



Dairy Sustainability Framework



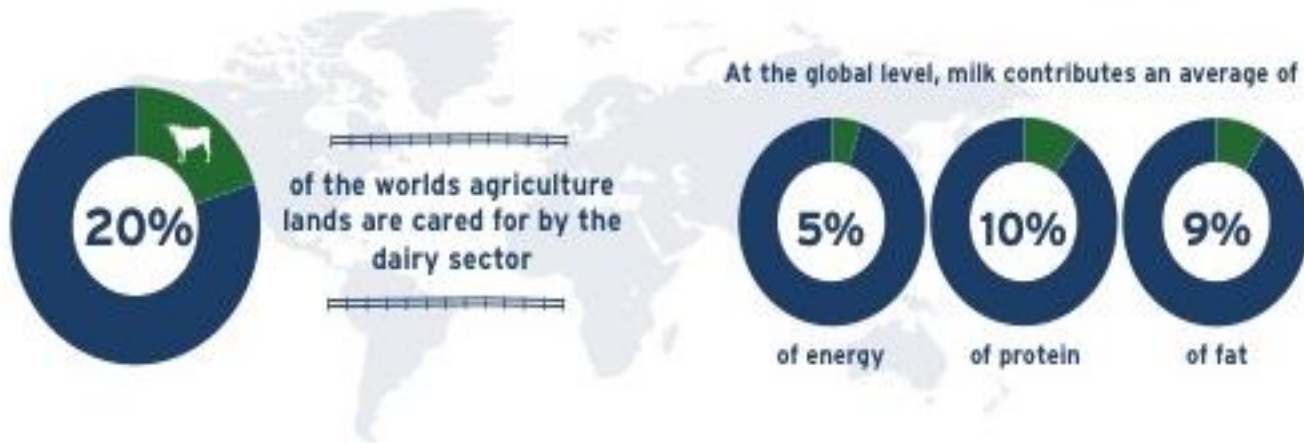
Dairy and GHG emissions
'Positive news.... Though plenty more to do'

EU Sustainable dairy symposium

Brian Lindsay



Dairy sector snapshot: Who we are



Dairy sector snapshot: Dairy farms

133 million
Dairy Farms



600 million
people live on Dairy Farms



400 million

additional people are supported by the full time jobs that are created in support of dairy farming



240 million

people are directly or indirectly employed in the dairy sector



37 million

farms are female-headed with

80 million

women engaged in dairy farming to some extent



Dairy sector snapshot: Value

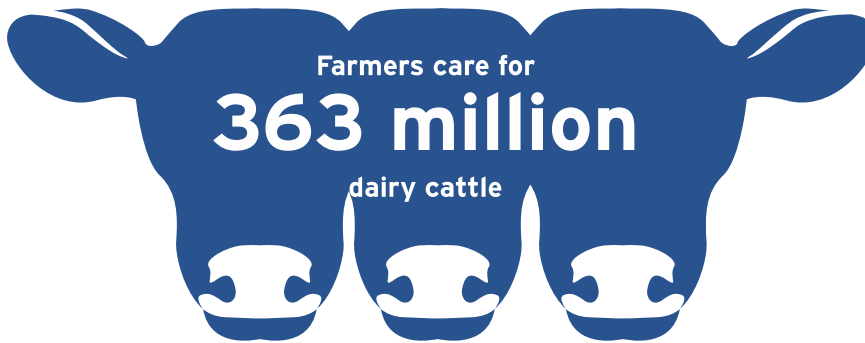
Milk is one of most produced and valuable agricultural commodities worldwide

Milk ranks third by production tonnage

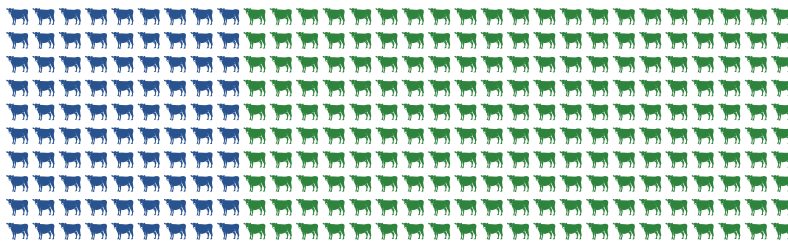
Milk is the top agricultural commodity in value terms the world over



