

## WN Update

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### *Principles. This century* **From World Nutrition to Nourish**

#### Geoffrey Cannon reports:

This 58th *World Nutrition*, with a record number of pages, is the final issue edited by me. Founder-editor as from May 2010, I compare publication of *WN* with the flight of a bumble bee – it can't be done, but look, listen and learn, it does fly, and it buzzes too. Yes, we have 'slipped' months, appearing 12 times in 2011 and in 2012, but – with bigger issues – 11 times in 2014 and 8 in 2015. *WN* has published over 200 authors, and at the last count was being accessed in over 80 countries, annually averaging around a million page sessions and 150 gigabytes of downloads.

Times change. *WN* has always been guided by its [\*original manifesto\*](#), as a journal where facts are respected and ideas come first. The quality and standard of its commentaries complements that of academic journals, and contributions are vividly edited, presented and illustrated. But in the last couple of years it has become obvious that two types of publication are needed. One can focus on the development of the



*Instruments of Power* is the title of this vast mural by [Thomas Hart Benton](#), now on permanent display at the Metropolitan Museum of Art in New York. *The relentless colossal mechanical 'progress' it depicts must now end for ever*



*Population. The world's population, 1 billion in 1800, 1.5 billion in 1900 and 2.5 billion, is now 7.5 billion, is projected to rise to 9.5 billion in 2050. Public policy and action must now denounce and prevent all forms of reckless growth*

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profession of public health nutrition, as represented by the World Public Health Nutrition Association. The other will be self-governed, concerned with public health and nutrition (note the 'and') as independently delineated by its own team. The need for both jobs to be done, and not mingled, has become obvious and imperative as the editorial team considered how best to face the relevant facts and prospects of this century. This has involved outlining a much bigger picture of nutrition as a branch of public health, and converging on an agreed overall publishing and editorial policy.

### ***Growing and grasping***

Illustrations of what this all means are the pictures above and below. The ideology depicted in the 1930 mural by Thomas Hart Benton (1889-1975) above is a US equivalent of [Futurism](#), the Italian art movement that glorified Fascism. It projects worship of machines and inhuman drive for aggressive colossal scale, speed, power, and growth, often used for invasions and wars, which now must end for ever.

Why do we see such a big picture? The photograph above shows another reason why. Mark Wahlqvist from Australia, China and Taiwan, a member of the *WN* team, emphasises that the planet cannot carry the weight of a longer-lived, physically bigger human population doubled since 1970 and projected to increase another 2 billion by 2050. These new billions will mostly live in cities with primitive, stagnant, jammed or collapsing infrastructures, often with little education and few prospects except as servants, gangsters, vagrants, or workers in the sex and drugs trades.

The photograph below is another reason why. It is of fracking – fracturing rock – to extract gas or oil. Estimated technically recoverable reserves amount to 420 trillion cubic metres. This fuel could drive up corporate production, sales and profits from



*Energy. The Paris climate summit ended with agreements and congratulations. But there is no good reason to believe that industry strategy will overall respond. Transnational corporations often ignore or even defy national governments*

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exploitation of countries in the global South, including corruption of their established appropriate food systems and dietary patterns, for some more decades. Many *WN* team members and regular contributors including Diana Parra from Colombia and the US, Colin Tudge from the UK, George Kent from the US (Hawai'i), Claudio Schuftan from Chile and Vietnam, and José Luis Vivero Pol from Spain and Belgium, who like Mark have university appointments, stress the appalling impact of increased energy exploitation on climate and the environment. So do I. In the words of the billionaire [James Goldsmith](#), who late in life became an ardent environmentalist, we all are on a merry-go-round to hell.

### ***Transforming and flying***

The relevance of population increase and of energy extraction to public health nutrition has been the topic of fervent discussion in the last two years. These are not topics on the nutrition academic curriculum – not yet, anyway. They are relevant because they are fundamental public health crises, and nutrition is or should be an integral part of public health. More than that though, much social, economic, environmental and other types of disturbance and convulsion distort, damage and corrupt food systems and supplies and thus patterns of diet and health. To ignore this is like looking in a mirror with eyes shut.

Most great issues that determine the nutrition and health of nations are off the map of nutrition as now taught and practiced. This is a compelling reason for two types of publication. One can be concerned with the knowledge, interests and capacities of the profession as now constituted. The other will have the vision and mission to be in the world as it is now and to foresee the future. By analogy, priests and prophets have different roles, as do bricklayers and architects, and consumers and citizens.



