WN *Feedback*

World Nutrition **Volume 5, Number 9, September 2014**

Journal of the World Public Health Nutrition Association
Published monthly at www.wphna.org/worldnutrition/



Sick societies. Informas

Measuring the drivers of obesity, disease, health and well-being



Bellagio, Como, Italy. First Informas meeting. November 2012. Above: David Sanders, Tim Lobstein. Mike Rayner, Justin Macmullan, Bruce Neal, Wendy Snowden, Stefanie Vandevijvere, Jixiang Ma, Sharon Friel, Mary L'Abbé, Chris Walker, Bridget Kelly. Below: Carlos Monteiro, Simon Barquera, Francesco Branca, Janice Albert, Shiriki Kumanyika, Boyd Swinburn (in the shades), Gary Sacks, Amanda Lee, Sailesh Mohaen, Godfrey Xuereb, Corinna Hawkes

Boyd Swinburn and Stefanie Vandevijvere write:

We write here to bring *WN* readers up to date with the progress of the INFORMAS (International Network for Food, Obesity and Non-Communicable Diseases Research, Monitoring and Action Support) initiative.

This letter updates your information first published about INFORMAS in January 2013, after our launch at the Rockfeller Center at Bellagio, on the shore of Lake Como, Italy, in November 2012. Our founding group is in the picture above. Full and updated information *is always available on our site.*

For new readers, here is who we are, what we do, and why. Here are some of the questions that have concerned us and colleagues worldwide for many years now. How does the relative healthiness of food environments compare across countries? What is the extent of implementation of policies and actions by governments and the food industry to reduce obesity and diet-related chronic non-communicable diseases in different countries? Which policies or combination of policies are most effective to reduce obesity and diet-related non-communicable diseases? How can health professionals better communicate about the relative healthiness of food environments and policies, to trigger effective action and better support advocacy efforts of national and global non-government civil society organisations?

The Bellagio launch

In the light of these important questions and a great ambition and urgency to address and to answer them, we launched INFORMAS at the Bellagio meeting (1,2). It is now an expanding network of public interest civil society organisations and researchers, whose purpose is to monitor, benchmark and support public and private sector actions to create healthy food environments and to reduce obesity and diet-related non-communicable diseases and their related inequities. From the start INFORMAS has been and remains supported by the World Health Organization and the UN Food and Agriculture Organization. Its partners also include a range of international professional and public interest organisations including Consumers International, the World Obesity Federation, and World Cancer Research Fund International.

A rapidly increased amount of recent research has shown that unhealthy diets globally are driven by the increasing availability of inexpensive, energy-dense, nutrient-poor and heavily promoted ultra-processed food products (3). Despite this, impressive evidence, it is predominantly consumers rather than governments or the food manufacturers and caterers that are held accountable for what is now the pandemic of obesity and soaring rates of diabetes.

The global non-communicable disease monitoring system instituted by WHO only includes two 'upstream' indicators on food environments. Upstream indicators, which relate to food environments as a whole, are however more responsive to policy changes than downstream indicators such as death rates. Up to now though, these broader determinants have not been effectively measured. To influence and persuade policy-makers and decision-takers, indicators need to be robust and set out comparatively, so that a country's policy efforts (such as on food marketing to children or on sodium in food supplies) can be reliably compared with international best practice. This is what INFORMAS is set up to do – to monitor and compare food environments and policies in a standardised way.



Pakiri Beach, New Zealand. Informas meeting held in March 2014 Upper row: Mike Rayner, Simon Barquera, Amanda Lee, Wendy Snowdon, Bruce Neal, Clare Dominick, Jillian Wate Middle: Bridget Kelly, Cliona Ni Mhurchu, Gary Sacks, Boyd Swinburn (in the shades), and then Tim Lobstein, Sally Mackay, Wilasinee Aduhyanon, and Mary L'Abbe. Lower row from the left are Shiriki Kumanyika, Visith Chavasit, Sirinya Phulkerd, Michelle Crino, Melissa Mialon, Thaksaphon Thamarangsi, Anandita Devi, Jane Landon, Sharon Friel, Stefanie Vandevijvere

Since our launch, we have made great progress on a range of issues, and we hope that public health nutrition researchers will be stimulated to consider undertaking INFORMAS surveys of food environments in their countries

The Pakiri Beach follow-up

We held a follow-up meeting this March at Pakiri Beach, New Zealand. Those present are shown above. A 14-paper open access supplement in *Obesity Reviews* (2) outlines the monitoring frameworks and indicators for the INFORMAS modules. These are:

- Government policies
- Private sector actions
- Food composition
- Food labelling
- Food promotion
- Food in public sector settings
- Food retail
- Food prices
- Food in trade and investment agreements

A wide range of countries are currently actively involved in INFORMAS. These include New Zealand, Australia, the UK, Canada, Fiji, Thailand, South Africa,

Mexico, Chile, Brazil and Guatemala. New Zealand is the first country in the world undertaking a full national survey to measure its food environments and policies as a baseline for future monitoring and research. To help other countries to follow this example and contribute to the global database on food environments and policies, design and methods for such a national survey have been published open access (4)

INFORMAS' Healthy Food Environment Policy Index (FOOD-EPI)(2) has now been applied in New Zealand. This is the first comprehensive assessment of the extent of implementation of national food policies. Thailand and Fiji are following, and other countries have shown interest in this tool and process. In New Zealand, an expert panel of 52 public health experts, with representatives from medical associations and other non-governmental organisations, have rated the extent of implementation of policies on food environments and infrastructure support by the New Zealand government against international best practice. Their ratings for each of the 42 good practice indicators were informed by documented evidence, validated by government officials and by international best practice.

