Outlook for the dairy sector in the next decades

A personal view

Nico van Belzen, PhD
Director General, International Dairy Federation

13th Panamerican Dairy Congress
9th September 2014, Querétaro, MX

CONGRÈS INTERNATIONAL

DE

LAITERIE

Organisé par la Société Nationale de Laiterie de Belgique

SOUS LA PRÉSIDENCE D'HONNEUR DE

M. le Baron VAN DER BRUGGEN

Ministre de l'Agriculture et des Beaux-Arts

ET LA PRÉSIDENCE DE

M. le Baron LÉON PEERS

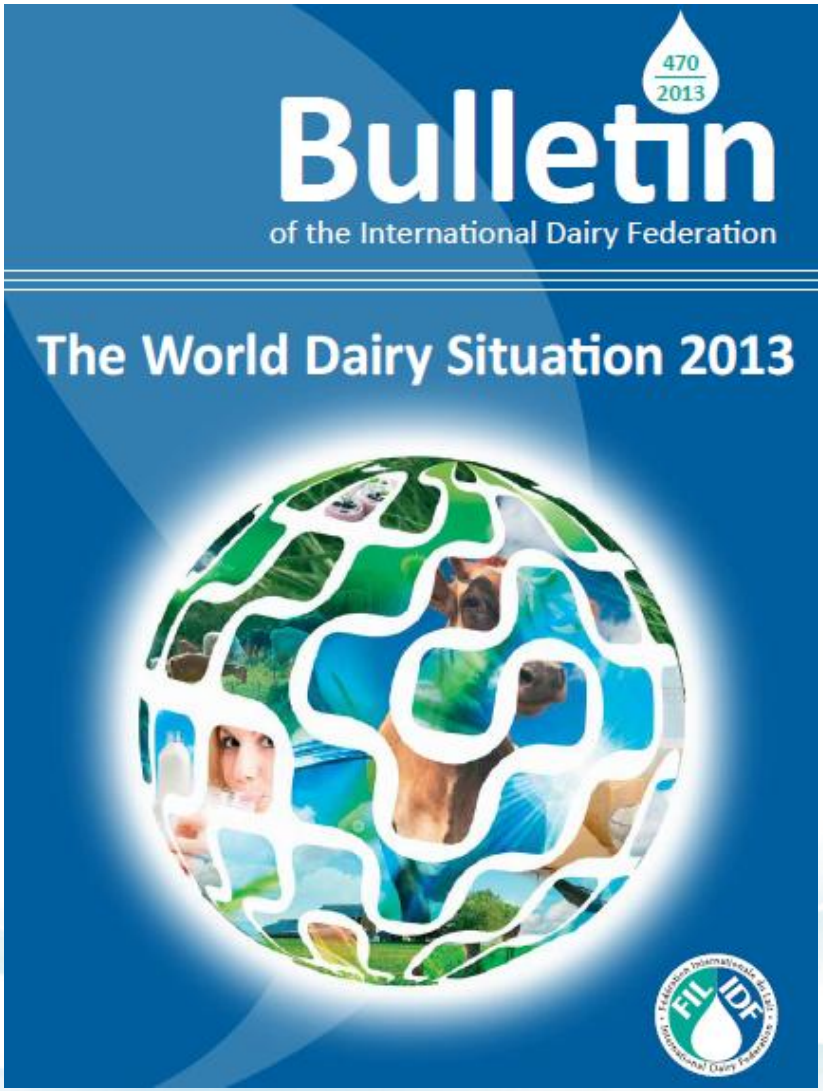
Président de la Société Nationale de Laiterie

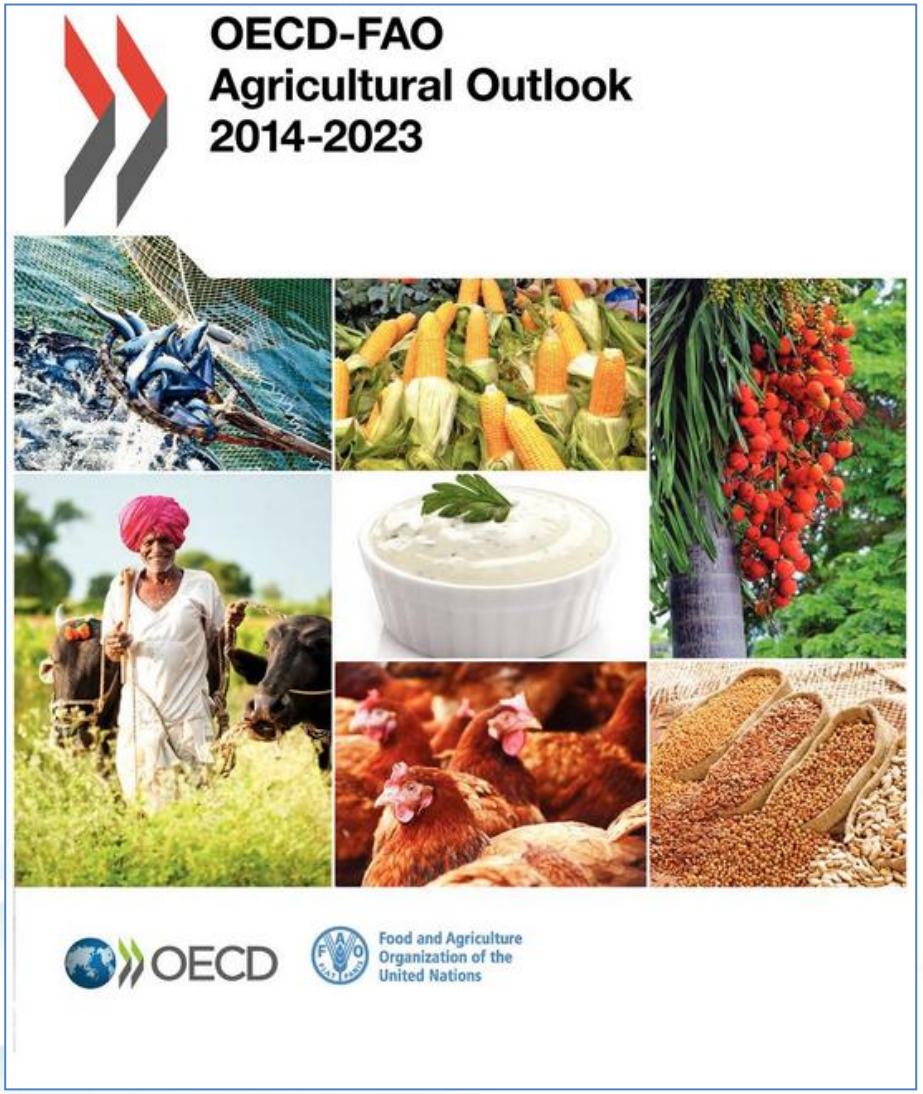
Bruxelles — 8, 9, 10 et 11 Septembre 1903

OVERVIEW

- Where are we today?
- The major challenge
- Key elements of a dairy sector strategy

