RURAL AFFAIRS AND ENVIRONMENT COMMITTEE

Tuesday 9 September 2008

Session 3

£5.00

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Produced and published in Scotland on behalf of the Scottish Parliamentary Corporate Body by RR Donnelley.

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RURAL AFFAIRS AND ENVIRONMENT COMMITTEE
15th Meeting 2008, Session 3

CONVENER

*Roseanna Cunningham (Perth) (SNP)

DEPUTY CONVENER

*John Scott (Ayr) (Con)

COMMITTEE MEMBERS

*Karen Gillon (Clydesdale) (Lab)
*Liam McArthur (Orkney) (LD)
*Des McNulty (Clydebank and Milngavie) (Lab)
*Alasdair Morgan (South of Scotland) (SNP)
*Peter Peacock (Highlands and Islands) (Lab)
*Bill Wilson (West of Scotland) (SNP)

COMMITTEE SUBSTITUTES

Jamie Hepburn (Central Scotland) (SNP)
Jim Hume (South of Scotland) (LD)
Nanette Milne (North East Scotland) (Con)
David Stewart (Highlands and Islands) (Lab)

*attended

THE FOLLOWING GAVE EVIDENCE:

Dr Peter Bowbrick
Carey Coombs
Sally Crystal (Scottish Association of Farmers Markets)
Andrew Fairlie
Michael Gibson (Macbeth's)
Adam Harrison (WWF Scotland)
Hugh Raven (Soil Association Scotland)
Dr Alan Renwick (Scottish Agricultural College)
Judith Robertson (Oxfam Scotland)
Professor Bill Slee (Macaulay Institute)
Dr Karen Smyth (Scottish Rural Property and Business Association)
Professor Phil Thomas
James Withers (National Farmers Union Scotland)

CLERK TO THE COMMITTEE
Peter McGrath

SENIOR ASSISTANT CLERK
Roz Wheeler

LOCATION
Committee Room 1

Scottish Parliament

Rural Affairs and Environment Committee

Tuesday 9 September 2008

[THE CONVENER *opened the meeting at 10:48*]

The Convener (Roseanna Cunningham): Good morning and welcome to the 15th meeting in 2008 of the Rural Affairs and Environment Committee. I remind everybody to switch off mobile phones and pagers or to put them into flight mode, as incoming messages interfere with the sound system, even if the devices are in vibrate or silent mode.

We are taking evidence this morning and this afternoon on food policy, with a view to identifying a focus for a future inquiry into the subject. I do not want people to think that this is the only thing that we will do. We are trying to inform ourselves at an early stage so that, if we launch a full-scale inquiry, it will be better focused for our having already had a more general discussion.

Some committee members will arrive late, for reasons outwith their control. One of those members is new to the committee; therefore, when he arrives, I will briefly have to suspend the conversation while he declares any interests, which he has to do before joining the committee. I will flag up when we will have to do that. The declaration of interests was to have been agenda item 1.

Decision on Taking Business in Private

10:50

The Convener: Agenda item 2 is consideration of whether the committee should review evidence from Government officials and the Cabinet Secretary for Rural Affairs and the Environment on the 2009-10 budget process and drafts of the committee's budget report in private at future meetings. Is the committee agreed on that?

Members *indicated agreement*.

Subordinate Legislation

Water Environment (Relevant Enactments and Designation of Responsible Authorities and Functions) Order 2008 (SSI 2008/263)

10:50

The Convener: Item 3 is subordinate legislation. SSI 2008/263 is a negative instrument on which the Subordinate Legislation Committee has made no comments, no committee member has raised any concerns and no motion to annul has been lodged. Do members have any comments on the instrument?

Members: No.

The Convener: Does the committee therefore agree not to make any recommendations in relation to SSI 2008/263, as detailed on the agenda?

Members *indicated agreement*.

Flood Management Legislation

10:51

The Convener: Item 4 is a brief item on flood management legislation. Committee members will be aware that flood management legislation will be introduced in the very near future and that the committee is likely to be the lead committee on the bill—in fact, I would be astonished if we were not. Members have a paper that outlines a number of practical matters that the committee can agree on in advance of the bill's introduction. I hope that members have read the paper.

There are three specific proposals. The first is that the clerks should prepare to issue a call for written evidence following the bill's introduction, so that we are ready to go the minute that it is introduced. The second proposal is that the committee should delegate to me the responsibility for arranging for the Scottish Parliamentary Corporate Body to pay witness expenses that are incurred during our scrutiny of the bill. The third proposal is that the committee should consider drafts of its report on the bill in private. Are those three proposals agreed by the committee?

Des McNulty (Clydebank and Milngavie) (Lab): I have two comments on framing the call for written evidence—I agree that it should be done. First, it would be helpful if we could ask those who are providing such evidence to comment on whether the bill adequately reflects the findings of our flooding and flood management inquiry. We would be asking them specifically to say whether they felt that the recommendations that emerged from that extensive inquiry were reflected in the bill.

Secondly, given our timetable constraints, it might be helpful to make it explicit that, because we will not take oral evidence from as wide a range of bodies as we have in the past, it will be in the interests of organisations to ensure that their written evidence is relatively comprehensive. We will be selective in taking oral evidence.

The Convener: Yes. Those are important points. A third point is that we are likely to limit the time that is available for organisations to submit written evidence to us. Normally, it would be about 12 weeks; however, we feel that we should be able to reduce that.

Peter Peacock (Highlands and Islands) (Lab): I agree with Des McNulty. We should also make it explicit that we take as read the evidence that organisations previously submitted to our inquiry. We do not need to see that again and we should focus on the kind of issues that Des McNulty suggests.

The Convener: That is important. We should ask people not simply to resubmit the submissions that they made to our inquiry, because we already have those.

We should also pick up on Des McNulty's comment about the differences between what is covered in the legislation and the issues covered in our inquiry. Going into the inquiry we knew that there would be some differences; for example, we looked at civil contingencies, which, as we know, will not be covered in the proposed flood management legislation. Other parts of our inquiry might well not be encompassed by the bill, and it will be interesting to see what those are.

Do members agree to those points and to the proposals in the paper?

Members *indicated agreement*.

Food Policy

10:55

The Convener: Item 5 is a round-table evidence session on food policy. We have decided to have a round-table discussion because we want to pick the witnesses' brains, get a conversation going about this issue and ensure that we get as much input as possible at this stage to help us to develop a remit for a full-scale inquiry.

For that reason, today's conversation will be fairly open and free flowing. No topic is being ruled in or out. I have asked committee members to break what are, for politicians, the habits of a lifetime and not to hog the conversation. However, they will obviously join the debate at certain points, ask some questions or try to move the conversation on to a slightly different issue.

Basically, I am trying to encourage a cross-flow. For example, if a witness wants to ask another witness a question, that will not be a problem. That said, we must try to avoid having too many voices speaking at the same time. However relaxed we might want the conversation to be, it cannot become a babble; after all, it is being recorded and if too many people speak at the same time the official report and the sound system go into meltdown. I simply remind everyone that it is not 11 pm in your living room; it is a committee meeting. However, within those constraints, we want things to be as free as possible.

This first session will run to about 12.45, which means that we have lots of time. We will see how things go, but we might have a brief five-minute break if people feel the need to go elsewhere. The second session will run from 1.45 to about 3.40. Those who take part this morning are welcome to stay and listen to this afternoon's discussion; we had to divide the item into two sessions simply because we do not have enough space for everyone around the table and, in any case, if we have too many people, things become unmanageable.

I ask the witnesses to take a minute each to introduce themselves and to highlight the one issue that they want the committee to take away from this meeting. I realise that I am putting you all on the spot. Unfortunately for Carey Coombs, he is the first witness and therefore has the least notice.

Carey Coombs: Good morning and thank you very much for this opportunity to give evidence. First, I should clarify whom I represent, because I suspect that my submission might have been slightly unclear about that. For the past three months I have been a part-time senior land use policy officer for the Royal Society for the Protection of Birds; I spend the rest of my time at home on a tenanted farm in South Lanarkshire. I used to be a policy manager for the Soil Association, but I no longer have any formal contact with it.

If you know that I work for the RSPB and that I am a farmer, it might be obvious that the message that I want to emphasise is that environmental issues and farming are and must be compatible. I see no incompatibility in that respect: indeed, I believe that compatibility can only become more important.

Sally Crystal (Scottish Association of Farmers Markets): I am chair of the Scottish Association of Farmers Markets and I thank the committee for inviting me to the meeting.

The Convener: Perhaps we can take all the thanks for granted.

Sally Crystal: I want to put across our concerns about regulation with regard to abattoirs—or their lack—and about the future of local food being sold at farmers markets.

11:00

The Convener: I skip over Alasdair Morgan, who is a committee member.

Michael Gibson (Macbeth's): My credentials are in my submission, but I hope that I transcend policy and food production. The most important single issue is that we implement what began as a good, innovative and cross-cutting proposal and that we persuade participants in the food industry to bury their current positions in order to put something together that is truly collaborative and in Scotland's interests.

The Convener: I skip over Peter Peacock, another committee member.

Dr Karen Smyth (Scottish Rural Property and Business Association): The one issue that I want to be considered is increasing competition. That large area would include, for example, labelling, reopening the debate on genetic modification, regulation and the procurement process.

The Convener: I move to James Withers, who is representing the National Farmers Union Scotland instead of Jim McLaren.

James Withers (National Farmers Union Scotland): Jim sends his apologies.

The Convener: That is okay.

James Withers: I am chief executive of the NFUS. The union has about 9,000 members who are mostly full-time farmers; indeed, we represent about two thirds of Scotland's full-time farmers.

The most important issue is ensuring that we maintain Scotland's food production capacity. At the moment, there is a significant decline, most notably in the livestock sector. Unless we halt that and secure the future of food production, anything else that we want to do about food policy will be meaningless.

Professor Phil Thomas: I suppose that the best introduction that I can give is to say that I am an ageing academic. I represent myself, although I should mention that I am chairman of the Scottish Salmon Producers Organisation, a member of the board of Quality Meat Scotland and a member of the board of Scottish Natural Heritage. I also serve on the Scottish advisory group for Linking Environment and Farming. I have other links to the industry that I will set aside.

My plea is that the Parliament and Government recognise that food policy is absolutely central to food supply and to associated socioeconomic impacts. Any issues and problems that might arise cannot be addressed simply by legislation and regulation; instead, such legislation and regulation must be put into a market context, which I realise is a demanding and innovative approach for politicians. There must be an air of realism about the priorities that the committee decides on.

