairy chain.
- SO in support of SDG 5: **Promote gender equality** by ensuring women receive proper recognition for their work in dairy production, processing and marketing and by encouraging women in leadership positions.
- SO in support of SDG 7: **Improve access to clean energy** through promotion of biogas from dairy systems.
- SO in support of SDG 17: **Strengthen the means of implementation** by building national, regional and global platforms for dairy development.

The 6 original SOs and the suggested set of revised and expanded SOs are presented in the following table.

Original SOs	Revised and expanded SOs
SO1 Increase farm profitability and milk productivity sustainably to meet the increasing demand for dairy products.	SO1 Meet rising demand for dairy products by sustainable increases in milk productivity and farm profitability.
SO2 Promote fair and efficient markets, including institutional structures to integrate small-scale producers in the modern value chain.	SO2 Integrate small-scale producers in the modern value chain through promotion of fair and efficient markets.

Original SOs	Revised and expanded SOs
SO3 Improve dairy food quality and safety	SO3 Protect and enhance human health by improving dairy food quality and safety and by enabling consumers to make informed choices on the benefits and risks of dairy products as part of the diet.
SO4 Enhance consumer education to enable more informed choices, including emphasis on publicly supported school milk programmes linked to local dairy operations.	
SO5 Strengthen stakeholder capacity to cope with production and market risks and for greater innovation.	SO4 Enhance resilience and adaptability of dairy systems by strengthening stakeholder capacity to cope with market and production risks and for greater innovation.
SO6 Minimize the environmental footprint of the dairy sector and improve mitigation/adaptation measures of the dairy sector to climate changes.	SO5 Protect and restore terrestrial ecosystems by minimizing the dairy sector's environmental footprint.
	SO6 Combat climate change by reducing GHG emissions along the dairy chain.
	SO7 Enhance levels of education through school milk programmes and transfer of knowledge and best practices to all actors involved in the dairy chain.
	SO8 Promote gender equality by ensuring women receive proper recognition for their work in dairy production, processing and marketing and by encouraging women in leadership positions.
	SO9 Improve access to clean energy through promotion of biogas from dairy systems.
	SO10 Strengthen the means of implementation by building national, regional and global platforms for dairy development.

The following table presents the correspondence between the SDGs and the suggested revised and expanded SOs of the RSSDDA.

SDGs	Revised and expanded SOs
Goal 1 End poverty in all its forms everywhere	SO2 Integrate small-scale producers in the modern value chain through promotion of fair and efficient markets. SO4 Enhance the resilience of dairy systems by strengthening stakeholder capacity to cope with market and production risks and for greater innovation.
Goal 2 End hunger, achieve food security and improved nutrition and promote sustainable agriculture.	SO1 Meet rising demand for dairy products by sustainable increases in milk productivity and farm profitability.
Goal 3 Ensure healthy lives and promote well-being for all at all ages.	SO3 Protect and enhance human health by improving dairy food quality and safety and by enabling consumers to make informed choices on the benefits and risks of dairy products as part of the diet.
Goal 4 Ensure inclusive and equitable quality education and promote lifelong learning opportunities for all.	SO7 Enhance levels of education through school milk programmes and transfer of knowledge and best practices to all actors involved in the dairy chain

SDGs	Revised and expanded SOs
Goal 5 Achieve gender equality and empower all women and girls.	S08 Promote gender equality by ensuring women receive proper recognition for their work in dairy production, processing and marketing and by encouraging women in leadership positions.
Goal 6 Ensure availability and sustainable management of water and sanitation for all.	S05 Protect and restore terrestrial ecosystems by minimizing the dairy sector's environmental (water) footprint.
Goal 7 Ensure access to affordable, reliable, sustainable and modern energy for all.	S09 Improve access to clean energy through promotion of biogas from dairy systems.
Goal 12 Ensure sustainable consumption and production patterns.	S05 Protect and restore terrestrial ecosystems by minimizing the dairy sector's environmental footprint. S01 Meet rising demand for dairy products by sustainable increases in farm profitability and milk productivity. S03 Protect and enhance human health by improving dairy food quality and safety and by enabling consumers to make informed choices on the benefits and risks of dairy products as part of the diet.
Goal 13 Take urgent action to combat climate change and its impacts.	S06 Combat climate change by reducing GHG emissions along the dairy chain.
Goal 15 Protect, restore and promote sustainable use of terrestrial ecosystems, sustainably manage forests, combat desertification, and halt and reverse land degradation and halt biodiversity loss.	S05 Protect and restore terrestrial ecosystems by minimizing the dairy sector's environmental footprint.
Goal 17 Strengthen the means of implementation and revitalize the Global Partnership for Sustainable Development	S010 Strengthen the means of implementation by building national, regional and global platforms for dairy development.
Goal 8 Promote sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all.	S02 <i>Integrate small-scale producers in the modern value chain through promotion of fair and efficient markets. [induced]</i> S04 <i>Enhance the resilience of dairy systems by strengthening stakeholder capacity to cope with market and production risks and for greater innovation. [induced]</i>
Goal 10 Reduce inequality within and between countries.	S02 <i>Integrate small-scale producers in the modern value chain through promotion of fair and efficient markets. [induced]</i> S04 <i>Enhance the resilience of dairy systems by strengthening stakeholder capacity to cope with market and production risks and for greater innovation. [induced]</i>
Goal 16 Promote peaceful and inclusive societies for sustainable development, provide access to justice for all and build effective, accountable and inclusive institutions at all levels.	S02 <i>Integrate small-scale producers in the modern value chain through promotion of fair and efficient markets. [induced]</i> S04 <i>Enhance the resilience of dairy systems by strengthening stakeholder capacity to cope with market and production risks and for greater innovation. [induced]</i>
Goal 9 Build resilient infrastructure, promote inclusive and sustainable industrialization and foster innovation.	n.a.
Goal 11 Make cities and human settlements inclusive, safe, resilient and sustainable.	n.a.

