Q&A: afternoon session

Panel: Dr Helen Szoke, Dr Norah Omot, Dr Elizabeth Finkel,
Dr Nguyen Van Bo, Dr Jammie Penm
Facilitator: Dr Jim Woodhill

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Facilitator *(Jim Woodhill)*: I would like to invite you all to come up with some controversial questions, particularly related to a core theme of this conference, the ethics of food security.

Q. Thank you for a really interesting session. My question is to Dr Jammie Penm. I am from Charles Sturt University, Wagga, and from India. You were talking about the food demand and consumption traits in India and the Asian perspective. Can you reflect on the food pulses, their production and consumption traits? They may be a solution towards reducing meat consumption in the future, as an alternative.

A. *(Jammie Penm)*: You are quite right, pulses demand has been increasing very significantly in India. You probably noticed that I did not really say anything about meat demand in India. There is a very simple reason. India is the largest world exporter for buffalo meat, so it actually has significant surpluses that it can supply to Asian countries. That is the reason I keep on emphasising that the market opportunities for Australia for the rest of the world will be fruit, vegetables and dairy products. Currently, very little of any of those products is imported into India because of its self-sufficiency policies. Many countries in Asia have self-sufficiency policies, but we do not believe that, towards 2050, they can keep that policy for every single agricultural commodiy. Choices will have to be made about where they want to concentrate their so-called self-sufficiency policies. In China, we do not think that they are going to keep their self-sufficiency policy on beef, because production costs are just too high. In India, we think that the policy will be focused on rice and maybe wheat, those staple foods, because of a large population on the poverty line, so we think that vegetables, fruit and dairy products will present market opportunities.

Q. My question is addressed to Dr Nguyen Van Bo. I was wondering if you could comment on the ethics of other countries mining the Mekong River? China is putting in dams; Cambodia, Lao and Vietnam are going to be severely affected, I would imagine, in your agricultural production because of the reduction in water from upstream. As you said in your paper, in Vietnam the problems are being compounded by sea level rise, which is going to bring a lot of sea water up the Delta, which will also affect the Red River Delta as well. I am wondering if you would like to give your opinions about your upstream neighbours?

This record of the Q&A sessions is derived from a transcript of the discussions and may contain inaccuracies.

A. *(Nguyen Van Bo)*: The question is easy but the answer is very difficult, because it is very sensitive. Maybe some of our Chinese colleagues here can add some of their opinions? Vietnam ranks at the bottom of the ASEAN countries in terms of the Water Security Index [see page 96, Table 3], because 70% of the water for our country originates outside Vietnam. We have the biggest river running from China, through Thailand, Lao, Cambodia and Vietnam. We have support from many international organisations and countries, including Australia. We have the Mekong River Commission. I think we would like to invite China to be a member, because China is not a member of this group, and they are upstream. As I indicated in my paper, international organisations give us a stronger voice on sensitive issues regarding natural resources.

A. *(Helen Szoke)*: I would like to add a comment. Oxfam does a lot of work around water governance. Impacts happen downstream, and also, as you would know, when dams are put in. I visited a site where a new dam is proposed to be built in Lao on the Cambodian border. The net effect in terms of displacement of families is only 11 households, but the total effect is enormous because of the actual construction of the dam and the building of concrete walls along the river to contain the water, which means that hundreds of households that are living quite well from fishing and small-scale crops will lose their primary source of food from fishing, because they will not be able to fish off the concrete embankments. So I think I am in a position, perhaps, to be a little bit direct and to say that issues around water governance are absolutely critical for many of those communities along the Mekong. It is not just the effects of countries upstream that can grab the water ahead of time. It is within those countries as well. The issue is that many problems can potentially be exacerbated, and communities that are doing quite well can be put into a state where they are experiencing hunger and poverty as a result.

Q. *(Colin Chartres, Crawford Fund and formerly Director-General of the International Water Management Institute (IWMI))*: My question is to Jammie Penm, about the India data you showed. Data that IWMI produced, and the Indian Government agreed with a couple of years ago, showed that India is already using, basically, all of its available water resources. The Water Resources 2030 Group associated with the World Bank demonstrated they are going to have quite a deficit by 2030. I would like some clarification from you about your figures. Are all those increases in India going to be water limited, or are they assuming that there is a very big increase in productivity and efficiency of agriculture? How did you factor those issues in, in terms of water availability, because a lot of production there is irrigated?