The Convener: Des McNulty, who is sitting next to Professor Thomas, is a committee member. On my left is John Scott, who is the deputy convener of the committee, and I am Roseanna Cunningham, the committee convener. I think that I have met a number of the witnesses on a number of different occasions.

Let us press on with the discussion. I ask John Scott to kick things off.

John Scott (Ayr) (Con): Thank you, convener.

The Convener: I should say that he does not really mean that; he is kicking me under the table.

John Scott: Is the concept of local food an important one? Various witnesses—James Withers, for example—have already highlighted the paramount importance of food security and the need to ensure future production in Scotland's hills and upland areas. What part does local food play in the food supply chain? Is there a need for more collaboration? I will keep away from the subject of food miles, but is local food important in reducing carbon footprints?

Please kick off the discussion in any way you see fit. For example, there is a huge debate about biofuels—[*Interruption.*] My convener is telling me, "Enough." The subject is dear to my heart and, once I have started, I could happily go on for a very long time. However, I will stop and let someone else come in on the subject of local food.

The Convener: That was fairly wide ranging. Does anyone want to pick up the cudgel to start with?

Sally Crystal: It is well documented that farmers markets are very successful and here to stay. Most of our organisers say that the markets are holding up in the current climate. The public are going to farmers markets, especially if they are nearby, because of carbon footprint concerns.

We are being encouraged to increase the number of farmers markets, but we have one major problem: increasing the number of food producers to service the markets. At the moment, we have got it about right. However, if we begin to increase the frequency of farmers markets so that they run weekly, I am afraid that we will find that we have not got it right for meat producers, because of a lack of abattoir facilities and the fact that home kills on a small scale are now very pressurised.

There are major problems to overcome if we are to keep the efficiency, quality and supply from meat producers going at farmers markets. SAFM is keen to increase the frequency of farmers markets because they are one way of supplying local food directly to the public, and an ideal way of helping farmers to sell their livestock at a bigger margin and therefore make more profit to help their farming enterprise.

The Convener: Carey Coombs, you had a lot to say about local food in your submission. Do you want to pick up on any of those issues?

Carey Coombs: I will expand on my submission. Part of the problem with the food system is a kind of disconnect. The importance of local food lies in understanding where food comes from and how it is produced. We are coming up with solutions in relation to food quality such as ear tagging, assurance schemes and other things, but those are possibly less necessary if there is a deeper understanding, and less distance, between producer and consumer.

That understanding—which is connected to education—is important. The key to sustainability is diversity of farm type and farm produce, and wild diversity, which go hand in hand. There is a cultural and social dimension as well as a biological diversity, and that comes together in local understanding.

The Convener: I know that some farmers are quite scathing about farmers markets. It has been suggested to me that if we all had to use them, it would put us back to medieval practices. Does NFU Scotland have a particular take on that?

James Withers: If there have been criticisms of farmers markets, it is because they have been held up—by the Government, more than by

anyone involved in the farmers markets movement—as the answer to farming's prayers, much as organic food, diversification and the development of farm shops have been. For a farmer whose farm is halfway up a hill in the middle of north-west Scotland, a farmers market is not necessarily an option, and nor is turning the barn into a bed and breakfast.

The Convener: Why is the option not there?

James Withers: Having a farm shop, for example, is not an option, because there are more sheep passing the end of the farm road than people. Those farms are not on a tourist trail—the option is not there for everyone.

The Convener: Leaving aside the idea of a farm shop, what about the market concept?

James Withers: The farmers market concept?

The Convener: Why would a market not help the farmers that you are talking about?

James Withers: They could be in the depths of Sutherland, some distance away from a town centre that draws enough people for a farmers market. The other issue is that where there is the option of holding a farmers market, there are issues surrounding abattoir and kill capacity, and the restructuring of that process—one of Sally Crystal's points—to make it work.

Professor Thomas: It might sound ironic, but local food is a global problem. We are in a situation in which the world's food supply, relative to population growth, is diminishing. The United Kingdom will always be able to buy its food on the world market at the right price, and prices will go up, but in countries where food is short there will be population movements, unrest and so on, and we will have to pick up those problems too.

Nationally, everyone has bought into the notion that we should all contribute to dealing with climate change and global warming. However, I would argue that we should all contribute to world food production; local food is, in essence, part of that. We should deliberately try to produce enough food not only to sustain ourselves, but to export to others. Local food is a specific issue that is related to a wider problem.

The Convener: Would you be part of the group that would call for more land to be turned over to—or put into—food production?

Professor Thomas: I would argue for more land to be put into food production, but there is a limit to the amount of available land. Globally, the amount of available land is reducing because of water shortages and the impact of climate change, and we do not want to chop down forests elsewhere. There is a problem with regard to the Scottish situation, because there are some land areas in Scotland that have historically been farmed from which people are walking away because the farming has become unsustainable. That is a problem for Scotland—we need to maintain the focus of farming and food production in rural areas where, frankly, there is not a lot else that can be done to maintain an economic and viable sustainability.

The Convener: This is a hugely loaded question, but do you believe that we should continue to subsidise that sector?

Professor Thomas: The answer is yes.

The Convener: Yes? That is fine.

Michael Gibson: It is important, in a Scottish context, to consider what we mean by local food. In Scotland, we should think about the whole ambit. It is important that we include, for example, sea fish, game, vegetables and processed products that we make locally; it is not just about red meat. It is important to recognise that we have the capacity to produce food, but we need access to processing and distribution to reach our markets.

We need to develop the market. Farmers markets are very important, but they are a small part of the total and they are location specific and likely to remain that way. In developing the market, we need to consider the role that multiple retailers play. For example, the large stores might, as part of their planning conditions, be required to provide space for local food, as is done elsewhere in Europe.

The tourism influence is important, and work should be done on encouraging the tourism industry in Scotland to procure locally. There is also the government aspect, in relation to public procurement in its widest form, which can be used to develop local markets. We need access to processing and distribution. The system is currently very centralised and, although there is a particular problem with creating abattoirs, that does not mean that other processing cannot be done locally. We need good effective distribution—there are good examples, such as in Skye. Those are the important things with regard to local food.

Dr Smyth: As an organisation, the SRPBA represents landowners and farmers. We obviously support local food production. It is important not only for the farming economy, but for sustaining rural communities that might not survive if farming did not remain in the area. The issue is often price. That is often the reason why local production is declining. As James Withers said, there are also problems in the hill sheep and livestock sector.

I support Phil Thomas's statement. The SRPBA believes that Scotland has an important role to play as a part of Europe in contributing to food

security. We need to maintain and increase food production.

11:15

Professor Thomas: Michael Gibson mentioned sea fish. If we consider the economic value of the various sectors of food production in Scotland, beef comes top of the list at about £450 million and aquaculture is next at about £400 million. From memory, the sea fish sector is worth about £370 million. The sheep sector is worth £135 million and the pig sector is worth about half of that. Aquaculture, as distinct from fishing, is an important part of the Scottish food system.

The Convener: You are warning us not to become too focused on land-based food production.

Professor Thomas: Yes. Aquaculture is the single biggest element of Scottish food exports.

John Scott: I think that Professor Thomas and Karen Smyth, in particular, are agreed in their comments. The recent report by the Scottish Agricultural College and the NFUS states that desertification is taking place, at least in hill and upland areas, with the huge decline in the number of sheep and cattle. The other things that you talked about are inherently static at the moment. The quantum shift is in livestock production, given the factors that you mentioned. Does anyone want to comment on the potential for desertification?

Professor Thomas: I was about to say that there are a lot of good comments and insights in the Royal Society of Edinburgh report that was published yesterday or the day before. The report is well worth reading. Economic activity in hill and upland areas must be maintained. People say that agriculture has declined in importance and is no longer the bricks of the wall; I argue that, although it might not be the bricks, it is the cement. Agriculture is often the element that maintains the socioeconomic structures in an area. It ensures that there are enough people to keep the local shop and school going.

If an area is to be viable, it is important that enough economic activity is put into the upstream and downstream elements of industry, and agriculture is an important component of that. In policy terms, that makes Scotland distinctive from, for example, England. There are few areas of England in which the travelling distance to a town where work is available is great, but that is not the case in Scotland. Here, if someone cannot find work in their local rural area, they have to move out of the area. As James Withers said, their options are limited.

Carey Coombs: There is huge concern about the depopulation of the uplands, but we must be careful not to assume that historic practice will necessarily be the best approach in the future. I speak as someone who has been a hill farmer in Argyll, so I know what the problems are. The hill farm that I farmed in Argyll was not best suited to running a large stock of sheep. That is not to say that sheep farming is not or will not be important, but we should have an open mind on the matter. There are historic reasons why we have a large sheep and cattle population.

On the other hand, I now work for the RSPB, which makes a strong case for supporting the maintenance of cattle, in particular, and sheep in the uplands. A lot of research has been done recently on the importance of maintaining pastoral systems and grazing livestock systems in the uplands. I just think that we should be careful. We need a vision for the future of the uplands. The farming community is conservative because it has to be so, and it needs time to adjust. The current depopulation is not appropriate, but things have to change slowly over time.

Michael Gibson: A lot of cattle and sheep have been removed from the hills. That is largely because of the lack of confidence that has been expressed in the policy that has come forward. There is a question mark over how we might deal with the single farm payment beyond 2013 and the less favoured area support scheme is under scrutiny. Also, people have not been making a living from cattle and sheep. Those are some of the reasons for the decline.

It is important that cattle and sheep remain, because they provide the critical mass in many rural communities. In particular, cattle require a much greater infrastructure and they benefit the grazing habitats in certain areas. However, we must look beyond agriculture and consider how it sits in the wider rural economy, including its role in supporting tourism. During the foot-and-mouth crisis, a lot of places in Scotland were closed and people were frustrated that they could not go out for walks. We must reflect on the fact that the landscape that they enjoy is influenced by the grazed environment.

I take the point that we should not assume that historic practice is necessarily the way forward for the rural economy. We must consider other land uses that might make a contribution, such as wild game and aquaculture. Aquaculture has often led the way in local food processing, especially in outlying areas such as the Uists. Perhaps they can teach us a thing or two. We can learn from other sectors.

We must also spread our labour. Crofting, as a part-time use of land, is a forward-thinking approach. If we cannot sustain full-time labour units, we must consider how people can split their

time between farming and aquaculture or other jobs.