Based on the implementation gaps identified, the experts have recommended concrete actions to the New Zealand government and identified seven of these for immediate implementation. The methods and the scorecard of the New Zealand Food-EPI study are now published online(5). Measurement and comparison with best practice using these indicators shows where policy actions are mostly needed.

Our aspirations

The aspiration of INFORMAS is to improve food environments and to reduce obesity and diet-related non-communicable diseases, by:

- Identifying international best practice public and private sector policies and actions, and indicators of the healthiness of key aspects of food environments.
- Measuring progress towards achieving these best standards, including trends over time and comparisons between countries.
- Creating an open-access global database for research into the determinants of obesity and related diseases and for evaluating the impact of policy solutions.
- Promoting accountability of the public and private sectors for their actions, and building research capacity in low and middle income countries
- Contributing to global work on monitoring diet-related non-communicable diseases, complementing the work of WHO.

Our purpose is to increase the accountability of governments and the private sector through regular, direct evidence on their levels of action or inaction and the comparative states of health of the national food environments they are creating. This is powerful. It attracts attention of decision-makers and has already changed policies and practices concerning breastfeeding, alcohol and tobacco (6-8).

With time series and cross-country comparisons, INFORMAS will become a critical data resource for analysing changes in determinants of obesity and related diseases Also, the impacts of national policies cannot readily be measured using methods such as randomised trials. But rich data series measuring levels of policy implementation, impacts on food environments, and health outcomes is one of the few robust ways to evaluate international and national policies.

We encourage countries of varying sizes and income levels to consider and apply the INFORMAS approach, in addition to WHO's monitoring framework; We believe this will improve and increase actions on food environments by governments and the food industry, and enhance effectiveness of civil society organisations' advocacy.

Boyd Swinburn
Stefanie Vandevijvere
School of Population Health
University of Auckland, New Zealand
Email: s.vandervijvere@auckland.ac.nz

References

1 International Network for Food and Obesity/NCD Research Monitoring and Action Support. [26/02/2013]. Available from: www.informas.org.

2. Swinburn B, Sacks G, Vandevijvere S, Kumanyika S, Lobstein T, Neal B, *et al.* INFORMAS (International Network for Food and Obesity/non-communicable diseases Research, Monitoring and Action Support): overview and key principles. Obes Rev. 2013 Oct;14 Suppl 1:1-12. http://onlinelibrary.wiley.com/doi/10.1111/obr.2013.14.issue-s1/issuetoc

3 Swinburn BA, Sacks G, Hall KD, McPherson K, Finegood DT, Moodie ML, *et al.* The global obesity pandemic: shaped by global drivers and local environments. *The Lancet.* 2011;378(9793):804-14.

4 Vandevijvere S, Swinburn B, INFORMAS. Towards global benchmarking of food environments and policies to reduce obesity and diet-related non-communicable diseases: design and methods for nation-wide surveys. BMJ open. 2014;4(5):e005339.

5. Swinburn B, Dominick CH, Vandevijvere S. *Benchmarking food environments: Experts' Assessments of Policy Gaps and Priorities for the New Zealand Government* Auckland: University of Auckland; 2014. Available from: https://cdn.auckland.ac.nz/assets/fmhs/ soph/globalhealth/informas/docs/Food-EPI%20report.pdf.

6. Save the children. Breastfeeding policy scorecard for developed countries 2012. Available from: http://savethechildrenweb.org/SOWM2012Interactive/SOWM2012/files/assets/downloads/page0045.pdf.

7. World Health Organization. Gobal status report on alcohol and health 2014. Geneva: World Health Organization, 2014. Available from: http://www.who.int/substance_abuse/publications/global_alcohol_report/en/

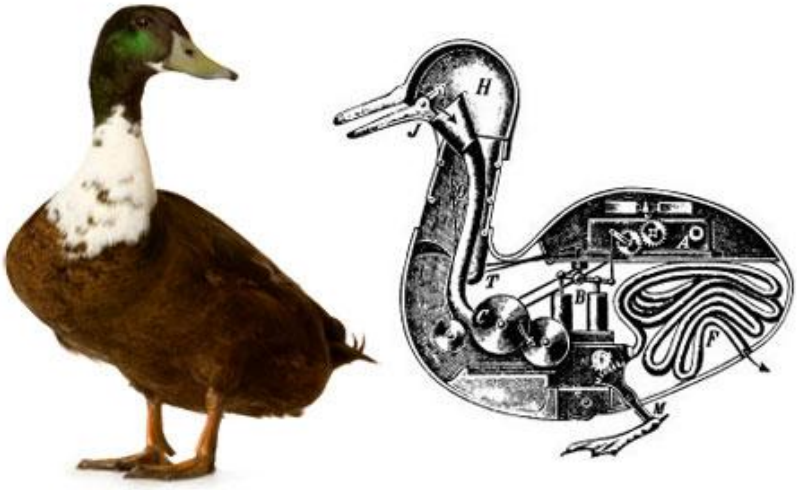
8. Australian Council on Smoking and Health. National tobacco control scorecard. Available from: http://www.acosh.org/law-and-policy/australian-best-practice/.