*Knowledge, decision – and action. Researchers, politicians, professional and public interest organisations, social movements, farmers, urban workers and citizens, are now becoming a grand alliance. Nourish will amplify this concerted voice*

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So this is not an auto-obituary. We all here on this editorial team are in the process of creating *Nourish*, our new independent journal with its own website, with a first issue launched for May this year. Some details are in the [main editorial of this WN](#). Like the phoenix, we rise and fly again as the team responsible for *Nourish*, of which I am privileged and proud to be the founding editor.

### ***Deciding and acting***

Nutritionists, personally or collectively, cannot make any significant improvement in the state of the world. Nor can any other profession, or institution, or union, or medium, or industry, or government – by themselves. Nor can the United Nations system – by itself. All such bodies that habitually dispute with and denigrate one another, as in Punch and Judy and other puppet shows designed to amuse children, make bad worse. *World Nutrition*, and *Nourish*, would be part of the problem if either merely recorded and amplified inertia, confusion and cacophony.

Now here is a reason to be cheerful. The [video above](#) is an example. It sets out the campaign of the worldwide social movement [La Via Campesina](#) to halt climate disruption by all means possible, including advocacy, activism and agitation. *La Via* is a network of 164 movements in 73 countries, with 200 million members, fighting for the rights of real farmers. Change on a scale now needed to make the planet a fit place for the human and living world will be created by popular movements with principles, vision, mission and work that really and truly are democratic, transcending conventional party politics. Professionals and their organisations now must join in, play their part in unison, and support social movements in all appropriate ways. *Nourish* will be a forum for this work. We will shape and amplify unity.

*Cannon G. From World Nutrition to Nourish. [Principles. This century ]  
World Nutrition January-March 2016, 7, 1-3, 7-10*



**WN** *Agroecology. Nepal*  
**Real farmers have to be resilient**



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[Access April 2015 Ashok Bhurtyal, Dushala Adhikari on the Vitamin A scandal here](#)

[Access June 2015 Ashok Bhurtyal on Langtang rebirth here](#)

[Access this issue Ashok Bhurtyal on the Vitamin A scandal here](#)

**Update team note.** Shahani Singh has been contributing to the [Science and Development Network](#) since 2013, on climate disruption, health and technology. She also has worked as a qualitative researcher for civil society organisations, think tanks and academic centres in Nepal. Here she writes on agroecology in Nepal, edited from *La Cité* as presented in Paris at the climate conference in December 2015, as invited by the UN Development Programme.



*Vulnerable countries need simple resilient methods of protection against disaster.  
Plastic ponds are used for irrigation of farms and gardens in upland Nepal.  
These guard against climate disruption, crop failure, and food insecurity*

Climate disruption involves flooding, heat, and other impacts of climate change. People in less resourced countries don't just need help to adapt and respond, they need to understand climate volatility and other shocks. They also have much to teach, as they come up with imaginative solutions to the problems they face with managing local environments. One such example is the resourceful Nepali farmers of the upland district of Kavrepalanchok.

### ***How to keep soil moist***

Mulching digs a hole for organic manure, sows the seed, and covers it with hay. This helps crops retain moisture throughout dry spells. One day in 2015 there was torrential rain for one day then Kavrepalanchok then no rain for the rest of the season, but the crops did not fail.

Farmers in the neighbouring village of Patleket have also found climate-smart ways to adapt. Plastic ponds enable irrigation of home farms and gardens. Each household in Patleket village has its own plastic-lined collection pond, and a bigger community pond sits higher up the hill. Having a local reliable source of water means farmers no longer have to hike for miles to the nearest river, pool, well or spring.

Mulching and water harvesting by using plastic ponds protect against extreme weather. A study by Japan's Kochi Technology University found that they 'contribute to poverty reduction for smallholder farmers...and are a promising technology for Nepal, and many other low-income nations'.

### ***The politics of farming***

The parts of the world that are not causing climate disruption are enduring and will suffer its most disastrous effects. As delegates to the climate change conference in Paris tussled over the final non-binding agreements, social movements around the world are agitating for real solutions (*Ed* – and see the opening *Update* in this issue of *WN*). Transformation of food systems and supplies to become agroecological will take decades, and these need to be indefinitely sustainable in all types of climate, terrain and culture.

Personal choices can be good examples, but transformation involves politics. A quiet revolution is needed to introduce, protect and strengthen, ecological agriculture. Less bad versions of the industrial agriculture now dominant in many countries will be no use.

Many farmers in Nepal are on the right path. Many always have been, and simply need assurance, support to survive hard times, and improved while simple machinery that needs minimal repair or inputs. All over the world, climate disruption will require adjustment of planting dates and crop varieties, crop relocation, improved land management (such as erosion control and soil protection through tree planting), new research and development policies, institutional reform, land tenure reform, training and capacity building, crop insurance, and financial protection when necessary.