James Withers: There has been a fundamental shift in what happens in our remote areas. We do not necessarily need to go into the number of factors that brought about that shift, but the reality is that people and animals are going. We need to consider how the public money that is spent in rural areas is targeted. A significant chunk of money goes into rural areas, either in direct payments to farmers or through rural development funding. We could spend that money better without necessarily adding another lump of public money to the system.

The blunt economist's view is that market forces are operating and that the market should sort things out. Under that view, where people do not get a good price, they will leave, and that is the nature of things. However, as Phil Thomas said, agriculture is the foundation of rural areas. Social and environmental benefits are delivered throughout the country, for which the market will never pay. Those benefits have to be paid for, so political intervention is critical. A sensible starting point would be to consider the way in which we spend public money in rural areas at present.

The Convener: We will come back to that point. After we hear from Peter Peacock, I will ask Carey Coombs to comment, because he commented on the rural development fund in his written submission.

Peter Peacock: The discussion has already demonstrated the width of the issue and how difficult it is to grapple with. I want to focus on the policy question about local food, because I have not yet heard an answer to that. Perhaps I should declare that I am a great fan of local food. I like going to local farmers markets. I started doing that in continental Europe and I am glad that farmers markets are coming to Scotland in a big way. I am attracted by the emphasis on more local production and fewer food miles.

However, if we put that to one side for a moment, we could argue that local food is just a middle-class indulgence for people like me who like to go to farmers markets and so on. If we consider the world situation, we have to increase food production by 50 per cent by 2030 and by even more beyond then. In that context, focusing on local food as a policy objective in Scotland could be an irrelevance because there are much bigger needs to meet. As James Withers said, farmers are going out of business and stock is declining. Arguably, it is more important to make the industry more competitive, regardless of where it sells its produce, than it is to focus on local food.

There is also the issue how we ensure that we give developing countries a fair deal. Why, in policy terms, is local food in Scotland important in a world context? Why should we back local food as a policy objective? In the wider context, is it not terribly relevant to have that as our top priority objective? I am interested in people's views on that.

Carey Coombs: I return to the issue of public money. My view is, and always has been, that farmers are not just food producers. We must acknowledge that farming is a multifunctional pursuit. James Withers suggested that perhaps we should not be calling for more money to support farmers. However, I believe that we need to build the case to reward farmers with much more money. The only way to do that is to pay them for delivering social and environmental services. That is why I struggle with the issue of the single farm payment at the moment. The single farm payment is historically based and is perceived to reward farmers for doing very little, although I accept that they have to maintain environmental conditions. It is a problem for farmers to hold up their hands and say, "I am earning this money." I, as a farmer, would like to hold up my hands and say that. That is why I am an advocate and supporter of environmental organisations that would like the money to be used for supporting agri-environment schemes and such like. The way forward for farmers in the uplands is to pay them for delivering in the new market of agri-environmental services. The market does not support much apart from food at the moment, but it is clear that it could do so.

The Convener: That is an interesting argument. You are saying that you want to pay farmers for environmental and social outcomes when, in fact, perhaps we should be paying farmers to get on with growing food.

Carey Coombs: There is an open market for growing food. That is where we appear to be, with a global marketplace. However, there is not a market for other services.

Alasdair Morgan (South of Scotland) (SNP): To follow on from what Peter Peacock said, it would be interesting to get some of what we are talking about in proportion. What proportion of the food calories that we consume in Scotland comes from local production? I suspect that it is infinitesimal. It would be interesting to know what proportion you think that it could get to, without our going back to some kind of stone age culture. If the proportion is not going to be huge, perhaps we should not spend too much time talking about it, as opposed to about other things. I merely put that point across; it can be knocked down.

Secondly, if I had come here from the planet zog, I would not be sure what we are trying to achieve. The objectives do not seem particularly clear. Is our objective to keep people in the upland

areas? That might be a good idea; people can make arguments for it. Alternatively, are we trying to keep birds and animals in those areas, so that they look nice for the tourists? Are we going to keep farming activity there because we need the food that it produces? Is that just for the people who live locally—people would not live locally if the food was not being produced there—or are we talking about contributing greatly to feeding other people? There is woolly thinking about all this. I am not saying that I am not as guilty of that as anyone else, but I am not sure what we are trying to achieve.

The Convener: That is interesting. There were a wide variety of submissions. If the primary focus is food production, that changes the parameters of what we are talking about. The primary focus might be something else.

11:30

Sally Crystal: There is an element of people questioning whether local food is important and saying that we should be considering the global aspect and that farmers should be looking to increase their food production to sell on a wider scale. I totally agree with that, but the tendency has been to base all food policy on a multiple vision of global sales and supermarkets and so on. There is a place for local food and for food that is produced on a smaller scale. If we can keep small farmers in business by encouraging them to produce fish, meat or whatever—I am not suggesting that it should be just meat—we should do so.

To date, every Government food policy has, quite rightly, looked at the multiple, global aspect of food production and the small farmer has been left behind. We have to remind ourselves that a lot of the small farmers are still working on the hills producing small amounts of sheep and cattle for which they are trying desperately to get a good price at the market. They do not necessarily want to sell to the supermarkets because they do not get a good price. We should not lump everything together in one area of food production; you must remember that there is small-scale food production. There are small farmers markets that are generating an incredible amount of money and employing an awful lot of people. One should not write them off as not being there to stay, or say that they will not grow.

The Convener: I did not get the impression that anybody here was writing them off.

Sally Crystal: It was said that they are small scale and would not grow.

The Convener: There are questions about the proportion of the whole business that they really encompass. It is fair to say that we get very focused on them, but part of the reason for that is that they are much more obvious; people go into their town centres and see the farmers market, which is distinctive. The markets have other benefits, which we should not overlook.

James Withers: I am keen for members to take away the point that it would be disastrous to get to a position in which we had to choose between supporting farmers for environmental work and supporting them for food production. That has been the failing of agricultural policies for 60 years. After the second world war, we had an emphasis purely on food production. That was tremendously successful for the first 20 years, but then it went too far and we ended up with grain mountains and wine lakes, which had environmental consequences. We then took a knee-jerk turn from that and said that the environment was the most important thing, because we had enough food. We thought that we could relax and go environmental, but now we are worried about food production again. That sort of ping-pong is dangerous. We need to map out a policy that focuses on producing food well and which delivers an environmental by-product. Some 75 per cent of Scotland's land mass is farmed 365 days a year by farmers; they do a management job, but they produce food at the same time.

I will make one other point while I am hogging the microphone. Peter Peacock asked the fundamental question why we should support local food. We mentioned socioeconomic and environmental benefits, but we are living in a much more volatile world now. Food security is back on the agenda for the first time since the world wars. If you want any evidence of the fact that we cannot rely on the rest of the world, you can look to the example of Argentina. We have become much more reliant on South American beef imports, which has allowed a downturn here. However, the Government in Argentina decided to ban exports of beef to keep prices down. If we become overly reliant on the rest of the world to feed us, we will end up with a real food security problem.

The Convener: That is useful.

Professor Thomas: I will try to address a couple of the questions that members have asked. Alasdair Morgan simply reflected the fact that we are dealing with complex problems to which there are no simple single solutions. Often, single-issue lobby groups simplify issues because it is the only way to deal with complexity.

If we wished, we could still produce enough food in Scotland to meet Scottish needs, but we export a lot of food in raw material form, which is then re-imported across the border in processed form. Clearly, it would not make sense to grow bananas on Ben Nevis. We will always import food from countries that have crops that we do not have.

If, by local food, we mean food that is produced in Scotland, my argument would always be that producing food from a strong Scottish food base is a moral, an economic and a socioeconomic objective; I include in that primary production and the upstream and downstream industries that Michael Gibson mentioned. With regard to local food in the sense of food that is sold at farmers markets, such markets are extremely helpful in encouraging good engagement by the public with the food production process. Not everyone goes to farmers markets, but a proportion of the population, including people such as Peter Peacock, does so.

The same is true of any other marketing exercise. Let us take organic food, for example, which I do not buy much of, but many people do. If we consider the distribution of the purchase of organic food across the UK, we find that a huge proportion of it is purchased in London and the south-east. Typically, organic food purchases in Scotland are at about half the level that they are at in London and the south-east. Socioeconomic and community factors come into play. The issue is complex, but there are priorities—areas on which the Parliament can put in effort to bring benefit.

The Convener: John Scott has chivalrously decided to forego his position in the list, so we will hear from Karen Smyth and then Michael Gibson.

Dr Smyth: In response to Alasdair Morgan's question about whether we want to produce environmental benefits, food, a place for people to live and so on, I would say, "All of the above." The production of food and the achievement of environmental gains in the same area are not necessarily mutually exclusive. Many environmental management practices are carried out where food is produced.

I agree with Carey Coombs that there is a need to provide money for farmers to provide public goods and to ensure that the provision of those public goods by farmers is properly costed. Michael Gibson said that historic practices are not necessarily the way forward. That is partly true, but many hill farmers have no option other than hill livestock production, for the reasons that James Withers explained.

Michael Gibson: In answering Alasdair Morgan's question, we must surely consider a Scotland-wide food policy that is pertinent to the richest and the poorest areas of the country. We should remember that Scotland has a well-defined, sophisticated processing and manufacturing sector that often needs high volumes of produce from productive areas and good, consistent supply chains. Our hills and uplands present a particular problem, but they must fit into a wider policy, as must local food issues.

We must remember that a food policy is about consumption as well as production, and that we want to use it to address some of the health agendas that are pertinent to us. I am talking about consumption by individuals and organisations. Government must have a key role to play in directing cross-cutting initiatives across its departments to facilitate action to address some of the dilemmas that arise from our food consumption.

John Scott: I want us to move on from local food because time is on the wane. We have done local food to death, so we should turn to food security, which most of us agree is a key issue. I would like the witnesses to identify some of the barriers to food production in Scotland and Europe, and to give us their ideas on possible solutions.

Carey Coombs: Before John Scott asked his question, I had intended to raise a debating point, which, as it turns out, is quite pertinent. Let us assume that we want to maintain or increase production. There are two ways of going about that. We could intensify production on high-quality ground, thereby freeing up land that was not deemed productive. The alternative approach would be to integrate food production with the wider environment. I know where my tendencies lie—I favour the integrated approach, because I do not consider looking after the environment and food production to be separate objectives. However, that is a topical debate.

John Scott: I take your point.

The Convener: Does anyone flat out disagree with anything that has been said so far? Please do not be afraid to say so. It is interesting that it appears that no one has heard anything that they flat out disagree with.

John Scott asked about barriers to food production. James Withers said earlier that he thought that Government could spend existing money better, but he did not go on to give a list of items on which it could be better spent. Would dealing with some of the barriers to food production be among those items?