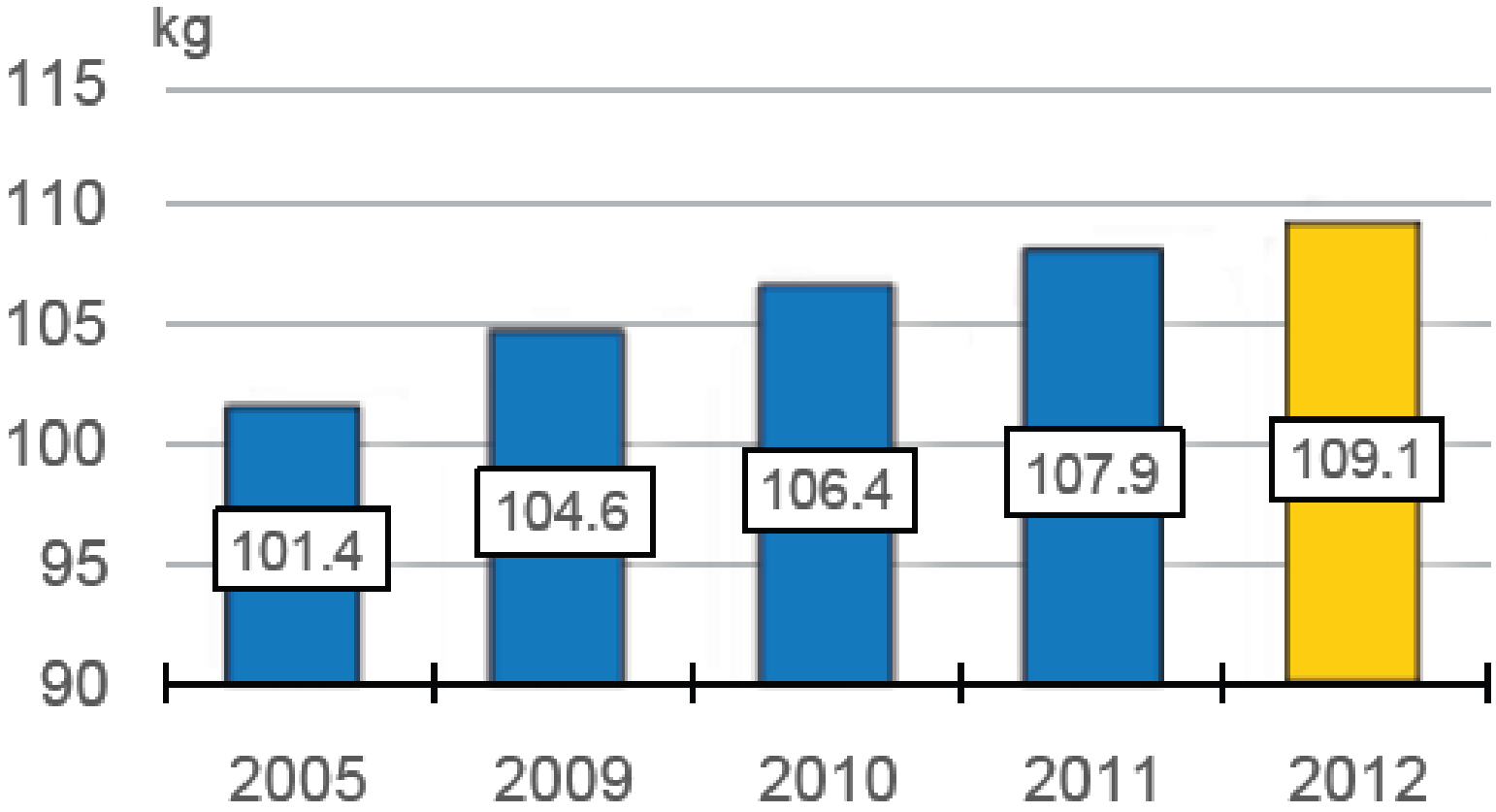
WHERE ARE WE TODAY?





GLOBAL MILK CONSUMPTION IS GROWING

Per capita milk consumption



Source: IDF World Dairy Situation Report 2013

LARGE REGIONAL DIFFERENCES

Dairy consumption in 2012	
per capita (kg milk equivalent)	
World	**109**
Asia	73
Europe	280
North America	274
South America	175
Africa	50
Central America	128
Oceania	255

Source: IDF World Dairy Situation Report 2013

OECD/FAO PROJECTION

- Global milk production increase by 180 Mt by 2023 cf. 2011-2013
  - 78% from developing countries
  - Average growth 1.9%/year, less than 2.2%/yr in last decade
  - Water and land shortages, slow modernization
- Real prices remaining well above pre-2007 level
- Consumption increases from 0.2% - 1.9% / person
- Trade expansion, export US, EU, NZ, AU, AR

Source: OECD-FAO Agricultural outlook 2014

MAIN ISSUES AND UNCERTAINTIES

- Development of Chinese self-sufficiency
- End of EU quota system in 2015
- 2014 US Farm Act could increase export
- Climate change
- Environmental legislation (GHG, manure, water)
- New trade agreements
- Price volatility

Source: OECD-FAO Agricultural outlook 2014

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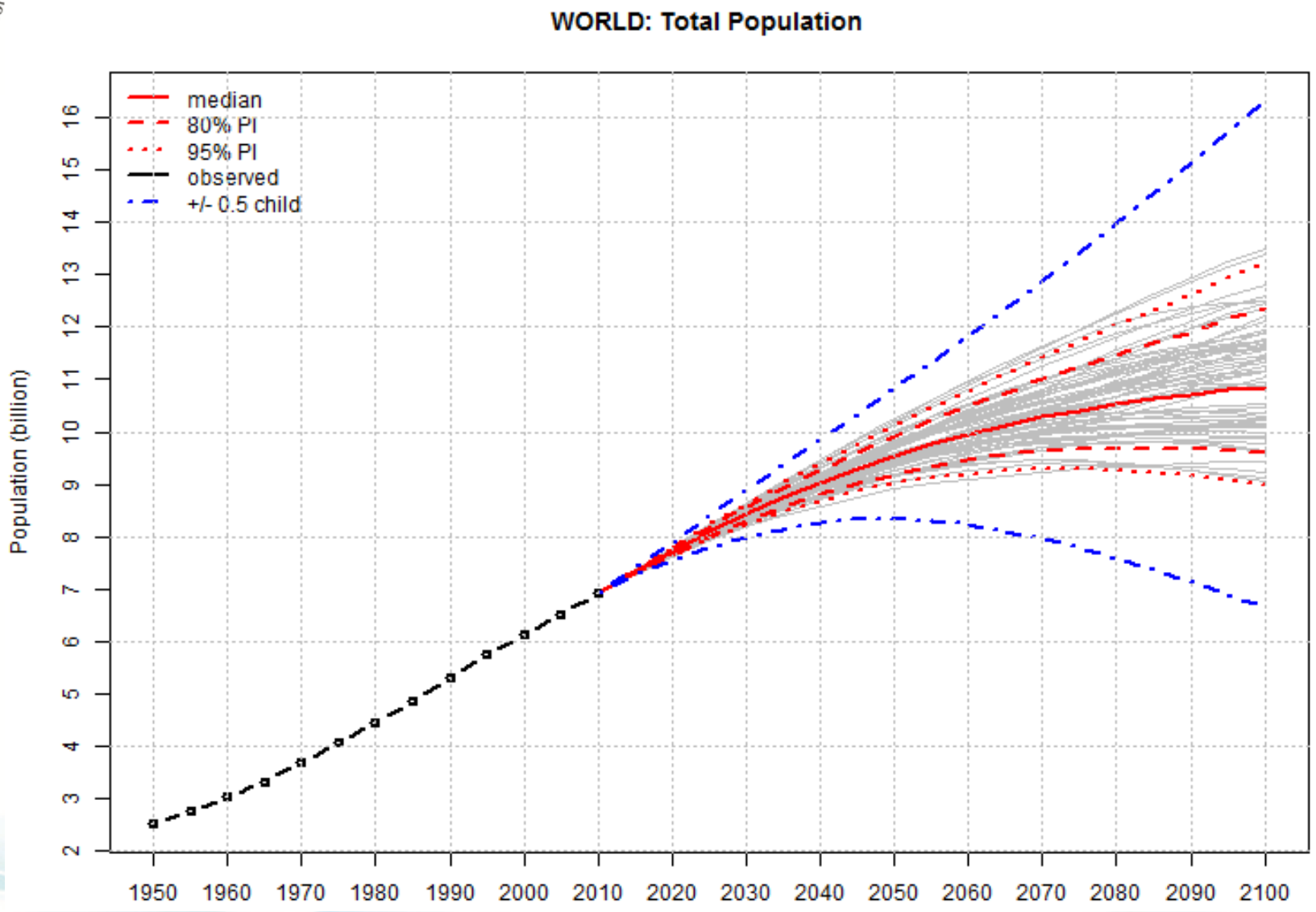
Probabilistic Population Projections based on the *World Population Prospects: The 2012 Revision*