SDGs	Revised and expanded SOs
Goal 14 Conserve and sustainably use the oceans, seas and marine resources for sustainable development.	n.a.

The expanded set of 10 SOs supports 11 SDGs directly (or through close indirect pathways), 3 through induced pathways while no link is established to 3 SDGs. The latter are related to infrastructure and industrialization, cities and human settlements, and marine resources.

Development of indicators for the SOs

Potential indicators for the revised and expanded SOs of the RSSDDA were developed by first linking the SOs with the SDGs they support, then identifying ‘fitting’ SDG targets, and thereafter choosing those indicators that could be applied to the SOs. Details of the SDG targets as they match the SOs and their indicators are presented in Annex 1. Separate indicators were developed for those cases where no suitable indicator could be taken or derived from the list of SDG indicators. The potential indicators for each of the SOs are presented in the table below. (Details of the ‘custodian agency’ are given in Annex 2.)

SO	SDG Indicator (Custodian Agency)
(1) Meet rising demand for dairy products by sustainable increases in farm profitability and milk productivity.	1.1 Prevalence of undernourishment in (a) population at large and (b) dairy households (FAO) 1.2 Prevalence of stunting among children under 5 years of age in (a) population at large and (b) dairy households (UNICEF) 1.3 Prevalence of malnutrition among children under 5 years of age, by type (wasting and overweight) in (a) population at large and (b) dairy households (UNICEF) 1.4 Volume of dairy production [should include co-products] per labour unit by class of dairy farm 1.5 Average dairy income of small-scale dairy producers, by sex (and indigenous status) 1.6 Proportion of agricultural area used for dairy under productive and sustainable agriculture (FAO) 1.7 Number of dairy animal genetic resources secured in either medium or long-term conservation facilities (FAO) 1.8 Proportion of local dairy breeds classified as being at risk, not-at-risk or unknown level of risk of extinction (FAO) 1.9 Food losses along the dairy chain (FAO, UNEP)
(2) Integrate small-scale producers in the modern value chain through promotion of fair and efficient markets.	2.1 Poverty headcount among dairy households (WB) 2.2 Growth rates of household expenditure or income per capita among the bottom 40% and total dairy households (WB)
(3) Protect and enhance human health by improving dairy food quality and safety and by enabling consumers to make informed choices on the benefits and risks of dairy products as part of the diet.	3.1 Proportion of milk / dairy product samples that conform with (minimum) milk safety standards 3.2 Incidence of milk-borne disease(s) per 1,000/year (WHO) 3.3 Mortality (morbidity) rate attributed to cardiovascular disease, cancer, diabetes or chronic respiratory disease linked to consumption of milk and milk products (WHO) 3.4 Under-5 mortality rate in dairy households (UNICEF) 3.5 Mortality / morbidity rate attributed to unsafe water, unsafe sanitation and lack of hygiene in dairy households (WHO)