Swinburn B, Vandevijvere S. Informas. Measuring the drivers of obesity, disease, health and well-being [Feedback]. World Nutrition September 2014, ***5,*** *9, 787-791*

Nutrition science theory and practice

The parts and the whole

Access June 2014 Advances in Nutrition Anthony Fardet on holism here



Living things are more than the sum of their parts. The diagram of the interior of a duck, imagined as a machine like a watch (right), is from 'The Duck of Jacques deVaucanson' of 1738

Anthony Fardet writes:

I have read recent contributions to *World Nutrition* on the impact of food processing on nutrition and public health (1,2), with great interest. Such thinking, and also that in *WN* on agriculture (3-5), is sympathetic with the work I am undertaking with my colleague Edmond Rock at the French National Institute for Agronomic Research (6-8). It also echoes my previous research on the health potential of cereal products (9-14). The science and practice of agronomy is inherently holistic, and also is shaped by public policies often enacted without population or planetary health and well-being in mind. It is reassuring to find a journal with contributions that take an integrated, holistic approach to food systems, dietary patterns, health and well-being.

Reductionism

In recent centuries reductionism, in which reality is split into isolated entities, has prevailed in Western countries. Certainly in the nutrition sciences, this powerful paradigm has reached its limits. Understanding the physiological effects of separate food compounds may appear at first view to be essential. But as *The Food System* team shows (1,2), this has led to the manufacture and marketing of unhealthy and junk foods, and to the reduction of the health potential of foods to only one or a few of their chemical compounds, such as orange juice for vitamin C, or milk for calcium.

The food matrix

The reality of all living systems is much more interesting and complex. A food is not just the sum of its known constituent bioactive substances. It is a matrix of hundreds of phytochemicals, including many that even when analysed in isolation are poorly understood, and others that no doubt have not yet been identified. In any case, a reductionist view of food does not consider the structure of the food itself and its effect on physiology, or the synergistic effects of bioactive compounds. Instead, natural foods are fractionated and their ingredients isolated. An outcome of food and nutrition science has been to enable and encourage the creation of highly refined and processed food products 'enriched' with some specific bioactive compound, often in inappropriate or even pharmacological amounts, labelled and claimed as having benefits to heath (2,6,7).

All this neglects the nature of whole food. It is no surprise that 'nutraceuticals' and other 'functional foods' apparently have not checked epidemics of obesity and diet-related chronic diseases in any country. In nature, when safe and eaten in appropriate combinations, foods are generally healthy. It is the ways in which they are altered or transformed by processing that magnify their impact on health and well-being (1,8).

The parts and the whole

Living things are more than the sum of their parts. This is inherent in the life process. It is essential that food and nutrition scientists respect the whole structure of foods. Aggressive technology that ignores foods as a whole is troublesome. The more that natural foods are intensively processed and highly refined, the more energy-dense they became, and the less phytonutrient-dense and less satiating (15). The classification of foods according to the nature, extent and purpose of processing, as set out by *The Food System* team (1), which informs the conceptual framework of the national Brazilian dietary guidelines now in draft (16), is a fruitful way forward.

A systematic 'paradigm shift' from reductionism to holism is now needed. This will enable food and nutrition scientists to undertake research whose findings will have more value for human health, and greater benefit to society, the environment, and the integrity and future of the whole living and physical world, *e.g.* the respect of biodiversity and animal well-being.

Anthony Fardet
Institut National de la Recherche Agronomique (INRA)
Clermont-Ferrand, France
Email: anthony.fardet@clermont.inra.fr

References

1 Monteiro CA, Cannon G, Levy RB, Claro RM, Moubarac J-C . *The Food System*. Ultra-processing. The big issue for disease, good health, well-being. [*Position paper*] *World Nutrition* December 2012, **3**, 12, 527-569. *Access pdf here*

2 Monteiro CA, Cannon G, Moubarac J-C. *The Food System*. Product reformulation will not improve public health. [*Position paper*] *World Nutrition* February 2014, **5**, 2, 140-168. *Access pdf here*

3 Jacoby E, Tirado C, Diaz A *et al.* Family farming, food security and public health in the Americas. [*Farming*]. *World Nutrition* June 2014, **5**, 6, 537-551.*Access pdf here*

4 Gomes F, with Legge D. *Development*. Food, nutrition, health in the new world order *[Update]*. *World Nutrition* July-August 2014, **5**, 7-8, 612-616.

5 Viscay L, de Campos A, Sanseverino S. *Farming*. Family farming essential in Latin America. *[Feedback] World Nutrition* July-August 2014, **5,** 7-8, 698-699.

6 Fardet A, Rock E. Toward a new philosophy of preventive nutrition: from a reductionist to a holistic paradigm. *Advances in Nutrition* 2014, **5**, 430-445. *Access pdf here*

7 Fardet A, Rock E. The search for a new paradigm to study micronutrient and phytochemical bioavailability: from reductionism to holism. *Medical Hypotheses* 2014, **82**(2), 181-186.

8 Fardet A. Editorial - Grain-based products, food structure and health potential: holism vs reductionism. *Journal of Nutrition Health & Food Engineering* 2014. **1**(1), 1-2.