Source: United Nations

THE NUTRITIONAL GAP (FOR DAIRY)

Average intake in South America

Recommended intake in some countries

World population estimate	9.000.000.000		people in 2050
Assumed daily intake	0,48	0,75	liter milk / person / day
Assumed yearly intake	175	274	liter milk / person / year
Global demand	1.576.800.000	2.463.750.000	tonnes milk per year
Production in 2012 (FAOSTAT)	753.924.957		tonnes milk per year
Increase in demand	**2,1**	**3,3**	**-fold**

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KEY ELEMENTS OF A DAIRY SECTOR STRATEGY

Nourish
the world with safe and sustainable dairy

Sustainability	Nutrition	Food Safety
Support a vibrant dairy sector committed to continuously improve its ability to provide safe and nutritious milk and dairy products from healthy animals, whilst preserving natural resources and ensuring decent livelihoods across the whole dairy value chain (cf. DSF)	*Support science-based nutrition policies to ensure that dairy is an integral part of the diet for all age groups and contributes to closing the nutritional gap*	*Safeguard the integrity and transparency of the dairy supply chain to ensure safety and quality of milk and dairy products.*

Standards

Develop science-based globally harmonized standards, guidelines, codes of practice and related methodologies, to continually improve regulatory environments for the dairy sector

POPULATION SIZE vs. MILK PRODUCTION

NEED FOR STANDARDS FOR TRADE

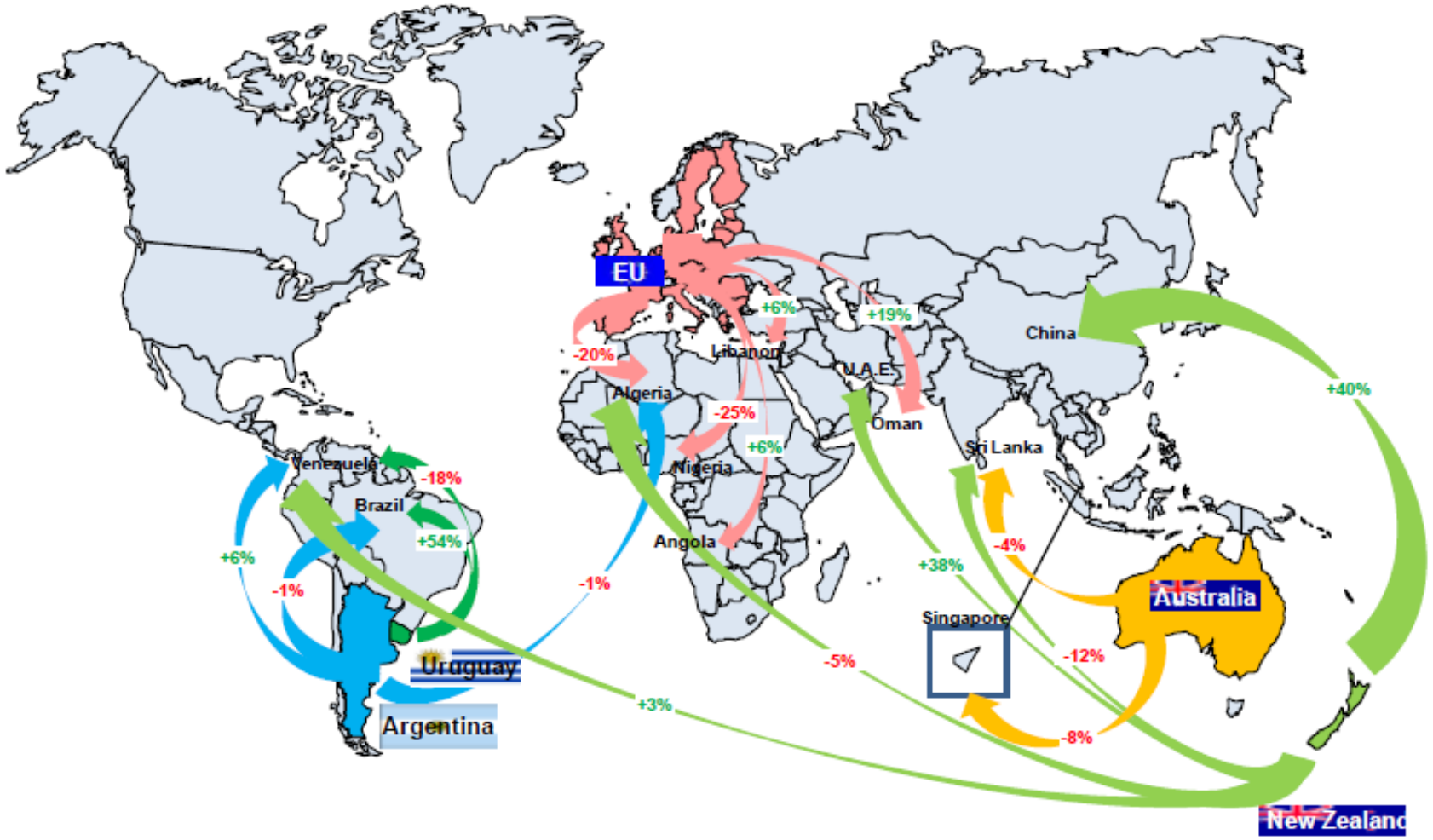
Population projection 2030 (UNFPA)		**Milk production 2012**, tonnes (FAOSTAT)	
World	**8.321.380.000**	**World**	**753.924.957**
India	1.523.482.000	India	124.850.000
China	1.393.076.000	USA	90.865.000
USA	361.680.000	China	42.733.311
Indonesia	279.659.000	Pakistan	37.861.000
Nigeria	257.815.000	Brazil	32.454.421
Pakistan	234.432.000	Russia	31.824.849
Brazil	220.492.000	Germany	30.519.896
Bangladesh	181.863.000	France	24.881.898
Russia	136.429.000	New Zealand	20.053.000
Mexico	135.398.000	Turkey	17.404.262

EXAMPLE OF TRADE IN 2012

Source: IDF World Dairy Situation Report 2013

World trade: dynamics in main export markets of top-5 WMP exporters

(Top-5 export markets per exporter > 10 000 tonnes. Development 2011/12 as indicated in %)



Source: PZ, Comtrade.