Dairy sector snapshot: Dairy cattle



Farmers in developing countries usually keeping them in herds of
2 or 3 cows



In industrialized economies herds are often larger: the average dairy farms in the UK and the US manage **90 and 300 dairy cows** respectively

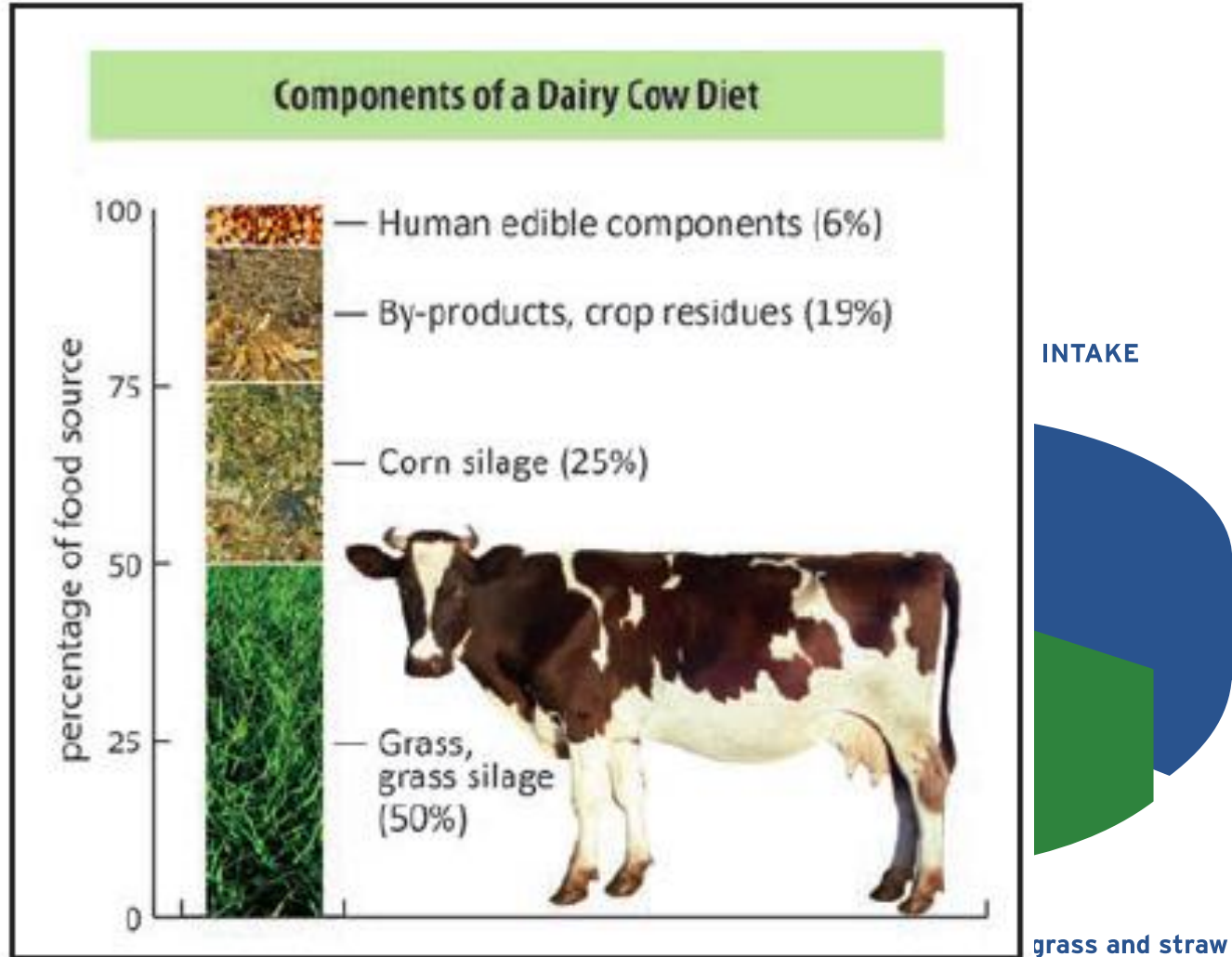


However, farms with more than 100 cows represent less than
0.3%
of all dairy farms globally

Cows – the great recycler!

