

## **WN Editorial**

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## *Nutrition and nourishment* **Beyond biochemistry**

UN secretary-general Ban Ki-moon has published a new report. This is [The Road to Dignity by 2030](#) with its aspirational subtitle *Ending Poverty, Transforming All Lives and Protecting the Planet*. It is a prelude to the global *Sustainable Development Goals* to be announced at the UN this coming September. Ban Ki-moon and his colleagues hope that the report and then the goals, designed for the coming period of 2016-2030 in succession to the 2000-2015 *Millennium Development Goals*, will ‘mark a paradigm shift for people and planet’. The report concludes with big words and bold ideas:

Today’s world is... in turmoil and turbulence... Societies are under serious strain, stemming from the erosion of our common values, climate change and growing inequalities, to migration pressures and borderless pandemics. It is also a time in which the strength of national and international institutions is being seriously tested. The nature and scope of this daunting array of enormous challenges necessitate that both inaction and business-as-usual must be dismissed as options... Simply put, this generation is charged with a duty to transform our societies.

### ***Changes of the century***

Nutrition needs to be a central part of the *Sustainable Development Goals*. So it can be, when it is integrated into social, economic and political planning at all levels, local, national and global. The point is surely obvious, but its implications need to be understood and acted upon.

Food insecurity and hunger are seen by impoverished people as proofs of injustice, and thus are prime causes of anger, uprisings and wars. The new *Goals* need to emphasise food security, and the human right to adequate food, as crucial and central. They are most likely to do so once nutrition itself as taught and practiced is itself transformed in nature and scope. There is no time to lose. For many colleagues there is nothing new in what has been touched on so far here. But a precondition of a change in a system of ideas, commonly known as a paradigm shift, is the replacement of an old by a new conceptual framework.

Here is the hard nut to crack, for conventionally, nutrition has a narrow definition. Ever since the nineteenth century, its status as a quantitative science has depended on its positioning as a biochemical discipline, allied with medicine, and mainly concerned with growth and health. Here is how it is defined in *Wikipedia*:

Nutrition is the science that interprets the interaction of nutrients and other substances in food... in relation to maintenance, growth, reproduction, health and disease of an organism. It includes food intake, absorption, assimilation, biosynthesis, energy metabolism, catabolism and excretion.

Public health nutrition sometimes is identified as clinical nutrition applied at population levels. In contrast, nutrition now needs to be defined both as a quantitative biological science involving chemistry, physiology and pathology, and also as a qualitative social, economic and environmental discipline, less preoccupied with numbers and more concerned with values.

Nutrition in theory and practice needs to be more able to face the dynamic circumstances and challenges of this century. As *The Road to Dignity by 2030* says, as do contributors to the *WN Visions* series, these areas include destructive ideologies, overmighty corporations, climate change, worsening inequalities, forced migration, and new epidemics. All these and more affect and are affected by states of population nutrition. The duty of nutrition now is to become competent to engage with and to shape public policies and actions, including in all these areas.

There are some signs that this is becoming understood. The outcome documents of the UN International Conference on Nutrition, issued last November, include commitment to secure improved states of population nutrition. Thus the [Rome Declaration on Nutrition](#) endorsed by all Member states pledges to

Improve nutrition by strengthening human and institutional capacities to address all forms of malnutrition through, *inter alia*, relevant scientific and socio-economic research and development, innovation and transfer of appropriate technologies on mutually agreed terms and conditions.

The promising phrase here is ‘socio-economic research and development’, provided this includes going beyond research, to identify, address and overcome the structural basic and underlying causes of all types of malnutrition, from deficiency to obesity.

### ***Enlightened concepts***

*WN* has a part to play in all this. Three examples are in contributions this month. First, as stated in *Feedback* by [Elisabeth Sterken of the Infant Feeding Action Coalition:](#)

Promotion and support for best breastfeeding practices and family food-based complementary feeding should be the primary intervention for programmes that aim to improve infant and young child nutrition status and reduce mortality from many causes.

The point here is that while breastmilk of course includes many nutrients, it is now universally agreed that breastfeeding is not only a biological process. The nourishment of breastmilk goes beyond its nutrients. Understanding of its value comes also from the behavioural and social sciences.

Second, in his January 2014 commentary selected for our review of the year, [\*György Scrinis\*](#) attacks what he calls ‘nutritionism’ – the reduction of nutrition to nutrients. Commenting on the conclusive evidence that trans-fats are toxic, he makes clear that the crucial issue is not nutrients (or anti-nutrients) but food technology, margarine as an ultra-processed product, and thus the economy of mass manufacturers.

Policy-makers have responded to this new evidence by re-categorising *trans*-fats as a ‘bad fat’, and food scientists and technologists and margarine manufacturers have sought new chemical processing techniques to produce a ‘virtually *trans*-fat-free’ margarine. In this way, focus is maintained on the nutrient composition of margarine, rather than bringing to light and opening up to scrutiny the types of processing techniques, ingredients and additives now being used in its production.

Third, this month we publish a radical appraisal of nutrition as conventionally defined in terms of macro- and micro-nutrients. This is in an account of [\*Leonardo Mata's\*](#) decade-long study, *The Children of Santa María Caqué*. Like the great pathologist, epidemiologist and social reformer Rudolf Virchow a century and a half ago, Leonardo identifies hunger and deficiency as a symptom not of lack of nutrients, but of poverty and injustice. And like other great leaders of the public health movement since the time of early industrialisation, Leonardo’s solutions involve community health care. They are also familial, social, economic and political:

- Health services for treatment of acute infectious diseases
- Immunisation against measles, whooping cough, tuberculosis, tetanus
- Hygiene education such as washing, boiling water and waste disposal
- Weaning practices education
- Family planning
- Agricultural education is use of seeds, fertiliser, storage of grains
- More beds in household
- Better housing and sanitation
- More water available to households
- Food price control
- Improvement of wages
- Agrarian reform

Public health nutrition cannot stop short of social reform. The forthcoming *Sustainable Development Goals* do indeed need to include nutrition, but not in any narrow sense. What is needed on a global scale, including throughout all impoverished continents, countries, and communities, is not just nutrients, and indeed not just food. It is adequate, available, affordable, appropriate nourishment – or, in a word, justice.

***The editors***