SO	SDG Indicator (Custodian Agency)
(4) Enhance the resilience of dairy systems by strengthening stakeholder capacity to cope with market and production risks and for greater innovation.	4.1 Proportion of total household income from dairy (incl. home consumption) [Measure of 'exposure'] 4.2 Resilience index based on SHARP methodology and tool 4.3 Proportion of households and dairy cattle with dairy insurance coverage
(5) Protect and restore terrestrial ecosystems by minimizing the dairy sector's environmental (incl. water) footprint.	5.1 Water use [incl. virtual water embedded in purchased feed] per kg milk (farm gate & end consumer) 5.2 Level of water stress: freshwater withdrawal for dairy as a proportion of available freshwater resources (FAO) 5.3 Proportion of wastewater safely treated (UN HABITAT, WHO, UNSD) 5.4 Eutrophication potential per kg milk 5.5 Nitrogen and phosphorous concentrations in water of dairy sheds / dairy communities 5.6 Soil acidification potential per kg milk 5.7 Proportion of agricultural land with lowered soil pH in dairy sheds / dairy communities 5.8 Proportion of land used for dairying that is degraded over total agricultural land area (UNCCD) 5.9 Non-renewable primary energy use per kg milk / dairy product (farm gate / end consumer)
(6) Combat climate change by reducing GHG emissions along the dairy chain.	6.1 GHG emission per kg of milk at farm gate 6.2 GHG emission per \$ (PPP) income from dairy at farm gate 6.3 GHG emission per kg of milk from farm gate to end consumer 6.4 GHG emission per \$ (PPP) income / profit from gate to end consumer
(7) Enhance levels of education through school milk programmes and transfer of knowledge and best practices to all actors involved in the dairy chain.	7.1 Proportion of dairy household children under 5 years of age who are developmentally on track in health, learning and psychosocial wellbeing, by sex (UNICEF) 7.2 Proportion of children and young people: (a) in grades 2/3; (b) at the end of primary; and (c) at the end of lower secondary achieving at least a minimum proficiency level in (i) reading and (ii) mathematics, by sex (UNESCO-UIS) - Number of children educated in school milk programmes 7.3. Participation rate of youth and adults (by sex) from dairy households in formal and non-formal education and training in the previous 12 months, by sex (UNESCO-UIS) 7.4. Proportion of dairy household youth and adults (by sex) with 'dairy technology' skills, by type of skill (UNESCO-UIS, ITU)
(8) Promote gender equality by ensuring women receive proper recognition for their work in dairy production, processing and marketing and by encouraging women in leadership positions.	8.1 Women Empowerment Index (IFPRI 2012) 8.2 Women ownership, access to, and decision-making power over dairy resources 8.3 Proportion of revenue from dairy under control of women 8.4 Proportion of women in managerial positions of dairy cooperatives / unions (ILO) 8.5 Proportion of individuals in dairy households who own a mobile telephone, by sex (ITU)
(9) Improve access to clean energy through promotion of biogas from dairy systems.	9.1 Proportion of dairy households with access to electricity (WB) 9.2 Proportion of dairy households using dung as fuel 9.3 Proportion of dung used for biogas production 9.4 Proportion of dairy households with primary reliance on clean fuels (WHO)
(10) Strengthen the means of implementation by building national, regional and global platforms for dairy development.	10.1 The dollar value of financial and technical assistance, including through North-South, South-South and triangular cooperation, committed to RSSDDA 10.2 Mutual accountability among RSSDDA cooperation actors through inclusive reviews

SO	SDG Indicator (Custodian Agency)
	10.3 Amount of United States dollars committed to public-private and civil society partnerships for sustainable and inclusive dairy sector development

The following tables provide a brief overview of methods / standards available for the indicators, their current application and how they could be applied to the RSSDDA.

SO1 Meet rising demand for dairy products by sustainable increases in farm profitability and milk productivity.

Indicator	Comment
1.1 Prevalence of undernourishment in (a) population at large and (b) dairy households	This indicator is well established at national level. It can also be estimated for sub-populations using National Household Surveys (NHS), such as Living Standard Measurement Surveys (LSMS), Household Income and Expenditure (HIES) and Household Budget Surveys (HBS) containing food consumption data. Doing so for dairy households would require identification of these in the dataset, e.g. 'sale of milk' or 'ownership of dairy animals'.
1.2 Prevalence of stunting among children under 5 years of age in (a) population at large and (b) dairy households (UNICEF)	There is an established methodology and national data is available for more than 100 countries. Disaggregation by household type would require an appropriate identifier variable in the national dataset.
1.4 Volume of dairy production [should include co-products] per labour unit by class of dairy farm (FAO)	This indicator needs to be established and data would have to be collected through specific surveys.
1.5 Average dairy income of small-scale dairy producers, by sex (and indigenous status) (FAO)	Some information required for this indicator might be obtained from national Household Surveys but it would seem more appropriate to collect the required information through the same survey used for indicator 1.4.
1.6 Proportion of agricultural area used for dairy under productive and sustainable agriculture (FAO)	FAO, in collaboration with UNEP, is developing a flexible indicator for 'proportion of agricultural area under sustainable agriculture'. This indicator, once operational, could be applied to national 'dairy sheds'.
1.7 Number of dairy animal genetic resources secured in either medium or long-term conservation facilities (FAO)	This information should be available through the FAO-led Animal Genetic Resources network.
1.8 Proportion of local dairy breeds classified as being at risk, not-at-risk or unknown level of risk of extinction (FAO)	This information should be available through the FAO-led Animal Genetic Resources network.
1.9 Food losses along the dairy chain (FAO, UNEP)	FAO and UNEP plan to annually produce a 'Global Food Loss Indicator', broken down by country and commodity.

SO2 Integrate small-scale producers in the modern value chain through promotion of fair and efficient markets.