40% of
feed intake
the globe

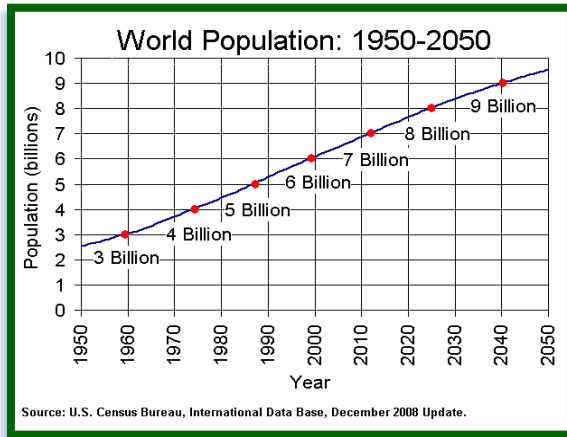
●
about 2.5 billion



Source: Bannink, 2011. A model of enteric fermentation in dairy cows to estimate methane emission for the Dutch National Inventory Report using the IPCC Tier 3 approach.⁷



The Challenge



2009, FAO's Director-General on How to Feed the World in 2050. Population and Development Review, 35: 837-839.



VEGAN FORMULA ONE DRIVER LEWIS HAMILTON URGES FANS TO 'GO PLANT-BASED'



Dairy Sustainability Framework

Aligning and connecting sustainability initiatives to demonstrate leadership and progress globally



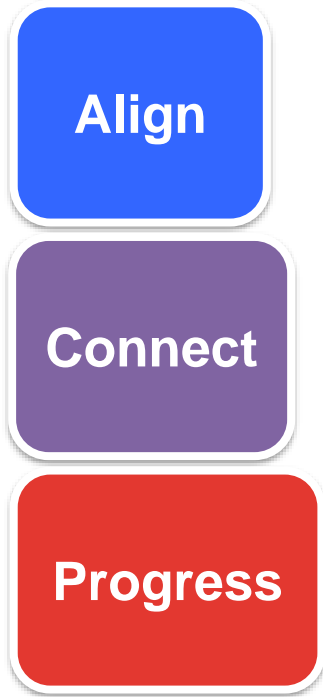
Dairy Sustainability Framework

dairysustainabilityframework.org

DSF Membership



A Sustainable Development Framework for Dairy



Dairy and the Sustainable Development Goals (SDGs)