9 Fardet A. New hypotheses for the protective mechanisms of whole-grain cereals: what is beyond fiber? *Nutrition Research Reviews* 2010, **23**(1), 65-134.

10 Lioger D, Fardet A, Foassert P *et al.* Influence of wheat flakes produced by sourdough prefermentation and no steam cooking on the blood glucose and insulin concentrations and satiety of healthy subjects. *Journal of the Americal College of Nutrition* 2009, **28**(1), 30-36.

11 Fardet A, Rock E, Rémésy C. Is the *in vitro* antioxidant potential of whole-grain cereals and cereal products well reflected in vivo? *Journal of Cereal Science* 2008, **48**(2), 258-276

12 Fardet A, Leenhardt F, Lioger D *et al.* Parameters controlling the glycaemic response of bread. *Nutrition Research Reviews* 2006, **19**(1), 18-25

13 Lioger D, Fardet A, Rémésy C. What kinds of cereal products for breakfast? *Cahiers de Nutrition et de Diététique* 2007,**42** (6) 309-319.

14 Chaurand M, Rémésy C, Fardet A *et al.* Influence of milling processing (roller and stone) on mineral content of conventional and organic cereal products. *Tecnica Molitoria* 2006, **57** (3) 290-302.

15 Fardet A. Food and health potential. Is food engineering the key issue? *Journal of Nutrition Health & Food Enginerring* 2014, **1**, 4, 00022. http://dx.doi.org/10.15406 /jnhfe.2014.01.00022

16 Moubarac J-C. Brazilian dietary guidelines. At last! A national guide based on meals! *[Update]*. *World Nutrition* March 2014, **5**, 3, 215-217.

*Fardet A. Nutrition science theory and practice. The parts and the whole [Feedback]. World Nutrition September 2014, **5,** 9, 792-794*



Blog Watch

The sneaky spin of Twitter feeds

Access February 2012 TFS Jean-Claude Moubarac on sexing up food products here
Access June 2014 Kiera Butler on Unhappy meals here

Anna Lappé writes:

Just recently, biotech giant Monsanto paid bloggers $US 150 each to attend 'an intimate and interactive panel' with 'two female farmers and a team from Monsanto.' The strictly invitation-only three-hour brunch, in the context of the BlogHer internet advertising conference, promised bloggers a chance to learn 'where your food comes from' and to hear about the 'impact growing food has on the environment, and how farmers are using fewer resources to feed a growing population', The invitation from BlogHer stated 'No blog posts or social media posts expected;' But the event was clearly designed to influence the opinions, and the writing, of influential bloggers.

Stealth marketing

Such stealth marketing techniques reveal how industry, from biotech behemoths to fast-food peddlers, is working surreptitiously to shape public opinion about biotechnology, industrialised farming and junk food. As our media landscape has changed, industry is devising marketing to take advantage of this new terrain and influence the people and platforms – not just journalists and newspapers – that shape understanding of farming and the health impacts of biotechnology and junk food.

Sean Timberlake, who has been blogging for nearly a decade, says 'Companies develop entire budget lines for social media programmes. They build it into their whole ad budget.' Networks such as BlogHer and Federated facilitate companies' advertising and outreach on blogs by aggregating blogs to sell as a bigger package. These networks can be leveraged and used as a bullhorn for their marketing.

This gives the age-old techniques of shaping public opinion a new, sneakier spin. Much of today's marketing happens behind the scenes and off the printed page – on the Web pages of blogs, on Twitter feeds and Facebook pages, through sponsored content and industry-funded webisodes and on the stages of big-ideas festivals.

Monsanto is not the only food company engaging with the blogosphere. McDonald's has been wooing them aggressively too, offering sweepstakes in partnership with BlogHer for the company's Listening Tour Luncheon, an exclusive event with the head of McDonald's USA. It is framed as a two-way conversation about nutrition, but more likely a gambit to garner the support of a powerful group of influencers.

Video is an increasingly popular (and shareable) medium for propaganda disguised as content. This summer, for example, Monsanto funded a Condé Nast film series called 'A Seat at the Table.' Each three- to five-minute episode covered questions such as 'Are food labels too complicated?' and 'GMOs: good or bad? and will feature 'an eclectic mix of industry and non-industry notables with diverse viewpoints.' It's hard to imagine truly free-flowing discussions resulting, paid for as they are by a company with a definitive take on, and stake in, the food-labelling wars. The US Farmers and Ranchers Alliance, meanwhile, has funded the documentary *Farmland*, described as a 'look at the lives of farmers and ranchers,' but whose narrative glorifies the trend toward larger, more industrialised farms. No surprise, given that the film's financing comes from an agribusiness front group.

Under cover propaganda

Big Ag is putting its communications dollars toward big-ideas events too, such as the Aspen Ideas Festival, where underwriters such as Monsanto are celebrated, and get a voice. Monsanto executives got to share their opinions. They're not in favour of state-based labelling initiatives. On how best to feed the world, they say that their chemicals and genetically engineered seeds are key to combating hunger. And past years have seen Coca-Cola, DuPont and Syngenta executives all touting their companies' sustainability onstage.

