

Sustainable diets and public health

I'm being filmed here in London where studies were done in the 19th century of 20 households having to share one fire to cook on. How can you feed yourself adequately in those sort of material conditions? The 20th century was about trying to improve the material conditions - the infrastructure for health. In the book I co-wrote with my friend and colleague Geoff Rayner, *Ecological Public Health*, we looked at the long-term public health problem. What is public health? And our conclusion - reviewing a whole number of changes in the world over the last 250 years, industrial capitalism, the modern era - we concluded the public health is today exactly what it was in the past. It's about shaping the conditions for good health.

Now when it comes to diet, what's a good diet? I'm Europe's only professor of food policy. I wish there were more. I'm old. We run a Masters at my university. They're popping up - brilliant young people now exploring these problems. But what's a good diet? Well, we know what the nutritionists say but what's a good diet for health and the environment. Is it the same in London as in Lagos or Lusaka? What's sustainable diet in Mumbai, Bombay, where I lived as a child. Is it the same as in Rio D Janeiro or Sao Paulo? This is now a major issue for 21st-century food policy. Part of the crisis of food policy is not just poor leadership, lack of a new framework, although I'm optimistic, I think that's beginning to emerge. It's not bedded down. It's not statutory. It's not totally agreed. But the need for it, the case for it and the misty shape of it is beginning to emerge, but what's a sustainable diet is now an absolutely critical issue for us to get clear on.

Part 1. Beyond productionism

In the second half of the 20th century, the architects of productionism - the policy approach that said produce more food, prices will come down as long as we distribute it OK, and sort out waste on and near the farms everything will get better and public health will improve. That's progress. Beautiful, simple, elegant and to some extent successful policy model. Those architects were often actually public health people. John Boyd Orr, the first director general of the UN's Food and Agricultural Organisation - I see his statue every time I go into the entrance of the headquarters of the FAO in Rome, there he is smoking a pipe, he's a doctor, they didn't understand the epidemiology of tobacco then - their view was that public health nutrition's demand of agriculture was to produce more food. Get protein, get calories, get what they called the protective foods - vegetables, green vegetables, they understood about vegetables, vitamins had been discovered. Gowland Hopkins got the Nobel Prize for vitamins in 1928. Their vision was essentially about producing more and making it available.

But by the 1970s, Ancell Keys in the seven nation study had emerged, showing very strange things. Richer societies didn't have better diets. Ancell Keys and other scientists, American scientist in his case, were beginning to show heart disease. They were beginning to show that rich societies, Britain, the United States, had worse diets for public health than Japan or Greece. Actually, Ancell Keys's study was on Crete. And the Cretan diet - they took a fantastic amount of exercise by the way it is not all diet but how we live, do we burn that food that we eat? The Cretan diet was heavily plant-based and if they ate meat it was a sheep that had run up and down mountains. If you go to Crete it's mountainous. And they ate lots of herbs. They ate a very diverse diet. But the 1970s

nutritionists were suddenly realising that the impact of diet was not just one where nutrition advice could be just eat more - the 1930s analysis. And at the same time, the environmental data is coming out saying but food is causing this damage to the environment.

What's a good diet for biodiversity? Well you could say, let me go to a hypermarket. Look, there's hundreds of different fruits and vegetables from all over the world there, but what's the environmental footprint? What's the carbon of transporting it? Actually most of the carbon tends to be on and near the farm or in cooking. We now have lots of science in the 21st century that is beginning to analyse diet through more a complicated set of lenses. Talking calories ain't enough. Some people argue well calories and carbon go side by side. High calorie diets are high carbon diet therefore climate change involved. A lot of attention now focuses on meat and dairy.

Meat and dairy, which is culturally been seen eating more of, is a cultural good. It's a sign of progress. Meat that used to be feast day food is everyday food. At one point in Britain you could buy three chickens for £5.00 - seven euros. This is unbelievable. Coming from Thailand or Brazil all the way here. This is astonishing. What's a good diet? This is still a huge question. But the key thing is nutrition can't be left to sort this out. It's got to have other scientists and other sciences and other bodies of knowledge to help articulate what that is. And I'm not arguing by the way that scientists should tell us what to eat - the job of science, the job of academics is to help hold the mirror up and say is this what you want, because that's what's happening at the moment.