*Box 1*

## **Courage in Nepal**



*Bimala Bajagain by her shelter built with funds from government and civil society. She will reinforce it with money from her increased harvest of potatoes, tomatoes, cucumber and bitter gourd, made possible by her adoption of mulching*

Bimala Bajagain, a farmer and mother of three children, wears a fading red *kurta* and looks older than her age of 35. She offers us plates of salted guavas at the porch of her earthquake-damaged house. By mid-day, October's warm sun boils over Kalchebesi village of Kavrepalanchok district. She offers us a plate of cucumbers. 'We managed to build our temporary shelter with assistance from government and civil society' she says, nodding toward the structure above, made of corrugated steel, beside her cowshed. 'It will have to be rebuilt for winter – it was unbearably hot in the summer and now it will turn very cold.'

### *Abundant harvest*

She plans to reinforce her shelter with plywood for insulation, which she will fund with a loan from a local cooperative, and eventually pay with income from selling her vegetables, if the water holds out. 'We have scarcity of water during the summer. This year, it poured torrentially for a day but halted for the rest of the season', Rows of bitter gourds hang from climbers suspended atop a wired roof. They look ripe for picking. Bajagain explains that mulching has helped her crops retain moisture through dry spells, sustaining her income. 'It involves nothing more than digging a hole for placing organic manure, sowing the seed and covering it with hay as a protective layer,' she says. The results are obvious. 'I had sown my seeds in February this year – six months on, I am still harvesting, whereas last year, the manure dried quickly and the harvest lasted only four months'.

Her income has nearly doubled compared to the year before, thanks to the extra water. The extra money from her increased harvest of potatoes, tomatoes, cucumber and bitter gourd will be all she has to fund the better winter shelter and support her children's education. She is hopeful, but she has good reason to remain concerned.

*Shrestha S. Real farmers have to be resilient. [Agroecology. Nepal]  
World Nutrition January-March 2016, 7, 1-3, 11-13*

*Update. World Nutrition January-March 2016, 7, 1-3, 7-27*



**WN** *Public goods. Pollution. Brazil*  
**The Sweet River poisoned**



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Around 250 years ago, over half the gold in the world came from the Brazilian inland state of Minas Gerais (which means ‘General Mines’). Ouro Preto (‘Black Gold’), the second capital of Minas, was the most populated in the Americas. Now the gold and diamonds are ended and the main ore in the state now is of iron, including at Alegria (‘Happiness’), the second biggest open pit in the world, with reserves estimated at close to 2 billion tons. The mines near Mariana, the original capital of Minas, are jointly owned by the British-Australian BHP Billiton, the biggest mining corporation in the world with annual profits around \$US 15 billion, and the once publicly-owned Brazilian Vale, first named Vale do Rio Doce (‘Valley of the Sweet River’), now privatised and the world’s biggest iron mining corporation.



*Brazil is in deep political and economic trouble. So is president Dilma Rousseff. Here she looks at the worst environmental disaster in Brazil’s history, that has poisoned 500 kilometres of river and also the ocean with toxic effluent*





*A married couple killed by the tide of toxic filth, are here commemorated on a bank of the dried toxic slime from the Mariana district iron ore mines. It may take until the end of this century for the Sweet River to be clean again*

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In 2012 Vale was voted the world's most irresponsible corporation with the most 'contempt for the environment and human rights' by Greenpeace. In 2014 Vale was one of the biggest corporate donors to the presidential campaigns of Dilma Rousseff from the workers' party (who narrowly won the election) and also of her adversary Aécio Neves of a leading corporate-friendly party. Both are natives of Minas, which with São Paulo is one of Brazil's two most politically powerful states.

### ***The dam broke***

Big businesses feed the money markets and their shareholders. The general policy of most governments is to cede their public duties to private including foreign-owned corporations. The safety record of the physical resource extracting industry is generally poor, and in Brazil publicly funded safety inspections are notional. So it was not surprising that on 5 November 2015 a colossal BHP Billiton-Vale dam, built to hold back refuse from seven years of iron ore extraction, burst. Early reports stated that Bento Rodrigues, a local small town, was obliterated by viscous mud, a small number of people (such as the couple commemorated above in a bank of the dried slime) were killed, as were many animals, thousands of people were homeless, and farmland and ecosystems were destroyed. All this seemed no worse than other environmental disasters regularly caused by corporate neglect of public safety.