These stealth-marketing strategies coincide with growing popular outcry about agricultural chemicals, soda and junk food and genetically modified ingredients. Yet despite countless $US millions spent on marketing over the two decades since genetically engineered seeds were first commercialised, 93 percent of US people still think GMOs should be labelled ,and 65 percent are unsure about the technology or believe it to be unsafe. Last year, when Monsanto retained the public relations firm Fleishman Hillard, known for its work with social media and agribusiness, to develop its new marketing initiatives, it did so 'amid fierce opposition to the seed giant's genetically modified products, noted *Holmes Report,* an industry publication.

The father of public relations, Edward Bernays, did not dream of the age of Twitter and Facebook, but if he was around now he wouldn't be surprised to see food-industry tweets and Facebook ads dressed up as news. Bernays knew the importance of constant innovation. If the public 'becomes weary of the old methods used to persuade it,' he wrote in his 1928 book *Propaganda*, ' then we must simply present our appeals more intelligently' Or, as we're seeing with Monsanto and its food industry counterparts, if not exactly intelligently, then at least more surreptitiously;

Anna Lappé
Twitter: @annalappe

Lappé A. The sneaky spin of twitter feeds [Blog Watch] [Feedback]. World Nutrition September 2014, ***5,*** *9, 794-796*



Climate. Nutrition. The big picture

Impact on water, crops and food

Access 2009 IPCC Report summary here
Access December 2009 Tony Michael, Colin Butler on climate change here
Access January 2014 Tony McMichael on climate change here
Access March 2014 IPCC report on food systems impacts here
Access March 2014 IPCC report on health impacts here
Access April 2014 Editorial on climate change and food systems here
Access May 2014 Tony McMichael, Helen Berry, Colin Butler on climate change here
Access June 2014 Colin Butler on climate change here





Both Kuwaits. Its arable land is characterised by a soil with a sandy texture, containing 80-90 per cent sand. It has good drainage and airing characteristics but has a very low water retention capacity

Tony McMichael addresses the burning issue of regional food and water shortages in his July-August WN contribution (1), as do leading reports and other WN contributions accessed above. This phenomenon is already making its impact felt across the world. The general situation in the Middle East, which is already politically unstable, is set to worsen. Climate change here is causing shifts in weather patterns and a reduction in the availability of water and crop yields.

Red lights flashing

I am a Mexican national now living and working in Kuwait. I am fascinated and disturbed by the flashing red lights indicating trouble ahead for the food and nutrition security of the people living in this country and the rest of the Middle East. Also I am shocked by the lack of measures being taken to prevent regional food shortages, increased food prices and malnutrition.

Previously a country dominated by a nomadic way of life and the trading of pearls, Kuwait has experienced rapid economic growth since the discovery of oil in 1938 (2). Following the brief occupation by Iraq in 1990 and the US intervention, changes in ways of life including dietary patterns and eating habits in Kuwait have resulted in a rapid increase in obesity and the health-related conditions that come with obesty. The World Health Organization estimates 30 per cent obesity prevalence for men and 55 per cent for women in Kuwait, ranking it the most obese among Arabic-speaking countries (3).

An increase in obesity prevalence usually parallels industrial development. In the Gulf region (Bahrain, Kuwait, Oman, Qatar, Saudi Arabia, and the United Arab Emirates) of the Middle East this in turn is linked with significant growth in income. Urbanisation and modernisation, from a health perspective, are negatively affecting quality of life in the Gulf region (4) Linked also with this development is degradation of the environment that sustains human population health, an environment that is weak for human sustainability to start out with. In Kuwait food yields are limited, with the food supply depending almost exclusively on import. Water supply is tight (internal renewable groundwater sources are negligible) and natural protectors against weather extremes (forests, reefs) are non-existent (5). Kuwait is an extreme place!

Close to the edge of disaster

Tony McMichael states that moderate warming may benefit crop yields in mid-to high- latitude regions but reduce yields in seasonally dry and low-altitude regions (1), In which case, several countries in the Middle East could be facing significant food shortages in the near future.

It is already difficult to grow food crops in the Gulf region due to a scarcity of water supply and limited availability of arable land. It is very poor in organic matter and the nutritional elements needed by plants. About 154 000 hectares in Kuwait have been judged as potentially cultivable land. Public expenditure on agricultural research and development has been identified as one of the main challenges being faced by this country in terms of food security (9). An additional temperature strain may become disastrous as extreme temperatures are already being experienced here.

While some countries in the region are taking initial steps to ensure their own food security, they are creating new food shortages in other parts of the world. For example, Saudi Arabia's growing food insecurity has led to the purchase or lease of arable land in different countries, including the World's hungriest nations, Ethiopia and Sudan. Saudis are planning to produce food for themselves with the land and water resources of other countries, to meet the rising food demand of the rapidly growing Saudi population. But transferring agricultural land from subsistence farming to export crops has led to even more food shortages (7).

Other initiatives seem to be more promising. Currently in Jordan and Qatar the Sahara Forest Project is taking off. The aim of this project is to develop new environmental solutions to produce food, water and energy in desert areas by using what is available (deserts, saltwater and CO2) to produce what is needed (8).