James Withers: I suppose that we go back to John Scott's original question, which was about what the barriers are.

John Scott: Labour costs are a barrier.

James Withers: There are labour barriers—there is a significant labour shortage—and skills and training barriers. Many of the skills in the agricultural industry are passed on through generations rather than being taught in academic institutions. The University of Aberdeen was the last major university to offer an agriculture degree, which I think has now been dropped. We need to

think about how to support our specialist agricultural colleges.

There is a barrier to new entrants to the sector, which is mainly a cost barrier. It relates to access to support payments and, crucially, access to land. A major problem is the fact that the tenanted sector remains largely stagnant. We must address that if we are to allow new entrants into the industry.

There are regulatory barriers, too. A question that has been asked is how Scotland can compete on the world stage. We cannot—we cannot compete with developing countries or with South America because our regulatory structure, which is based on food quality, food safety, environmental health, health and safety and employment legislation, does not allow us to. That is not an argument for sweeping away that strong regulatory structure; it is an argument for saying that we need to get rewards from the marketplace for having a brand that is built on additional assurances for consumers.

The Convener: I just want to confirm that the regulatory regime under which we operate applies across the European Union.

James Withers: Yes.

The Convener: So Scotland is not unique in not being able to compete with developing countries. That is the result of our choosing—or not—to comply with a regulatory regime that is imposed by the EU.

James Withers: Yes. Issues arise within the EU, but those are mostly down to decisions about when to implement specific measures and how strictly to implement them.

The Convener: I appreciate that.

James Withers: I am talking about a more global issue, whereby the principles of free trade are not necessarily principles of fair trade. The fact that we operate on a different platform is not reflected in the price of products on Tesco's shelves.

The Convener: You threw in the fact that the tenanted sector is stagnant. Before we hear from Des McNulty, will you amplify that slightly?

James Withers: I do not want to open a can of worms, but I have probably already done so.

The Convener: It is okay for us to discuss cans of worms.

James Withers: Ever since the Land Reform (Scotland) Act 2003 was passed, landowners have been afraid of the right to buy. They have been frightened that, at some point, an absolute right to buy might come into force, which would mean that one day a tenant could wake up and decide that they wanted to take their farm. That has meant that, unfortunately, not enough land has been let, which has been one of the biggest hurdles. The fear of a right to buy might be irrational, but it remains a difficulty as regards the availability of land for let. Another issue is that new entrants from outwith the industry who want to rent land do not have the same financial back-up or financial foundation that is available to those who are already in the industry.

11:45

The Convener: James Withers has raised some interesting questions. I have scribbled those down as issues to which we might choose to return.

The next question is from Des McNulty.

Des McNulty: I want to pursue the points that James Withers raised. He suggested that, as is being said of the UK mortgage market, the system is fundamentally broken because there is a basic lack of confidence in it and no one knows how to resolve the big structural problems that exist. Essentially—if I understood the point correctly—the big issue with the supply of skilled people who could become farmers is not necessarily a shortage of agricultural colleges, but the process by which people become farmers or tenant farmers. People need support to be able to set themselves up in business and to become trained within the industry. Whereas in other countries around the world—as was the case here perhaps 40 or 50 years ago—recruitment into farming is a matter of custom and practice and things are handed on from father to son or within local communities, in this country that process has in a sense come to an end. However, we have a situation in which new entrants, whose skills and energy could perhaps resolve some of the problems that are being experienced at a global level, face barriers to get into farming. That is the problem that we need to sort out. We agree on the problem, but what is the solution?

James Withers: The tenant farming forum and the Scottish Government have done a lot of work on new entrants schemes and how to support new entrants. However—this may be a bit of a cliché—the best new entrants scheme is a profitable industry. We can address small training issues and even some of the tenancy issues, but the biggest concern is the fundamental profitability of the industry. Really, the existing generation of farmers stay in the industry because it is in their blood. When the accountant visits the farm, he usually leaves in tears asking, "What on earth are you doing?" The farmer says, "Well, I have always been a farmer and my father was a farmer." The committee understandably wants to hear about detailed matters such as training, issues of labelling and public procurement, but there is a

fundamental issue of profitability. We need to consider the whole structure of how we support farming. If we get that right, new entrants will come along because the single biggest barrier will have gone.

Michael Gibson: We are in danger of talking ourselves into our boots in saying that the whole situation is broken. I do not think that the farming system is broken, but the wrong signals and the wrong messages are coming out. Farmers are insecure at the moment. The lack of confidence comes from global changes—fertiliser prices have a fundamental effect on how we farm in Scotland, particularly on grassland—and from not knowing what will happen under the next round of reform of the common agricultural policy. For people who are involved in a very long production cycle, such things matter. We also have a fear of a free market—which is, as we said, not necessarily a fair market—and we fear the influence that the multiples can exert on producers, as happened in the dairy industry. Access to land is prohibitive, both for new entrants and for farmers who want to expand. Very often, that is due to our current fiscal situation. In that context, it is important that the Government provides a coherent long-term policy that can give food producers the confidence to go forward.

The Convener: However, many of those challenges cannot be directly affected by the Scottish Government. It is important that we try to establish what tools the Scottish Government has that could make a difference. The Scottish Government cannot necessarily have an impact on international oil prices—not yet anyway.

Michael Gibson: I appreciate that—

The Convener: Some of those points are extremely valid—I also hear them from friends who are in farming—but the cost of fuel and the cost of feed are almost externally imposed costs that need to be managed somehow. In the circumstances, what can the Scottish Government do to help to make things better?

Michael Gibson: One thing that Scottish Government policy could do is to ensure that we can farm better and get better value for our produce. We need a better and stronger market and we need to do things better. However, we are in danger of concentrating on terrestrial agriculture when we should be looking at food in its widest sense. We need to consider what we can produce in Scotland with an overarching food policy.

The Convener: I will let Karen Smyth and Carey Coombs respond before we have a brief suspension.

Dr Smyth: Briefly, I agree with what James Withers said about barriers. One barrier that I want to highlight is regulation. Over the years, we have noticed that the Scottish Government has introduced gold plating into many of the European Union regulations. That has placed additional burdens on farmers that have caused many problems. That is one issue that could be addressed.

Carey Coombs: I want to pick up on Michael Gibson's comment that the farming system is not broken. That may be the case, but it is potentially broken. We have some serious major issues such as climate change and peak oil. I take Michael Gibson's point, but I do not think that we should belittle the problems.

The Convener: I suspend the meeting for two or three minutes to allow people to refresh themselves.

11:53

Meeting suspended.

11:57

On resuming—

The Convener: There is still a lot to talk about, so we could perhaps move on to the role that research can play in food production and food security—although I do not want this to turn into a 45 minute discussion on genetically modified food, because there is more to research science and technology than that. I am also interested in some of the land use issues that have come up, although I know that the Scottish Government is launching a separate land use inquiry. We can discuss those two issues now and try to cover one or two others later.

Professor Thomas: I can kick off on the research question. The reality is that Scotland has never been well placed in its agricultural resource assets. Some 85 per cent of the country has less favoured area status, and it has always been a difficult country in which to be successful in agriculture. It has been successful historically because it has been particularly strong in scientific research and industry innovation. My argument is therefore that we abandon the assumption that we need strength in those areas at our great peril.

The research sector in the UK as a whole has been declining for—I am tempted to say—most of my adult life. There have been good reasons for that, but in many areas now we have only the amount of scientific resource that we can get away with, which is limiting. There are only one or two people in some areas of expertise, and any further erosion would be very damaging.

My view is that, as a country, we have to focus on not only doing the right research in the right way but ensuring that we have the resources to

develop our own research and engage with international research. If we do not have people in our country who can understand what is happening elsewhere, we cannot make use of the wider research base. Our research base in Scotland is extremely important.

12:00

John Scott: You seem to be painting an apocalyptic picture—essentially, that our research basis has almost reached the point at which there is insufficient critical mass to sustain the development of our rural areas at a time when we most need that development to increase food production capability. Is that what you are saying?

Professor Thomas: I would not want the situation to sound quite as difficult as that. Over the years, the research institutions have been very good at focusing on the great priorities. Therefore, to some extent, the rationalisation and adjustments in our system have maintained a strength and quality in particular areas. However, we have lost whole sectors—and whole institutes—that were important historically and which are still important. My concern is that, if there is further erosion, we will not be able to respond to challenges.

My argument is therefore for maintenance and growth. Further investment in research is essential. There are opportunities for innovation in agriculture and aquaculture—an area in which I have an interest—but those innovations will be driven only by the right research investment and the development of new technologies from that. Historically, Scotland has been strong for the reasons that I have given; we are not in nearly such a strong position now.

Michael Gibson: As I am chairman of both the Macaulay Land Use Research Institute and the management board of the Scottish Association for Marine Science, research is close to my heart. I do not quite share Phil Thomas's apocalyptic view, but we need to understand a lot more about land use and the options that are available to us.

We do not necessarily understand our relationships with the accepted pillars of sustainability—environment, production and social economics—particularly under climate change conditions. Climate change is not all one way; in some cases, it affords us opportunities. It is important that we can adapt to climate change.

Changes to our land use and what we produce from it often have unintended or unforeseen effects, particularly in social economics. For example, we might seek to enhance our environment by culling deer, but in doing so we might slow down employment, take away business from hotels and disturb what is a delicate economic balance.

We have to understand what we need from land use to attract tourists. For example, if we overegg the pudding with wind farms, is that a negative or do tourists not mind? We also need a greater understanding of the research that will examine the marine environment in conjunction with the land environment, particularly in our sea lochs and the west coast, where they are inextricably linked.

We need to do that research, but unfortunately it can be long-term, expensive work. We need to articulate clearly the questions that we are asking and to understand what we expect from the research. We do not always do that—we often stick in a pin and say, "Keep going, we'll do a bit more of this and a bit more of the next thing." We do not yet have a vision of where we are trying to go or of the research that we need to underpin that.

John Scott: Who should provide that vision?

Michael Gibson: We can try to interact as much as possible with the major funders, but many of the questions are international, and at the Macaulay we interact a lot with international collaborations and with international funders.

The Convener: In Scotland, we have never really had an equivalent of the Commonwealth Scientific and Industrial Research Organisation in Australia. The CSIRO is widely known in Australia, right across society. Advances are taught in schools—for example, the advances that allowed wheat to be grown in areas where it could not have been grown before—as part and parcel of Australian history. I know of no organisation in Scotland that has ever had a public status or acceptance that is equivalent to CSIRO's. I may be wrong. Does Phil Thomas want to contradict me?