Indicator	Comment
2.1 Poverty headcount among dairy households (WB)	There is an established methodology and national data for overall poverty headcount is available for more than 100 countries. For application to dairy households, National Household Surveys (NHS) need to have an indicator variable as for indicator 1.1(b)

Indicator	Comment
	and 1.2(b)
2.2 Growth rates of household expenditure or income per capita among the bottom 40% and total dairy households (WB)	There is an established methodology and the indicator is based on the same data as indicator 2.1.

S03 Protect and enhance human health by improving dairy food quality and safety and by enabling consumers to make informed choices on the benefits and risks of dairy products as part of the diet.

Indicator	Comment
3.1 Proportion of milk / dairy product samples that conform with (minimum) milk safety standards	This information should be available from national dairy development and / or food safety authorities.
3.2 Incidence of (selected?) milk-borne disease(s) per 1,000/year	Data for this indicator is not routinely collected. Given the non-specific nature of most milk-borne diseases, attribution to specific causes seems hard to achieve.
3.3 Mortality (morbidity) rate attributed to cardiovascular disease, cancer, diabetes or chronic respiratory disease linked to consumption of milk and milk products (WHO)	There is an established methodology that has been tested and an agreed international standard for estimating mortality / morbidity rates. However establishing the causal link with consumption of milk and milk products will present a major challenge.
3.4 Under-5 mortality rate in dairy households (UNICEF)	There is an established methodology that has been tested and an agreed international standard, which would have to be applied to dairy households. National-level data is available for over 190 countries.
3.5 Mortality / morbidity rate attributed to unsafe water, unsafe sanitation and lack of hygiene in dairy households (WHO)	There is an established methodology that has been tested and an agreed international standard, which would have to be applied to dairy households. National-level data is available for 92 countries.

S04 Enhance the resilience of dairy systems by strengthening stakeholder capacity to cope with market and production risks and for greater innovation.

Indicator	Comment
4.1 Proportion of total household income from dairy (incl. home consumption) [Measure of 'exposure']	This indicator may crudely be estimated from NHS if the latter provide sufficient detail on sources of income. However, it is unlikely that all sources of dairy income (in kind and in cash) are covered in NHS data, as 'dairy income' is more than income from milk sales.
4.2 Resilience index based on SHARP (Self-evaluation and Holistic Assessment of Climate-Resilience of Farmers and Pastoralists) methodology and tool	The SHARP resilience index, developed by FAO, although primarily focused on climate resilience, has four main assessment areas: environment, social, economic, governance, as well as a fifth general information category. Although it may need some adaptation, SHARP appears to cover all elements determining resilience of dairy systems. More information can be found at: http://www.fao.org/in-action/sharp/en/
4.3 Proportion of households and dairy cattle with dairy insurance coverage	Data for this indicator would have to be collected through farm and / or insurance company surveys.

S05 Protect and restore terrestrial ecosystems by minimizing the dairy sector's environmental (incl. water) footprint.

Indicator	Comment
-----------	---------

Indicator	Comment
5.1 Water use [incl. virtual water embedded in purchased feed] per kg milk (farm gate & end consumer)	No 'internationally established' methodology exists, but various studies have estimated the water footprint (blue, green, grey) of milk production in different environments.
5.2 Level of water stress: freshwater withdrawal for dairy as a proportion of available freshwater resources (FAO)	An established methodology exists for this indicator using total freshwater withdrawal (sum of agriculture, industry and municipal withdrawal). Using information generated for producing indicator 5.1 would permit estimation of dairy freshwater withdrawal as proportion of agriculture and total withdrawal.
5.3 Proportion of wastewater safely treated (UN HABITAT, WHO, UNSD)	An established methodology exists for this indicator, which covers both household wastewater and industrial waste water. Data availability may be a challenge.
5.4 Eutrophication potential (in NO ₃ equivalents) per kg milk	An established methodology exists (LCA); its application may need to be standardized
5.5 Nitrogen and phosphorous concentrations in water of dairy sheds / dairy communities	These figures would need to be obtained from local environmental agencies.
5.6 Soil acidification potential (in SO ₂ equivalents) per kg milk	An established methodology exists (LCA); its application may need to be standardized;
5.7 Proportion of agricultural land with lowered soil pH in dairy sheds / dairy communities	These figures would need to be obtained from local environmental agencies.
5.8 Proportion of land used for dairying that is degraded over total agricultural land area (UNCCD)	There is a suggested methodology but no international standard. UNCCD, FAO and UNEP are working towards an international standard.
5.9 Non-renewable primary energy use (in MJ) per kg milk / dairy product (farm gate / end consumer)	An established methodology exists (LCA); its application may need to be standardized

S06 Combat climate change by reducing GHG emissions along the dairy chain.

