

## **Academy of the Social Sciences in Australia (ASSA)**

### **Cunningham Lecture: Living with an unsustainable food system: can food democracy resolve the dilemmas?**

**Presented by Professor Tim Lang, Centre for Food Policy, City University London at the Shine Dome, Canberra, Australia  
November 8, 2011**

#### **Barry McGaw-**

Good evening and welcome to this Cunningham lecture this evening. I'm Barry McGaw, currently the President of the Academy of the Social Sciences. It is always a special feeling for me to be connected with a Cunningham lecture. Ken Cunningham, who was very involved in the foundation of the predecessor organisation of the Academy of Social Sciences, was a foundation director of Australian Council for Educational Research, of which I was the 4<sup>th</sup> director so I feel a descent from him and I also gave this lecture several years ago. So it's a nice connection to be back here tonight, this time to introduce the speaker.

You all know from the documentation you've received that Tim Lang is Professor of Food Policy, at the City University London. You might have been intrigued, as I was, at the little description at the start that having finished his PhD in Social Psychology he became a 'hill farmer'. I asked what a hill farmer was and that meant he ran sheep and cattle on the Pennines before he then went on and pursued the interest in food policy much more substantially that's led to the work he's doing now and also to the grounds for which we've invited him to come to Australia to deliver this lecture this evening. Tim

#### **Tim Lang**

Thank you very much indeed.

Even by my standards that's a fairly long title (see Slide 1) but I want you to read it and know this is what we are talking about.

I am genuinely honoured to be here and to give this, just to show Barry that I too did my homework about Dr Cunningham. And what particularly intrigued me was the bottom dot point that he, like me and many of you, had an interdisciplinary focus to his work and to his life.

Actually my PhD was in Psychology but I did my first degrees in sociology and psychology, and have then switched and spent part of a decade being a farmer and then what I am talking to you about tonight. And it is that combination and cross-disciplinary, or as I prefer to say interdisciplinary focus, that I'm really going to draw upon. So thank you Dr Cunningham.

To answer my question (Slide 3) - can food democracy resolve some of the

dilemmas of living with an unsustainable food system? I think the answer is 'No' but it grounds the process that we have to go through. I think it adds coherence and I think above all it injects a human perspective, a bottom up perspective. So it's that that I want to explore and to be self-indulgent, the food democracy term is, I think, a term I coined 20 yrs ago to try and address the messy situation that we're in and the messy social processes that are going to have to get us out of this.

And those of you who have been here today for the really wonderful symposium that we've had with some really brilliant talks, that has been an illustration of what the problem is. We know we've got an unsustainable food system; we know it's about us, we humans who are wrecking the planet, over consuming, taking food away from the potential of future generations and we don't really know what to do about it.

We've got some intermediary thoughts but we are actually doing next to nothing to address it. And here am I giving you a talk titled 'can food democracy help resolve this?' and I am saying I think food democracy *has* to be part of that picture because essentially the problem is democracy.

I will do this talk with some chapter headings as it were. And I am now going to summarise to get us all on the same mat, on the same carpet, in the same room.

What have we inherited from the 20<sup>th</sup> century? (slide 4). Essentially we have inherited a situation that on the one hand is this (slide 6): undernourishment, a catastrophic situation that was improving (this is from 1960s to the present) but is now getting worse. It is bouncing up and down; it is basically the price of oil. After a period of great optimism from the 1920s was rolled out in the 1940s and 1950s - which I'll talk about – which was essentially about producing more food, improving nutrition, raising the food supply (in other words) and raising incomes, getting rid of farmers to raise the incomes of others, a life expectancy approach to food and health which was enormously important and we have to salute it and celebrate it.

The theoreticians of us, those of you who are out of epidemiology (McKeon, Fogel, Szreter) – slide 5- hot debates still going on about this, about how important was food in raising life expectancy, but there is general agreement that it was certainly part of it if not all of the picture. Also scientific advances in distribution, on farm production, reducing waste, spoilage, better storage and so on; better ecological understanding of our reliance on the world of plants and ecosystems. But this - Slide 6 – this running sore plus by the end of the 20<sup>th</sup> century, environmental damage; rampant inequalities, rampant; obesity overtaking hunger -1.4 billion people overweight and obese; only 1 billion hungry. This is an astonishing state of affairs after the 20<sup>th</sup> century claiming to be about food progress.