Professor Thomas: Yes, I will contradict you on the issue of status: the Scottish agriculture research institutes and the SAC were actually leading the CSIRO by many years. However, you have a point when you talk about acceptance and recognition. The general public has not widely appreciated the strength of our agricultural research base.

Looking at the citation indexes of research is a way of measuring a country's research output, and Scotland has led in biological and agricultural research. From memory, Scotland was second only to America, and that was attributable to our very strong research institute and SAC base. However, that was not widely recognised.

Carey Coombs: I want to pick up on a question raised by previous speakers—the question of what is the right research. Tim Lang, who reviewed the

Scottish diet action plan, has forecast that food production could move away from the productionist paradigm and towards either a technological paradigm or an ecologically integrated paradigm. That is the sort of debate that we might have to get involved in. It might not be as clear cut as that, but those are the sorts of argument that we will have to consider.

I want to pick up on the GM debate, which I imagined would come up. I have brought along the latest issue of the journal of the Food Ethics Council, which says that the debate on GM foods is the wrong debate. Basically, the journal suggests that the debate should be about what kind of food production we need and about how to get it. We should not be saying, "We've got GM technology, so what's the problem?"

The Convener: Would you tell the clerks how to access that information so that the rest of us can read it?

Carey Coombs: Yes. I have simply summarised my starting point for the debate on GM.

James Withers: It is critical that we keep quality research in the public sector, and GM is a good example. We have got into a "GM—yes or no?" debate, but we should be saying, "GM—maybe, but let the scientists do the work so that we can make a rational decision."

Because a message is going out that we do not do GM, I fear that we will export research elsewhere and will lose some of our best scientists. The crucial point is that the research will go into the private sector; the Monsantos of this world will own the research and they will have a clear vested interest in its outcome. Keeping the research in the public sector will be critical so that we can make informed decisions in this country on whether GM has any future here and on what that future might be.

Professor Thomas: Whether we as a nation accept GM food and GM crops is a public debate that has yet to be had. However, GM technology is already with us and already having an impact. I will give two specific examples. Increasingly, vaccines are produced by GM technology, and unless we are to opt out of using all the new vaccines that become available, we will not be able to sidestep GM technology.

Let me put my second example into a feed context. From memory, I think that the European Union is about 28 per cent self-sufficient in plant protein—soya bean in particular—for animal feed. The rest of the world has moved lock, stock and barrel to growing GM soya beans for good economic reasons. Therefore, we will get to the situation—indeed, we may be there already—in which we cannot avoid importing GM materials to use in animal feed.

We can park the debate about whether we should grow GM crops, but it is simply unrealistic for us to think that we can sidestep all GM technology.

Carey Coombs: There are two separate issues. Medicinal use of GM technology should not be confused with food production; it can be a separate issue. Also, the fact that GM technology may be used worldwide does not necessarily mean that we have to use it. There may be reasons for that and I am sure that we could debate it all day.

To be honest, the amount of plant protein that we import to feed animals is a scandal. There is no economic, environmental or ethical reason to go on importing soya from South America to feed livestock. It is quite a serious issue. We should be thinking of reducing those imports, and certainly not maintaining them.

Michael Gibson: Government and policy makers will always have to make tough decisions and there will always be a little bit of a dilemma. It is extremely important that good, independent, trustworthy evidence is available to them to help them in that process.

The convener asked whether what we do is as good as what Australia does. Our communication of the available research findings probably needs to be much better. We need to communicate the findings to non-governmental organisations, Government and individuals. We also need to inform individuals better about what the research means for their day-to-day lives. Equally, Government, NGOs and individuals must be receptive; they do not always want to hear what researchers have to say.

The Convener: I was making the point that Australians grow up knowing about advances and, through their school system, are made conscious of the relevance and importance of those advances to the Australian economy. I do not sense an equivalent connection in Scotland.

Michael Gibson: On the Food Standards Agency, individuals are becoming more dislocated from knowledge of where their food came from and how it was produced.

John Scott: The convener has charged me with moving on again to another question. We want to talk a little about the effect that competing land use priorities—such as wind farms for energy, flood management, recreation, housing and growing biofuels—have on food production. Should we work towards a more spatially planned use of our land or would it smack of the Soviet state to suggest that we move towards an absolutely planned, integrated type of agriculture? I would be interested to hear your views on how best to use our land, given the competing

demands on it and the discussion about food policy.

James Withers: That is a really important issue. At the moment, there are competing signals. If I have a hectare of farmland somewhere in the central belt, I have no idea what people want me to do with it. Should I flood it to protect the town, grow biofuels on it, grow food on it or plant it all with trees? All those options appear to have some worthwhile gain somewhere along the line.

We are almost coming back to a back-to-basics approach. For the reasons that I outlined earlier—a volatile world, food security and the socio-economic and environmental benefits—food production is becoming critical. However, the impact that proposed legislation will have on food production is not considered as part of the legislative process in the Scottish Parliament or elsewhere.

Although we do regulatory impact assessments and look at costs, we do not hold up any of our significant legislation to a food production test. If we decide that food production is important and we develop a food policy, it would be worth while holding up legislation, such as the flooding bill, to some kind of food production test to see what impact it would have on our potential to produce food. Then we can make an informed decision about whether we want such legislation to go ahead or whether we want to apply the brakes to it.

12:15

The Convener: That is part and parcel of the argument that every piece of legislation or regulation should be subject to rural proofing.

James Withers: Yes.

The Convener: Alasdair Morgan is pulling a face. Do you want to speak?

Alasdair Morgan: No, I always pull a face.

Dr Smyth: The issue of targets and priorities has concerned us for some time: we have targets for biofuels, forestry and so on, but not for food production. I am not saying that we should have a target for food production or that biofuels and forestry are unimportant, but food production has to be taken into consideration with the other land use objectives that the Government sets.

We welcome the Government's proposed study into land use, which I think is happening in the next month or so. I hope that it will set some academic research in the area. Although the debate has been opened up, as John Scott said, we do not want some sort of Stalinistic planning process whereby we cannot grow food where we want to or have forestry where it is necessary. However, there should probably be some rules, such as on where to locate a flood plain because we do not necessarily want another land use practice in the same place. We need to think logically about working with the land that we have.

Michael Gibson: If we look at land as a resource, land managers are simple and basic about what they do with it, which depends on the signal that they get about the likely future flow of funds from that resource. They have in front of them a matrix of opportunity, if you like, and that matrix is very restricted in certain parts of Scotland. For example, you can have only cattle or sheep in certain places; in other places, it might be possible to have a bit of forestry or the opportunity to look at renewables and some environmental schemes.

There is much greater choice in land use in the lowlands—consideration can be given to biofuels, housing and all sorts of other opportunities. If, however, some of those opportunities change and the decisions are irreversible, it is important that the signals given to land managers are well thought through. They cannot knock down houses and go back to producing wheat. When flood plains are flooded, will they be recoverable? Such questions are unanswered.

Land managers can replace biofuels—they can grow wheat for biofuel one year and go back to food the next. However, if people in dairying do not get the right signal that dairying is economic, they will have to leave the area and will not go back in a hurry.

Carey Coombs: I have no particular answer, but I will throw something into the mix that follows on nicely from what Michael Gibson said. The decision is not just one about different types of land use; it is about which agricultural commodities are used as well. If, in the future, we seek to align production closer to diet, there might be a case for looking at growing more fruit and veg, for example, given the constraints of the Scottish climate and topography.

Professor Thomas: I am a great believer in market forces. Someone asked earlier what the Scottish Parliament could do. One thing that it could do—and which it does—is influence the market by making regulations, pronouncements and policy statements. Very often market forces move much more quickly than any Government might anticipate and sometimes the outcomes are not necessarily the desired ones.

My plea is that, as Michael Gibson said, we must think through the impact of a change before it is made. For example, when the debates on land reform took place, one could have predicted that the situation that James Withers mentioned earlier would arise—that there would be fewer rather than

more tenancies—yet the Parliament seemed unable to get its mind around the fact that the market might act in a perverse way even though almost everybody supported the objective of the legislation.

There are some tricky issues, but the important point to remember is that legislation influences the market.

The Convener: I do not want us to go too far down that line, but many people were aware of that possibility, which is why many people in the Parliament at the time wanted the legislation to go further than it did. Some things become self-fulfilling prophecies. If people do not play along and legislation does not result in what we want, we can go back and people might be confronted with even greater legislative demands. That relates to the tenant farmer issue. If the legislation had gone further, it might have prevented the situation that Professor Thomas mentioned.

Des McNulty wants to comment, and then we will move on to a theme that James Withers mentioned—the application of legislation. I would like us to discuss how the climate change bill will affect food production.

Des McNulty: I am interested in land use planning. In recent years, around our towns and cities and sometimes well beyond them, rural areas have been suburbanised, with significant amounts of generally good-quality farmland being converted into housing. There is an impact on climate change because much of that housing is not close to public transport. Should we prevent such development and state that we are not going to have mass suburbanisation? Should we monitor the boundaries of built communities and force people to build on brownfield sites and have higher population density? How does that relate to the rural housing crisis? We hear that it is difficult for people who work in rural areas to access housing.

Is there a feeling that we are operating with inconsistent policies or policies that are too broad to meet the requirement for food security that you highlight? Should we prioritise one policy and say that the others will have to fall into place, or is the situation just a mess, with different departments going in different directions?

John Scott: I will pick up on that.

The Convener: Will you hold on a second? Do the witnesses want to pick up on what Des McNulty said, or shall we let it lie just now?

Sally Crystal: I have great sympathy with what Des McNulty said. Local authorities tend to rush to agree to applications because we need more housing, but there is little thought about where developments are being situated and whether they are close to public transport such as buses. We do not have good, well-thought-out policy on the matter. Policy needs to be reviewed, because urbanisation is coming into the middle of the countryside and taking up good, valuable farmland.

Michael Gibson: We have to do much more to co-ordinate the roles of central Government and local authorities in planning and the development of land. At present, we get sporadic developments and there is huge inconsistency. Something appears to be all right on one side of a local boundary but not on the other. We seem to be torn between a number of priorities. On the one hand, we want to give people new houses but, on the other, we want to preserve things in aspic. We need to think carefully about how we plan in the broadest sense. Planning seldom takes account of food production or how to achieve infill. Often, that leads to bad use of our inner-city and town areas, which are not developed in the way that they should be.

The Convener: Your point is that there is not enough brownfield regeneration.