A. *(Jammie Penm)*: You are quite right. First, let me brief you on the type of evidence we collected before this modelling, which is still ongoing. I consulted widely in India, in China and some other countries. Now, it depends on which scholar or representative you talk to. Both in China and in India, the Government officials that I talked to cited that significant investment into agriculture will improve productivities and that it will be Government policy to protect water resources and so on. I do not mean to come here and tell you that this is what will happen by 2050. The modelling is based on the productivity assumptions that India will achieve towards 2050. If we believe that Delhi

cannot achieve that kind of productivity growth then obviously imports will have to increase a lot more; and for the world, if we cannot achieve significant productivity growth for the world as a whole, then food prices will skyrocket and there will be a lot of unhappy people living in developing countries. My paper merely showed you our modelling results, and an underlying assumption is that, yes, agricultural productivity growth will slow. For the world as a whole, it has been slowing from about 3% per year to around 2% per year. It will continue to slow, in our view, towards 1% per year by 2050, but there are countries that cannot generate significant productivity growth. If those assumptions turn out to be wrong by 2050, if I am still in Canberra I will be happy for anybody to come and see me.

Facilitator *(Jim Woodhill)*: If I understand you correctly you are saying that those assumptions about dramatic increases in water use efficiency are fairly optimistic assumptions?

A. *(Jammie Penm)*: I would not say they are optimistic assumptions; let me make that very clear. There are a lot of other organisations, such as FAO and others, which are using similar types of assumptions. We complement the assumptions with sensitivity analyses because the science evidence related to some of those issues is not really clear-cut. At this stage, based on the current information, it is very difficult to say that I am right and somebody else is wrong.

Q. *(Rowan Alden, a Crawford Fund Scholar from Charles Sturt University)*: I am interested in the panel's thoughts on the ethics around biofuels, and food for consumption versus food for fuel.

A. *(Helen Szoke)*: In my paper I talked about the fact that crops have been used to produce other forms of food, and that that is problematic. It did not comment on the biofuels area particularly. My response to this question is that we have to look at the total picture and if at the end of the day we still have people who are hungry then there is a problem in diverting food products into other enterprises, and that problem is exacerbated if there are consequences of those other enterprises in terms of impact on the environment. That then takes us into the full cycle of what that means in terms of sustainability and what it means in terms of the impact on communities, and then what it means in terms of people being in hunger. I do not think grain used for biofuels can be looked at in isolation.

Q. *(John Rivers, from the Australian National University)*: This is a general question to the panel. There has been a bit of a vibe today, and it is perhaps more pronounced in the mainstream media, that self-sufficiency is a bit of a dirty word. But for a lot of developing countries, to focus on exporting crops onto the global market makes them far less food secure because they are diverting resources away from providing for the local market and into cash crops — and of course the idea of a globalised food market is predicated on the idea of seamless infrastructure that can move the food efficiently between markets. Is there room in our policy in Australia, and indeed around the world, for self-sufficiency? Is there scope for some form of self-sufficiency?

Dr Nguyen Van Bo, Dr Helen Szoke and Dr Elizabeth Finkel on the afternoon Q&A panel.

A. *(Panel member)*: For the world as a whole, we tried self-sufficiency, maybe a thousand years ago, or five hundred years ago, and it turned out to have not a very good outcome. I personally think that trade will have to be part of the solution, because if you want to achieve maximum efficiencies the best way is through trade. Food security does not necessarily mean self-sufficiency. When you want to achieve self-sufficiency, you lose economic efficiencies. A thousand years ago everybody was doing backyard production for their own consumption. It did not turn out to work very well.

A. *(Panel member)*: I would like to add to this. The lessons learned from the hundred years of agricultural commercialisation show that every economy should be based on the relative advantages of production. Every country has some advantages in some commodities. So, I think that for the world, it should be based on maximising economic profit.