Indicator	Comment
6.1 GHG emission (in CO ₂ equivalents) per kg of milk at farm gate	An established methodology exists (LCA); its application may need to be standardized;
6.2 GHG emission per \$ (PPP) income from dairy at farm gate	This indicator can be constructed by combining indicators 6.2 and 1.5.
6.3 GHG emission per kg of milk from farm gate to end consumer	An established methodology exists (LCA); its application may need to be standardized for various dairy value chains
6.4 GHG emission per \$ (PPP) income / profit from farm gate to end consumer	This indicator builds on indicator 6.3 and in addition requires information on income / profit from farm gate to end consumer, which may be difficult to assess for some of the dairy value chains.

S07 Enhance levels of education through school milk programmes and transfer of knowledge and best practices to all actors involved in the dairy chain.

Indicator	Comment
7.1 Proportion of dairy household children under 5 years of age who are developmentally on track in health, learning and psychosocial wellbeing, by sex (UNICEF)	There is an established methodology but no international standard. UNICEF collects this information every three years through 'Multiple Indicator Cluster Surveys' (MICS). Data for this indicator would probably have to be collected through

Indicator	Comment
	targeted surveys.
7.2 Proportion of children and young people: (a) in grades 2/3; (b) at the end of primary; and (c) at the end of lower secondary achieving at least a minimum proficiency level in (i) reading and (ii) mathematics, by sex (UNESCO-UIS)	There is an established methodology but no international standard.
7.3. Participation rate of youth and adults (by sex) from dairy households in formal and non-formal education and training in the previous 12 months, by sex (UNESCO-UIS)	There is an established methodology but no international standard. Data for this indicator would probably have to be collected through targeted surveys.
7.4. Proportion of dairy household youth and adults (by sex) with 'dairy technology' skills, by type of skill.	There no established methodology. Data for this indicator would probably have to be collected through targeted surveys.

S08 Promote gender equality by ensuring women receive proper recognition for their work in dairy production, processing and marketing and by encouraging women in leadership positions.

Indicator	Comment
8.1 Women Empowerment Index (IFPRI 2012)	The Women's Empowerment in Agriculture Index (WEI) is composed of two sub-indexes: one measures five domains of empowerment for women, and the other measures gender parity in empowerment within the household. It is an aggregate index based on individual-level data on men and women within the same households. A household survey interviewing men and women from the same household was developed to provide data for the Index. More information on the index can be obtained at https://feedthefuture.gov/lp/womens-empowerment-agriculture-index
8.2 Women ownership, access to, and decision-making power over dairy resources	This is one of the domains covered by the WEI.
8.3 Proportion of revenue from dairy under control of women	This is one of the domains covered by the WEI.
8.4 Proportion of women in managerial positions of dairy cooperatives / unions (ILO)	Data for this indicator would have to be collected.
8.5 Proportion of individuals in dairy households who own a mobile telephone, by sex (ITU)	There is an established methodology that has been tested and an agreed international standard. Data for the proportion of individuals owning a mobile phone has been collected through an annual questionnaire that ITU sends to national statistical offices (NSO) since 2015. A survey would be required for this indicator to be specific to dairy households.

S09 Improve access to clean energy through promotion of biogas from dairy systems.

Indicator	Comment
9.1 Proportion of dairy households with access to electricity (WB)	There is an established methodology and international standard. The methodology is under refinement to capture various dimensions of energy access and efforts to include the item in household surveys are

Indicator	Comment
	under way. Data for this indicator would have to be collected to be specific to dairy households.
9.2 Proportion of dairy households using dung as fuel	Data for this indicator would have to be collected.
9.3 Proportion of dung used for biogas production	Data for this indicator would have to be collected.
9.4 Proportion of dairy households with primary reliance on clean fuels (WHO)	There is an established methodology and international standard. National data, broken down by rural and urban households exists for most Asian countries. Data for this indicator would have to be collected to be specific to dairy households.

S010 Strengthen the means of implementation by building national, regional and global platforms for dairy development.

Indicator	Comment
10.1 The dollar value of financial and technical assistance, including through North-South, South-South and triangular cooperation, committed to RSSDDA	
10.2 Mutual accountability among RSSDDA cooperation actors through inclusive reviews	
10.3 Amount of United States dollars committed to public-private and civil society partnerships for sustainable and inclusive dairy sector development	