But later reports showed the true effects of the burst dam. An estimated 60 million square metres of slime cover the local countryside and made the Rio Doce filthy and stinking. After initial statements saying that the effluent is not very harmful, independent analyses showed that it contains concentrations of iron at levels over 10,000 times of those judged safe to drink, and also contains zinc and copper, and the very toxic arsenic and mercury. Apparent disaster was actual catastrophe.



*Over 500 kilometres of the Sweet River are now the Poison River, as shown above, pouring toxic filth from the iron ore dam break into the Atlantic. This is a consequence of the dominant global strategy of privatising public goods*

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In less than three weeks the effluent had moved 500 kilometres and polluted the Atlantic Ocean in the neighbouring state of Espírito Santo, as shown in the satellite picture above. Essentially, the Rio Doce by and below Mariana has been killed, and a great tract of agricultural land destroyed or polluted. Many other Brazilian waterways have been poisoned at other times, because of failure or inability to check the human flight to cities with no infrastructure able to sanitise industrial effluent and human and animal wastes. This is also true in countries the world over.

### ***The big bosses say sorry***

Brazilian president Dilma Rousseff compares the outrage with the BP Deepwater Horizon catastrophe in the Gulf of Mexico. ‘Who is responsible?’ she asks. ‘A big business with Vale and BHP Billiton as partners’. Brazil’s deputy attorney-general Sandra Cureau says that the corporations should suffer ‘exemplary punishment’, and ‘Vale and BHP were totally careless. They had no alarm system in place.’

The cash cost is reckoned at around \$US 1.5-2.5 billion. The preliminary fine of \$US 65 million imposed, around two days’ profits of BHP Billiton, will not revive the river or restore the destroyed livelihoods of thousands of displaced and otherwise ruined farming families, and other immiserated communities. Disasters tend to have the net effect of robbing the poor to enrich corporations. At a press conference Andrew Mackenzie, the chief executive of BHP Billiton, and Murilo Ferreira, chief executive of Vale, said they were very sorry. In due course share prices, currently depressed, will bounce back. There is no gold or diamonds left in the hills of Minas, but iron is always in demand, to make bigger cities in Brazil and other countries.

*Neves F. The Sweet River poisoned. [Public goods. Pollution. Brazil]  
World Nutrition January-March 2016, 7, 1-3, 14-16*

## *Food systems. Waste. France, China, Turkey* **Waste not, want not**



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[Access 2013 World Resources Institute Food loss and waste report here](#)  
[Access 2015 World Policy Institute Amy McDermott on food waste here](#)

**Update team note.** As successive commentaries and editorials in *WN* state, if 'development' continues to mean more exploitation, production and consumption, sustainability is impossible. What's needed is a lot less consumption, production and exploitation. One move is reduction of food waste. Globally, close to one-third of all food is lost or wasted – 1.3 billion tonnes a year, causing economic losses of \$US 750 billion a year, and extensive environmental degradation. Food waste is a big issue.



*Food wasted every year in the US amounts on average to 525 kilograms (1,150 pounds) per family of four. Dorothy and Peter Waldt of New Jersey and their children Chloe and Christopher show what this looks like*

*Kuwait City, Kuwait.* Here I give examples of food waste in three countries, with a brief sense of what legislators, citizens and consumers are – and should be – doing to reduce food waste.

***France. The supermarket law***



*Arash Derambarsh (front centre) and his fellow campaigners in Courbevoie, near Paris, France, with their collection of fresh and processed food that has been thrown out by local supermarkets*

The average French person throws out 20-30 kilograms of food a year – of which 7 kilograms is still in its wrapping! The national cost is up to €20 billion. .Of the annual 7.1 million tonnes, two-thirds is binned by consumers, one seventh by restaurants and over a tenth by shops.