ISO/IDF standards

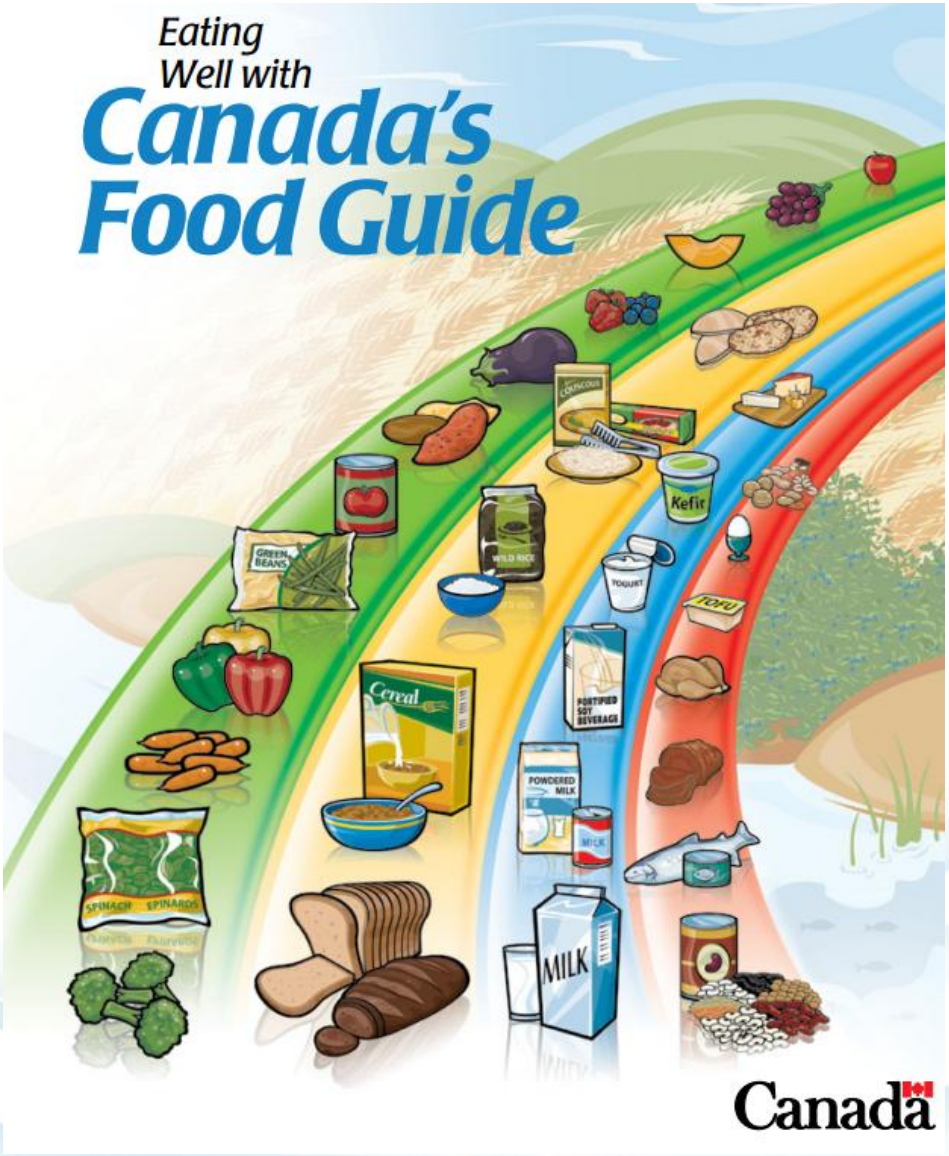
- Internationally harmonized standards for methods of analysis and sampling for the dairy sector
- Currently over 170 joint standards, e.g.
  - raw milk quality testing
  - herd improvement
  - process control and optimization
  - compliance with food standard specifications
  - truth of labeling
  - food safety
- Many are referenced in national and regional regulations
- Over 60 have been recommended by Codex Alimentarius

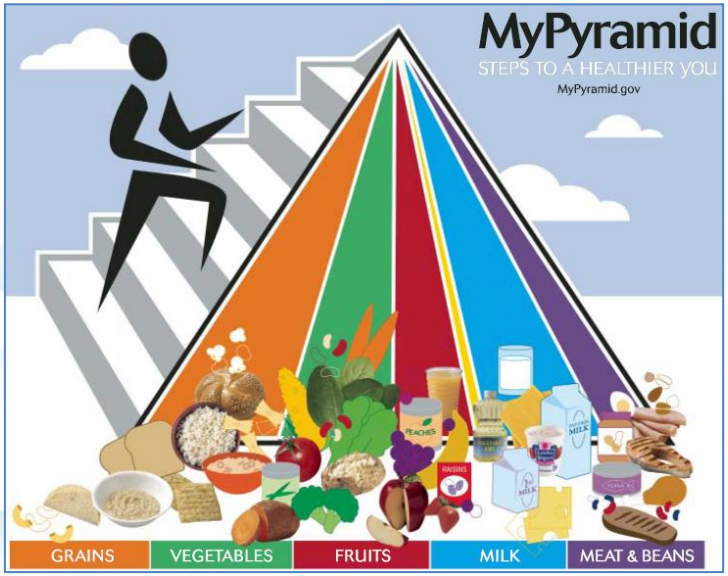
INTERNATIONAL STANDARD	**ISO 13366-2**
	IDF 148-2

FOOD SAFETY

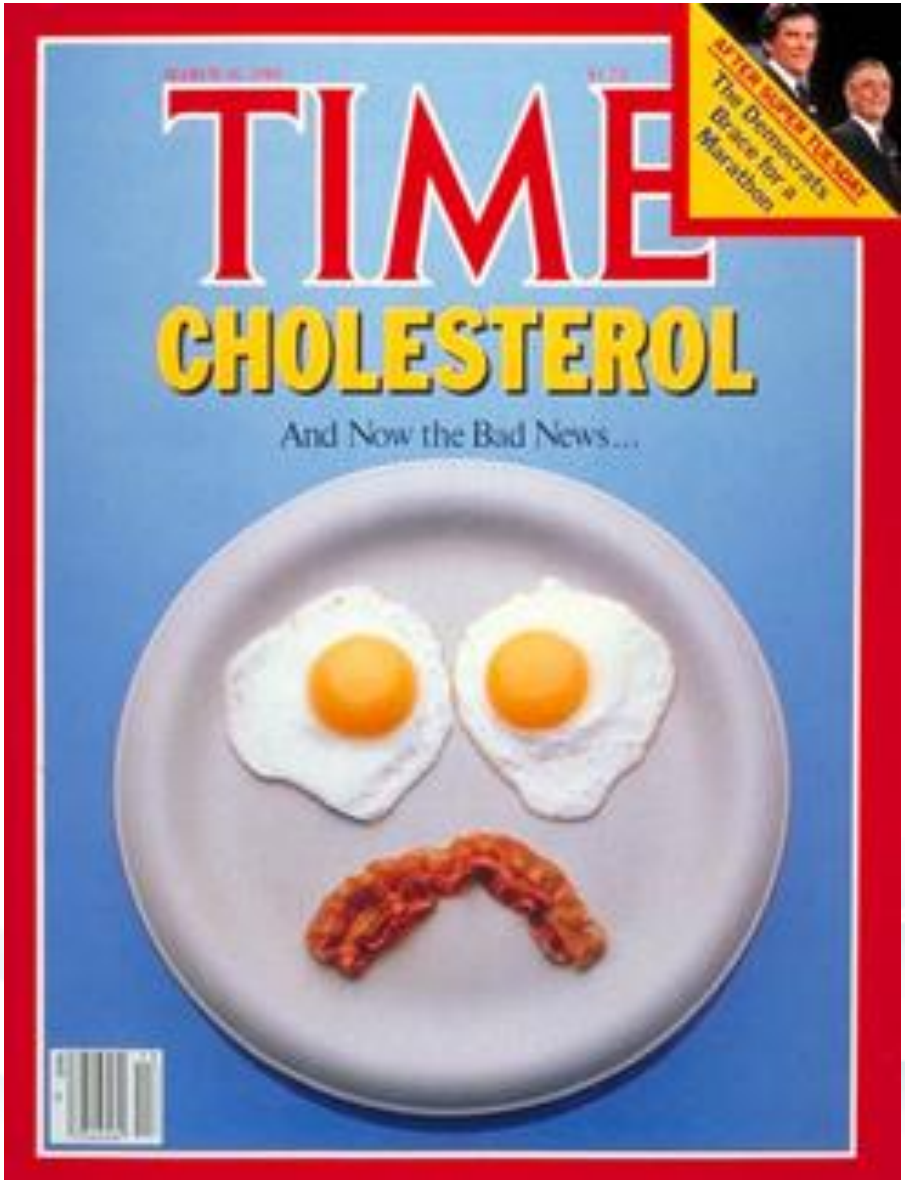
- Our generation enjoys the safest food ever
- Further improvements are possible
- Analytical sensitivity is improving, but risk assessment has a hard time keeping up
- Areas of progress:
  - Threshold of toxicological concern
  - Prediction of pathogenicity based on genetic information (perhaps in the future)