John Scott: Those who are old enough to remember will be aware that the last time that we felt that we did not have enough food—after the second world war—the policy was that good agricultural land should not be built on or used for forestry. Perhaps we need to go back to that presumption. Over the past 20 years, good agricultural land has been assigned for housing because food production no longer appeared to be vital. Perhaps that presumption in favour of food production will come back into play. That follows on from Des McNulty's point.

I think that we can probably move the discussion on now, unless Alasdair Morgan wants to respond.

Alasdair Morgan: The issue is a bit more complex than food production. As has been alluded to, the issue is what kind of food we should produce. For example, what mechanisms make people produce beef instead of frozen veg? We know that people are driven to that type of production by the market and by the subsidies that are available. In Scotland, we have tended to concentrate on niche—that is, more profitable—sectors such as beef production. However, in attempting to address the global food crisis, one would not necessarily go for the most profitable products such as beef, which takes a long time to produce. One would go for whatever put calories in people's bellies, basically.

John Scott: The question is whether we have reached the stage at which there should be an overriding priority for land use that everything else should follow.

Peter Peacock: We have talked about the part that technology can play in increasing production and how science and research can improve food quality, but we have not addressed the prior question—prior even to the issue of land use—of what Scotland's role should be. As Professor Thomas said, Scotland is clearly not the world's bread basket, given that it comprises mainly less favoured area. Does that mean that our national food policy should be to fill European and worldwide niche markets for high-quality products, for which the regulatory burdens are perhaps a benefit? Alternatively, as Alasdair Morgan suggested, should we think about having more volume and less quality to try to meet some of those world targets?

Perhaps those are not complete opposites, but I am interested to hear people's views on where Scotland should position itself in terms of food policy. Do we go for quality, or do we go for volume?

Professor Thomas: That is a no-brainer. Scotland has to be at the top of the quality market because we cannot compete in commodity markets, by and large.

Peter Peacock: That has implications for land use.

Professor Thomas: That is right. Quality foodstuffs should be our niche.

The Convener: However, food security is also an issue in an uncertain global market, in which someone else could turn off the supply on which we have been reliant. The issue of food security cannot be ignored.

Professor Thomas: That is also true.

The Convener: John Scott will move us on to the impact of the climate change legislation.

John Scott: This is a topical issue. It is argued that cattle produce too much methane so we should eat less beef. Obviously—I declare an interest as a beef and sheep farmer—I would not want that, but I want to hear people's views about what impact global warming should have on food production. Where should the balance be struck?

At some point before we finish at 12.45, we also need to have a discussion on biofuels, so perhaps that issue can be rolled up into this discussion.

The Convener: We want to consider those issues in the context of the carbon emissions reduction targets that the UK and Scotland are signing up to. Following on in the spirit of James Withers's earlier comments, what are people's views on how those targets will impact on cattle farming, biofuels and food production?

12:30

Carey Coombs: I, too, declare an interest as a beef farmer. That said, I acknowledge that methane is a gas that is at the top of the agenda. However, the situation is much more complex. We should be looking to optimise rather than maximise cattle numbers. The knee-jerk reaction of calling for a decimation of cattle numbers would be a nonsense.

The other important gas that is attributable to farming is nitrous oxide. Farming systems must tighten up their nutrient cycles in that regard. What the water framework directive addresses and the nitrates that are emitted as a result of high nitrogen use are part of the same problem. Basically, we have a created a huge nitrogen flux and we are emitting a lot into the air. Fertilisers have a big part to play in all of this. Obviously, we know how to tighten up fertiliser usage. Given that I used to work for the Soil Association Scotland, I would suggest that organic farming has a role to play.

The Convener: So you are saying that we should look more towards the fertiliser side of things than to the capacity of a cow to produce methane.

Carey Coombs: It would be a nonsense to call for a decimation of cattle numbers. That said, methane must be looked at in the mix; we must not shy away from addressing the issue.

Michael Gibson: I have no idea about the relative flatulence of my cows. The issue is important. We need to do quite a lot of research into the definitions of the terms that we use when talking about climate change and global warming. We need to define what we mean when we say "carbon footprint" or "food miles". We need to put such terminology into everyday language. Different groups bandy about terms for different reasons—it seems almost to be done ad hoc. However, food miles, for example, are not necessarily a bad thing.

In terms of food policy, we have to look more at whether we have the best fit for our farming. For example, should we concentrate on ensuring that all the cows are up in the hills grazing on the rougher pastures and that they are the right cattle for those pastures? Also, should our grade 1 agricultural land be used only for growing vegetables, soft fruits and other highly productive foodstuffs? Price will drive that: farmers are not daft, so they will move to adopt those practices.

On fertilisers, price will drive change faster than anything else will do. Current prices mean that an awful lot of our upland grassland is unsustainable economically. Farmers will increasingly have to look at using clover as a fertiliser and at other alternative mechanisms.

The Convener: Has the NFUS considered the impact of the proposed climate change bill on agriculture?

James Withers: As Carey Coombs pointed out, we could effect an 80 per cent reduction in livestock emissions simply by getting rid our cattle. However, we probably do not want the knock-on impacts of doing that. I return to the issue of measuring food production impact.

The debate on climate change seems to be focused on attempts to quantify and cut emissions without looking at the other side of the debate. We need also to ask to what extent agricultural practice is acting as a carbon absorption mechanism. In other words, is agricultural practice taking greenhouses gases out of the atmosphere? We also need to make comparisons between systems in this country and those elsewhere in the world.

The nitrous oxide in fertilisers is a greenhouse gas that is 310 times more harmful than carbon dioxide is. Our agricultural system is based mostly on extensive natural, organic with a small "o" systems that have a much better environmental track record than is the case in other parts of the world from which we may have to import more food if we do not protect capacity in this country.

We need to consider both sides of the debate. Some work has been done to look at beef production in Scotland, the initial results of which suggest that beef farming might be a carbon-neutral activity. That finding probably sounds bizarre when viewed from the standpoint of the debate thus far on methane output. We need a rounded debate that considers the greenhouse gas that farming is absorbing as well as that which it may be pumping out.

The Convener: So the debate thus far has been only on the negative outcomes and not on some of the positives.

Dr Smyth: Earlier, we discussed the issue of research and development. In meeting climate change targets, we should consider R and D. There are ways in which we can reduce methane emissions, for example by housing livestock and giving them foodstuffs that reduce emissions. However, the wider public might pose questions about that, and public perceptions of quality might be affected. Quality and the way in which we deal with our livestock have to be taken into account.

Professor Thomas: The 80 per cent target is hugely challenging for every sector, including agriculture. The good news for agriculture is that many of the things that we would do in order to reach or approach the target are also financially beneficial. The economics and the doing of the job often go together. I will give a simple example to do with methane. Any process that speeds up or intensifies the production of livestock or milk, making it more efficient, also reduces the amount of methane that is produced per unit of food produced. The equation is very simple. The things that are more efficient economically are also more efficient in terms of reducing the production of methane. That is the plus in the equation.

The Convener: What about biofuel production and its impact?

James Withers: I do not think that vast swathes of Scotland will be growing crops for fuel rather than food. The biofuel debate has become polarised. Last year, biofuels were saving the world; this year, they are the end of the world.

Some biofuel developments in Scotland are almost unquestionably a win-win—when we are using waste and turning it from a costly by-product into a beneficial product with an economic and environmental value. For example, growing oil-seed rape, using it to make vegetable oil to cook food, and then—instead of disposing of the oil at the end of its usefulness for cooking—channelling it into biodiesel, seems like a great story. Similarly on the livestock side, animal fat—tallow—has been a costly waste product for a while. However, as long as the regulatory framework allows us to do it, we will be able to process the fat into biodiesel. That is happening at the Argent Energy plant in Motherwell just now.

The biofuel debate is more complicated than the polarised view would suggest. There are some wins in Scotland at the moment and we should try to invest in them. Government money for processing, marketing or grant schemes can help such developments, turning costly waste into valuable product.

The Convener: We have only eight minutes left. We will have another debate this afternoon with another panel of witnesses, some of whom will be interested in global issues, but are there any significant issues that we have not discussed this morning?

Carey Coombs: I would just like to point out that regulation can be different from bureaucracy. Regulation is not necessarily a bad thing, but bureaucracy can be a pain in the arse.

The Convener: Did the official reporters get that? [*Laughter.*]

Carey Coombs: Another point relates to food sovereignty—mentioned by another speaker—which concerns where power, capital and influence lie in the food system. It would be worth while having a debate on that in the Scottish context, taking supermarkets, multinationals, food democracy and food justice into account. It is a big subject.

Sally Crystal: I could not agree more with what Carey Coombs said about regulation. We have to look into that.

Michael Gibson: This debate is broad, and we have to keep track of the fact that it involves the whole of Scottish food production and not just terrestrial food production. We must also remember that the food debate is part of the health debate.

The Convener: We have been talking a lot about land use strategy, which must have been frustrating for you, but a marine bill is coming up. Would you say that the marine bill has the potential to be as important for food production as any land use strategy?

Michael Gibson: Yes, but the important thing is to tie them together. Government must be able to bring together the health debate, the marine debate, the terrestrial debate and the economic debate, and then try to come up with a way of satisfying the whole lot.

Dr Smyth: It is important to educate the general public about where food comes from and the benefits of local food and so on.

James Withers: I was going to mention education, but I will not do so now. Two aspects that might seem small compared with the big structural things that we have talked about but which could send an important message are public procurement and labelling. Buildings such as this one should be standard bearers for public procurement of local food, but they are not, so we need to address that. For a variety of reasons, the saltire is appearing on many things at the moment, not least in supermarket aisles, but it means nothing as far as food provenance goes. We need to consider how we can develop our brand and produce to the best possible standards. If we lose control of the brand at retail level, it is gone. Unless the saltire-type labelling means something for the food, we will lose a lot of our good work.

Professor Thomas: I would emphasise the point that has just been made. The saltire as a brand has been very important in terms of Scotch quality beef, for example. The other issue that was raised, which Michael Gibson just touched on, is marine development. We have tremendous potential in Scotland for further development of aquaculture in conventional fin fish farming and in shellfish and so on. The marine bill and everything associated with it is crucial. At the moment, the framework of regulation that we have in place is, in effect, driving the industry elsewhere. It is genuinely a barrier, compared with the situation in many of our competitor countries. We must have regulation, but it has to be fit for purpose.