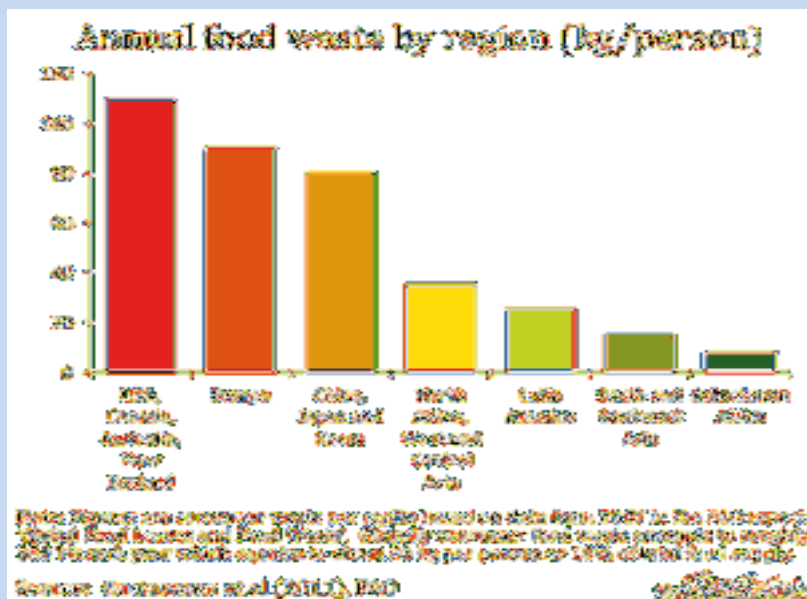
The French government is hoping to slice food waste in half by 2025. Last May, deputies presented 39 suggestions to the government to end food waste. Under legislation proposed, as part of a law on energy and the environment due in 2016, supermarkets in France will be obliged to donate all unsold but still edible food to charity or for use as animal feed or farming compost. All large-sized supermarkets will have to sign contracts with a charity group to facilitate food donations. Those with a footprint of 40 square metres or more will have to sign contracts with charities by July 2016 or face fines of up to €75,000 or two years in jail.

The law will also introduce an education programme about food waste in schools and businesses. At present, some grocery stores are pouring bleach in bins after throwing away food to make it unfit for consumption and to avoid any lawsuits that may come from ‘dumpster diving’.

Retail representatives say it is a mistake for the new law only to target big supermarkets, which cause only 5 percent of total food waste. It may create an illusion that supermarkets are doing their share while failing to address the wider issue of overproduction throughout the food industry as well as the wastage in food distribution chains. Further, it does not address the issue of food waste that occurs at home. Preventing or reducing food waste at home may, they say, be more effective and get better results.

Box 1

One-third of all food is wasted



Food waste refers mainly to the discarding of food that is or should be fit for human consumption, by choice, or after the food has become unfit to eat. The UN Food and Agriculture Organization estimates that about one-third of the food that is intentionally produced for human consumption is annually lost or wasted somewhere in the food system chains from farms to factories, to retailers, caterers, and households.

*Food systems failure*

In low-income countries food waste is largely a result of wide-ranging managerial and technical limitations in harvesting techniques, storage, transportation, processing, cooling facilities, infrastructure, packaging and marketing systems. Without the capacity to pickle, can, dry, or bottle foods, surpluses of perishables like okra, mangoes, and cabbage can't be converted into shelf-stable foods. Bad road and rail conditions slow transport of food from farm to market. Informally packed fruit gets jostled into mush, vegetables wilt and rot for lack of shade and cooling. To make agriculture systems more sustainable, what grows from the soil should be returned to the soil.

In high-income countries causes of food waste relate more to consumer behaviour..Food waste is not just a problem of the food industry. Much food is wasted at home. Inadequate planning of purchases and failure to use food before its expiry date also causes food waste. Food waste is also linked with obesity. In many restaurants there are normally two choices: to overeat or to waste food. The problem of food waste is also one of food insecurity.

***China: memories of famine***

In China, the equivalent of \$US 32 billion worth of food is thrown away every year. Of this 70 per cent is food scraps. Meanwhile, over 125 million Chinese live below the national poverty line (defined as the equivalent of about \$US 1.8 a day), and often lack sufficient food.

As household incomes, urban populations, and overall food consumption in China continue to rise, the country faces serious problems of food waste, natural resource scarcity, and overflowing landfills.

With the Great Famine of the late 1950s still affecting the psyche of older Chinese citizens, they seem to be the ones leading the movements to reduce food waste. Initiatives such as on-site treatment of food scraps, the Clean Plate initiative (zero food waste when dining out) and Food Link (food waste reduction education) are all active. Today China produces less volume of food waste than the US despite its much larger population.

***Turkey. 'No bread wasted'***



*A local bakery shown here in Turkey. Bread, a staple food in many countries, is often wasted. The Turkish Grain Board is reducing the waste of bread supply and consumption throughout the country*

In 2013 the Turkish Grain Board directed a campaign to reduce the amount of bread wasted in the country. At the time, the leading causes of waste were identified as neglect and lack of awareness. In shops and homes across the country, bread was often improperly stored and stale bread was either thrown away or fed to livestock. People were frequently buying too much bread and bakers were over-producing.

Apart from traditional information campaign methods, creative strategies to connect with people included discussions about food and bread waste in the school curriculum and in mosques, art and poetry competitions engaging as many as 25 million children, printing the campaign logo on national lottery tickets and even publishing a recipe book that celebrates stale bread as one of the most useful ingredients in the pantry.