A. *(Helen Szoke)*: I want to comment from the perspective of the global food market. We have done some work as part of a campaign called 'Behind the Brands', in which we researched the top 10 food producers and did a desktop policy analysis of their sourcing behaviour: asking if they pay living wages to small-scale producers and farm workers; and what policies they had in place in relation to women. What about the sustainability of their behaviour? If you go to any of the Oxfam websites and look at the 'Behind the Brands' campaign and see the web of the top 10 food producers and all the labels and all the brand names that we know so well, you can see that they have a really critical role in terms of the future in relation to people's access to food and the people who are producing food that are living in poverty. So, if there is an inevitability to having a global food system where there is less emphasis on self-sufficiency, there will also have to be checks and balances. The private sector, the multinational companies, have a really critical role to play in that, because they can lead with ethical sourcing. To the credit of some of these top 10 food producers, they have led the way in terms of sourcing cocoa from the west coast of Africa, and Coca Cola and Pepsi have adopted a zero tolerance to land grabs. All the bits

of the jigsaw have to be looked at — not just one part of it — in terms of the issues around agricultural development.

Facilitator *(Jim Woodhill)*: Helen, what is Oxfam's overall view on more open trade versus self-sufficiency?

A. *(Helen Szoke)*: I don't know that we have a view on that *per se*. Our focus is on poverty and the people who are in poverty, and the systems that keep them there. We certainly support small-scale producers having a critical role to play. We do not support the corporatisation of agriculture because of what we see as the impacts of that in displacing people. How that then elevates to national trade and international trade policies is a different area that I do not think I am equipped to comment on.

Q. *(a student from the University of Western Sydney)*: My question is for Dr Elizabeth Finkel. In your paper you said that there were organisations like Greenpeace that were against genetically modified organisms (GMOs), on almost an ideological level. What strategies would you use to try and convince people like that, that GMOs are a good idea?

A. *(Elizabeth Finkel)*: I have been looking at this issue for quite a few years now. When I would have conversations with my friends, maybe five or six years ago, they were astounded how naïve I was, because I assumed that organisations like that would operate on the basis of evidence. Somebody pointed out to me, 'No, their opinion comes first, not evidence. You know, evidence is only collected in favour of their particular stances.' I do not really understand the basis of the Greenpeace position. I am guessing that it helps to keep the rage alive, and... and GM is a great lightning rod which helps to fill their coffers. Certainly, lots of political groups around world make use of that rage. I do not really know what to say. I did confront the Australian representative at a science communicators conference in Brisbane earlier this year, where he was part of a very cosy panel. Everybody was talking about science communication and he was talking about science communication and I thought, 'No, this is wrong'. I said, 'No, no, I do not consider your institution to be at all aligned with science, because any member of this group will change their opinion based on evidence, and what will it take for Greenpeace to change their opinion, based on overwhelming evidence?' And his answer was really just to say: 'Well, we are a huge organisation'. I do not know what that meant.

Q. *(from the floor)*: We need to get an alternative response to that.

A. *(Helen Szoke)*: I will comment. Oxfam is a global organisation that campaigns. I do not know enough about Greenpeace and their particular position on GM, but I would have to say that just because an organisation is an activist organisation, it does not mean that it responds to evidence. It depends on what arguments are put together. Now, some of the arguments are around science, but in your paper you said some of the arguments are also around issues to do with corporatisation and what the other impacts of corporatisation might be, and they are the sorts of things that I have alluded to. For instance, do corporations acquire land through prime form consent? Do they appropriately resettle people in a way where they can sustain their livelihoods? Do they take into account

environmental impacts? I am not going to speak on behalf of Greenpeace, but I am speaking on behalf of a global organisation that is an activist organisation, as well as an organisation that is involved in international development, to say that often we will not come at things just on the basis of scientific evidence, because there is a range of other evidence that also comes into play, which includes issues around global corporate interests, which includes the impact on little people, small communities across the world. Now, whether that is part of the Greenpeace argument or not I do not know, but from my perspective that is certainly how we [Oxfam] operate.

A. *(Jammie Penm)*: In some countries they do not call it GM corn or GM soy bean; they call it biotech crops, to avoid this trouble.

Q. *(Scarlett Crawford, a student from the University of Sydney)*: My question is about food waste. What has been done in developed countries to reduce food waste, and what has been done specifically from a top-down approach? I feel that grass-roots movements can only go so far, because the food waste in developed countries generally stems from entrenched consumer attitudes and behaviours.

A. *(Panel member)*: I have two responses that do not answer your question directly. First, in [less] developed countries, I do not think waste comes from entrenched behaviours. I think that systems of dealing with the supply chain around food and processing food are, perhaps, not as well developed as they are in developed countries, to prevent the waste of food. Basic things, like transport, refrigeration, packaging, those sorts of things. I think waste there is partly a systemic issue. On the other hand, given the consumption patterns of the developed world, I think it is incumbent on the developed world to fundamentally change some of its practices, because that is where the wealth is, that is where we see the changing food patterns, the changing use of food, the changing acquisition of food. I think there is a job to be done there as well. Also, I think multinational companies that are actually involved in food production could help with some of that wastage, preventing some of it, and that is a much more challenging issue, I think, for them, because of issues around markets and aesthetics and changing consumption patterns.