The Convener: A consultation on the marine bill is on-going. The bill will almost certainly come to the committee at some point. I am glad that we touched on procurement, because I am happy to tell you that all the berries that we have been eating this morning are Scottish grown, as is the lunch that is now available outside for those who want to stay to eat. We cracked the whip and ensured that Sodexho provided us with food that is locally sourced. I hope that you enjoy it. I thank all the witnesses for coming. We have had a really good time. We cannot cover every issue in one go but, from our point of view, the morning has been a fantastic exploratory session. I thank all the people from the Scottish Parliament information centre who produced the papers and the various staff who have had to do the work. They will continue to be with us this afternoon.

12:42

Meeting suspended.

13:45

On resuming—

Interests

The Convener: I welcome the new witnesses to the afternoon session. I understand that some people from the morning session are staying on to listen in.

Before we press on with food policy, I ask new committee member Liam McArthur, who replaces his colleague Mike Rumbles as the Liberal Democrat member on the committee, whether he has any interests to declare.

Liam McArthur (Orkney) (LD): I have nothing to declare, convener.

Food Policy

13:46

The Convener: I ask again that all mobile phones, pagers and so on be switched off or, at least, be put in flight mode. They interfere with the sound system even when they accept things when they are on vibrate or silent, so I am afraid that that is not an option. Thank you for switching them off.

The plan is to finish this session around 3.40, so we have quite a lot of time. Obviously, if the whole thing dries up and everybody is struck dumb earlier, we will finish earlier. However, that is the available envelope, so nobody needs to feel under an enormous amount of pressure.

I invite each witness to say who they are, why they are here, what they represent and to flag up one aspect that they want us to take away from today.

Dr Peter Bowbrick: Good afternoon. I have worked on food policy in 20 to 30 countries around the world with people in organisations such as the United Nations, the World Bank and the European Community. What I want members to take away is the fact that one of the official publications that I have seen on food policy in Scotland ranks with the worst document on food policy that I have seen anywhere in the world. I appeal to the committee to get in a world-class team of food policy experts to do the job effectively. Before you ask, I am not looking for a job, but I will happily advise on how to recruit such people.

Adam Harrison (WWF Scotland): I am the food and agricultural policy officer for WWF Scotland, which is part of a global environmental organisation. The key message for us is that the biggest challenge and the biggest threat to long-term food security in Scotland is the sustainability of the food that Scotland produces and consumes, not least in terms of climate change. Food is a good example of why the proposed climate change bill needs to measure not just CO_2 but a range of greenhouse gases, and to address not only the problem of emissions from our food production but the problem of consumption emissions from our consumption of food. As we heard this morning, we import a large amount of food, so what we do in Scotland is not the whole picture in terms of climate and food.

Hugh Raven (Soil Association Scotland): I am the director of the Soil Association Scotland, which is the devolved office of the Soil Association, the UK body that focuses on sustainable food and farming. We are perhaps especially known for our concentration on organic food, but we are interested in all sustainable food and regard

organic food and farming as exemplars of, but not the only answer to, sustainability in our food supplies. If I had one point to make, it would be to ask you, please, not to be seduced by technological resolutions or technofixes—I refer in particular to biofuels and genetically modified organisms.

Dr Alan Renwick (Scottish Agricultural College): I am head of the land economy and environment research group in the Scottish Agricultural College. The one thing that we want to put forward is the need for sustainable farming systems in Scotland that allow farmers to be technically efficient while protecting our environment and enhancing our rural economies.

Judith Robertson (Oxfam Scotland): Good afternoon. I am the head of Oxfam Scotland. My understanding is that I was invited to bring an international perspective to the discussion. There is no doubt that food security is not an issue just for Scotland, but is a global issue. For the many hundreds of thousands of people with whom we work around the world, food security and rising food prices are not simply about long-term sustainability—they are matters of life and death.

The perspective that I would like the committee to take away from the meeting is to do with the fact that we are intrinsically linked in a global food system. There are some key issues that impact on the poorest people in the world; those people will be my focus as we consider food security globally. The biggest gap in funding is a 20-year lack of investment in agriculture, particularly in rural small-scale agriculture, which is making many countries in the world desperately food-insecure.

Professor Bill Slee (Macaulay Institute): I am from the Macaulay Institute in Aberdeen, which is the main research provider to the Scottish Government. I have worked in food and rural development issues for many years.

My key question is how the committee can better support the development of an economically vibrant but environmentally sustainable agri-food complex in Scotland.

Andrew Fairlie: I am a chef and restaurateur. I have a business at Gleneagles hotel. I represent the fun aspect of food—food as pleasure. I would like the committee's work to result in better collaboration between food producers, hotels, restaurants, businesses and local authorities.

The Convener: That is useful. It is interesting that we have witnesses from a number of different areas, some of which might counterpoint others.

John Scott: Thank you all for coming. As with the previous panel, we will begin by discussing the impact of local food on the Scottish food scene. As Oxfam's representative, Judith Robertson might not wish to comment, but she should feel free to comment on any issues that arise. I appreciate that we are not talking about the international dimension of local food, but the marketing and provenance of such food, and its importance or otherwise in a world that grows hungrier daily. The Oxfam perspective might be that rather than worry about the quality of food that is available, we should worry about whether food will be available at all. I am interested to hear everyone's views.

The Convener: We face a challenge in that if we choose local food over food from elsewhere, that will have an impact internationally. In choosing local food, will we be doing the right thing? Who would like to kick off? Hugh Raven raised his eyebrows. I warn witnesses that the meeting will be a bit like an auction—if you waggle your pen, raise an eyebrow or look askance, I am liable to pounce on you. If you do not want to be drawn into the discussion, you must sit very still.

Hugh Raven: I welcome the opportunity to comment on local food, which we in the Soil Association are keen to promote. I will make some cautionary suggestions in response to Mr Scott.

Although local food has a great deal to offer—I will elaborate on that theme shortly—it is useful to draw into the conversation the term "food miles", which has a great deal of resonance these days. The term is particularly close to my heart, given that I claim—but get no credit for—co-authorship of it. The man whom the etymological dictionaries credit with having invented it is Tim Lang, but I worked with him as his right-hard person when he devised it and edited the first food miles report.

Food that is low in food miles has—wrongly, in my view—become a proxy for sustainable food. The concept of food miles is extremely effective as a way of sensitising public opinion to the issues of food transportation and the potential benefits of local food, but it is misleading to regard it as the next best thing to, or an equivalent of, sustainable food, for reasons on which I am sure Judith Robertson could elaborate more effectively than I can.

Reducing food miles does not always mean increasing sustainable food, and locally produced food can sometimes be extremely damaging. One of the leading advocates of local food in the district in which I live—Lochaber—is in fact a highly intensive battery chicken producer, about whose production there is nothing sustainable whatsoever. Nonetheless, it is local to the people in that area.

I have a couple of other quick comments. There are strong benefits from supporting a local food economy. The capacity to produce a variety of crops in as many areas of Scotland as possible—by maintaining a local food economy, the diversity

of production and agricultural land in a condition such that it can be turned to a variety of production systems—is helpful from the point of view of both food security and sustainable development.

There is also a strong educational element in local food of allowing the producer and consumer to be as close together in the supply chain as possible. In other words, there can be direct feedback from the consumer about the food attributes that they want, which will enable a much better understanding among producers of how they can add value and address local needs. There are educational and sustainable development benefits through reducing transport and retaining agricultural land in a condition that is fit to supply local markets.

Dr Bowbrick: Several points came out strongly this morning. Food production is 75 per cent fossil fuels—in the form of fertiliser and fuel—and the price of fossil fuels has shot up. At the same time, we are struck by global warming and are feeding a massive world population. Those are the fundamental problems that we will face in the next five to 10 years. All the world markets that we have been used to will cease to apply, and all the production functions and the costs of production of various crops will cease to apply. We must tackle that situation—doing so will solve the problems.

The Convener: One problem is that the Scottish Parliament does not have the capacity to tackle the cost of a barrel of oil. We can discuss the tools that are available to us.

I will ask Bill Slee to speak. Then I want to challenge Andrew Fairlie about how easy he finds it to source food locally or, if he does not source local food, why not.

Professor Slee: Local food is an important strand in the development of Scottish food policy, although I would tend to use the word "regional" rather than local. In other words, we may want to think in terms of Grampian and the Highlands, rather than—

The Convener: I think that by local we have generally meant Scotland-wide.

Professor Slee: My point is that local can be thought of on different scales.

In general, a stronger local food sector is good for rural development. It is particularly good when it can connect to tourism, which is the biggest industry in many parts of rural Scotland. Andrew Fairlie can comment on that.

Hugh Raven's point about reconnecting producers and consumers is important for the local food sector in building understanding, and it is good for sustainability. The point about road miles is well taken: having few road miles on intensively heated Scottish tomatoes is not necessarily good for sustainability.

We must recognise that the local food sector will be quite small, especially in Orkney, Caithness, Dumfries and Galloway and Grampian, so the export market for high-quality Scottish food will be vital to the overall wellbeing of the rural sector. Therefore, we should support the local food sector and nurture its growth, but we should not regard it as the answer to rural development problems. The mainstream food sector will also be very important.

The Convener: Okay. Andrew Fairlie?

14:00

Andrew Fairlie: What do you want to know? I source locally as much as I can, although doing so is much more difficult than it would seem. Food from within a 30-mile radius is regarded as local, but given the level of restaurant that I run, to me as a chef local produce means Scottish produce. It is not possible to sustain my restaurant using only produce that is available in and around Perthshire. My job is to source the best ingredients I can get. Nine times out of 10 they are Scottish, but there are certain things that we cannot source in Scotland—poultry, for one, is pretty grim.

The Convener: Is that because the kind of poultry that you want to source is not available? Obviously, there is any amount of battery farming going on in Scotland, but that is not what you are interested in.

Andrew Fairlie: That is right. What is hugely important to me as a chef is the quality of the produce, its sustainability and so on: we look for a range of things in a product. I have not found a supplier here who can give us the quality of poultry that I can buy in France.

Bill Wilson (West of Scotland) (SNP): You said that sustainability is one of the issues that you take on board. How does your restaurant measure sustainability?

Andrew Fairlie: How do we measure sustainability?

Bill Wilson: Yes. If you account for sustainability in the produce you buy, how do you measure that and decide whether, from the restaurant's perspective, products are more or less sustainable?

Andrew Fairlie: An example, from the restaurant perspective, is that I will not buy dredged scallops—I buy only hand-dived scallops. We pay a lot more for them and we have to pass on the cost, but I will not accept dredged scallops. We do not buy a number of goods because

ethically they are not good. We try as much as we can to be sustainable.