The campaign's recommendations were not legally enforced, but the Turkish public responded strongly. Households reacted especially well to the campaign, reducing bread waste by an average of 40%. As Turkey wastes less bread, it also saves more money. According to the Grain Board, reducing unnecessary waste and excess purchases in 2013 saved consumers an estimated equivalent of US\$ 1.2 billion.

## ***Waste is profitable***



*Here is good food from a supermarket dumpster in Copenhagen. Food waste campaigners continue to collect wasted food, denounce the practice – and enjoy the food, made into meals for people in need*

It's no secret though, that the more products consumers discard after reading its 'use by' date, the more products retailers can sell. For supermarkets, it makes commercial sense to tip surplus fruit into dumpsters rather than lower their price, and undercut sales of full-priced fruit. Fearing to come up short on supermarket contracts, big commercial growers typically overplant. Farmers will also leave entire blocks of fruit or vegetables in orchards and fields for fear of flooding the market and depressing prices. Sometimes the cost of labour to harvest a crop exceeds the value of selling it, so plenty of fruits and vegetables are left behind. Food waste is indeed a big issue.

### *Box 2*

#### **What you can do now**

Reducing food waste is not just an issue for industry. Customers and consumers are also complicit. Those of us with adequate money and access, over-buy when faced with cheap and seductively packaged food. We don't always store food properly; we take 'use by' dates literally, although this information is an estimate of peak freshness and has very little to do with food safety. We forget to eat our leftovers, and toss good food into the garbage.

There is plenty to do at home which can reduce the amount of food that is wasted daily. Plan your meals before you grocery shop. Make a detailed shopping list and stick to it. Serve reasonable sized portions. Save your leftovers, and then eat them. Use what you already have in your refrigerator and freezer and cupboards. Being a good host does not mean lavish meals and discarded leftovers. An invitation to dinner can be transformed into an interactive preparation and cooking session involving the guests. By reducing food waste, money and resources are saved, environmental impact reduced, and one more step is taken on the long road towards where everybody has enough to eat.

*Gardumo-Diaz S. Waste not, want not. [Food systems. Waste]*

*World Nutrition January-March 2016, 7, 1-3, 17-21*



**WN** *Sugar taxation*

## **The cost, price and value of sugar**



*The cost of sugar. The hands of a Haitian labourer working in the sugar fields of Batey los Pelao in the Dominican Republic, two hours from Florida-style ocean resorts. Cane cutters' wages are \$US5 dollars a ton. Many earn less*

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[Access January 2011 Vanity Fair Marie Brenner on Big Sugar and the Fanjuls here](#)  
[Access April 2014 American Journal of Public Health on Sugar tax benefits here](#)  
[Access July-August 2014 Rich Cohen on Sugar and slavery here](#)  
[Access July 2015 Al Jazeera Amy Bracken on Dominican sugar workers here](#)  
[Access October 2015 The Guardian Robert Lustig on Sugar tax here](#)  
[Access November-December 2015 Update on UK and Mexican sugar tax here](#)  
[Access November-December 2015 Geoffrey Cannon Here I stand on sugar tax here](#)  
[Access November-December 2015 World Obesity on Mexican sugar tax here](#)  
[Access December 2015 Washington Post Robert Paarlberg on Sugar tax here](#)  
[Access this issue Geoffrey Cannon on Sidney Mintz here](#)

### **Geoffrey Cannon reports:**

The hands above are not those of a scientist at the Society of Latin American Nutrition Associations (SLAN) triennial conference, held last November in the Palm Beach-style oceanside resort of Punta Cana in the Dominican Republic. At that event presentations included some supported by Coca-Cola, Pepsi-Co, Nestlé and Mondelēz (formerly Kraft) – corporations whose profits depend on sugar and syrup. The hands are of a Haitian cane-cutter in Batey los Pelao, two hours up the road from Punta Cana. A trip for SLAN notables to see how sugar cane is cut and to meet the workers was not on offer. No presenter discussed the economics and politics of sugar production.





*The cost of sugar. Haiti was once a state whose economy boomed on sugar produced by slave labour. Now the Dominican Republic economy is boosted by 100,000 tons of sugar a year exported to the US, mostly produced by imported Haitian workers*

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For nutritionists of any stripe to overlook or ignore the conditions of the people who hands-on produce food, is absurd, pitiable and just plain wrong. But first, sugar. Two years ago *World Nutrition* began a series of commentaries, reports and news stories recording the most convulsive shift in science and policy in over half a century. This of course has been the change from demonising fat (more precisely, saturated fat) to demonising sugar (more precisely, added sugars) as the most important dietary cause of overweight and obesity, and other conditions including diabetes and the multi-organ metabolic syndrome. The experts have changed their minds. Or rather, new generations have now become dominant, and have acknowledged past investigators such as T.L.Cleave, John Yudkin, Gerald Reaven, Kenneth Heaton and indeed the