Increased food prices

Arab countries are the largest importers of cereal in the world. Most of the countries in the Middle East import at least 50 per cent of the food energy they consume. Small Gulf countries (Bahrain, Qatar, UAE, Kuwait, and Oman) are dependent almost completely on imports for staple foods (9). The Middle East is encountering steep spikes on food prices. This increase is partially due to competition for the same food products (wheat, corn, soybeans, animal protein) from other areas of the world (in particular Asia) where incomes are rising and the demand for more energy-dense food and products is setting off. Besides threatening the well-being of those already living on meagre resources, the food price increases have amplified the number of poverty-stricken people by millions in less-affluent Middle East nations.

According to the 2014 Global Food Security Index, Middle Eastern countries rank from place 17/109 (Israel, although with current political turmoil this is likely to have changed) to place 91/109 (Yemen). Household expenditure spent in food ranges from 15.5 per cent (Israel) to 60 per cent (Egypt). In contrast, the US ranks 1/109 as the most food secure country based on this indicator; its population spends on average 6.7 per cent of household expenditure on food (6).

Where is the action?

Malnutrition means deficiencies, excesses, and imbalances in intake of energy, and protein and other nutrients (10). Everybody knows about malnutrition in Africa and Asia. Less so for the Middle East, though both nutrient deficiencies and obesity are common. Anemia, vitamin A, iodine and folate deficiencies are pressing diet-related public health problems in the region, as a result of poor quality and unbalanced diets. Also overweight and obesity are on the rise, particularly among women. At the same time, harsh climate, and socio-cultural practices and ways of life designed for increased comfort, are creating an obesogenic environment.

With some of the richest countries in the World, the Gulf region has the financial means to establish a strong food security programme, at both regional and national levels. Why is this not being done? Meanwhile, the challenging environmental conditions of the entire Middle East region should prove a stimulating subject of study, for those interested in the link between sustainability and public health.

Sara Diana Garduño-Diaz
American University of the Middle East, Kuwait
Email: sdgarduno@gmail.com

References

1 McMichael AJ. Climate. Nutrition. The big picture, Impact on water, crops and food. [*Commentary*]. *World Nutrition*, July-August 2014, **5**, 7-8, 632-636.

2 Kuwait Petrol Company (2013). *Kuwait Oil History*. Available from: http://www.kpc.com.kw/AboutKPC/KuwaitOilHistory/default.aspx.

3 Ono T, Guthold R, Strong K (2005). *WHO Global Comparable Estimates 2005*. Available from: http://apps.who.int/infobase/Comparisons.aspx.

4 Garduño-Diaz SD, Garduño-Diaz PY (2014). Components of an obesogenic environment in Kuwait. *Journal of Nutritional Therapeutics* **3**, 35-46

5 AQUASTAT FAO (2008). *FAO's Information System on Water and Agriculture, Kuwait*. Available from: http://www.fao.org/nr/water/aquastat/countries_regions/kuwait/index.stm.

6 Economist Intelligence Unit (2014). *Global Food Security Index*. Available from: http://foodsecurityindex.eiu.com/

7 Katkhuda N (2014). *Food Security in the Middle East*. EcoMENA. Available from: http://www.ecomena.org/tag/food-shortage-in-middle-east/

8 The Sahara Forest Project (2014). *Greening the desert*. Available from: http://saharaforestproject.com/concept.html.

9 World Bank, United Nations Food and Agriculture Organization, International Fund for Agricultural Development (2009). *Improving food security in Arab countries*. Available from: http://reliefweb.int/sites/reliefweb.int/files/resources/1F52B98A6BBC8065492575A0000B87DA-Full_Report.

10 Global Alliance for Improved Nutrition (2010). *The double burden of malnutrition in the Middle East and North Africa*. Available from: http://www.gainhealth.org/sites/s1.gainnutrition.addison.com/files/DoubleBurden_2.pdf.

Garduño-Diaz S. Climate. Nutrition. The big picture
[*Feedback*] *World Nutrition September 2014, **5,** 9, 797-800*

Editor's comment:

Sara Garduño-Diaz has joined the *WN* editorial team, reporting from the Eastern Mediterranean region and with a general brief. Her letter is well timed. The World Health Organization held a three-day invitation-only meeting on climate change and human health on 27-29 August. Our next issue will carry a further and major commentary by Tony McMichael.

Climate change requires systematic new thinking in all areas of public health. The WHO announcement of its meeting states: 'Climate disruption can compromise health security through extreme weather events and infectious disease outbreaks. Air pollution increases the burden of non-communicable disease. A greater focus on preventive public health measures could ease pressure on health services and provide a more supportive environment for achieving universal health coverage. The conference will provide a springboard for action in addressing the impacts of climate change on health, with the potential to improve the lives of millions'. Let us hope so.



WN *Farming*

What works



The global industrial food system, however it is developed, by its nature is not and cannot be sustainable. The future is mostly in the hands of hundreds of millions of farming families

Brooke Aksnes writes:

I am writing in response to Sarah Elton's *Small is Essential* piece (1) from the July-August 2014 *WN,* where she hails the benefits of small, family-owned farms in maintaining adequate food production despite the challenge of climate change. She also discusses the value of these small-scale agriculture projects in improving quality of life for farmers, supporting local economies and protecting the earth and its resources. However, this piece omits an indispensable theme in the argument for family farms: traditional knowledge.