Part 2. Policy routes

If the challenge is sustainable diets, what's the policy route into this. Almost every country on the planet that I can see, and have been able to look at, issues some sort of official guidelines, nutrition guidelines. They're often known as dietary guidelines or food-based dietary guidelines. There's an argument about whether or not those should be set by nutrients - you know breaking down protein, calories, well not protein, but calories salt etc, etc going down even to micronutrients or whether it is better to give those guidelines in food terms. So the United States has the dietary guidelines for Americans, revised every five years. In Europe, we went through were a rather lugubrious and very fractious process of setting a Euro diet in 2000-2001. In Britain, we have dietary guidelines set and put through the Food Standards Agency. The Netherlands, likewise. Most countries have systems like that. In Brazil, the same. In India, the same. In China, the same.

How do we make these sustainable dietary guidelines? Well, firstly nutritionists aren't very happy about that. So there's actually an internecine fight going on. Nutritionists say don't muddy these waters. We've got enough trouble. We've been trying to get these to be taken seriously for years. We've been giving the five a day messages, eat this, eat that, cut back on meat and dairy etc. And now you're coming along and saying well we've got to have the environment, we've got to take cultural differences and seasonality and local, and identity issues seriously. Don't complicate it. It's a good argument but, I think, ultimately wrong.

The sustainable dietary guidelines approach says will let's try and piece this together. Without a doubt the best thing that happened, in this respect, from the commodity crisis of 2007-8 was that some of the rich countries started thinking about this more seriously.

Across northern Europe, it was remarkable - it was actually very nice to see it in Britain, in Germany - which had been ahead of the game I'll come to that at the moment - in Sweden, in the Netherlands, in Italy, Southern Europe, processes began to start saying we OK what should we have by ways of sustainable dietary guidelines and Sweden really set the benchmark. Sweden's food, environment agency, sorry its environmental protection agency and its national food administration, the two relevant bodies, worked for two years to create dietary advice for environmentally conscious consumers. And being good Europeans, they sent this carefully crafted document - that said things like eat seasonally if you can, it has a lower carbon footprint - if I eat a strawberry in the middle of winter from Britain it will have, without doubt, have been under a greenhouse using energy to burn it to create it, actually lower carbon, lower footprint, to have it grown in the open air in Spain in winter even despite trucking it 1000 miles its carbon footprint will be lower. But to eat fruit in season is actually the optimum. Eat sustainably sourced fish. If everyone ate rare fish the seas are empty.

The Swedish advice was remarkable. They sent it to the European Commission, to the European Food Safety Authority (EFSA) and said we want to make this our advice. Well then a lot of skulduggery went on. It's still not entirely clear what happened. We've got people looking at it but almost certainly pressure from big meat companies in America through to Poland, a European Union member by then cast doubt on whether this was within European law. Was it infringing the single market that food should be freely tradable, between and within all 27 member states. So, if Sweden was saying eat locally, eat seasonally was that being a trade barrier to food coming from Italy or Spain? So Sweden withdrew it. Well this, I think, was a tragedy. This was crazy. This was a narrow view of economics determining sustainable diet, but at the same time the British had begun to work. The British produced work that said actually the good news is a healthier diet, eating less meat, less dairy, also lowers environmental impact. So it's not just a situation of tensions between environment and health there is win-win. But nonetheless when you go into more detail there are still some difficulties.

Do I eat fish is the big one? Do I eat fish? If I eat two portions of fish, one of which is oily, the British advice, and the whole world of 7 billion people did that mackerel, herring and sardines are gone within a few years. The seas are already in crisis, overfished and distorted. Fish is a really tricky one. Meat and dairy - the cultural signals even in India primarily vegetarian economy and diet it's got the biggest and fastest growing dairy herd on the planet. And the cows are major emitters of methane, 24 times more powerful as a climate change gas than CO₂. Maybe instead of having global nutritional advice were going to have to bio-regionalise dietary advice. That's what the Swedish test if you like really points to.

Part 3. The UN's unmet challenge

Back in 1992, the UN system hosted as the FAO, the food and agricultural Organisation and the World Health Organisation, the WHO, two key parts of the UN system, they hosted it, the UN, hosted an international conference on nutrition ICN - International Conference on Nutrition. That tried to encapsulate the growing concern about consumption and diet and public health nutrition. Largely it was framed around the under consumption problem. It was dominated by the hunger story, rather than the malconsumption, overconsumption and under consumption story. What I think is the new picture. It took 22 years before the UN system did a recall known as ICN 2 -

international conference on nutrition number two, held not 20 years later but 22 years later in 2014.

Now the year 1992 is significant because ICN number 1 was in the same year as the Rio conference. The United Nations Conference on Environment and Development, which was the outcome of the Brundtland report, to some extent, the world commission on environment and development, where Brundtland and her commission said the world's economy must aim towards everything but, in our case were talking about food, a food system which is good for the economy, good for the environment and good for society.

