



Speaker Summary Note

Session: **Agriculture, Nutrition, & Health:**
Where are we now, where are we headed, and where do we want to be?

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Introduction

At the beginning of this important conference aimed to explore the links between agriculture and nutrition, it is useful to examine the overall global nutrition trends.

Nutrition Challenges

1. When the MDG goals were formulated at the end of the 1990s number of people living below the World Bank's poverty line were 1.8 billion. This number went down to 1.4 billion in 2005, mainly because of China. In reality, without China, the number of people living in extreme poverty actually went up between 1990 and 2005 by about 36 million.
2. At the same time, despite earlier progress, the number of hungry has been rising since 1995 from 842 million in 1990–1992 to 873 million in 2004–2006 and to 1.02 billion people during 2009, the highest level ever.
3. In 2010, about 115 million children worldwide are underweight and 186 million children under five years of age are stunted¹ and every year an estimated 13 million children are born with restricted intrauterine growth or prematurely.²
4. Anaemia affects 47.4% of the preschool-age population³ and 42% of pregnant women (468 million). 33.3% of the preschool-age population globally is vitamin A deficient. Overall, more than 2 billion people are deficient in micronutrients.

¹ Underweight and stunting, in: *World Health Statistics 2010*. Geneva, World Health Organization, 2010.

² de Onis M, Blössner M, Villar J. Levels and patterns of intrauterine growth retardation in developing countries. *European Journal of Clinical Nutrition* 1998, 52(Suppl.1):S5-15.

³ de Benoist B, McLean E, Egli I, Cogswell M (Eds). *Worldwide prevalence of anaemia 1993–2005: WHO global database on anaemia*. Geneva, World Health Organization, 2008.

5. Undernutrition is recognized as the underlying cause of nearly one in three deaths from all diseases in children in pre-school years and together maternal and child undernutrition account for 11 percent of the global burden of disease.

Trends and geographical priorities

6. The prevalence of stunting is higher in Africa than in Asia, but in absolute numbers most children affected by stunting live in Asia.
7. In Africa, rates of stunting have changed little between 1990 and 2010 while, in Asia and Latin America and the Caribbean, rates have almost halved.
8. The proportion of low birth-weight babies has fallen by over 10% in South Asia from 1980 to 2000, but still remains considerably higher there than in any other region.
9. Anaemia rates have not varied significantly in Africa since 1990 and have remained similar in South-Central Asia. Rates have declined in East Asia and Central America.
10. For most regions, apart from parts of Africa, rates of vitamin A deficiency have declined since 1990, although there is still regional variation.
11. WHO regional estimates indicate that the highest proportion of preschool-age children affected by night-blindness is in Africa, a value that is four times higher than estimated in Southeast Asia (0.5%). Africa has the greatest number of preschool-age children affected with night-blindness (2.55 million), and corresponds to almost half of the children affected globally.
12. Risk of iodine deficiency based on urinary iodine concentrations is higher in Europe than in many parts of the rest of the world.
13. In summary, improvement in stunting and vitamin A nutrition and a more modest improvement in anemia, but mainly in Asia, while little or no progress or even a deterioration has been observed in Africa.

Overweight and obesity

14. At the same time, the latest estimates suggest as many as 1.7 billion people are overweight, of whom 500 million are obese. Globally, the number of overweight and obese⁴ preschool children in 2010 is estimated at 43 million. Worldwide, at least 2.6 million people die each year as a result of being overweight or obese.
15. Increasingly the impact is seen not only in affluent countries but even among poorer populations in countries undergoing nutrition transition. Infant and young child overweight trends between 1990 and 2015 illustrate the steeper rise in the lower-middle income group compared to all other groupings, reflecting rapid changes in those countries.
16. From 1990 to 2010 rates of childhood obesity in Africa doubled to 8.5, whereas in Latin America and the Caribbean rates stagnated; and in Asia rates increased from 3.2 to 4.9.
17. Within Africa, the rates in the Southern sub-region have been flat, whereas in Middle and Northern Africa the prevalence has increased four-fold. Within Asia, the Western sub-region prevalence increased five-fold from 3 to 15%, whereas in the Eastern region the prevalence hardly changed.
18. Approximately 500 million adults are obese. The prevalence of overweight and obesity are highest in the WHO Regions of the Americas (61.7% for overweight in both sexes, and 26.3% for obesity)

⁴ +2 standard deviations or more above the median of the WHO standards.

and lowest in the WHO Region for South East Asia (13.5% overweight in both sexes and 2.7% for obesity). In the WHO region for Europe and the WHO region for the Eastern Mediterranean, and the WHO region for the Americas over 50% of women were overweight. For all three of these regions, roughly half of overweight women are obese (22.8% in Europe, 24.5% in the Eastern Mediterranean, 29.2% in the Americas).