DIETARY RECOMMENDATIONS

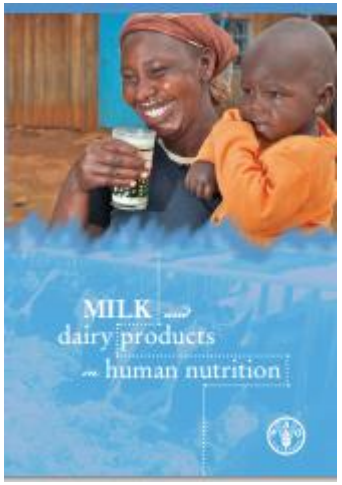




‘POPULAR NUTRITION’ FROM 1984 TO 2014



NUTRITIONAL BENEFITS OF DAIRY



Milk and dairy products in human nutrition

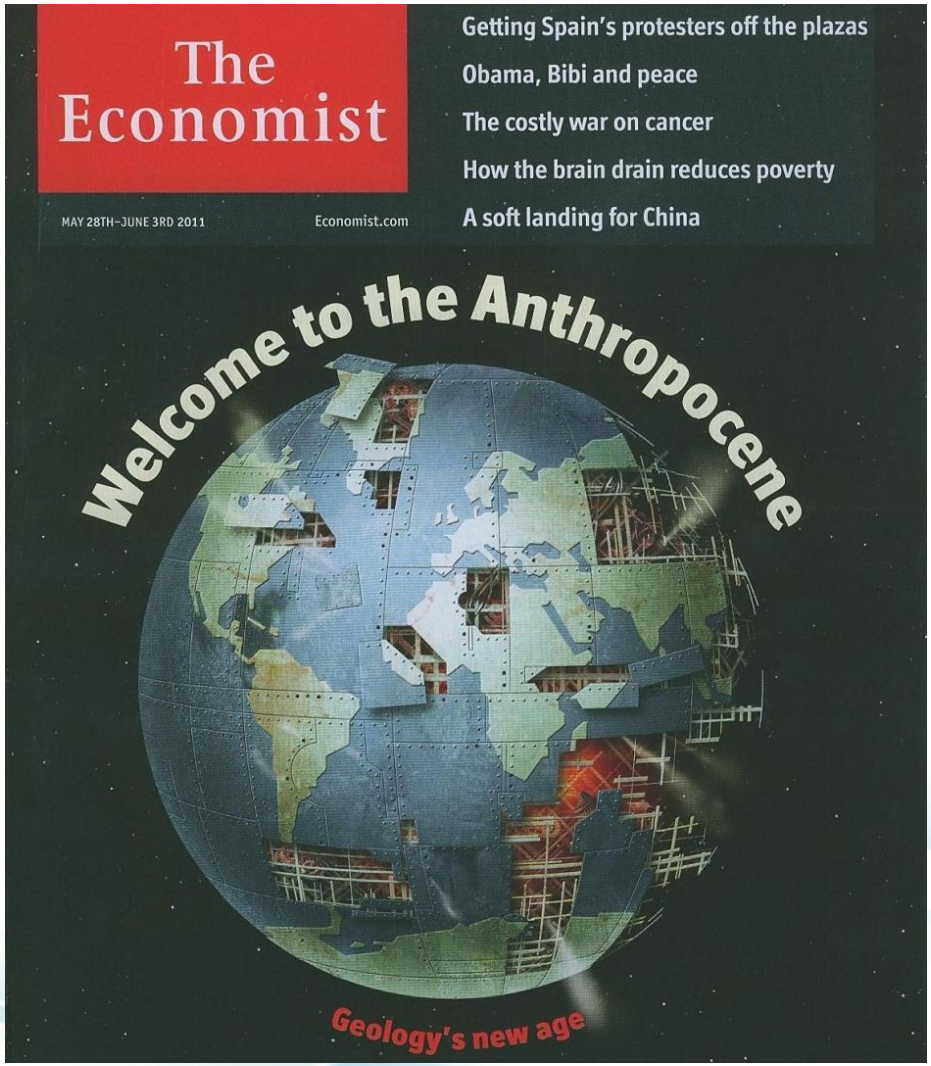
(FAO, 2013)

- "Milk is a major source of dietary energy, protein and fat"
- "It can make a significant contribution to meeting the required nutrient intakes of calcium, magnesium, selenium, riboflavin, vitamin B12 and pantothenic acid."
- "Dairy products can be important in diversifying the diet. They (...) provide high quality protein and micronutrient in an easily absorbed form (...)"

RECENT IDF INPUT TO WHO (WORLD HEALTH ORGANIZATION)

- Scoping on guidelines on saturated fat and trans-fat consumption
- Draft guidelines on sugar intake
- Development of a global monitoring system for the prevention and control of non-communicable diseases
- Comments on 2nd Int'l Congress Nutrition (ICN2) draft
  - political outcome document
  - framework for action

THE IMPORTANCE OF SUSTAINABILITY



"Anthropocene" coined by Eugene Stoermer, Paul Crutzen

"Human development has reached a scale where it affects vital planetary processes" (Rockström and Karlberg 2010)