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

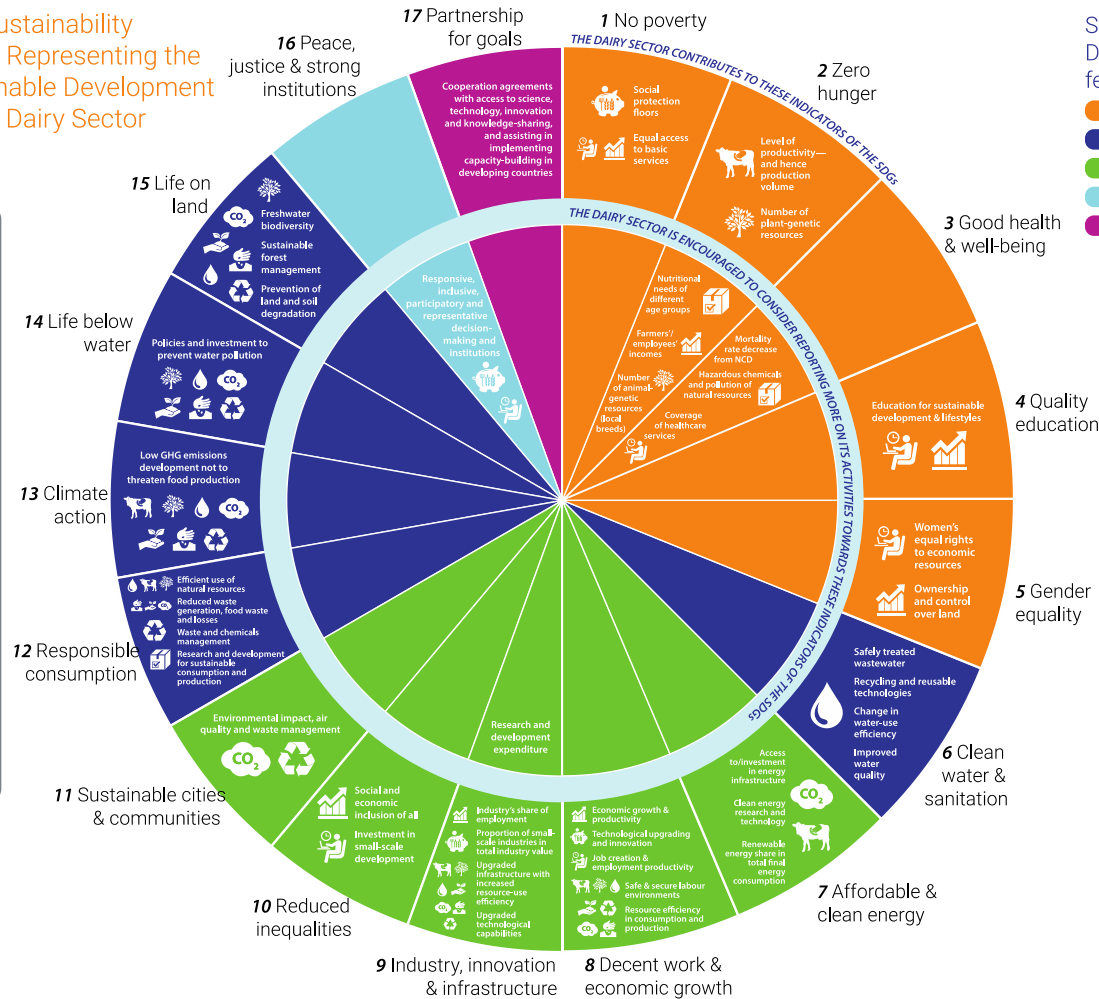
Sustainable Development Goals featured in 5 Ps