Rampant consumerism. I will give you the figures. In my country, 30% of all food purchased at the check-out till is thrown away. Not even in the Lang household do we eat pineapple peelings - they're composted.

You have some waste in any food system. It's what we do with it that matters. The waste of edible nutritionally sound food is staggering - we have gone from a situation where waste was on the farm to where it is now at the point of consumption. All of this underpinned by fantasy economics... there's no other word to put to it. Fantasy economics. Where, as we've talked this morning and this afternoon, cheap food has come to represent progress. Which merely has meant that the costs are externalised. No-one pays for the environment except future generations.

The non-communicable diseases picture that accompanies this is astonishing. (slide 8) - 63% of all the deaths in the last year recorded in 2008 by the WHO Global Status Report that came out earlier this year (2011) are to do with food. The cardio-vascular diseases, the cancers, the respiratory diseases are not affected but diabetes absolutely is and physical exercise. Diet is both killing us and also shortage is killing people. This is a more complicated picture. So at the end of the 20<sup>th</sup> Century we have a more complicated mess than at the beginning of the 20<sup>th</sup> century. That is a very difficult situation for anyone who believes in rationality and democracy to have to say. But that is my considered judgement.

And here from Global Status Report (slide 9), I haven't got time to take you through this but the data shows males on the left, females on the right. Immediately under these halves, on the left hand it shows regions of the world and then beside that on the right "low-income", Lower middle income through to high income.

You will see whichever way you look at it, the red non-communicable diseases is now the dominant cause of premature death. This is a remarkable situation, and one that we absolutely have to couple with the similar picture we can paint about the environment.

### **Biodiversity.** (slide 10)

Food is now the major source, the FAO is saying, of degradation – 15 of the world's 24 major ecosystem services are degraded by food-related activity. (Millenium Ecosystems Assessment, 2005). It is staggering and sobering.

50-78% of main fish stocks monitored are either in decline or have been fished unsustainably. And yet nutritional advice is to carry on eating fish. This is bonkers. It is the only word to apply. And yet every nutrition department carries on saying "eat fish". My own government says 'Eat 2 portions of fish one of which should be oily' and will not say where those fish are coming from. And here's the data that it is choosing to ignore (slide 10). And you have this problem in Australia too.

### **Water.** (Slide 11)

Agriculture consumes 70% of all global potable water extracted for human use. Livestock in that is taking over. 40% of average UK citizen's agricultural

water footprint comes from eating meat and dairy. It takes 16000 litres of water to produce 1kg of meat in the Netherlands; 2400 l of water to produce a 150 g hamburger. This is virtual water in the way that the wonderful saint-like Professor Tony Allen did not meant it and his notion to be applied.

And here is the picture, world-wide, of meat production (slide 12) rocketing over 40yrs. These are FAO figures but in a nice neat Worldwatch Institute slide.

And here, I apologise for this, this is a very important one (slide 13). We in public health (I work in a public health department by the way) keep saying 'consume less fat in the rich western world'. Yet in every region of the world over the last 40 yrs, fat consumption has gone up in a per capita basis over and above what we should be consuming. There is a problem of overproduction. Overproduction is the picture I'm painting going back to something Stuart said this morning.

**Waste** (slide 14).

If you think this is just the mad Brits wasting 30%.... The global estimates are 30-40% of food fit to eat is wasted but the reasons vary. In rich countries, like you and my country, it's consumption that is wasting it and ruthlessly brilliantly managed retailing is stripping out the waste and pushing it at both ends of the supply chain. This is a new phenomenon which choice editing is not able to deal with.

And underpinning of all of this, I am still dealing with the 20<sup>th</sup> Century by the way, wait till I get onto the 21<sup>st</sup> - is oil (slide 15). And food is basically oil. All these slides are available for you so you can look at them later. This is IMF and FAO figures – you'll see that the commodities that went AWOL in the price rise are essentially echoing the price rise of oil. Food's footprint is basically about oil- not entirely but heavily.

