



COMMENTS FROM THE INTERNATIONAL DAIRY FEDERATION (IDF) on the ICN2 Framework for Action zero draft to implement the Rome Declaration on Nutrition

The International Dairy Federation (IDF) is grateful for the opportunity to comment on the ICN2 Framework for Action zero draft to implement the Rome Declaration on Nutrition. Since 1903, IDF is the pre-eminent source of scientific and technical expertise for all stakeholders of the dairy chain. IDF commits to help nourish the world with safe and sustainable dairy.

1. a) Do you have any general comments on the draft Framework for Action?

IDF supports the need to promote healthy diets and to focus on balanced and diversified diets. Emphasis should be put on the value of a 'whole food' and 'dietary approach', rather than 'isolated nutrients' approach.

It has been shown that access to better and more diversified diets is key for combating problems of micronutrient malnutrition or "hidden hunger".ⁱ FAO states that "the only sustainable means of addressing malnutrition is through the consumption of a high-quality, diverse diet that provides adequate but not excessive energy."ⁱⁱ

Since people consume foods, rather than single nutrients in isolation, recommendations based on nutrients can be difficult to put into practice.ⁱⁱⁱ

In a recent editorial in the Lancet Diabetes & Endocrinology entitled Saturated fatty acids and type 2 diabetes: more evidence to re-invent dietary guidelines Dariush Mozaffarian concluded:

*"Taken together with other advances in nutritional science, now is the time to redesign our process of setting dietary guidelines. We need to move away from **unhelpful classifications and policies based on crude groupings of merely chemically related nutrients (eg, total saturated fat)** and their predicted or postulated effects on risk—which, in addition to scientific dubiousness, create confusion for consumers and opportunities for manipulation by industry—and towards food-based guidelines that mainly consider prospective evidence for effects on clinical endpoints."*^{iv}

IDF recommends that nutrient-based recommendations should be changed to food-based and healthy dietary patterns recommendations throughout the document.

IDF recognizes the need to step-up action at global, regional and national level to combat antimicrobial resistance (AMR). It strongly supports the "One Health Approach" and several related initiatives led by FAO, WHO and OIE to address AMR. IDF welcomes the stated recognition of food suppliers as important stakeholders to cooperate with and supports the call for ensuring cross-sector participation by the health, agriculture and trade sectors in decision making for safe, quality foods and coordinating implementation of preventive programmes. Overall, **IDF supports the proposed priority actions on AMR while it asks for reconsideration of the wording in Section 3.3.6 pertaining to termination of non-therapeutic use of antimicrobials to remove present ambiguity.**

1. b) Do you have any comments on chapter 1-2? and

1. d) Do you have any comments on chapter 4-5

It is stated on page 2 that the Framework for Action is designed for a 10 year time frame. IDF would like to note that this is a very long time frame within the field of nutrition and health. As dietary recommendations may change within the next 10 years, there should be a mechanism to ensure that the dietary recommendations and targets outlined in the Framework (e.g. p 8 and 11) remain consistent with the best available scientific evidence. When the evidence changes, so too should the targets and programmes discussed on page 24-27. IDF notes in this context that page 28 of the draft Framework for Action (chapter 5) mentions an 'Intergovernmental Panel on Nutrition (IPN)' to 'review and assess the most recent scientific, technical and socio-economic information produced worldwide relevant to understanding nutrition' but it is not clear how the targets and programmes set as a result of the Framework for Action would be adapted in relation to advice from the IPN.

1. c) Do you have any comments on chapter 3 (3.1 Food systems, 3.2 Social Protection; 3.3 Health; 3.4 International trade and investment)?

IDF comments on chapter 3.1 Food systems (p 7-13)

If nutrient-based recommendations would be persisted then IDF would like to challenge the recommendation for Saturated Fatty Acids and recommends that the type of Trans-Fat be specified.