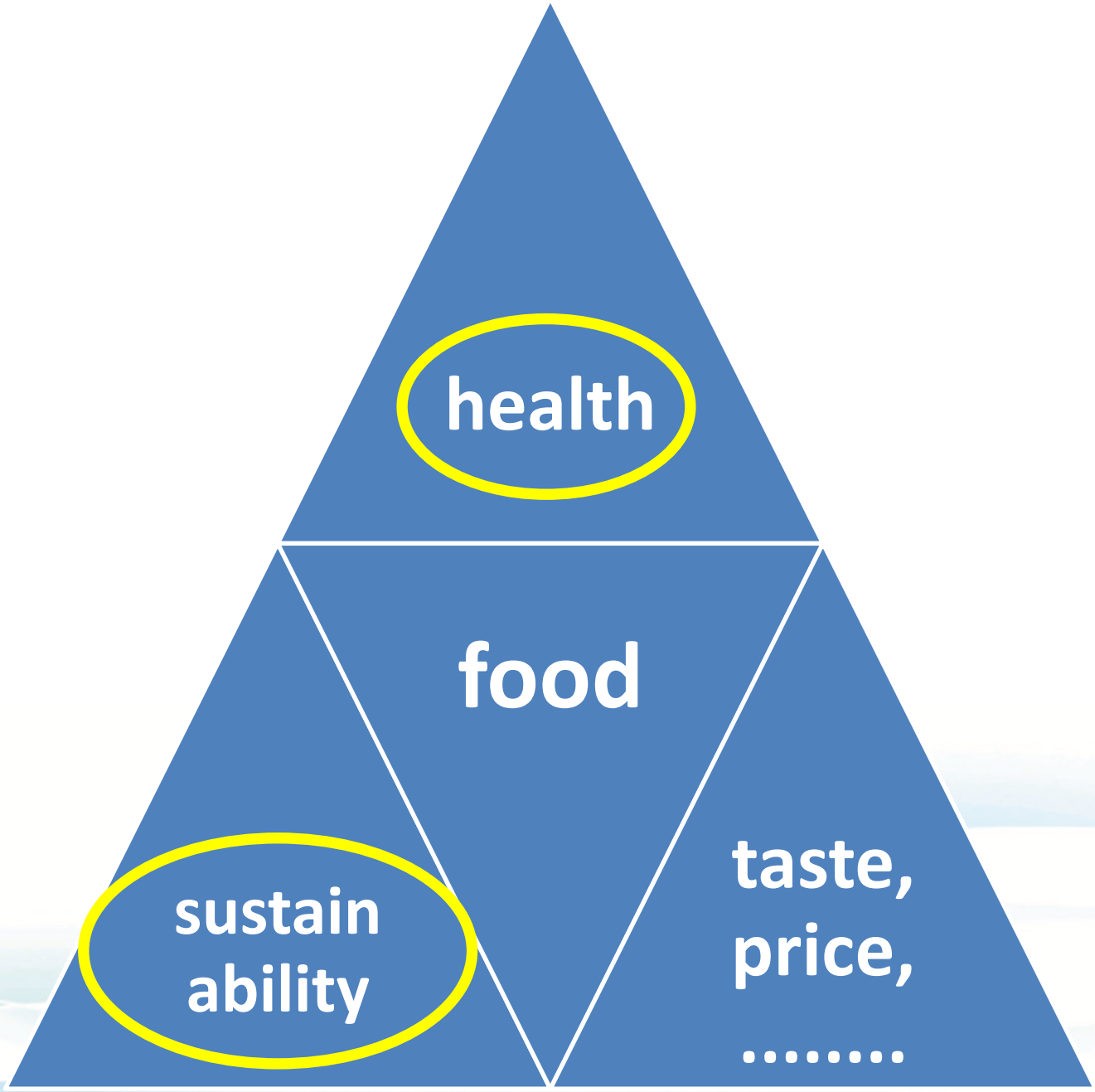
E.g. C, N, P, H_2O cycles

Future fossil cities, fossil tools

Environment

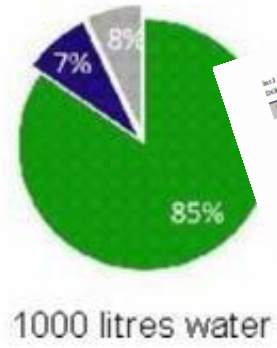
3,353,965	Forest loss this year (hectares)
4,515,344	Land lost to soil erosion this year (ha)
22,707,621,602	CO_2 emissions this year (tons)
7,739,137	Desertification this year (hectares)
6,315,380	Toxic chemicals released in the environment this year (tons)

http://www.worldometers.info/


health
food
sustain
ability
taste,
price,
.....

THE ENVIRONMENTAL CONTEXT : GENERAL CONFUSION

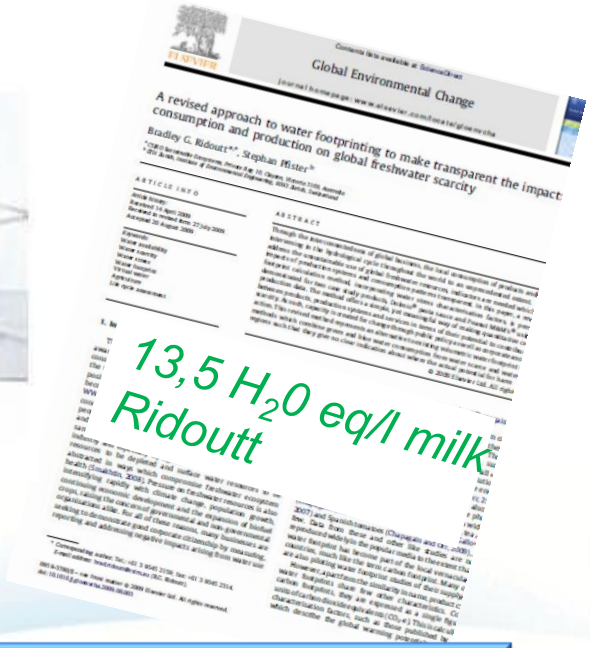
- **Numerous different methodologies** to quantify the environmental impact of the livestock sector: very different results, difficult to identify ways of improvement



1000 litres water

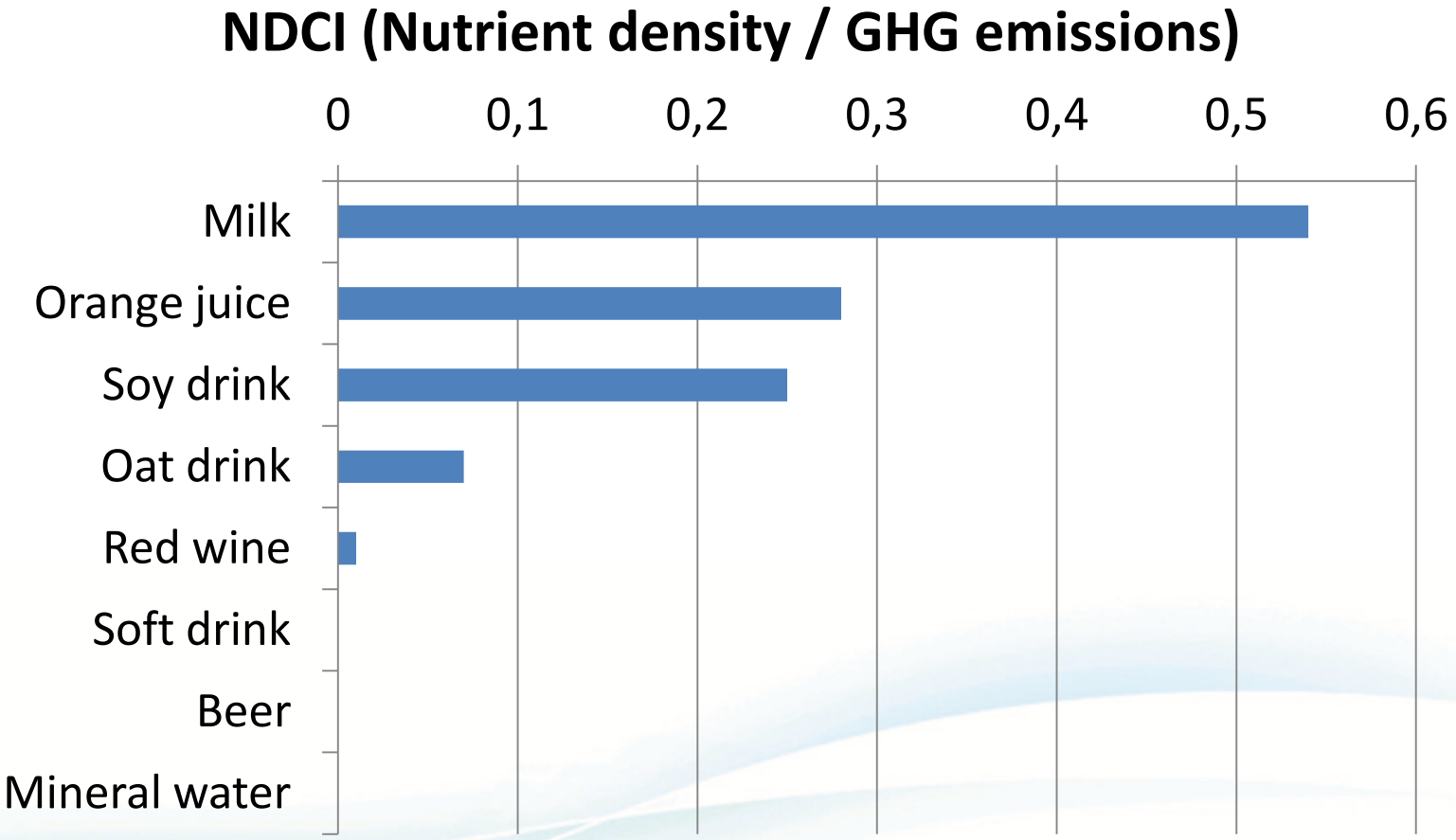
WFN

1 litre milk



Urgent need for harmonised and robust methods/indicators,
To reduce confusion
To identify mitigation strategies based on robust science

Nutrient Density to Climate Impact Index of Beverages



Smedman et al. 2010 Food Nutr Res 54: 5170

IDF Dairy Sustainability Map

Environmental	Economic	Social
Greenhouse Gas Emissions	Quality assurance at dairy farming level Animal Health & Animal Welfare	
Water & Energy Use	Food Safety & Nutrition	
Waste Handling, Effluent Treatment, Pollution	Price of feed and raw milk vs. retail price	Labor conditions at dairy farm /plant
Biodiversity	Costs of milk collection, production and processing	Consumer behaviors and trends

Areas in which IDF actively provides leadership and guidance to the global dairy industry

Areas monitored

GDAA AND DAIRY SUSTAINABILITY WEBSITE

www.dairy-sustainability-initiative.org

SHARE

Welcome to the Dairy Sustainability Commitment Website

The Dairy Sustainability Framework is the GDAA program for aligning and connecting sustainability initiatives to demonstrate leadership and progress globally

Second issue of the GDAA Newsletter

Don't miss the second issue of the GDAA Newsletter!