ANNEX 1 Connecting RSSDDA SOs with related SDG targets and indicators

SO	SDGs	SDG Targets	SDG Indicator
(1) Meet rising demand for dairy products by sustainable increases in farm profitability and milk productivity.	2; 12	2.1 By 2030, end hunger and ensure access by all people, in particular the poor and people in vulnerable situations, including infants, to safe, nutritious and sufficient food all year round.	2.1.1 Prevalence of undernourishment (FAO) 2.1.2 Prevalence of moderate or severe food insecurity in the population, based on the Food Insecurity Experience Scale (FIES) (FAO)
		2.2 By 2030, end all forms of malnutrition, including achieving, by 2025, the internationally agreed targets on stunting and wasting in children under 5 years of age, and address the nutritional needs of adolescent girls, pregnant and lactating women and older persons.	2.2.1 Prevalence of stunting (height for age <-2 standard deviation from the median of the World Health Organization (WHO) Child Growth Standards) among children under 5 years of age (UNICEF) 2.2.2 Prevalence of malnutrition (weight for height >+2 or <-2 standard deviation from the median of the WHO Child Growth Standards) among children under 5 years of age, by type (wasting and overweight) (UNICEF)
		2.3 By 2030, double the agricultural productivity and incomes of small-scale food producers, in particular women, indigenous peoples, family farmers, pastoralists and fishers, including through secure and equal access to land, other productive resources and inputs, knowledge, financial services, markets and opportunities for value addition and non-farm employment.	2.3.1 Volume of production per labour unit by classes of farming/pastoral/forestry enterprise size (FAO) 2.3.2 Average income of small-scale food producers, by sex and indigenous status (FAO)
		2.4 By 2030, ensure sustainable food production systems and implement resilient agricultural practices that increase productivity and production, that help maintain ecosystems, that strengthen capacity for adaptation to climate change, extreme weather, drought, flooding and other disasters and that progressively improve land and soil quality.	2.4.1 Proportion of agricultural area under productive and sustainable agriculture (FAO)
		2.5 By 2020, maintain the genetic diversity of seeds, cultivated plants and farmed and domesticated animals and their related wild species,	2.5.1 Number of plant and animal genetic resources for food and agriculture secured in either medium or long-term conservation facilities (FAO) 2.5.2 Proportion of local breeds classified as

SO	SDGs	SDG Targets	SDG Indicator
			being at risk, not-at-risk or unknown level of risk of extinction (FAO)
		12.3 By 2030, halve per capita global food waste at the retail and consumer levels and reduce food losses along production and supply chains, including post-harvest losses.	12.3.1 Global food loss index (FAO, UNEP)
(2) Integrate small-scale producers in the modern value chain through promotion of fair and efficient markets.	1; 8; 10; 16	1.1 By 2030, eradicate extreme poverty for all people everywhere, currently measured as people living on less than \$1.25 a day.	1.1 Poverty headcount (WB)
		1.2 By 2030, reduce at least by half the proportion of men, women and children of all ages living in poverty in all its dimensions according to national definitions.	1.2 National governments
		10.1 By 2030, progressively achieve and sustain income growth of the bottom 40 per cent of the population at a rate higher than the national average.	10.1 Growth rates of household expenditure or income per capita among bottom 40% and total population (WB)
(3) Protect and enhance human health by improving dairy food quality and safety and by enabling consumers to make informed choices on the benefits and risks of dairy products as part of the diet.	3; 12	3.2 By 2030, end preventable deaths of new-borns and children under 5 years old.	3.2.1 Under-5 mortality rate (UNICEF) 3.2.2 Neonatal mortality rate (UNICEF)
		3.3 By 2030, end the epidemics of AIDS, tuberculosis, malaria and neglected tropical diseases and combat hepatitis, water-borne diseases and other communicable diseases.	3.3.1 – 3.3.5 AIDS, TB, etc. incidence per 1,000 (WHO)
		3.4 By 2030, reduce by one third premature mortality from non-communicable diseases through prevention and treatment.	3.4.1 Mortality rate attributed to cardiovascular disease, cancer, diabetes or chronic respiratory disease (WHO) 3.4.2 Suicide mortality rate (WHO)
		3.9 By 2030, substantially reduce the number of deaths and illnesses from hazardous chemicals and air, water and soil pollution and contamination.	3.9.1 Mortality rate attributed to household and ambient air pollution (WHO) 3.9.2 Mortality rate attributed to unsafe water, unsafe sanitation and lack of hygiene (exposure to unsafe Water, Sanitation and Hygiene for All (WASH) services) (WHO) 3.9.3 Mortality rate attributed to unintentional poisoning (WHO)