Reconsideration of the Saturated Fatty Acid recommendation

- Oliveira Otto stated that "Although dietary recommendations have focused on restricting saturated fat consumption to reduce cardiovascular disease (CVD) risk, evidence from prospective studies has not supported a strong link between total saturated fat intake and CVD events" and they concluded that "**Associations of saturated fat with health may depend on food specific fatty acids or other nutrient constituents in foods that contain saturated fat, in addition to saturated fat.**"^v
- A 2014 systematic review and meta-analysis – that included more recent and larger trials (up to July 2013) – concluded that '**current evidence does not clearly support cardiovascular guidelines that encourage high consumption of polyunsaturated fatty acids and low consumption of total saturated fats.**' This conclusion is based on research involving more than 600,000 participants in 18 countries, funded by the British Heart Foundation, the UK Medical Research Council, Cambridge National Institute for Health Research Biomedical Research Centre, and Gates Cambridge.^{vi}
- The largest study so far (EPIC), including 12,132 cases of incident type 2 diabetes from 340,234 adults across eight European countries showed that different individual saturated fatty acids were independently associated with incident type 2 diabetes in **opposite** directions^{vii}. There were inverse associations between type 2 diabetes and odd chain saturated fatty acids (15:0 and 17:0 – the type found in dairy fat) and positive associations between type 2 diabetes and even-chain saturated fatty acids (14:0, 16:0 and 18:0 – from fatty diets, but also made within the body from carbohydrates and alcohol).

In light of the evidence outlined above, IDF proposes that the recommendation on SFA should be made less restrictive and take into account differences in SFA from different food sources.

Trans-fats – the type needs specifying

- Whenever the term *trans* fats is used, it should be specified that this relates to industrially produced *trans* fat, **NOT** the trans fatty acids that are naturally present in ruminant fat.
- This is because the detrimental effects of industrial TFA on heart health are well accepted. For example:
 - A 2009 WHO Scientific update on TFA concluded that:
*'The current growing body of evidence from controlled trials and observational studies indicates that TFA consumption from **partially hydrogenated oils** adversely affects multiple cardiovascular risk factors and contributes significantly to increased risk of CHD events.
TFA produced by **partial hydrogenation** of fats and oils should be considered industrial food additives having no demonstrable health benefits and clear risks to human health.'*^{vii}
 - The 2010 FAO/WHO Expert Consultation on Fats and Fatty Acids in Human Nutrition contain similar conclusions on industrial TFA:
*'There is convincing evidence that TFA from commercial **partially hydrogenated vegetable oils** (PHVO) increase CHD risk factors and CHD events – more so than had been thought in the past.
There is also probable evidence of an increased risk of fatal CHD and sudden cardiac death in addition to an increased risk of metabolic syndrome components and diabetes.'*^{ix}
- However, the conclusions of the 2009 WHO Scientific update on TFA about ruminant TFA were very different to those relating to industrial TFA:
*Although **ruminant** TFAs cannot be removed entirely from the diet their intake is **low** in most populations and to date there is **no conclusive evidence** supporting an association with CHD risks **in the amounts usually consumed.***^v
- The 2010 FAO/WHO Expert Consultation on Fats and Fatty Acids in Human Nutrition concluded:
*Among adults, the estimated average daily **ruminant TFA intake in most societies is low.***^{vi}
- A systematic review and meta-analysis of cohort studies concluded that 'industrial TFA may be positively related to CHD, whereas ruminant TFA is not, but the limited number of available studies prohibits any firm conclusions concerning whether the source of TFA is important. The null association of ruminant TFA with CHD risk may be due to lower intake levels.'^x
- In a 2013 review of randomised controlled trials, Brouwer and colleagues found that gram for gram, ruminant TFA, CLA and industrial TFA had largely the same effect on blood lipoproteins, but commented that the question whether ruminant TFA cause cardiovascular disease is irrelevant, because their intake is too low.'^{xi}

In light of the evidence outlined above, IDF recommends that all mentions of 'trans-fats' should be changed to 'industrial trans-fats'.

Appreciate the acknowledgement of the nutritional benefits of animal-source products.