Download the newsletter and sign up to our direct mailing list from the Press Room.

Read more...

The Dairy Sustainability Framework

The Dairy Sustainability Framework (DSF) resulted from an initiative undertaken by the dairy sector to align globally on key sustainability activities in a coherent way.

Find out more about this exciting new development by downloading the brochure.

FEPALE

SAI PLATFORM

GLOBAL DAIRY PLATFORM

eda

ESADA

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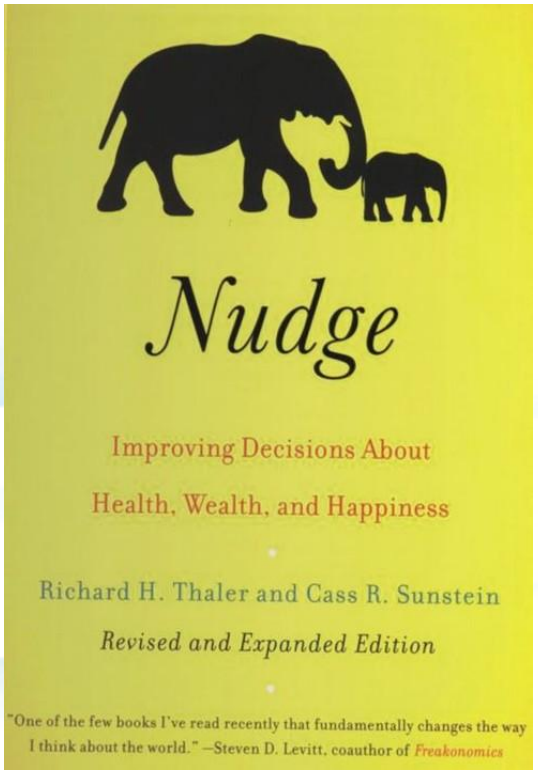
GOVERNMENT POLICY ON SUSTAINABILITY

Production

- E.g. Dutch draft legislation to replace milk quota by regulation of manure management

Consumption

- Will probably be done by 'nudging': positive/negative reinforcement and indirect suggestions to try to achieve **non-forced** compliance

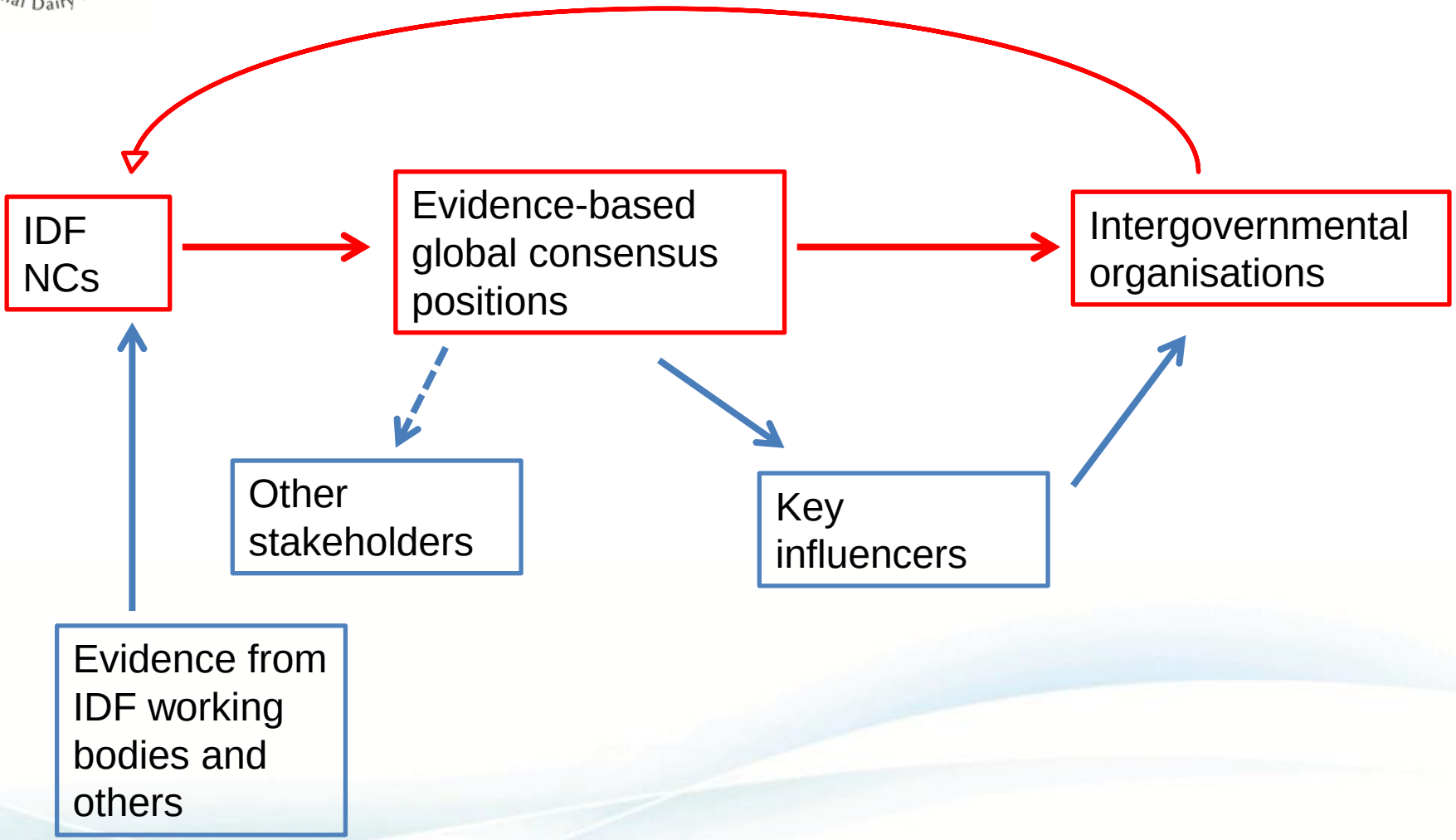


GOVERNMENT POLICY ON SUSTAINABILITY

AN EXAMPLE FROM THE NETHERLANDS

	up!	Touareg	Fold difference
CO_2 emission (g / km)	95	193	2
Fuel consumption (L / 100 km)	4,1	8,2	2
Net cost (€)	7.153	42.470	6
VAT (€)	1.502	8.919	6
BPM tax (€)	735	22.601	31
Total cost (€)	9.390	73.990	8