- People
- Planet
- Prosperity
- Peace
- Partnership

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



Rabobank

Indicator Implementation

2019



Animal Care



GHG Emissions



Soil Nutrients



Soil Quality and Retention



Biodiversity



Water Availability and Quality



Working Conditions

2020



Waste



Product Safety and Quality



Market Development



Rural Economies





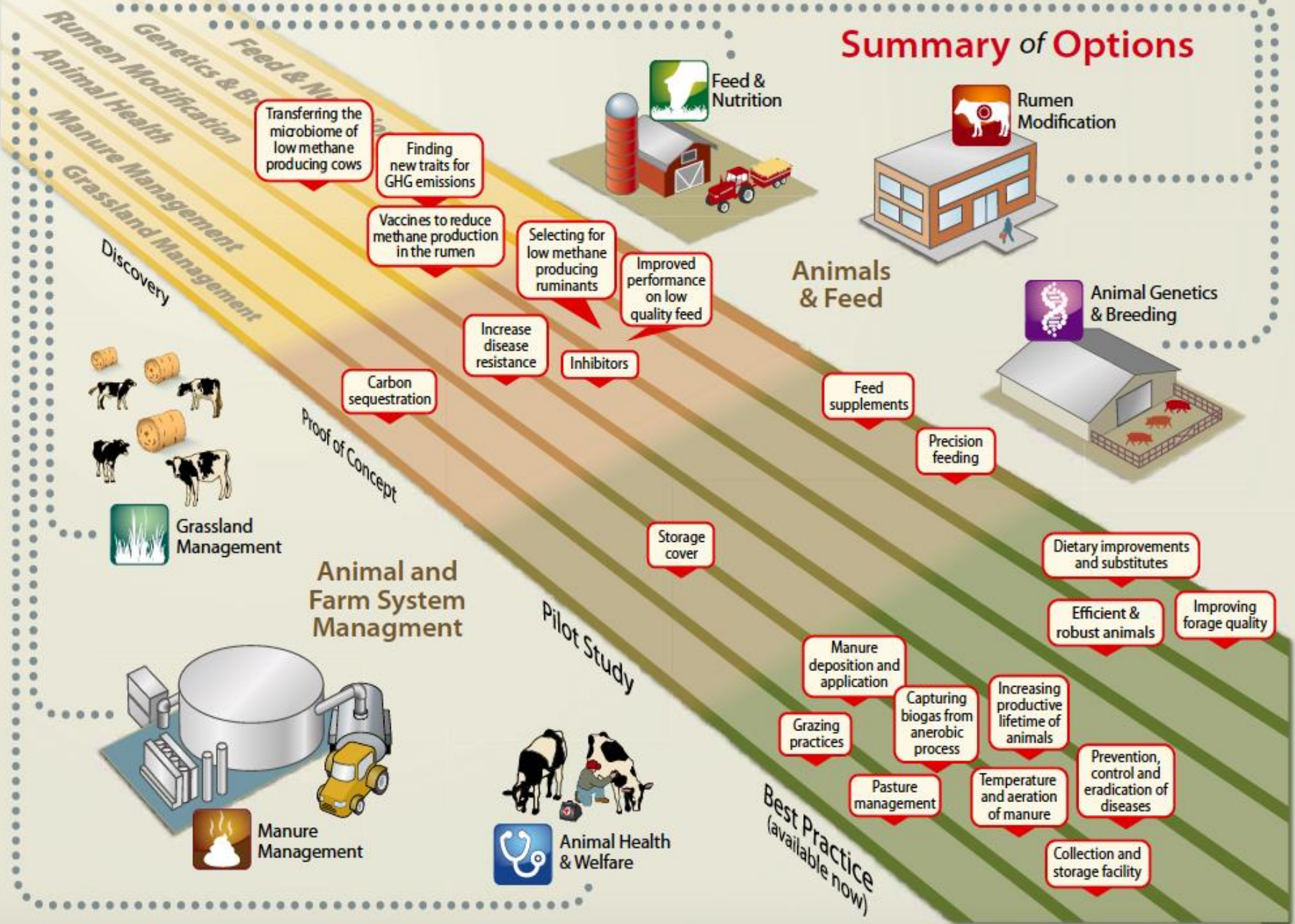
Greenhouse Gas Emissions

Strategic Intent: GHG emissions across the full value chain are quantified and reduced by all economically viable means

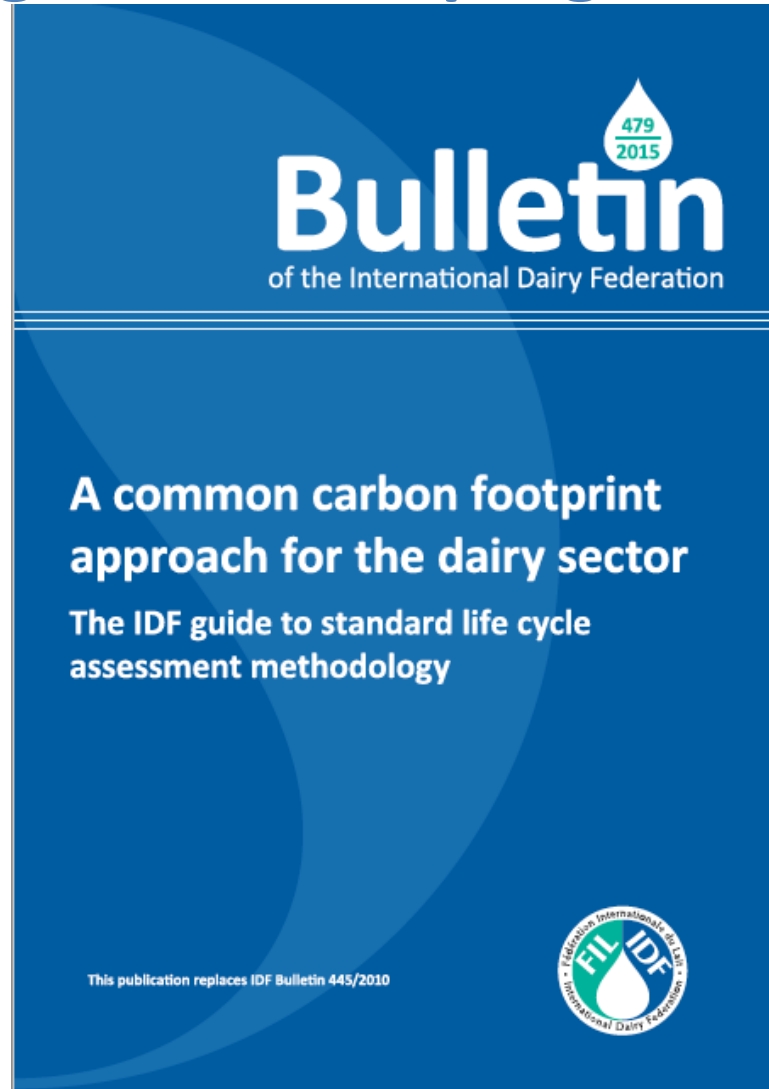
Indicator Metric: GHG emissions using the IDF methodology