Food consumption accounts for 31% of all consumption-related greenhouse gas emissions. (slide 16). That is the definitive European EIPRO study done by the joint research centres of the European Union – an impeccable series of studies.

Different studies have also calculated this. In Britain we have a fantastic sophisticated set of studies and experts on this ... the Cranfield WWF and University of Surrey team for example have done it. They initially calculated it as only 20% but then they started to count hidden land use and then it went back up to 30%. So whichever way or whichever methodology people are looking at it, we end up with what WWF has now calculated: that the UK is consuming food as though there are 2-3 planets unlike the United states which is working at 4-5 planets. What is Australia doing? I bet you are in that sort of zone.

Malawi by the way is 0.8% and I'm not sure you would get anyone to vote to go to Malawi and this is our problem for democracy.

But the picture is this (slide 17). No wonder you get very sober pictures like this. This is from the extraordinary study by Rockstrom and Steffen and people in Nature essentially calculations using very interesting methodology which has been criticised but has ended up being robust and you will see food involved in certainly four of the 8 that they looked at here.

This is a very tricky situation that we've had at the end of 20<sup>th</sup> Century. To really rub home I think the Harvard School of Public Health are utterly fantastic but here, literally straight off the latest version (slide 18), this is their critical version of the USDA plate and advice to consumers. It is saying next to nothing about sustainability, ignoring the problem of where and how nutrients arrive on the plate. And if you look at the bottom right– it says just choose fish. It doesn't say anything about where your poultry is to come from, what it's fed. One half of all the cereals grown on the planet are fed to animals for meat. And then think of the water. I mean this is accepting consumerism in a way that I think frankly is crazy.

Ok so that is my very sober account of the 20<sup>th</sup> century.

I am a policy man. I look at the work of other scientists. I am interested in the interface between evidence and policy. I explore but no longer believe in the fantasy of evidence-based policy. I do believe in evidence-based medicine. I do believe in Cochrane as a methodology. It is fantastic if you want an operation: Don't get the wrong leg taken off. Evidence-based medicine is pretty good but whether we've advanced evidence-based policy for addressing the sorts of issues we're here to discuss, I'm not so clear.

I think the good news is the tensions we are talking about is emerging. The fact that I can give you these figures is a sign that the evidence is bubbling up but is not being translated into policy. Part of the problem of that is that we've got to lock into a particular paradigm. The paradigm is what I and my colleagues have called 'productionism' not the same thing that the agricultural sociologists have called 'productivism' (slide 20).

Productionism is about the policy paradigm and the paradigm can be explained and described very simply (see slide 21). Science plus capital plus good distribution will increase output, deliver less waste, be cheaper and deliver therefore health and progress. This was an entire policy package you can read. Australian scientist, Rosemary Stanton-Hicks was talking about this. Boyd Orr was talking about it in the 1940s. Across the western world this picture of productionism was essentially the marginal argument of the 1930s that in the Second World War won its day and was essentially rolled out because Boyd Orr was appointed Director General of the FAO.

These policies are populated. These are 2 white middle class men but there were hundreds of them, thousands of scientists who agreed with what they did. It was a socially just approach but the problem is that this doesn't fit the 21<sup>st</sup> century (Slide 23). It has addressed the Malthusian problem but it relied upon oil to raise production, mined the environment, assumed more food is

good for health (whereas in fact now we have an obesity problem and over-consumption). It assumed that consumers and humans eat rationally. It focussed policy attention on the farm not on what happens afterwards.