A. *(Panel member)*: I would also like to comment on food waste. One of the things I encounter, when there are arguments for biotechnology — not by me particularly but in the literature — one of the new ripostes is, 'The world produces plenty of food. We don't need biotechnology.' I think that is an interesting statement to unpack. Of course we should reduce food waste, but most food waste does take place in countries that are not having food shortages and issues feeding their people. It is hard for me to understand how Australia reducing its food waste is going to help poor women farmers at the end of a dirt road in Africa to increase their productivity. I would like to see a bit of segregation in that popular argument.

A. *(Jammie Penm)*: I would like comment on changing this situation: how to change attitude and behaviour. The most important meal is breakfast, but most young people forget to have breakfast, and they eat very late in the night; it is not good. It is also one of the ways of wasting food. In the morning, we need

but we don't have; in afternoon and the late night, we do not need but we have food. Is there a way to change this habit?

Q. *(a private pharmacist and economist)*: One main issue for food waste in our western world is the use-by-date. I think the use-by-date is now used in a stupid way, and that we have to train consumers again about when you can eat things and when you cannot eat things, rather than going by the use-by-date. People look at that and then just throw the item away. Helen or other panel members might like to comment on that?

My main question is to Elizabeth Finkel about GMOs. We heard today about the nutritional value of food and that GM crops are grown for yield. I wonder if, in your research, you found the scientific papers from Argentina that equated a GM soya bean with an 80% reduction in micronutrients, compared with the soya bean that is not GM? A similar thing was reported in the United States, last year, with GM corn and the normal hybrids with 80%, 90% less micronutrients. Are we creating empty calories with the GM?

A. *(Elizabeth Finkel)*: I am not aware of that finding. But why should that be? Surely the quality depends on the variety of corn that you breed it into?

Statement from the floor: I can answer that one. It all goes back to Monsanto and Roundup®, and Agent Orange. When Roundup® was released, around 35 years ago, there was evidence in the field that Roundup® was breaking down in 24 hours, so there was no remnant in the paddocks. These days Roundup® is not breaking down in the field any more. In 1966 it was found to be a chelator, which is like a magnet to attract minerals. So if you use Roundup®-ready crops, the Roundup® does not break down and it chelates the minerals, and the crop plant cannot take up the minerals and you get low mineral nutrition.

Facilitator *(Jim Woodhill)*: Thank you. Maybe you can email us the references for that work please, which would probably be quite useful.

Q. Dr Omot, I had the privilege of doing some work in your country a few years ago around NARI. One of the issues there, which relates to food waste and its challenges, was the ability to get fresh produce from the highlands into Port Moresby or to other population centres. A number of options were being looked at. Have there been developments in that, in relation to the ability to be able to get fresh vegetables into the city?

A. *(Norah Omot)*: Yes, there has been some work happening on that. A couple of years ago we had a project on sweet potato. That project included various studies on the different sectors in the food chain and where the losses are. There was a suggestion of looking at the packaging, because when farmers are shipping sweet potatoes they pack them into bags which can weigh 70 or even 100 kilograms. When someone lifts that up — it is not equipment lifting it up — they carry the bag on their shoulders and then just throw it off, and there is a lot of waste that happens as a result. So that study considered ways to reduce losses through good packaging material, and also the storage life, how long sweet potato can be stored — they are packed in the bags and the bags sweat and that also affects the quality of the sweet potato — and also some curing

practices. I think recently there have been some studies on whether we can grow vegetables closer to Port Moresby, the biggest urban market in Papua New Guinea, to avoid shipping produce from the highlands.

A, Q. *(Shenggen Fan, from the floor)*: The nutrition contents of modern varieties, whether from GMO or not, is still a risk topic. People have speculated that modern varieties may have low levels of micronutrients. This has been debated. There is no strong evidence to show that. We need scientific evidence. However, certain breeding methodologies could alter the micronutrients of certain crops. You might have heard of Golden Rice, adding vitamin A to rice, and zinc and iron into rice. Right now, most of the so-called bio-fortification is through traditional breeding, not GM. If the general environment allowed us to use GM to add nutrition into different crops, that could accelerate the progress, but the current environment just does not allow scientists to work on that.