What I think, and many people think, ICN2 should have done was pickup on all the data, all the complexity, all the tensions, all the problems, that had emerged since 1992 - the data on which got stronger and stronger. The intergovernmental panel on climate change, commissions on water, on land use, huge millennium ecosystems assessment studying all the world's ecosystems, came out in 2005, surely ICN2 would have taken those on board.

I smile but I was in tears. It did nothing of the kind. A bit of rhetoric about it but nothing seriously said. What is a good diet for the 21st-century, good for health, good for the environment and living within our means. A planning for a world of 9 billion people. The assumption was still essentially productionist. The big problem is hunger. Hunger is a huge problem 0.9 billion people are malnourished but 1.4 or 1.5 billion people i.e. much more, are overweight and obese and that is growing, and 2 billion people mal consuming, iodine deficiencies, things that aren't about taste but about minerals in food.

The world ought to have got pointers towards sustainable diet at ICN2. It didn't. Many of us pushing for that, big preparatory conferences hosted at FAO. I co-chaired a 3 day working party in a big science conference hosted by the FAO and Bioversity International, one of the Consultative Group on International Agricultural Research, one of the UN affiliated big agricultural research bodies looking at biodiversity, in Rome in 2000. We articulated the need, and the case and the broad parameters of sustainable diets and said we now need to get into more detail. Countries need to engage with us. We can't expect the food industry to produce food which is good for diet, health, the planet, society if we don't give them guidelines. What's the framework of a good food system must include diet surely. I get heated. And yet we're not getting and yet as we saw in the example of Sweden, the most articulate attempt to do this was beaten back by vested interests from the meat and dairy industry.

The same happened by the way in Australia. The Australians in the revision of their dietary guidelines started taking it very seriously. People on the committee said we must factor environment into this. Beaten back by the Australian meat industry and the politicians backed it. Australia's a meat and dairy exporter. We're talking power politics in something the really ought to be something that is democratically available and democratically just. It makes no sense to have a world where the diet of even low income people in a rich country like the United States do not get advice on what a sustainable diet is.

Do I eat fish? Yes or no? It's a crunch issue. Do I eat meat? It's not yes or no but how much, produced how? If I have a broiler chicken produced in a factory farm, it has a short life. It's a welfare issue. The animal welfarists, and I share this view, think it's disgraceful but it's being fed grain. It's converting something that humans can eat to

produce an animal in captivity to then give us something that we like because we think meat is nice. It's a cultural indicator. We must sort this mess out. What's a good diet? And the system of governance is not helping us, or not enough.

But the good news is, it's tiptoeing in there. When I was a government commissioner in Britain I hammered the Food Standards Agency, very politely, saying I will be not be happy with you as a commissioner on sustainable development until you've sorted out do I eat fish, yes or no? To be fair the British government then, 2009-10, set up a working party across northern Europe, beginning to share this issue, we've got to sort this out actually. All of that stopped. It was driven back, but to be fair, the Food Standards Agency did start modifying, on its website, said please eat sustainable fish. But that's still not sorting it out. It's not sorting out the food system, not sorting out the fisheries system, to make sure that's only they what we get. It's been left to consumer choice, that neoliberal market model again.

I don't want some nanny Corporation telling me what to eat, because that's what's happening at the moment. Their marketing dominates our cultural mores. I think the crisis of sustainable diet is one just to governments and experts getting together. It's a crisis actually for us consumers. Do I know what a sustainable diet is. The answer is yes, we now know the broad criteria by which to judge it. Is that advice being given to me supported by whoever, the answer is no. We have a plethora many, many attempts to do it. Vegans say well that's the answer. Well is it? Soya! Is soya chopping down the Amazon the answer to a sustainable diet? Mmm, not so sure. I don't know. What we do with the uplands in a country like Britain? In India, a Hindu dominated country with a huge dairy industry but not eating the meat. This is complicated but has to be sorted out. This is a crisis for us and our conception of what a good diet is.

Part 4. Principles and politics

When I ask myself about what do I eat, let alone sort of national guidelines or what's good for the world, I gave up meat actually. I used to be a beef farmer, sheep - I've killed most animals, I've bred them - but I gave up meat in Britain for a very different reason actually, it was over mad cow disease. I was so angry about how it was handled. So badly. It's a textbook what not to do in the food policy world but I stayed not eating meat but I eat dairy. So indirectly I'm eating meat.

Essentially I think a good diet is one, which is plant-based, on that the science agrees, both the environment and public health nutrition. The more plants we eat the better. But I'm interested in biodiversity actually I think biodiversity is one of the really tricky issues.