The difficulty we now face, the emerging tensions I want to talk about (slide 24), is that we now have a split in policy psychology. After 35 yrs of looking, talking, studying, interviewing policy makers around the world, I think we are now in a situation where there are 6 positions (slide 25)

1. **Deniers** – the people who do not think the sort of evidence I have given you matters. It can all be left to consumers to choose at the point of consumption. You have no place to be in this room in the business of policy making.
2. **Business as usual** who say ‘well we have a little difficulty at the moment. Let’s just get the show back on the road and carry on making food cheaper, producing more, and we’ll use new technologies to do this but not just new technologies. We’ll use psychology to do it, to get behaviour change, to start getting people to behave differently.
3. **Incrementalists** who say “Yes, we have got to do change but we musn’t frighten the horses. We’ve can do it slowly’
4. **System shifters** who think that we will actually going to have to have fundamental change. We have the choice of whether we manage it ourselves or whether wars or shocks do it for us, which is what history tells us is most likely. Which is what I don’t want. I’m a democrat and believe in us taking control of our circumstances.
5. **Retreat to the bunkers** – the petty protectionists as opposed to the sustainable protectionists
6. **Technical fixers** – that science will solve things. I see that position with CSIRO here. I see it in Europe and many governments. I see it in much public policy discourse eg the Chief Scientists report, like your PMSIEC report we discussed earlier. You see a great dose of that sort of thinking.

We have to have something more subtle than that – not the least because we have had some fantastic reports. (Slide 26) The WHO, FAO, UN reports, World bank reports, IAASTD reports, PMSIEC report, INRA report, Foresight report, Prince Charles’ staggeringly good International Sustainability Unit report (he paid for 12 scientists to work on the report which was done for the G20 but which, for various Greek reasons, didn’t see the light of day).

I think the most interesting man in world food policy – Olivier De Schutter, the UN Special Rapporteur on the right to Food- a very nice lawyer has written some short elegant reports. He has no income from doing it – he just has interns working with him. I recommend that you read his reports.

Those of us who are in academic departments should hang our heads in collective shame. We are not engaging with the policy making process and if you read the biography of Boyd Orr, he would be shocked at us. A fabulous book by James Vernon, British but unfortunately living in California, historian called Hunger is not about hunger. It’s about the history of policy engagement across sciences across the board. It is a beautiful elegant book about the

growth of engagement between policy makers, academics and the world of food.

So I'm in very sober mood- my overall verdict is that we are in a position of no policy coherence. I was fascinated by the descriptions today. I loved Peter Langridge's deep honesty in presenting the PMSIEC report. He was right. Lack of coherence – it's not Australia's problem. You have got that problem but it is not yours alone. We have, unfortunately, multi-level lack of coherence. At the local level, the sub-national level, the national level, the regional level and the global level, there is institutionalised incompetence and incapacity to make coherent what needs to be coherent.

So what do we need to do?

I'm a rationalist, even though I was trained as a psychologist.

What you do is you go and ask people. So I'm going to run through now what I think you get when you go and ask people in government, in commerce, in civil society. (slide 29)

I nearly leapt up earlier today at the Symposium to say, when we were talking what could we do about price volatility, actually one of the impacts of Olivier de Schutter, and indeed others, is on the issue of price volatility. The G20 communiqué at Cannes on November 4<sup>th</sup> has whole sections on what to do about price volatility. This is the beginning of a possibility of taming out-of-control commodity speculators. They are out of control (slide 30).

But we have to get this into control. We have to see this even though we are neutral academics. We have to start engaging with this world where the people who are now controlling the means of existence – the price of land. Speculation about these things is not an issue about national sovereignty. It is actually about whether our food system is in tune with ecosystems, is in tune with public health, is in tune with the possibilities of a decent society or whether or not we carry on to continued difficulties. So go read G20 final communiqué (slide 31).

And that's the way diplomacy works. The door opens, you tiptoe in. You have other people who kick other doors, bang drums outside but a process is beginning that in this decade we have to sort out.

The most interesting things happening in the European Union, and I haven't met an Australian who is following it but I urge you to do so, actually began at Rio in 1992 United Nations Conference Environment Development (slide 32). At that meeting, European Union made a commitment to run with sustainability and consumption of food after it. Twenty years later, and thank goodness the Swedish government said they would lead it.

Now, for the European Union, we have an extremely interesting policy framework that was announced in September 2011 in Brussels. It has a really sexy title - The Roadmap for a Resource Efficient Europe. Pages 18 and 19

are all about food. This is going to change the European Union if it survives the Greek crisis and the bankers' crisis, which is not necessarily certain.