SO	SDGs	SDG Targets	SDG Indicator
		12.1 Implement the 10-Year Framework of Programmes on Sustainable Consumption and Production Patterns, all countries taking action, with developed countries taking the lead, taking into account the development and capabilities of developing countries.	12.1.1 Number of countries with sustainable consumption and production (SCP) action plans or SCP mainstreamed as priority into national policies (UNEP)
(4) Enhance the resilience of dairy systems by strengthening stakeholder capacity to cope with market and production risks and for greater innovation	1; 8, 10; 16	1.5 By 2030, build the resilience of the poor and those in vulnerable situations and reduce their exposure and vulnerability to climate-related extreme events and other economic, social and environmental shocks and disasters	1.5.1 Number of deaths, missing persons and persons affected by disaster per 100,000 people (UNISDR) 1.5.2 Direct disaster economic loss in relation to global gross domestic product (GDP) (UNISDR)
(5) Protect and restore terrestrial ecosystems by minimizing the dairy sector's environmental (incl. water) footprint.	6; 12; 15	6.3 By 2030, improve water quality by reducing pollution, eliminating dumping and minimizing release of hazardous chemicals and materials, halving the proportion of untreated wastewater and substantially increasing recycling and safe reuse globally.	6.3.1 Proportion of wastewater safely treated (UN HABITAT, WHO, UNSD) 6.3.2 Proportion of bodies of water with good ambient water quality (UNEP)
		6.4 By 2030 substantially increase water-use efficiency across all sectors and ensure sustainable withdrawals and supply of freshwater to address water scarcity and substantially reduce the number of people suffering from water scarcity.	6.4.1 Change in water-use efficiency over time (FAO) 6.4.2 Level of water stress: freshwater withdrawal as a proportion of available freshwater resources (FAO)
		12.2 By 2030, achieve the sustainable management and efficient use of natural resources.	12.2.1 Material footprint, material footprint per capita, and material footprint per GDP (UNEP) 12.2.2 Domestic material consumption, domestic material consumption per capita, and domestic material consumption per GDP (UNEP)
		15.3 By 2030, combat desertification, restore degraded land and soil, including land affected by desertification, drought and floods, and strive to achieve a land degradation-neutral world.	15.3.1 Proportion of land that is degraded over total land area (UNCCD)
(6) Combat climate change by reducing GHG emissions along the dairy chain.	13	13.1 Strengthen resilience and adaptive capacity to climate-related hazards and natural disasters in all countries.	13.1.1 Number of countries with national and local disaster risk reduction strategies (UNISDR) 13.1.2 Number of deaths, missing persons and persons affected by disaster per 100,000 people (UNISDR)

SO	SDGs	SDG Targets	SDG Indicator
		13.2 Integrate climate change measures into national policies, strategies and planning.	13.2.1 Number of countries that have communicated the establishment or operationalization of an integrated policy/strategy/plan which increases their ability to adapt to the adverse impacts of climate change, and foster climate resilience and low greenhouse gas emissions development in a manner that does not threaten food production (including a national adaptation plan, nationally determined contribution, national communication, biennial update report or other (UNFCCC?))
		13.3 Improve education, awareness-raising and human and institutional capacity on climate change mitigation, adaptation, impact reduction and early warning.	13.3.1 Number of countries that have integrated mitigation, adaptation, impact reduction and early warning into primary, secondary and tertiary curricula (UNESCO) 13.3.2 Number of countries that have communicated the strengthening of institutional, systemic and individual capacity-building to implement adaptation, mitigation and technology transfer, and development actions (UNFCCC?)
(7) Enhance levels of education through school milk programmes and transfer of knowledge and best practices to all actors involved in the dairy chain.	4	4.1 By 2030, ensure that all girls and boys complete free, equitable and quality primary and secondary education leading to relevant and effective learning outcomes.	4.1.1 Proportion of children and young people: (a) in grades 2/3; (b) at the end of primary; and (c) at the end of lower secondary achieving at least a minimum proficiency level in (i) reading and (ii) mathematics, by sex (UNESCO-UIS)
		4.2 By 2030, ensure that all girls and boys have access to quality early childhood development, care and pre-primary education so that they are ready for primary education.	4.2.1 Proportion of children under 5 years of age who are developmentally on track in health, learning and psychosocial wellbeing, by sex (UNICEF) 4.2.2 Participation rate in organized learning (one year before the official primary entry age), by sex (UNESCO-UIS)
		4.3 By 2030, ensure equal access for all women and men to affordable	4.3.1 Participation rate of youth and adults in

SO	SDGs	SDG Targets	SDG Indicator
		and quality technical, vocational and tertiary education, including university.	formal and non-formal education and training in the previous 12 months, by sex (UNESCO-UIS)
		4.4 By 2030, substantially increase the number of youth and adults who have relevant skills, including technical and vocational skills, for employment, decent jobs and entrepreneurship	4.4.1 Proportion of youth and adults with information and communications technology (ICT) skills, by type of skill (UNESCO-UIS, ITU)
(8) Promote gender equality by ensuring women receive proper recognition for their work in dairy production, processing and marketing and by encouraging women in leadership positions	5	5.1 End all forms of discrimination against all women and girls everywhere.	5.1.1 Whether or not legal frameworks are in place to promote, enforce and monitor equality and non- discrimination on the basis of sex (UN WOMEN)
		5.5 Ensure women's full and effective participation and equal opportunities for leadership at all levels of decision-making in political, economic and public life	5.5.1 Proportion of seats held by women in national parliaments and local governments (IPU, UN WOMEN) 5.5.2 Proportion of women in managerial positions (ILO)
		5a Undertake reforms to give women equal rights to economic resources, as well as access to ownership and control over land and other forms of property, financial services, inheritance and natural resources, in accordance with national laws.	5.a.1 (a) Proportion of total agricultural population with ownership or secure rights over agricultural land, by sex; and (b) share of women among owners or rights-bearers of agricultural land, by type of tenure (FAO, UN WOMEN, UNSD) 5.a.2 Proportion of countries where the legal framework (including customary law) guarantees women's equal rights to land ownership and/or control (FAO, WB, UN WOMEN)
		5.b Enhance the use of enabling technology, in particular information and communications technology, to promote the empowerment of women	5.b.1 Proportion of individuals who own a mobile telephone, by sex (ITU)
		5.c Adopt and strengthen sound policies and enforceable legislation for the promotion of gender equality and the empowerment of all women and girls at all levels	5.c.1 Proportion of countries with systems to track and make public allocations for gender equality and women's empowerment (UN WOMEN, OECD)
(9) Improve access to clean energy through promotion	7	7.1 By 2030, ensure universal access to affordable, reliable and modern energy services.	7.1.1 Proportion of population with access to electricity (WB)