When I go round a hypermarket in the United States, or a big Carrefour in France, or, a vast Tesco Cathedral in Britain to give some examples, you could say, I could say to myself, well here's biodiversity. Isn't this wonderful. Look at this. Hundreds of plants and fresh they're all put at the beginning to remind you that it's a shop because after that everything is packaged in tinned, and signed, sealed and delivered. So is that the way forward, that we just eat plants? Well the answer is no that's not quite what sustainable diets is getting us to think about. It's getting us to think of the nature of production. How's it being produced - is that spinach that I think is great produced in 100 ha block sprayed endlessly and really is hermetically sealed but on the land. Is that the same thing as having spinach grown alongside and in between other crops that I also

want to eat. I think the principle is moving towards getting biodiversity in the field and through to my stomach. I think that's a principle that emerging.

Sustainable diet isn't just me, me, me, me the consumer but is about signals going back through the food supply chain. And we have to do more work actually on these things. But the big picture about carbon, and climate change, and calories is clear. The rich world over consumes. The most important thing to me to sustainable diet thinking, that I can do, is to eat less and to cut down on meat and dairy in particular, and preferably give them up actually. Although that then sends really strange signals. I'm ex-Northern English farmer on the moors of the North of England, where I farmed, what do you do? They're sheep farms, not sheep farms as in Australia, but they're maintaining the moorlands, well you can argue, get rid of the sheep and grow trees, that will be much better for climate change. That is actually what that terrain was 4000 years ago. We think of the beauty of the Moors and the mountains as has happened in Greece where the goats ate the trees - the sheep ate the land in countries like Britain. So thinking in landscape is part of eating a sustainable diet.

Some of this picture is win-win. I repeat if I less meat and dairy that's better for carbon and better for health. Some of it is tricky. I repeat fish. Do I eat it? Yes, say the nutritionists, no say the environmentalists or only please sustainably sourced but what is that? And if 6-7 billion people eat that let alone 9 billion they're pretty certainly wiped out. So where are we going get to our omega 3s and 4s, 6s from? Plants. Seaweeds. We need to rethink actually where we get our nutrients from and to translate that into a diet that we like. There's no point force-feeding us nutrients. Some companies would love that. They'll say we'll do it. This will be the new techno-wizardry. Indeed some people are working on that. There was wonderful sort of account of this new world, this new techno-wizard world, given in the Financial Times in 2014, if you want to look for it. This is a world where you have an egg-free mayonnaise produced from plants. This is a world where new generations of processing, funded by venture capitalists, will say look, eat me. I'm your answer to the sustainable diet. So this is an open question. There are different approaches to what is a sustainable diet not about the nutrients but about how we get it.

And the point that I'm raising here is, although the science is becoming clearer about nutrients and ecosystems, nutrients and over, mal and under consumption, the method of getting the sustainable diet is problematic. That's a political issue, as it always is. I would say that I'm a professor of food policy. And I don't mean politics in the sense of party politics necessarily. Sometimes it's that. I mean it's about who controls that. Who controls our ideas? Who controls our culture?

The 20th century is essentially been a century of the deracination, it's separated us from our roots. I'm using the Latin word deracinate. It's separating us from our roots. Culture has broken away from religion, though many people follow religious diets but diet has been secularised, even for people who are following religious rules. Companies have taken more control. Consumerism has taken over what we want and the evidence about sustainable diets is we have to rein that back, to eat less in the rich countries, and the poor countries eat more and the policy package and I think since that is known as contract and converge.

This is a model that was developed for climate change, I think it fits public health nutrition perfectly. Contract in the sense of the rich countries eat less for the poor

countries to eat more and converge towards a more sustainable diet. And that the policy architecture is not in place yet to deliver but there is now a movement to do that. A movement around the sustainable development goals coupling with sustainable dietary guidelines. What I call SDG squared and I think that's the way to go. So I'm an optimist.

I think we're in the process of democratic experimentation. One of my favourite civil society groups – the Fife diet. A husband and wife and family and some of their friends got together in the early 2000s and said we must live within our locality. Everyone thought they were going to starve to death, they were in the north of Scotland, middle of Scotland arguably but to Southerners like me, North. They got thinner. They rebuilt local farming and growing. It grew to 1000, more, 6000 people subscribing to this view. This is wonderful, people are experimenting. Vancouver another, the Vancouver hundred mile diet. There are civil society's beginning to experiment with sustainable diets, sending signals back but I don't think any of this will change unless we get help at the national and international level. That's, I would say that I'm an academic on food policy. But the good news is I think that's beginning to bubble up to the Swedish experiment, the Netherlands experiment, the British experiment, these are early signs of the structural change for sustainable dietary guidelines. That's the way to go.