Measurement: Level of GHG emissions

Summary of Options



Alignment and progression





Water

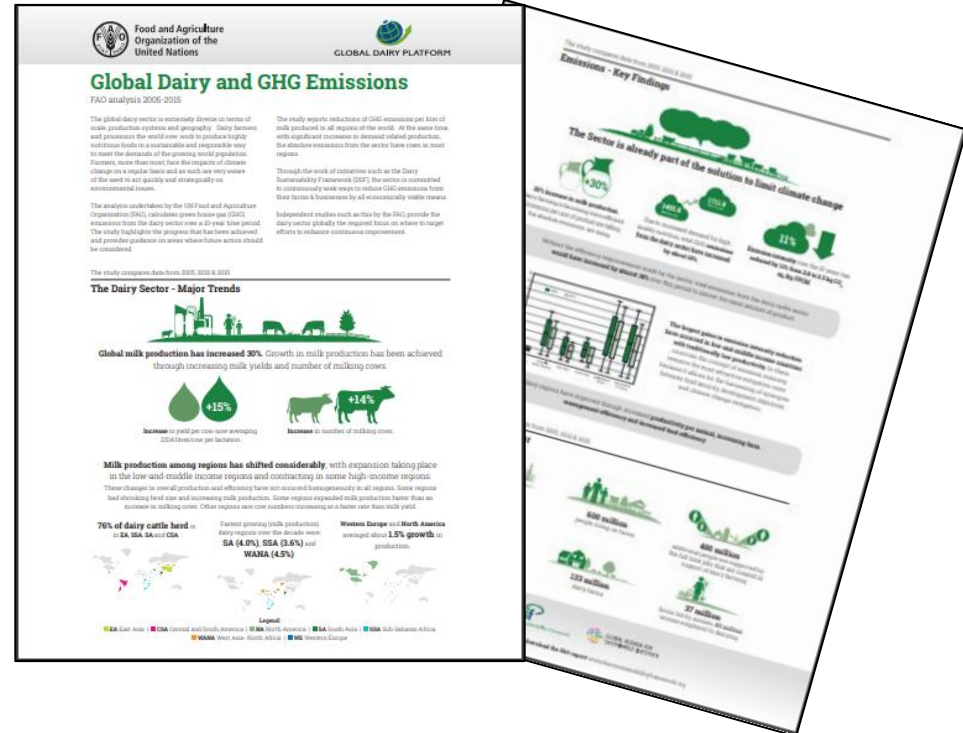
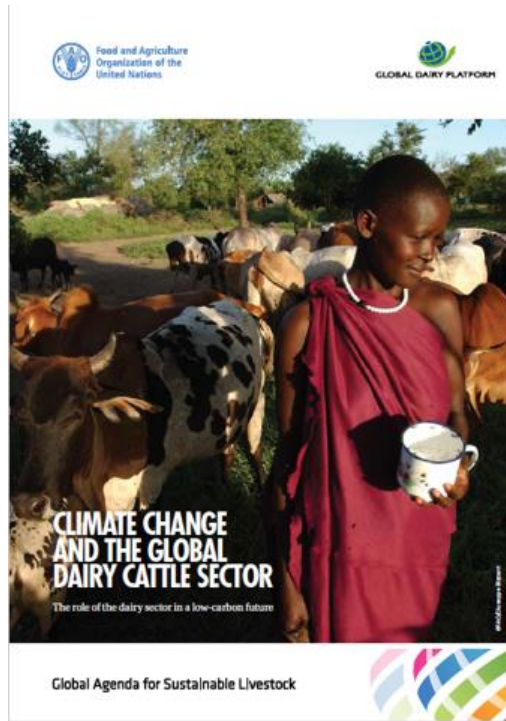
Strategic Intent: Water availability and quality is managed responsibly throughout the dairy value chain