Adequate representation is key



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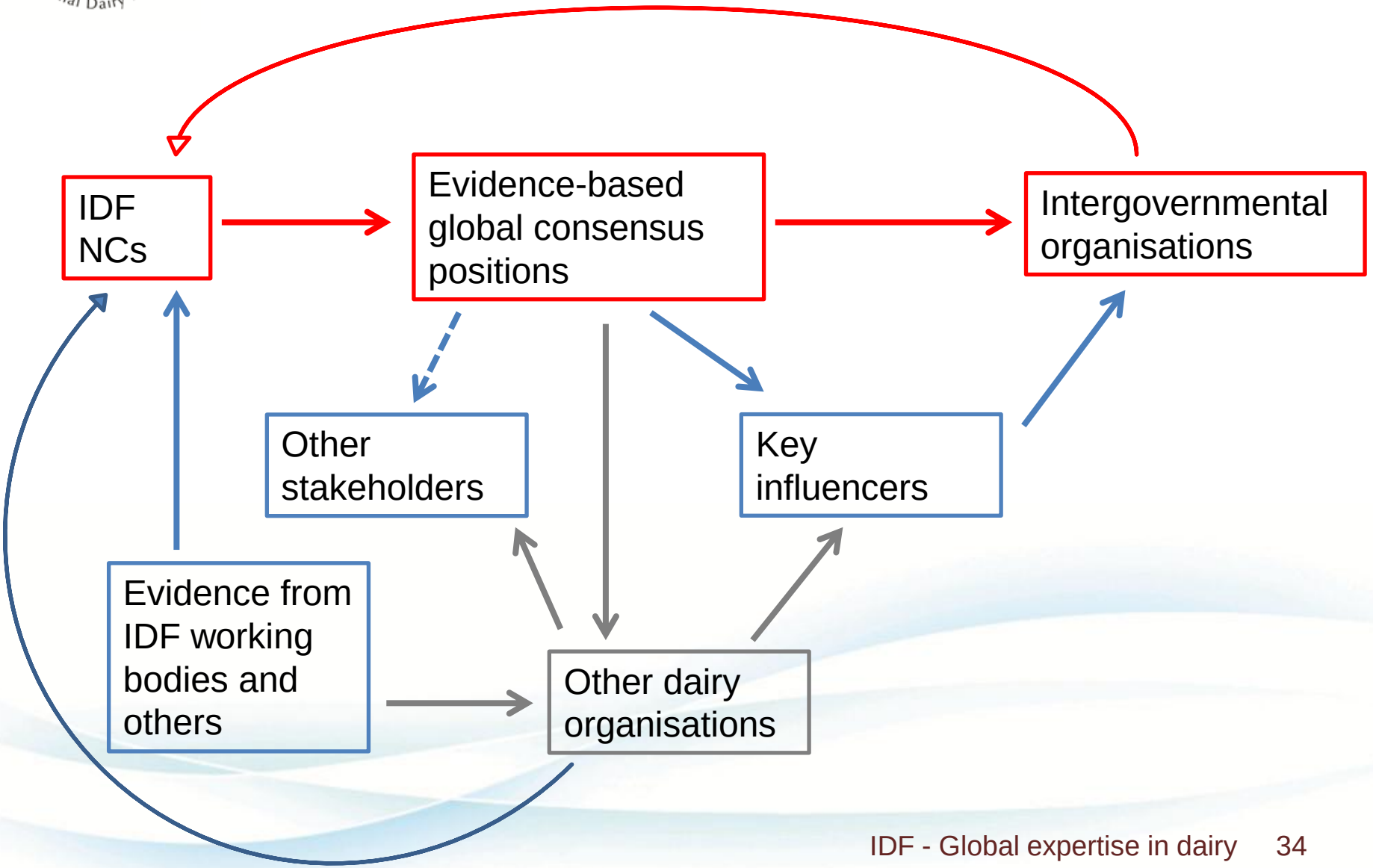

LIAISON WITH FAO ON SUSTAINABILITY

Global Agenda for Sustainable Livestock

- Focus on: 1) Closing the efficiency gap; 2) Restoring value to grasslands; 3) Waste to worth

Partnership on Livestock Environmental Assessment and Performance (LEAP)

- Build framework to guide and evaluate progress on environmental performance
- Produce methodologies and sector-specific guidelines for the LCA assessment of GHG emissions
- Technical Action Groups
  - Feed; Small Ruminants; Poultry
  - Large Ruminants; Biodiversity

LIAISON WITH ISO ON SUSTAINABILITY

ISO TC 207 SC5/WG8 on Water Footprint

IDF expert participation in development of ISO guidance

ISO TC 207 SC7 on Greenhouse Gas Management

IDF monitoring activities related to dairy sector guidance

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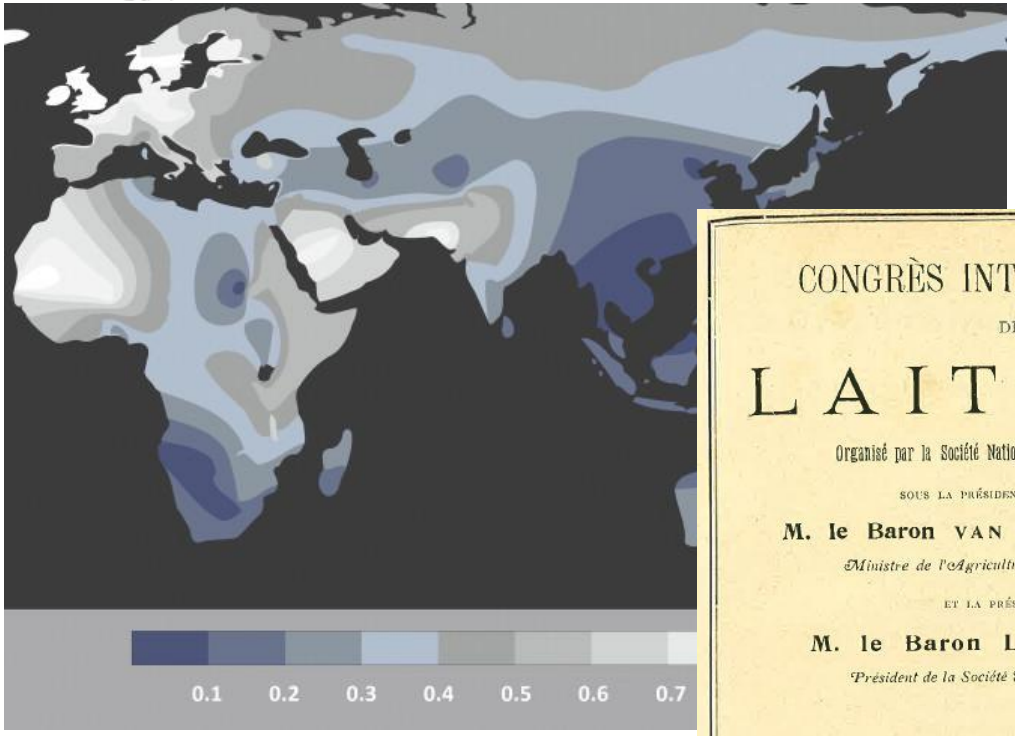
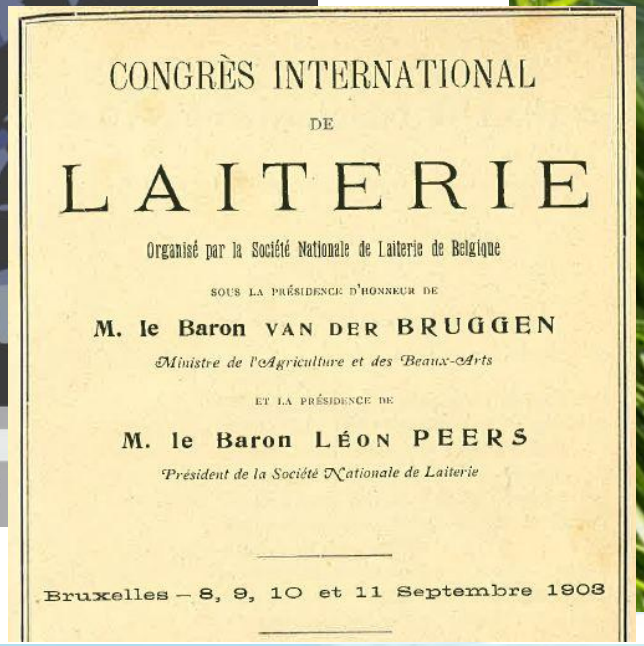
FROM ANCIENT HISTORY TO BRIGHT FUTURE





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