Research on the consumption of animal-based foods by children has demonstrated convincingly improved growth, micronutrient status, cognitive performance and a level of physical activity^{xii}. Milk and other dairy foods provide macronutrients, essential micronutrients (vitamins and minerals), fatty acids and growth factors that are needed for energy and for growth and development of children. Under-nutrition and micronutrient deficiencies are still highly prevalent in children less than 5 years old, which could begin to be alleviated with greater consumption of milk and other dairy products and animal based foods.

The FAO book on Milk and Dairy products in human nutrition states that *“Milk and dairy products play a key role in healthy human nutrition and development throughout life, but especially in childhood”*^{xiii}. That milk and dairy products can help alleviate malnutrition and stunted growth is stated throughout the book:

- “Growing consumption of dairy and other livestock products is bringing important nutritional benefits to large segments of the population of developing countries.”
- “As a concentrated source of macro- and micronutrients, milk and dairy products can play a particularly important role in human nutrition in developing countries, where the diets of poor people frequently lack diversity and consumption of animal-source foods may be limited.”
- “Milk plays a key role in treating under-nutrition both in industrialized countries, where almost all products used for enteral feeding of malnourished hospitalized children and adults are milk-based and in developing countries.”
- “In children with poor nutritional status, the addition of milk to the diet is likely to supply nutrients that are important for growth and are deficient in the diet.”

Also, Table 4.8 of this publication highlights many benefits in relation to chronic diseases:

- “There is moderate evidence showing an association between milk and dairy product consumption and lower incidence of T2DM¹ in adults.”
- “Milk and calcium probably protect against colorectal cancer”
- “There may be a protective effect of milk and dairy on weight due to components such as protein. However, if such an effect exists the magnitude is likely to be small.”
- The majority of review studies conducting meta-analyses of prospective studies conclude that low-fat milk and total dairy product consumption is generally not associated with CVD risk and may actually contribute to a reduction of CVD.”
- ‘Although dairy foods contribute to SFA content of the diet, other components in milk such as calcium and PUFAs may reduce risk factors for CHD.’

IDF appreciates the acknowledgement of the nutritional benefits of animal-source products however this should not be restricted to young children but should be broadened to all age groups.

¹ type 2 diabetes mellitus

Consideration needs to be given to a cross disciplinary approach when developing set of guidelines for sustainable food production practices.

While the concept of sustainable food systems is not new^{xiv}, much more research is needed to establish the scientific foundation on which informed recommendations for sustainable, healthy diets can be made.

A sustainable food system must meet the nutritional needs of the human population while not depleting or degrading the natural resources upon which life depends, as indicated in this definition by the United Nations Environmental Program:

“Sustainable food systems enable the production of sufficient, nutritious food, while conserving the resources that the food system depends on and lowering its environmental impacts. Such systems are based on the idea that all activities related to food (producing, processing, transporting, storing, marketing and consuming) are interconnected and interactive.”

United Nations Environment Program 2012^{xv}

The concept of sustainable diets contains additional aspects of sustainability related to the human population, as described in the Food and Agriculture Organization’s definition of sustainable diets:

“Sustainable diets are those diets with low environmental impacts which contribute to food and nutrition security and to healthy life for present and future generations. Sustainable diets are protective and respectful of biodiversity and ecosystems, culturally acceptable, accessible, economically fair and affordable, nutritionally adequate, safe and healthy; while optimizing natural and human resources.”

Food and Agriculture Organization 2012^{xvi}

Whether framed as sustainable food systems, sustainable healthy diets, or nutrition security, the underlying systems - agricultural, environmental, social, and economic - are connected to one another in ways that are only recently being understood and appreciated by scientists and policymakers. A coordinated, interdisciplinary approach is needed to gain vital insights on interrelated dynamic and adaptive processes within and across these systems, as suggested in a 2012 *Proceedings of the National Academy of Sciences* publication.^{xvii}

Appreciate the focus on nutrition education.

Schools are a logical and appropriate place to focus on nutrition education. It is a place where skills are established and lifelong values for healthy foods choices supported.