Indicator Metric: Effluent Management Plan (EMP) & Water Use Efficiency

Measurement: Number of EMP's implemented and number of liters of water required to produce a kilogram of product (processing level)



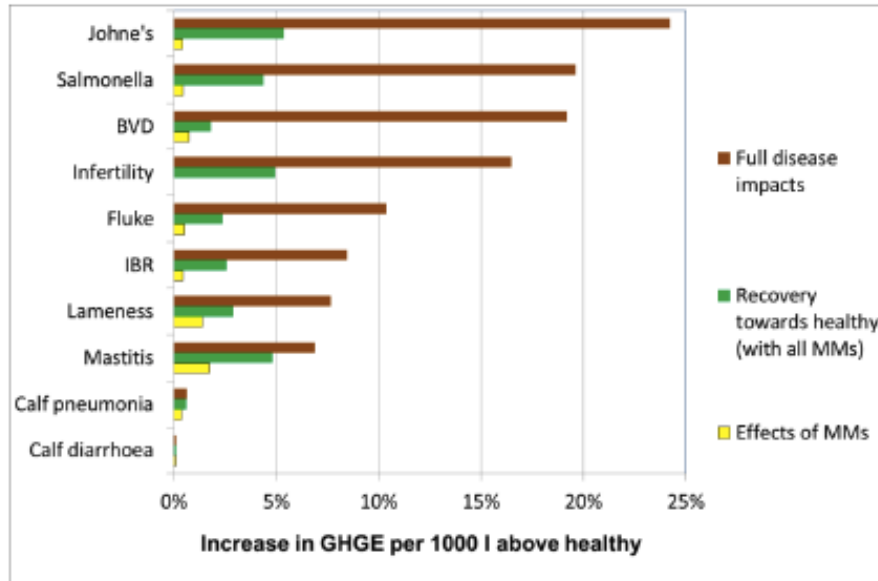
Global Dairy and GHG Emissions



<http://www.fao.org/3/CA2929EN/ca2929en.pdf>



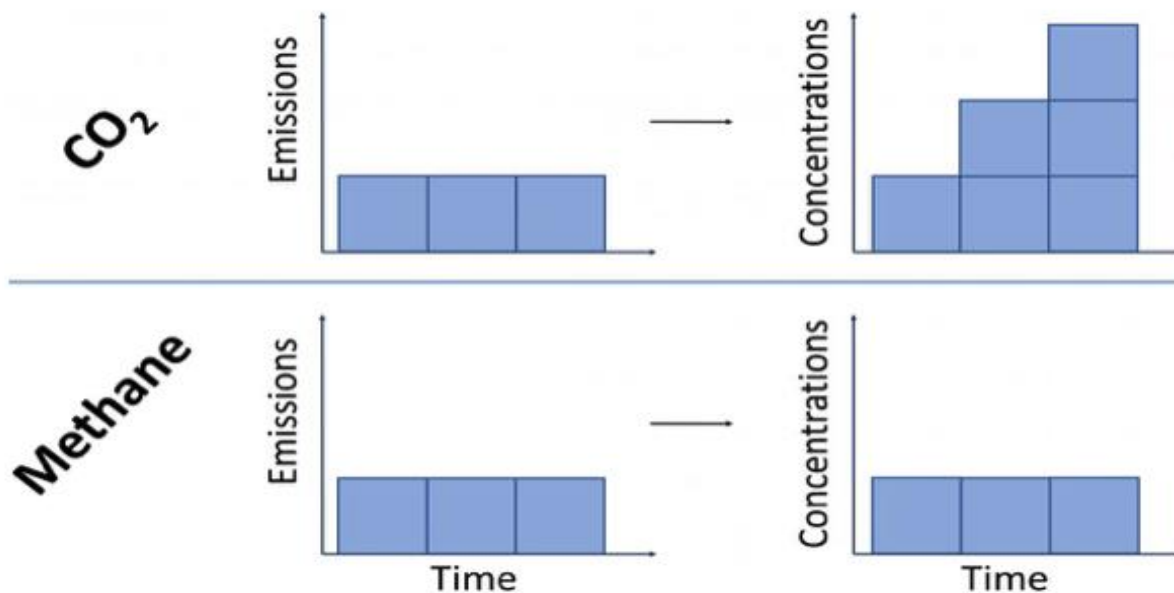
Cattle Health management and GHG emissions