So there are some interesting things emerging around integration of environment and public health into resource efficiency. Very similar to your debate in Australia.

In Britain, the home of free trade thinking ie colonialism, we've had endless shocks in the 1990's- 2000s which gave change (slide 33). Yesterday at a seminar around your National Food Plan, which is an interesting and really important process, we were running through what's been the British experience in developing, trying to put together an integrated policy position on food. The short answer is that it is hard work and the recent government changes meant almost all that we did slowly over 10 yrs, under a reluctant labour government, has been swept away by the coalition government.

But the good news is the legacy of interest across the board of commerce, people in civil society, indeed civil servants and also some Ministers, but not powerful ones yet, is that the UK with this catastrophic footprint has to get its act in order. And that was all summarised in a really brilliant report, called the Food Matters Report that came out in July 2008. I recommend it to you greatly.

You have your National Food Plan (slides 36-37). That is beginning to go the route we went. The reason I tell you about the British process is not just because I am proud of it but to remind you that great work that went on was swept away by the shake of a lambs tail by a government. In other words, if we do that sort of policy engagement you *have* to create structures that will survive it. I would say (I look at the president), I would say you (publicly and privately) you should start a process of having an independent body of scientists who, as it were gently monitor government but also feed ideas into government. Retain some credible independence.

We need/you need to think about those sorts of things. How could ASSA contribute to pulling together cross – disciplinary social sciences along with the Academy of Sciences Australia to enable both building bridges across the sciences but also to create some continuing memory of what it is you're about.

### **The commercial sector** (slide 38)

If we turn to that, is I think at the moment in the running. Of all things I would not have expected to come to Australia 5 yrs ago to say that I think that big capital is now deeply worried about the picture I painted for you in surveying the 20<sup>th</sup> Century. Why big food capital is worried about that is because it wants to be around in 30-40 yrs time even if the politicians have gone.

And that is why you are seeing astonishing commitments – Pepsico, my least favourite company on the planet bar one, has announced reducing its water footprint and its greenhouse gas footprint in all its products in 5 yrs by 50%. It

is public, stated and committed and they are doing it. I keep saying the only good thing you could do, is stop selling Pepsi at all- because you would solve the water problem and also your carbon footprint at a stroke, but for some reason they won't do that. But to reduce it by 50% is not unimportant.

Unilever – doing 50% by 2015 in all its consumer products. Now you cannot say that this is nothing.

Walmart – not my favourite company, had an epiphany at Hurricane Katrina in 2005. The then CEO, Lee Scott, gave a stunning speech which I recommend to you (still on their web-site) where he said Hurricane Katrina exposed the futility and weakness of the US state and also the federal state and that Walmart was the single organisation that actually started doing something. Walmart, which was critical of its British Subsidiary ASDA, has now made ASDA its pioneer for the whole of the Walmart 'family'.

You cannot say these are not companies doing things. There are remarkable things being done by companies but the problem is they are on a one by one basis. There is some coming together – they've got a sustainable agriculture initiative they launched this year. The new sustainable initiative TSI that is actually very interesting. The largest pasta company on the planet Barilla has launched a centre for food and nutrition, which has rewritten the Harvard public health advice and given it a sustainability dimension. These are companies acting like the state.

Now for those of us, you Aussie-Kiwi's who have pioneered this brilliant School of Agrifood Analysis, this is not what we would have expected. And yet this is putting pressure on governments. That is what is actually happening. So, a very interesting new development of space is emerging in the policy world where strange bedfellows are doing strange things.

Citizens' initiatives are partly illustrated by these (Slide 40) where you get the interface. The Fair Trade Foundation started as a religious movement but is now signing up companies like no one imagined. The Marine Stewardship Council was actually started by Unilever 30 years ago. They were in the business of selling fish oils and they knew there wouldn't be fish if they didn't resolve this and by their own auditing, from this body they set up but is now independent from them, they know that they are failing their own criteria. These are interesting new forms of governance that the social sciences, I think, have done a very good job in monitoring.