*The cost of sugar. Cutting cane at Batey los Pelao. The UN International Labour Organization describes Dominican sugar plantations as ‘one of the most widely documented instances of coercive labour contracting over the past two decades.’*

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later revised Robert Atkins, all of whom were ignored, sidelined or abused for pointing to sugar – or else refined carbohydrates – as the main single dietary menace. (This said, there is now practical unanimity that industrial *trans*-fats are not merely unhealthy, but toxic). Nutrition scientists who remain in the saturated fat camp have tended not to recant, but to keep quiet, as happens in periods when paradigms shift.

But what is now discerned, after many commentaries in *WN* including [one in this issue](#), and now many papers in conventional international journals, is that sugar itself is not the big problem. The correct focus is on ultra-processed food products. These are largely or entirely made up from processed oils, fats, sugars, syrups or starches, plus salt, plus a range of additives. Most, such as soft drinks and breakfast ‘cereals’, are made palatable by sugars, syrups or sweeteners (salty oily snacks are an exception).

### ***The revenge of the slaves***

The implication of this *Food System-NOVA* thesis is profound. It is not consumption (individual choices or personal greed) that is the basic cause of obesity, but production (industrial strategies or corporate rapacity). So far though, the accusing finger is pointed only at manufacturing and catering corporations, and not at production and distribution.. This is a mistake. The cane sugar industry is an example of such error, as the photographs shown here indicate. Ultra-processed products are typically very cheap to manufacture, because the prices of most of their main ingredients are rock bottom. With sugar this is largely because cane sugar cutters endure outrageous and dangerous conditions. They are grossly overworked and underpaid, only nominally better off than the slaves who enabled the colossal sugar estates of Brazil and the Caribbean. Their owners became vastly rich and powerful.



*The cost of sugar. Andrés Michel, 75, lost an eye cultivating cane two decades ago. Sitting on the bed in his tiny, one-room, cement home, holding a pocket-sized Bible in calloused hands, he still works, from 6 to noon daily, but can't make ends meet*



*The value of sugar. José ('Pepe') and Alfonso ('Alfy') Fanjul (centre and right) own much sugar production in Florida and the Caribbean, and Tate&Lyle Europe. Monica Lewinsky revealed that Alfy had a direct line to then president Bill Clinton*

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The West Indian 'Sugar Interest' packed the British parliament, distorting national policies, until after abolition of slavery. Its profits (and the lucre from tobacco), in Britain built magnificent mansions, gigantic government offices and marvellous monuments, drove the Industrial Revolution, paid armies, and fuelled the Empire.

Its product enabled mass manufacture of cakes, biscuits, chocolate and other confectionery, and the desserts called 'sweets', which all corrupted the established dietary patterns of the British people. Sugar, a preservative and a bulking aid as well as a sweetener, also shaped the food supplies of territories over-run by the British in the era of Empire. The 'Western' or industrial diet, an artifice of mass manufacture, is dependent on sugar and its products, together with oils and their products, and meat and dairy products. Rotting teeth and other diseases are a revenge of the slaves.

### ***Why sugar got Big***

The fact that production and distribution of sugar has been globalised for almost half a millennium has been neglected, as has the baleful success of the world sugar trade until now, in ensuring that influential people think that its product is innocuous and even a nourishing source of energy. Fat has got the rap, one reason being that the butter and margarine makers have always acted as enemies, whereas the sugar and chemical sweetener industries have agreed a truce. But the other omission is the singular nature of Big Sugar, personified as one example of many by the astounding entrepreneurs such as the originally Cuban Fanjul brothers (shown above) and family, whose father lost the family sugar business after the Cuban revolution. This global cartel uses methods of production of sugar from cane which in some ways can be as degrading, exploitative and brutal as those endured by slaves. This is why sugar and products depending on sugar are so cheap to make, though not always to buy.

### *Box 1*

## How to raise \$US 300 billion or more a year from an equitable sugar tax that will be good for workers, the land, and health

*Geoffrey Cannon proposes:*

A tax of around 20 per cent or more on added sugars reduces rates of obesity and diabetes, or at least slows down their increase. Documents pdfs of which are accessible at the beginning of this report, and many others, agree that taxes work, with the current modest Mexican tax as an example, and by analogy with taxation of tobacco products and alcoholic drinks. Also, sugar taxation has in the past [been normal government policy](#). But the focus on disorders and diseases is too narrow. An equitable system will also benefit workers, the land, and food culture. The proposal that follows is preliminary, includes guesses that can be checked and corrected, and needs development. But I believe it is conceptually sound.