- **AHIM** – Animal Health Improvement Measures
- **MRV** – Measurement, Reporting and Verification
- **NDC's** – Nationally Determined Contributions



GWP* - *New ways of quantifying methane*



C – Sequ

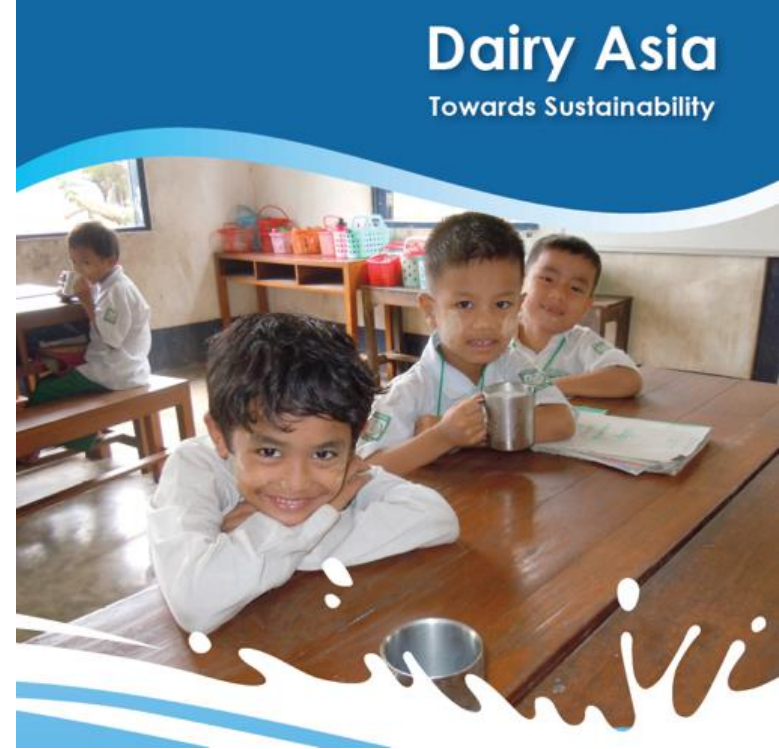
Project of guidelines for the calculation of Carbon Sequestration for the Dairy cattle sector

- No agreed methodology for quantification
- Wide range of stakeholders!
- How can we embed and reward the right behaviors?
- Not about new science
- Packaging and implementing





- Growth area in production and consumption
- 13 Asian countries..
- Moving from talking to action!



Food and Agriculture
Organization of the
United Nations

Global Agenda for
Sustainable Livestock



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India – Cow feeding

- 2/3's animals fed in excess of requirements
- Similar number deficient in essential minerals
- Ration Planning – Local feeds
- Training for locals to deliver advice (30k – 6k are women)
- Animals tagged to monitor progress



- 2.4 million animals
- 30,000 villages
- 1.8 million farmers – 26% are women

Outcomes:

- Net daily income of farmers increased by INR 25/animal/day (annual INR - 7625.00)
- Increased milk production – more milk for families
- Reduced feeding costs!
- Decrease in GHG emissions 12-15%
- Social status of LRP's increased substantially to INR 1500-3000



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Thank you

www.dairysustainabilityframework.org



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