What has food democracy got to do with all of this? (slide 42). And can the notion, the practice of food democracy, something which builds on the Athenian exchange, not the Columbian exchange – the notion that people are sentient beings and can take control of their own destiny with all the contradictions of that - can the notion of food democracy help this? I think it does. But it does depend on what we mean by food democracy.

For neo-liberal analysis (slide 43), it's what happens at the checkout. You don't need government because when you buy a good at the checkout till,

that's your vote. So why bother to vote every 3, 4 or 5 yrs because you're voting at the checkout till. It's a very sophisticated argument.

And that's why I say the relationship between the consumer and the company becomes all the more important. But the tradition of food democracy is more about representative democracy. Democracy is bottom up and multi-level democracy. I don't want to go into it because I write about it but if we were to summarise food democracy, my most recent attempt was in our 2009 book with Oxford University Press, *Food Policy*, I would say this (slide 44):

Essentially what I'm talking about is a long historical process. That we're talking about social processes where the voice and interests of ordinary people are reflected. Where critical friends like us academics ask of people 'who they are working for?' Where we look for social movements not superheroes or academic 'whizzoes' but social movements beyond the ego to the collective.

It's a process of struggle and vigilance and it's essentially about accountability. And I think we have more work to do as social scientist to review the different forms of accountability. Those of you who were here at the symposium where we had that really remarkable story of what was happening in central Australia in relation to Indigenous people and their food shops - with an accountability system that frankly spoke of the 1840s, of the cooperative movement. I lived in Rochedale where it began. You go and read the history of the cooperative movement that was essentially about accountability. The cooperative movement was started as a response to adulteration and expensive prices from people who couldn't afford it and the system of having people in control of what went into the shop. I used to walk past the shop when I went to the station. You were rebuilding that- you were talking about accountability not just at the point of the checkout.

So food democracy reconnects to these older discourses- it's messy but essential (slide 47). And I think ultimately, Food democracy is about the civilising of is, otherwise, a brutal process. You cannot look at the evidence of the state of the food system at the end of the 20th Century and not say this is brutal. I've done very well; you've all done very well, but the majority of that is not the case. The majority has built, has widened of course, but it is altering and uncivilising what needs to be recivilised.

I asked myself, preparing this, if I had 3 minutes with the prime minister, what I would say and this is it (Slide 49):

Prime Minister, we have no overall coherence, very similar to what Peter was saying about the PMSIEC report. Huge gaps being evidenced in policy but what wasn't being said in the PMSIEC report was the concentration of power. The concentration of power is dramatic – and that actually is paradoxical because it is what is leading to these huge companies now being very worried about the future because they are acutely aware of their own power. They see themselves as skating. One CEO of a very large company told me that he 'sees himself as skating, the ice cracking behind us'.

Bottom right is what interests me – the fact that food culture is still living in a fantasy of choice and unsustainability as our right, and yet the evidence of unsustainability coming from the science. We are not listening (top right) to ecological noise.

Why this matters I think for social science is this (slide 53). I think the notion of food democracy and the picture I'm painting you is seeking voice. This big picture is beginning to get some patchy representation. The PMSIEC report covered some of this. My own Chief Scientist's Foresight Report covered some of this – but it was production focussed. The elephant in the room is consumers. Everyone is frightened of confronting consumers. I've worked a lot of my life friendly to, and working for, the consumer movement. I dropped out of academia for 10 yrs and worked in essentially a consumer organisation think-tank. We have to tackle the issue of consumption.

So I think our task is to aid food democracy (slide 54).

In my 5 yrs as a government commissioner on sustainable development, where I was responsible for auditing and pushing and promoting sustainable development through food to the British government, I became more and more unhappy with the notion of thinking about sustainability in terms of economy, environment and society. It didn't tell me enough.

It didn't give me enough detail; it didn't cover the complexity and sophistication that was displayed in the symposium we've had today. And this is the Sustainable Development Commission UK, now abolished by the new government, in our final report published five days before closure on March 26. Essentially it said that if you have 3 minutes with the prime minister you have to say "Prime Minister you've got to deliver a food system which is about quality, environment, economy, social values, health and governance (slide 55).