My question is to Norah. You mentioned shifting from food security to nutrition security, and I think Dr Bo also said the same thing. What sort of mechanisms do you have to make sure that nutrition is indeed the objective of your research? Dr Bo, how can Vietnam reshape its agriculture for nutrition outcomes? How can you really make sure your agricultural practices, your agricultural policies, drive your outcome towards nutrition?

A. *(Norah Omot)*: Yes, in my paper I said that we did this massive exercise where we tried to understand the farming communities and the problems that they have, and that when we did our strategic planning we had not considered nutrition. Now we have to really have another look at how can we adjust the project implementation plans we already have, to see if it is possible to also mainstream nutrition into our projects. We can look at various ways to ensure that nutrition is being addressed in projects that we work on.

A. *(Nguyen Van Bo)*: The issue of how to shift from food security to nutrition security is very easy to recognise, but very difficult to realise in real life. It depends mainly on the incomes of the people. When we want to adjust the ratio between the sources of protein or carbohydrate, we have to improve the income of the farmer, because sources of energy coming from meat or fish or veggies are always more expensive compared to rice or the other food crops. We are implementing this strategy by several paths. The first one is to improve what we call the interiors or internal sectors. It is developing a new variety of rice, or maize, with higher protein content. We have a variety of rice with content of protein higher than 11%, whereas normal rice has only 6 or 7%. So, if you do not have a chance to get protein from other sources, you can use that one to adjust the protein percentage in the dietary index. The second method is to reduce some areas for growing food crops, for raising vegetables and fruit. We do not have large areas like Australia, where I have heard you may use about 13 hectares per one head of cattle. In our country, we graze 20 head of cattle per one hectare. It is a problem to increase the area for grazing to improve meat production, but we can obtain protein from other sources, like legumes. We produce a lot of legumes, so we can use the protein from vegetable sources.

A, Q. *(Tony Fischer, Crawford Fund, ACT)*: A quick comment and then a question. The comment is that 90% of United States corn is GM and the US is harvesting a record corn yield this year of 10.65 tonnes per hectare. I do not think there is too much micronutrient deficiency in that corn crop.

My question is to Dr Bo. We have heard a lot about smallholders in Asia — they dominate agriculture in Asia — but the farms are very small. We heard one success story from China this morning, but I think that may be the exception to the rule. You hinted at the problem, that when you engaged in and agreed on reform you gave ownership to the farmers, but now the farms are too small. How are you going to get out of this bind of having too many farmers with too small farms, in your country in particular?

A. *(Nguyen Van Bo)*: Thank you, Tony. We have developed a strategy and program that we call 'Large Farm'. We invite enterprises to invest in the production of one or two kinds of commodity, and they accumulate land from the farmer households by signing contracts. We call this contract farming with the farmer, and the farmer is a shareholder. It is like investing and holding a share in the company, only in this case we can make fewer larger farms for commodity production. There are already half a million hectares under this program and we hope to have 2 million hectares for rice in ten years. For coffee and other industrial crops we are already following this model of production.

Q. *(a Crawford Fund Scholar)*: My question is for Norah. You spoke about changing consumer preferences and household nutrition, and about some of the traditional vegetables which are not being accepted very well, because people do not like the taste. Are you thinking about making them into a processed food, or making them more acceptable, say by cooking them in different recipes, or introducing some new cooking methods so that they can be accepted?

A. *(Norah Omot)*: Yes, we are thinking of promoting them through recipe cards and we have some ideas on whether we can develop hand-size cards with attractive pictures of the recipes on one side and maybe the recipe itself on the back, and promote that, or hand it to shoppers when they go shopping in supermarkets. We have a lot of foreigners going into Papua New Guinea to work in the mines everywhere in PNG and they are not familiar with our food. So we would like to promote traditional vegetables by having these kinds of recipes and working with the institutions that cater for the mine workers. But we would also like to do cooking demonstrations with schools and with community groups, and we would like to engage also with women, especially in the women's groups and the communities, as a means of promoting traditional recipes for health, and to link up with the local health clinics so we create awareness and also do cooking demonstrations in those areas.

Facilitator *(Jim Woodhill)*: Very nice practical suggestions there to make a difference. Please, let us all thank our panel very much.