SO	SDGs	SDG Targets	SDG Indicator
of biogas from dairy systems		7.2 By 2030, increase substantially the share of renewable energy in the global energy mix.	7.1.2 Proportion of population with primary reliance on clean fuels and technology (WB, UNSD?)
(10) Strengthen the means of implementation by building national, regional and global platforms for dairy development	17	17.1 Strengthen domestic resource mobilization, including through international support to developing countries, to improve domestic capacity for tax and other revenue collection.	17.1.1 Total government revenue (by source) as a percentage of GDP 17.1.2 Proportion of domestic budget funded by domestic taxes
		17.6 Enhance North-South, South-South and triangular regional and international cooperation on and access to science, technology and innovation and enhance knowledge-sharing on mutually agreed terms.	17.6.1 Access to patent information and use of the international intellectual property system 17.6.2 Fixed Internet broadband subscriptions, by speed
		17.7 Promote the development, transfer, dissemination and diffusion of environmentally sound technologies to developing countries on favourable terms, including on concessional and preferential terms, as mutually agreed.	17.7.1 Total amount of approved funding for developing countries to promote the development, transfer, dissemination and diffusion of environmentally sound technologies
		17.9 Enhance international support for implementing effective and targeted capacity-building in developing countries to support national plans to implement all the Sustainable Development Goals, including through North-South, South-South and triangular cooperation.	17.9.1 The dollar value of financial and technical assistance, including through North-South, South-South and triangular cooperation, committed to developing countries' designing and implementing a holistic policy mix that aims at sustainable development in three dimensions (including elements such as reducing inequality within a country and governance)
		17.16 Enhance the Global Partnership for Sustainable Development, complemented by multi-stakeholder partnerships that mobilize and share knowledge, expertise, technology and financial resources, to support the achievement of the Sustainable Development Goals in all countries, in particular developing countries.	17.16.1 Mutual accountability among development cooperation actors is strengthened through inclusive reviews
		17.17 Encourage and promote effective public, public-private and civil society partnerships, building on the experience and resourcing strategies of partnerships.	17.17.1 Amount of United States dollars committed to public-private and civil society partnerships
		17.18 By 2020, enhance capacity-building support to developing countries, including for least developed countries and small island	17.18.1 Proportion of sustainable development indicators produced at the national level with full

SO	SDGs	SDG Targets	SDG Indicator
		developing States, to increase significantly the availability of high-quality, timely and reliable data disaggregated by income, gender, age, race, ethnicity, migratory status, disability, geographic location and other characteristics relevant in national contexts.	disaggregation when relevant to the target, in accordance with the Fundamental Principles of Official Statistics
		17.19 By 2030, build on existing initiatives to develop measurements of progress on sustainable development that complement gross domestic product, and support statistical capacity-building in developing countries.	17.19.1 Dollar value of all resources made available to strengthen statistical capacity in developing countries

Red = unsuitable; Green = potentially suitable by adding dairy specificity; no highlight = undecided

ANNEX 2 Designated 'Custodian Agencies' for specific SDG indicators

Acronym	Organization	URL
FAO	Food and Agriculture Organization of the UN	http://www.fao.org/home/en/
ILO	International Labour Organization	http://www.ilo.org/global/lang--en/index.htm
IPU	Inter-Parliamentary Union	http://www.ipu.org/english/home.htm
ITU	UN Agency for Information and Communication Technologies	http://www.itu.int/en/Pages/default.aspx
UNCCD	UN Convention to Combat Desertification	http://www.unccd.int/en/Pages/default.aspx
UNEP	UN Environment Programme	http://www.unep.org
UNESCO	UN Educational Scientific and Cultural Organization	http://en.unesco.org
UNFCCC	UN Framework Convention on Climate Change	http://newsroom.unfccc.int
UN-HABITAT	UN Human Settlements Programme	http://unhabitat.org
UNICEF	UN Children's Emergency Fund	http://www.unicef.org
UNISDR	UN Office for Disaster Risk Reduction	http://www.unisdr.org
UNSD	UN Statistics Division	http://unstats.un.org/unsd/default.htm
UN-WOMEN	UN Entity for Gender Equality and the Empowerment of Women	http://www.unwomen.org/en
WB	The World Bank	http://www.worldbank.org
WHO	World Health Organization	http://www.who.int/en/