She highlights a global industrial food system which diminishes soil quality, wastes water, douses fields in chemicals and ultimately aims at overriding environmental capacities. It seeks to overpower nature instead of working in harmony with it. Family farms, however, often follow centuries-old practices, such as crop and livestock rotation and methods specific to climate and landscape, which sustain soil quality and nutritional value of harvests. Many small-scale farmers have inherited a specialised, geographically-specific understanding of how to work with nature based on multiple generations of experience.

An example of traditional farming wisdom versus the ecological tyranny of industrial agriculture is the ambitious Al Safi dairy farm (2) located in the heart of the Arabian Desert, contrasted with the agricultural system that sustained the large Hohokam population in the Sonoran Desert (Arizona, United States) for nearly ten centuries.

The Al Safi dairy farm ranches 29,000 cows in blistering temperatures of up to 50° Celsius (3). In order to run the nature-defying operation, 135 litres of water areused per cow each day. Fresh water is sucked up from nearly a mile underground and used to hydrate and cool the livestock as well as water once-desert fields of alfalfa that feed the cattle (3).Creating a dairy farm in the desert is less a testament to modern science than to the extreme waste attempting to challenge nature causes.

Conversely, the Hohokam people harnessed their immediate resources to create a farming system that lasted them for centuries (4). Using an extensive irrigation system of canals and dams, they nourished and hydrated their soil with river and flood waters. This native people also cultivated a wide variety of crops, including: corn, cotton, beans and many wild plant species, never encountering the soil-quality drain of monoculture. To avoid the environmental stress of grazing animals, they did not keep domestic livestock. In arid conditions similar to that of the Arabian Desert, the group managed to sustainably fuel a flourishing society for nearly 1,000 years(4).

The Hohokam are a model of working sustainably with natural means, as opposed to against geographical and weather boundaries. The Al Safi dairy wastes nearly four million litres of water daily to upkeep an unnatural operation, but the American natives capitalised on limited water resources to feed many generations of people. No matter how impressive an agricultural feat technology can create, finite resources will always remain finite. Indigenous groups like the Hohokam should guide us today.

The future of food is not independent of nature's limits; it embraces what the earth has to offer. The Hohokam people's farms are gone, but today's traditional farmers around the globe still use valuable knowledge passed down for hundreds of years. They provide means tangibly to improve human lives and protect the environment and a wealth of largely-untapped wisdom. Mass monoculture cannot meet the growing global demand for food. Learning to work with and not despite the varying composition of farmlands, however, can do so.

Brooke N. Aksnes
Université Libre de Bruxelles Ecole de Santé Publique, Brussels, Belgium
Email : brooke.aksnes@gmail.com

References

1 Elton S. Small is essential. [*Farming] [Update]. World Nutrition* July-August 2014, **5**, 7-8, 621-622
2 Al Safi Dairy website: http://www.alfaisaliah.com/index0f0e.html?id=125
3 Lymbery P, Oakeshott I. Thicker than water: Draining rivers, lakes and oil wells. In *Farmageddon: The True Cost of Cheap Meat*. London, Bloomsbury, 2014.
4 Vorobyovy G. Hohokam farming systems: How to survive 1,000 years in the desert, 2002. Retrieved from Foundation for Agrarian Development Research web site: http://www.fadr.msu.ru/rodale/agsieve/txt/vol5/3/art1.html

*Aksnes B. Farming. What works. [Feedback]. World Nutrition September 2014, **5,** 9, 801-802*

WN
Back on board

Access May 2013 Seva Khambadkone I get around here

***Seva Khambadkone* writes:**

Editor's note. After a 'sabbatical', Seva is back with us now as a WN assistant editor. Here she brings us to date. Also please see The Issue, page 710

It has certainly been a while. *When I last wrote*, I was on the tail end of my time working with a community-based public health organisation in Nicaragua. Now I am returned to the States where I've begun medical school at Johns Hopkins.

In ten months, we've covered the basics of human anatomy, cellular and molecular biology, immunology, haematology and oncology, microbiology and infectious disease, dermatology, psychiatry, and neurology. Hopkins is well known as both a research powerhouse and hospital. This dual focus on science and patient care is reflected in our curriculum: classroom lectures and labs are balanced with clinical experience from our very first week. The early patient exposure means that from the very first time we learn about the biological basis of a disease, we are already associating it with the very real humans who suffer from it, adding a critical element of humanity to what can be an overwhelming onslaught of information.

The first two years of the curriculum are also graded pass-fail. The freedom this gives us traditionally overwhelmed medical students to pursue outside interests – often what drew us to medicine in the first place – will make us better, more directed, empathetic, and grounded physicians.

Coming back on board as an assistant editor for *World Nutrition*, I am so thrilled to share these experiences with you all and learn from all of yours. From my continued and fervent belief in community-based, empowerment-based interventions, to a new and growing interest in the gut microbiome, I look forward to adding my own, ever-developing perspective to the public health nutrition conversation here at *WN*.