If we don't have any of those, the system doesn't work. And then we can go into more detail. And all of these things, unfortunately at the moment, are traded off. So we are getting quality at the cost of the environment; and we're getting health with absolutely no rational approach to economics. What we've got to do is have an approach that I've called omni-standards. We've got to get all of these ratcheting up simultaneously. That is what the 21<sup>st</sup> century food policy is going to be about. And this is difficult and the process you are going through with your national food plan is the beginnings of something that could be really important in contributing to that. So this is available to you.

Another sober bit, if we don't go the food democratic route, what might happen? Go read CIA reports, go and see Defence Industry Reports, go and read all sorts of reports (the back end of the scientific reports) and they're pretty sober – I think essentially we are talking about the end of the era of cheap food. As Hugh Campbell said in the earlier session, I think the era of cheap food is over with what it represents.

But what we're not quite so sure is what to replace it with. I think food democracy is about engaging with and democratising the process of change. The alternative is food control, top down. You're already seeing companies engaging with not wanting to confront consumers but doing choice editing without consumers being involved. At one level we can favour that, at another level its not including people in the management of their own diets. This is tricky.

Psychologists are being brought in to manipulate, basically, in the name of a nudge, I think what we have got to do in other words is more actively promote a more integrated approach to food change. Apply social science to the hot spots, show why they matter. Experiment with reduction of meat and dairy (slide 56).

What would a diet look like? How palatable could it be if it wasn't based around meat and dairy? What would New Zealand's and Australia's food economy and landscapes look like if you didn't farm for cattle or sheep.

I think my summary in one slide (slide 61) is the potential pressure points for world insecurity led by bankers bubbles over into food (we're already seeing that) – the oil prices, land grabs, global obesity rates, wars, immigration. I was at a Ministry of Defence briefing quite recently where that was quite overtly talked about and the Military say 'it will be us who will be sorting this mess out'. I think the incentives for food democracy to be actively pursued by us, whatever our discipline or science, is really important because I think the era of cheap food is over. It is a very difficult problem indeed.

We have a lot to do. We know a lot. We're not putting it together; we need to put it together. We haven't got good narratives. We haven't got positive stories to tell, except in pockets. What we're not doing is scaling it up. We know individual democratic experiments but what we're not doing it is at the national level or the big level. And that frankly is why your National Food Plan is so important. Here is your government saying we have to do something about this so I would *urge you, urge you* to get involved in that, but keep your critical distance.

Barry McGaw invited questions from the audience.

Q: Recently in this country we had a convoy of semi-trailers converging on Canberra from around Australia, originally against carbon tax but then to other issues. This made me wonder: how does the message get out to people out there on the land, in communities and regional areas who don't really understand or don't believe about climate change and things going on that are so adverse to us and Governments are at risk of being tipped over?

A: Very good question. The environment movement has been wanting to do choice editing – wanting to get change imposed – and ultimately is now getting into a difficulty of exactly that. We are getting reactions because consumers expect their cars, lorry drivers expect their oil. A minister in the British government told me that, following a lorry strike in 2000, around 1000

people brought the food system within 5 days of closure. At later meeting of a working party looking at the British food supply chain put together by the Ministry of Defence, all the food industry people on that committee said that it was 3 days not 5 days. The narrative changes very much when those sort of things come out.

WWF is engaging very interestingly with this. It has come up with its 1 planet analogy. It's trying to begin to educate consumers about the way we have deep footprints – and there is a second wave of environmental thinking trying to develop a food democratic approach. It's trying to approach you or me or Barry to say 'as we fly everywhere around the world to tell everyone to stay local, please think about what you're doing'. So I see it as a problem of narrative. I may be wrong but I say we need to understand more what people get their lives from, the meanings they have and how does this radical view of change over the next 30 yrs, which is coming everyone agrees, the only issue is how do we deal with it. We need to start doing democratic experiments on that. When the parameters of control, which frame decisions alter the decisions alter.