ⁱ FAO.2013. Milk and Dairy Products in Human Nutrition. <http://www.fao.org/docrep/018/i3396e/i3396e.pdf> (Accessed on 6 May 2014)

ⁱⁱ FAO 2013. The state of food and agriculture. Food systems for better nutrition. <http://www.fao.org/docrep/018/i3300e/i3300e00.htm> (Accessed on 6 May 2014)

ⁱⁱⁱ National Health and Medical Research Council (2013) Australian Dietary Guidelines. Canberra: National Health and Medical Research Council.

^{iv} <http://download.thelancet.com/pdfs/journals/landia/PIIS2213858714701664.pdf>

^v de Oliveira Otto *et al.*, (2012) Dietary intake of saturated fat by food source and incident cardiovascular disease: the Multi-Ethnic Study of Atherosclerosis. *Am J Clin Nutr* 96(2):397-404.

^{vi} Chowdhury R *et al.* (2014) Association of Dietary, Circulating, and Supplement Fatty Acids With Coronary Risk. *Ann Intern Med* 160; 398-406

^{vii} Forouhi NG *et al.*, (2014) Differences in the prospective association between individual plasma phospholipid saturated fatty acids and incident type 2 diabetes: the EPIC-InterAct case-cohort study. *Lancet Diabetes Endocrinol* Published on line August 6, 2014,

^{viii} Uauy R *et al.*, (2009) Review. WHO Scientific update on trans fatty acids: summary and conclusions. *EJCN* 63, S68-75.

^{ix} FAO (2010) Food and Nutrition Paper 91. Fats and fatty acids in human nutrition. Report of an expert consultation. (<http://foris.fao.org/preview/25553-ece4cb94ac52f9a25af77ca5cfba7a8c.pdf>, accessed 12 March 2014)

^x Bendsen NT *et al.*, (2011) Consumption of industrial and ruminant trans fatty acids and risk of coronary heart disease: a systematic review and meta-analysis of cohort studies. *Eur J Clin Nutr* 65;773-83.

^{xi} Brouwer IA *et al.* (2013) *Trans* fatty acids and cardiovascular health: research completed? *Eur J Clin Nutr* advance online publication, 27 March 2013; doi: 10.1038/ejcn.2013.43.

^{xii} Dror DK, Allen LH. The importance of milk and other animal-source foods for children in low-income countries. *Food & Nutrition Bulletin*. 2011; 32:227-43.

^{xiii} FAO.2013. Milk and Dairy Products in Human Nutrition. <http://www.fao.org/docrep/018/i3396e/i3396e.pdf> (Accessed on 6 May 2014)

^{xiv} Gussow JD, Clancy KL. Dietary guidelines for sustainability. *J Nutr Educ* 1986;18 (1):1-5

^{xv} UNEP. Avoiding Future Famines: Strengthening the Ecological Foundation of Food Security through Sustainable Food Systems. *United Nations Environment Programme (UNEP), Nairobi, Kenya* 2012.

^{xvi} Burlingame B, Drnini, S. Sustainable diets and biodiversity: Directions and solutions for policy, research and action. Proceedings of the International Scientific Symposium, *BIODIVERSITY AND SUSTAINABLE DIETS UNITED AGAINST HUNGER, 3 – 5 November 2010*, FAO Headquarters, Rome 2012.

^{xvii} Hammond RA, Dubé L. A systems science perspective and transdisciplinary models for food and nutrition security. *Proc Natl Acad Sci U S A* 2012;109(31):12356 - 12363.

**IDF comments on chapter 3.3 Health, section 3.3.6 Food safety and antimicrobial resistance -
Priority actions on antimicrobial resistance (p 22- 23)**

IDF requests modification of the text in the third bullet point:

Terminate non-therapeutic use of antimicrobials, such as the use of antimicrobials as growth promoters.

to read either:

Terminate use of antimicrobials as growth promoters.

or alternatively:

Terminate non-therapeutic use of antimicrobials as growth promoters.