Seva Khambadkone
Johns Hopkins School of Medicine. Baltimore, Maryland, US
Email: skhamba1@jhmi.edu

Khambadkone S. Back on board
[*Feedback*] *World Nutrition September 2014, **5**, 9, 803*

Rights. justice

The rights and wrongs of rights

Access June 2014 Geoffrey Cannon on equity and equality here
Access June 2014 Claudio Schuftan on equity and equality here
Access July-August Urban Jonsson on equity and equality here

Editor's note

Regular *WN* contributor and advisor Urban Jonsson, a senior UN executive for many years, is an authority on human rights and the application of this concept to nutrition and health. The 1990 UN Convention on the Rights of the Child started the United Nations Children's Fund's work with human rights. Then the UN Secretary-General asked all relevant UN agencies to apply a human rights-based approach to development. Urban Jonsson was then appointed senior advisor on human rights to the UNICEF executive director. His own priority research interest is about the complex relationships among development, democracy, justice and human rights. He was an active member of the UN Standing Committee on Nutrition for many years, and convened the SCN working group on nutrition as a human right He is now executive director of The Owls, an international consultancy in the area of human rights, democracy and development

Urban Jonsson writes:

WN has been carrying a number of contributions on the concepts of equity and equality, which can be accessed above. A related concept is that of human rights, which also is often not well understood.

Misuse of the concept

A common misuse of the concept of human rights is the practice of using normative 'human rights-like' positions that are not recognised as part of international human rights law as real human rights, for example 'rights to the city', 'tenure rights', 'youth rights', and some parts of 'property rights'.

Another common misuse is the practice of using 'good governance' as synonymous with human rights realisation, forgetting that 'good governance' is indeed a necessary but not a sufficient condition for the realisation of human rights.

A more political form of misuse of human rights is the practice of using the end of a country's violation of human rights, most often economic and civil rights, as conditionality for cooperation, for example development cooperation.

A more recent misuse is the unacceptable increasing practice of using 'equity' as a human rights concept. 'Equality' is a human rights concept (a human rights principle), while 'equity' is a justice concept (fairness). This deliberate mistake totally alters the political discussion on power structures in society.

Rhetorical repackaging

Some UN and national documents refer to human rights in their introductions and in their conclusions, without any serious effort to 'integrate' or use any human rights approach or taking any serious 'human rights perspective'. The reason for this is often a desire to show a 'high moral ground' by referring to human rights, and the incorporation of human rights terminology into traditional development discourse, without any significant change in reality (1).

A cross-cutting issue

Already in 1997 the Secretary General's UN Reform Agenda strongly promoted human rights as a cross-cutting issue, which should be integrated in the work of all agency mechanisms established in the areas of development and humanitarian work. However, since then no agency has managed to define 'cross-cutting' human rights work in clear operational terms. From at first mainly focussing on single agencies, the concept soon was expanded to apply to a number of inter-agency mechanisms, which contributed to a further dilution of the term.

Mainstreaming or integration

'Human rights mainstreaming or integration' is the most common approach referred to in development literature. This aims to integrate human rights into all sectors of existing development interventions (such as water, education). 'Mainstreaming' and 'integrating' are often used interchangeably, although very seldom clearly defined.

Although seldom explicitly explained or elaborated upon, development is sometimes seen as the achievement of desirable outcomes through the selection and implementation of human rights acceptable processes. 'Mainstreaming' of human rights then often means a strong adherence to human rights principles in the design and the implementation of the process of a policy, programme or project (such as non-discrimination, equality, participation and inclusion), while the desirable outcome represents a recognised human rights standard, (such as the right to adequate housing, right to water and sanitation, and so on, often together with some specific criteria of human rights principles (such as non-discrimination).

A human rights-based approach

Here for future general agreement as a foundation for clear discussion, are practical and necessary key criteria that are specific, unique and useful in adopting a human-rights based approach. They closely follow the 2003 UN Stamford Principles (2).

- Causality analysis should be undertaken in order to identify which human rights (ratified by the country) are primarily affected, and which are the major

immediate, underlying, and basic (structural) causes of the non-realisation of each of these rights.

- Pattern analysis, based on the causality analysis, will identify important claim-holders and their valid claims on duty-bearers, and for each duty-bearers the correlative duties or obligations.
- Capacity gap analysis involves, for each human right, assessment of the capacity gaps of right-holders to claim their rights and the capacity gaps of duty-bearers to meet their duties.
- A plan of action including design strategies, programmes and projects to reduce or eliminate these capacity gaps, such that there is accelerated realisation of the selected rights, can then be devised.
- Programmes should explicitly reflect both the outcome and the process dimension of development, with the outcome reflecting human rights standards and the process adhering to relevant human rights principles.
- Programmes should monitor and evaluate both outcomes and processes guided by human rights standards and principles.
- Programming should be informed by the recommendations of international human rights bodies and mechanisms.

Urban Jonsson
Dar es Salaam, Tanzania
Email: urban@urbanjonsson.com

References

1 Uvin P. *On high moral ground: The incorporation of human rights by the development enterprise*: The Fletcher Journal of Development Studies 2002, 17

2 UN. *The Human Rights Based Approach to Development: Towards a Common Understanding Among the United Nations Agencies*. Second Inter-Agency Workshop. Stamford, 2003

Please cite as: Jonsson U. Rights, justice. The rights and wrongs of rights.
[*Feedback*] *World Nutrition September 2014, **5,** 9, 797-799*

How to respond

Feedback is edited by Isabela Sattamini. Please address letters for publication to wn.letters@gmail.com. Letters usually respond to or comment on contributions to *World Nutrition*. More general letters will also be considered. Usual length for main text of letters is between 350 and 1,000 words but they can be shorter or longer. Any references should usually be limited to up to 12. Letters are edited for length and style, may be shortened or developed, and once edited are sent to the author for approval.