We need to engage with that, and we haven't done. And we have a rather pessimistic view that consumers have done the wrong thing and it's us who know what they should do. I think this is right but we need this to be flip-sided– we need to say well, what would it take for consumers to want something? Essentially this is about the enlightened – what do we mean by progress? And the root values we have to play on are families, children, happiness, health – all the top issues that come out of values studies. Huge literature which I think comes into play here.

What we haven't done is use that sort of literature and that sort of research, used by the marketing industry all the time, to address the discourse we're talking about tonight. And that I think is the challenge for the next 10 yrs. I'd like CSIRO to do more work on what would a sustainable lifestyle look like and tick positive boxes for Australian citizens by 2020. That's the sort of work we need to do.

Q: Are there other European countries showing a leading role in reforming their approach to food policy? Are there examples?

A: There are examples. We operate in a multi-level world where some things occur at the European level but other things happen at other levels. At the moment, no one is doing total comprehensive but there is the beginnings of the jig-saw at the European level, at the national member state level, and at the sub level and at the local level. There are interesting experiments, policy developments.

The most interesting country at the moment is Sweden, 2<sup>nd</sup> is France. I think what we have across Europe are some interesting examples. No one's got it or all the boxes being ticked.

But I am ever an optimist and I think there is a fabulous set of experiments all over the world of great things that are happening that need to be pulled together and say we want what's happened here to happen there. There 's some wonderful movement happening re cross fertilisation around cities. For example, Cardiff University has just hosted a meeting of 26 cities to discuss how to develop more sustainable food systems for cities. That sort of democratic experimentation is going on everywhere but no one's done it. What we've got is this bubbling democracy – I see it as a process of democratic experimentalism. That's where we are at the moment.

Q: We have a bit of a problem in Australia where we have a confrontation set up and so the moment we start suggesting 'a little less meat, a little less fish' –we get the thing that 'all those figures don't apply to us. We don't use that much water to produce our beef or sheep. If we can buy fish in the shops, they must be sustainable'. We have various people saying we don't have a problem in Australia so we're tending to ignore the world data and being very isolationist about it.

How do you suggest we overcome that confrontation because those lines have already been set with the public health people on one side versus various people involved in industry on the other side. Where do we go?

A: The answer is 'with difficulty' – and you know we have had this problem in Britain.

I think is one of the reasons why I said what I said, Barry. Because I think the problem is we have got an unsustainable food supply chain providing unsustainable diets. What we need is to get nutrition guidelines to dovetail with environmental footprints. Sustainability requires guidelines that are *eco-nutrition* not nutrition. The reality is that when we've got government leading these processes, and they say they don't want it, you're not going to get it.

That's why I told you about Barilla – the largest pasta maker on the planet- and what it's doing because this is business beginning to do eco guidelines. That's why, Barry, I was saying that you need to get together your own process. If government won't do it, well do it elsewhere. Because the track record is that's when change happens. Boyd Orr wrote his food health and income on his own and his son-in-law did the graphics. And just look at the legacy of that report.

We don't actually need to have government do it; it's much better if government does it, because it sets the framework and it creates the level playing field but if it won't do it, do it yourself in a different way. And then I think that needs cross interdisciplinary eminent bodies. In our case the royal society stepped in to that. Part of the legacy of the Sustainable Development Commission, we had set up a scientific advisory committee on nutrition, and had got a commitment to do the first steps in the development of econutriton guidelines. This was abolished under pressure from industry but there's other bits of industry that would like them.

You have the moment with your National Food Plan, where outside you can push those arguments in, you can make them public, you can create the policy space for good people in government to get more wind in their sails and at the same time you build solidarities across the sciences. It's a food democratic process. The history of public health nutrition is that. So that's another very long answer but it happens to be true.

Barry McGaw: Well Professor Lang I thank you for the lecture. A self-confessed optimist, one wouldn't have recognised through much of the presentation, but the evidence he marshalled to confirm the basis of the pessimism was powerful and it was lovely the grounds of optimism emerging towards the end. So we thank you for lecture. We thank you for the carbon footprint you left coming to speak to us because it has been a pleasure to have you here and I know other organisations have been benefiting from your presence as well.

End of Lecture.