Infant feeding

19. Only about one-third of children under 6 month of age are exclusively breastfed. During the period 2000–2008 in particular, the rates of exclusive breastfeeding seem to have declined in all regions, except in Africa. The Southeast Asia region has the highest rates of exclusive breastfeeding among all regions although even they do not reach 50% during the whole time period
20. More than 60% of countries stated a high percentage of children 6–8 or 6–9 months old receiving complementary foods.

Changes in the Quality of the Diet

1. Industrialization of the food chain has also changed the macronutrient composition of the diet, which is now much more energy dense.
2. The type of carbohydrate in the diet has changed with industrialization, with decreases in complex carbohydrates, such as starches, and an increase in refined sugar. The consumption of sugars has typically increased in fifty fold in industrialized countries, with upwards of 15% of energy intake now coming from refined sugar. The majority of these sugars is “hidden” in processed foods and drinks, rather than added to food by the consumer.
3. The fat content of the diet has also increased from 20% to 40% in many industrialized countries.
4. Food consumption patterns are becoming more similar throughout the world, with shifts towards higher-quality and more expensive foods, such as meat and dairy products, reflecting the progressive urbanization of the population.
5. In 1996, FAO was indicating that the share of dietary energy supplies coming from vegetable sources in 1990–92 was 71% in developed countries and 90% in developing countries. Cereals alone provided 60% of dietary energy in developing countries, as compared to just 30% in developed. Meat and fish provided 14% in developing against just 6% in developed countries.
6. FAO further reported in 2002 that meat consumption in developing countries had risen from only 10 kg per person annually in 1964–66 to 26 kg in 1997–99, and was projected to rise to 37 kg per person per year in 2030 (FAO 2002). Milk and dairy products have also seen rapid growth, from 28 kg per person per year in 1964–66, to 45 kg now, and could rise to 66 kg in 2030. Globally, some 660 million tons of cereals are used as livestock feed each year, representing just over a third of total world cereal use.

Effects of unhealthy diet

7. Overall, 2.8 million lives could potentially be saved each year worldwide if fruit and vegetable consumption were increased to 400 g/person/day.
8. Decreasing dietary salt intake from the current global levels of 9–12 grams per day to the recommended level of 5 grams per day would have a major impact on blood pressure and cardiovascular disease.

9. Increase in fat intake has been steady and particularly rapid since the 1980s in lower middle-income countries. This reflects the drastic changes in the food supply chain in those countries. According to existing data, there were large variations across regions of the world in the amount of total fats available for human consumption. The lowest quantities consumed were recorded in South East Asia, while the highest consumption was in Europe.
10. High consumption of saturated fats and trans fatty acids is a leading cause of heart disease; replacement with polyunsaturated vegetable oils lowers coronary heart disease risk.⁵ For saturated fat, the lowest was in Africa, but the highest was in the European and American regions, with very high values observed in some of the Pacific Islands. Energy from saturated fatty acids usually account for one third of the energy from total fat, with the notable exception of Southeast Asia, where saturated fatty acids account for over 40% of total fat intake.

Policy Responses

1. Establishing health mindful supply goals

Food Based Dietary Guidelines and dietary goals should be considered in policy decisions about the food supply. Goals could be established about

- quantity and quality of fat
- quality of carbohydrates
- micronutrient content of food

2. Involvement of the whole value chain

These supply goals need to be pursued throughout the food chain:

- at the level of primary production: the selection of oil crops will affect the dietary content of n-3, n-6, SFA and monounsaturated fat; the investment in horticulture will affect the availability of vegetables, etc.; what is the supply goal for animal products (milk, meat);
- at the level of processing, product formulation and use of different ingredients will affect the nutrition profile of the foods marketed (TFA, salt, refined sugar, high fructose corn syrup, wholegrain cereals);
- at the level of marketing and distribution.

3. Multiple tools to guide the value chain

Can we talk about health concerned food governance ? What tools there are to guide the supply of food?

- Dynamics of incentives and taxation
- Offer of food in public institutions
- Information to the consumers : labels and nutrient profiles, marketing controls

Can private sector investments be aligned to the supply goals, based on Corporate Social Responsibility?

4. Strengthening the evidence base.

- For nutrition interventions, we have the Lancet series—programme guidance based on systematic reviews. For agricultural policy, evidence to be reviewed and experience analysed. This conference is important to scope the sector.

⁵ Hu FB et al. (1997). Dietary fat intake and the risk of coronary heart disease in women. *New England Journal of Medicine* 337(21):1491–1499.

- The scientific basis of the relationship between diet and health undergoes continuous revisions and this reflects on the establishment of dietary goals and the development of FBDG. In particular, there is debate about the quantity and quality of fat and the quality of carbohydrates.
5. WHO is developing a comprehensive implementation plan on infant and young child nutrition, addressed to the health sector that calls for the development of intersectoral nutrition plan, in line with the multisectoral framework that the Committee of Food Security has committed to develop.