The first tax should be levied on sugar once it is refined. Global production of sugar from cane and from beet is now around 175 million tonnes a year (up from 250 thousand in 1800, 8.5 million in 1900, and 120 million in 2000). The current price of sugar after refining is around \$US 375 a ton. A modest global tax of 100 per cent or say \$US 400 a ton, well below the percentages commonly levied on cigarettes and liquor, will therefore raise \$70 billion a year. This revenue should be devoted to the welfare of sugar cane workers, as a small but useful part of a global binding treaty to ensure decent wages, working conditions and housing, also to include incentives for owners to switch from cane production to types of agriculture that nourish the soil and that produce healthy food.

The second tax should be levied on manufacturers and on the retail price of ultra-processed products containing more than 10 per cent of dietary energy from added sugar. This could be a flat 25 per rate, or a sliding scale from say 25 to 100 per cent depending on the amount of added sugar. If the total sales of sugared ultra-processed products is \$US 1 trillion (million million) a year – a guess that may be not wildly out, since soft drink sales alone are around \$US 200 billion a year – a flat 25 per cent tax will raise a further \$250 billion a year. This revenue will be sequestered for supply of safe drinking water in schools and for primary health care centres in impoverished countries and settings.

### *Making it happen*

All forms of subsidy or other support of the production of sugar and syrup will be removed, by law. But the price of sugar sold as [a culinary ingredient](#) for freshly prepared dishes and meals will not be taxed, and could be subsidised, as support for impoverished families and to support and encourage home cooking. In this form there is no good evidence that added sugar significantly increases rates of population obesity or diabetes. This solves the issue of regressive taxation, which in any case is a bogus argument against a sugar tax, given the human and material costs of obesity and diabetes.

The \$US 320 billion question is how to achieve a binding global sugar tax, vastly preferable given porous national borders, timid national governments, and corporate power. Existing actors include the World Trade Organization and the World Economic Forum, whose current 'free market' ideology is opposed to any inhibition of corporate revenues and profits. But the model for a global tax needs to be built. In the period before the WTO and the WEF and such-like bodies come to see sense, national governments, in concert, will impose sugar taxation approximating to the plan sketched here, by analogy with taxation of tobacco products and alcoholic drinks. Progress will be monitored by those UN agencies best placed to do so, also working in concert, such as the UN Food and Agriculture Organization, the International Labour Organization, and the UN Environmental Programme. *To be continued...*



*The value of sugar. José ('Pepe') Fanjul, with Hillary Clinton, leading candidate for election in 2016 as US president. meeting at a recent New York gala evening. The Fanjuls have donated \$US millions to Republican and Democratic candidates*

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Moreover, the ingenuity of modern sugar magnates in manipulating politicians is as clever as that of the 18th century Caribbean sugar barons. The Fanjuls are an example. Alfonso (Alfy) the elder brother, is intimately connected with the US Democratic Party and Bill Clinton. José ('Pepe') has supported the Republican Party and the Bush dynasty, but is now on a charm offensive with Hillary Clinton. The Clintons, and Bush I and II, have all been feted at Casa de Campo, the Fanjul's 7,000 acre resort, three hours drive from the cane fields. The Fanjuls have helped persuade the US administration to be nice to the Castro regime, and so let them 'open up' Cuba, and no doubt recover the family mansions, estates and business.

There is no record of Alfy and Pepe's political friends, or other guests such as Kim Kardashian, Donald Rumsfeld or Beyoncé, being offered a tour of Batey los Pelao, and so it is unlikely that any of them have visited Andrés Michel.

*This Update relies on the investigations of the Fanjul empire by Amy Bracken in US Al Jazeera, and by Marie Brenner in Vanity Fair. Other sources are Sweetness and Power by Sidney Mintz; The Making of New World Slavery by Robin Blackburn; the chapter by Wallace Aykroyd in Sugars in Nutrition; and Sugar, the Grass That Changed the World by Sanjida O'Connell. Personal guides have been the late John Yudkin, Francis Avery Jones, Kenneth Heaton, and Aubrey Sheiham. Sid Mintz, who I never met, died age 93 on 26 December, at the time I was drafting this Update. Disclosure. I am a member of the team convened by Carlos Monteiro of the University of Sao Paulo, Brazil, responsible for the Food System-NOVA thesis on ultra-processing, as published in many international journals as well as in WN.*

*Cannon G. The cost, price and value of sugar. [Sugar taxation]  
World Nutrition January-March 2016, 7, 1-3, 22-27*

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