Rationale:

The terminology of non-therapeutic use provides for some ambiguity and may be confused with the use of dry cow antimicrobials in dairy cattle to treat intramammary infections during the dry period. Terminating the use of antimicrobials as growth promoters is supported.

For many decades, the dairy sector has applied intramammary antibiotic therapy immediately after the last milking of lactation (dry cow therapy) in order to treat existing intramammary infections and new infections during the early weeks of the dry period. Dry cow therapy is globally recognized as an essential and effective component of effective mastitis control programmes targeted not only at preserving animal health and welfare (acute mastitis is as a very painful condition) but ultimately, it aims at ensuring food safety by preventing the spread of pathogens in dairy herds and subsequently into the milk.

Throughout the years, the dairy sector has been very much aware of the need for responsible use and has implemented adequate measures throughout the dairy supply chain. Integrated supply chain management approaches adopted by the dairy industry help to prevent the creation and transmission of antimicrobial resistance. IDF has published a *Guide to Prudent Use of Antimicrobial Agents in Dairy Production* in 2013. The guide is a generic framework to support the responsible use of antimicrobial agents on dairy farms. It focuses on desired outcomes and provides examples of recommended practices for all participants that are involved in the production, distribution, supply, use and regulation of antimicrobial agents used on dairy farms (dairy farmers, veterinarians, food/milk processing companies, pharmaceutical companies and competent authorities).

An IDF comprehensive review of the scientific literature has demonstrated no apparent progression of antimicrobial resistance in mastitis pathogens after four decades of antimicrobial drug use in dairy cows. In fact, the patterns of respective AMR of today are similar to those recorded over the last 30 years and there is no evidence to suggest that dry cow therapy has contributed to an increase in AMR of mastitis pathogens.

IDF would like to emphasize that dry cow therapy is a risk management tool in accordance with adopted *Codex Alimentarius Guidelines for Risk Analysis of Foodborne Antimicrobial Resistance (CAC/GL 77-2011)* and other Codex codes and guidelines as well as complying with the texts of other international organizations such as the World Organisation for Animal Health (OIE).

IDF supports and recommends further research and development of alternatives to use of antimicrobials in animal food production.

- Codex Alimentarius Guidelines for Risk Analysis of Foodborne Antimicrobial Resistance (CAC/GL 77-2011) : <http://www.codexalimentarius.org/standards/en/>

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- Codex Alimentarius Code of Practice to Minimize and Contain Antimicrobial Resistance (CAC/RCP 61-2005) : <http://www.codexalimentarius.org/standards/en/>
 - Codex Alimentarius Code of Hygienic Practice for Milk and Milk Products (CAC/RCP 57-2004) : <http://www.codexalimentarius.org/standards/en/>
 - FAO/OIE Guide to Good Farming Practices for Animal Production Food Safety (2010): http://www.fao.org/ag/againfo/resources/en/pubs_ah.html
 - FAO/IDF Guide to Good Dairy Farming Practice (2011) : <http://www.fao.org/docrep/014/ba0027e/ba0027e00.pdf>
 - IDF Factsheet on antimicrobial resistance (20 : <http://www.fil-idf.org/Public/ListPage.php?ID=37463>
 - IDF Guide to Good Animal Welfare in Dairy Production (2008): <http://www.oie.int/doc/ged/D7201.PDF>
 - IDF Guide to Prudent Use of Antimicrobial Agents in Dairy Production (2013): <http://www.fil-idf.org/Public/PublicationsPage.php?ID=27121&highlight=true>
 - NMC detailed explanation on dry cow therapy: <http://nmconline.org/drycow.htm>
 - OIE Terrestrial Animal Health Code. Chapters 6.6 to 6.10 on the recommendations for controlling antimicrobial resistance and responsible and prudent use of antimicrobial agents in veterinary medicine: <http://www.oie.int/en/international-standard-setting/terrestrial-code/access-online/>

IDF has no comment on the remaining questions 2 to 4.