Judith Robertson: Adam Harrison and I talked about the issue prior to the meeting. As one might expect, I would like to give perhaps not an alternative side to the argument on food miles but to say that one of the key issues around food miles is that consumption patterns in Scotland's economy would have a global impact if we stopped importing certain foods that are produced in developing countries. Although we acknowledge the carbon-emissions impact of transporting food long distances, there is sometimes a miscalculation in respect of emissions around whether it is more effective to transport it and produce it elsewhere. Inevitably, I will raise the issue of the impact on developing countries' economies of curtailing those productive sources and stopping those exports. That does not mean to say that Oxfam or I would say that we should continue to carry on exporting food in those programmes.

Consideration of only food as the primary issue will lead to a certain conclusion, but if you look at the structure of economies and the way in which food systems integrate with economic systems globally, there is a slightly different story. Developing countries are forced into a position in which exporting primary commodities is their principal source of foreign income, which is not sustainable on a national economic level. Our intention and hope would be that developed countries' policies would take into account their impact on developing countries, not in order to exclude change but to ensure that change processes are fair and equitable, do not cause more poverty, do not put people further into vulnerable situations but support them to get out of them, and do not build into economic structures and trade policies barriers, tariffs and so on that inhibit the potential for developing countries to get out of the poverty traps in which they find themselves.

Adam Harrison: I agree with many of the other witnesses that there are good cultural, economic and social reasons to support local food, but I also agree with Hugh Raven that the environmental reason to do so is not always so clear. Half the greenhouse gas emissions from food come from the primary production process—the farming side. In all but a few cases, the emissions that are due to transport are a small part of the total.

The key is to examine the whole production cycle and work out where the emissions are. An interesting way to look at the issue is to think about striving for seasonality rather than locality. Wherever it happens in the world, the production of fruit and vegetables out of season will be expensive to the climate; it does not make sense to produce them out of season. I would be interested to explore where the balance of responsibility lies between retailers and consumers on that. On one side, the retailers will say that they make out-of-season strawberries available because the customer wants them, but the customer also goes into the shop and buys them because they are available. We need to try to crack that egg and work out how we can move back to thinking much more sustainably and holistically about the food that people consume.

The Convener: That is quite a challenge against the backdrop of rising food prices. For many people who are trying to feed a family week to week, the most important thing is the price of the food on the shelf, not where it comes from or how it was produced. We would be fooling ourselves if we did not accept that that was the reality in most food purchasing. What impact does what you are talking about have on that?

Adam Harrison: One reason why there is so much relatively cheap food on the shelves is that the real costs are not accounted for in the price the consumer pays. I am talking about the climate impacts, the water pollution impacts and the fact that horticulture—

The Convener: So you think that food should be even more expensive.

Adam Harrison: There are many arguments to say that we ought to reflect the real cost of our food—the real cost of our consumption—in what we spend on it.

The Convener: Should that happen even if people go hungry?

Adam Harrison: It is not a matter of people going hungry, but of society as a whole accounting for the costs.

Dr Bowbrick: People will be hungry anyway and millions of them will die.

Judith Robertson: They are already dying.

The Convener: People are not yet dying in the streets of Edinburgh or Glasgow for want of food.

Dr Bowbrick: The convener made the point that the Scottish Parliament cannot do much about the world oil price, but we must know what impact it will have on Scottish agriculture. It will affect what crops every farmer chooses to produce, so it will affect everybody, but we do not know what is happening. Is Bill Slee getting 30 per cent of his research budget to examine the effects of global warming?

Professor Slee: Climate change is a major cross-cutting theme across all the research in our research programme, which is shared with the Scottish Agricultural College and other organisations. We have invested significantly in

that work and are investing more all the time in work by researchers from environmental psychologists through to crop scientists, so we are taking a broad-ranging look at climate change.

In general, the evidence is that eastern Scotland in particular will probably have enhanced growing conditions, although it will perhaps also have a longer soil-moisture deficit in the summer. Although many other parts of the world could suffer more adverse responses to climate change, eastern Scotland might be relatively advantaged. Western Scotland could have wetter summers and wetter winters. For those of you who are from or represent the west, that is hard luck but, in Alford in Aberdeenshire, I will be relatively okay.

There is continuing research, and I believe that more effort will be expended in the future, with the Government in Scotland investing in that research.

Dr Bowbrick: Do you have as much money as you feel you need?

The Convener: Regardless of what policy area one is in, the answer to that question is always no—nobody ever has enough money for what they want to do, so we will take it that Professor Slee would like more money.

Professor Slee: Yes. However, at the margins, we are investing a lot more research time in that topic. I am sure that my SAC colleagues would say the same. We consider it to be a priority.

The Convener: You might have heard James Withers from the NFUS say, in a startling departure from the norm—for which I commend him—that it is more about spending the money in a better and more targeted way than it is about getting more money. Are there areas where better targeted spending might be an issue?

Professor Slee: That issue always exists. There are always path dependencies. There is a history of where we have come from in the research that we have done, and emergent issues need more resources, so of course the issue applies—

The Convener: From your perspective, what are the key research areas? Peter Bowbrick believes that the impact of climate change is key.

Dr Bowbrick: Fuel is also key.

Professor Slee: The most important thing is for Scotland to have a competitive agri-food system and to maintain it sustainably into the future.

The Convener: Can you expand on that? It is not clear to me.

Professor Slee: If we look back over our shoulders at the past 10 years of Scottish agricultural performance, farm incomes have been desperately compromised. A number of major crises were wrought as a result of BSE and foot and mouth disease, which dramatically interrupted trade in livestock. Arable farmers' incomes were also desperately low three or four years ago. In the past 18 months, there has been a turnaround in fortunes, but it is not complete and it has not happened throughout the industry. The average age of farmers is increasing because many young people do not want to enter the industry.

We could say that the industry has been hanging on by its fingernails, but it is looking forward to slightly better times as a result of increased global demand, biofuels and other factors that are fairly well documented. However, there are still some major issues of sustainability in Scottish agriculture, such as the need for small abattoirs to support local development. There are also issues of overcapacity in the abattoir sector overall. A number of issues in the agri-food complex need to be addressed.

There is a desperate need for a dynamic and responsive industry throughout the food supply chain that can deliver to local and regional development and deliver competitively into export markets, which will largely remain open. In global political discourse, there is a move towards freer trade. We live within that framework, and Scotland needs to be competitive within it.

The Convener: You said that there is overcapacity in abattoirs as well as a need for more small abattoirs. Will you expand on that? If there is overcapacity, what is the problem?

Professor Slee: The large-scale meat processing sector deals predominantly with export from regions. There is an issue in island economies, where livestock must be transported long distances and then returned. Mull has a small co-operatively owned abattoir and Islay has just developed one. They are important because people are trying to develop the local sectors, and they are important for animal welfare reasons. However, because of regulation and costs, they tend not to be competitive. Because Orkney is larger, it has a larger and more competitive abattoir that can compete more widely and effectively.

Peter Peacock: Bill Slee picked up on some of the points that I was going to raise, but I return to the barriers to supply of local food. You mentioned abattoirs, about which we heard this morning. Before we came into the room, Andrew Fairlie was talking about getting access to lobsters and so on, and in his opening remarks he mentioned better connections between restaurants and suppliers. What are the impediments to that? What is the dynamic that is not working? Are there other obvious barriers to the market for local food? As Bill Slee said, the context is that local food markets are a part of Scotland's future.

The Convener: Are you bouncing the question back to Andrew Fairlie, Bill Slee or both?

Peter Peacock: It is for both, and for the others.

Andrew Fairlie: Education is an important factor. Farmers now realise that they have to work in a different way. One barrier that prevents me from buying local produce is that, when I try to deal directly with farmers, they have no concept of how my business operates. On the other side, chefs have no concept of how agriculture operates. For us to work together, we need joined-up thinking in the middle. Chefs need to understand the farming side and farmers need to understand our side.

14:15

On a number of occasions, local producers have contacted me to say that they have, for example, some fantastic pork. When they bring it in, we taste it and find that it is fantastic. I commit myself to putting it on the menu for a month, but two weeks later the producer tells me that there is no more of it. The guy is trying to develop a business, but he has no concept of my needs. Gradually, my part of the industry and farming are beginning to understand how each other's businesses work. Lack of such understanding is a huge barrier. We need something in the middle that will enable us to work together more collaboratively.

Peter Peacock: Do you know what that might be? God forbid, but is it a role for Government? Is it a role for the NFU or for colleges? If your experience is common to others, that is a problem. Whose job is it to facilitate relations between farmers and chefs?

Andrew Fairlie: My experience is common to everyone in the sector. I talk to chefs every day, and all of them have the same problem. I do not know whose job it is to facilitate relations between the two groups. One approach is to form co-operatives. When I talk to chefs in France, they tell me that local procurement is not an issue there, because they have co-operatives in which people work together and service one another. We do not have that system here. There are a couple of schemes. In Arran, for example, a group of suppliers, growers and farmers have got together to organise distribution. It is much easier for me to buy certain things from Arran than to buy them a couple of miles down the road in Perth.

John Scott: Food networks might be a solution.

The Convener: It is curious that procurement issues, which are a big obstacle here, do not appear to be a challenge in France, despite the fact that, presumably, people there operate within the same regulatory framework that we do.

Andrew Fairlie: Perhaps they do not adhere to the rules.

The Convener: Do we think that that is the reason?

Andrew Fairlie: I do not know.

Dr Renwick: I return to the earlier question about whether and where there should be more investment in science. I do not say that there should be more investment, but climate change and other issues are making the questions more complex. Our Scottish science base has been very component based in its development. We have a world-class crop research institute and a world-class animal research institute, but we have probably not invested in looking at integrated agricultural systems or in research that brings together social scientists and crop and animal scientists so that we can answer the more complex, difficult questions that are emerging now. We must focus on that area in the future.

Alasdair Morgan: Bill Slee said that we need competitive agriculture. Presumably he did not mean competitive in the sense that the industry understands the term—competitive without subsidy. I suspect that the Oxfams of this world would say that, although the World Trade Organization has had some success in opening up agriculture, the third world thinks that it is getting stuffed, because it is being opened up to our produce at the same time as we, the rest of Europe and the Yanks continue to subsidise our agriculture.

Professor Slee: In the short term, European agriculture cannot be competitive without the single farm payment. We will continue to have a common agricultural policy of sorts until 2013. I am sure that members are aware that the Westminster Government is keen for pillar 1 to be dismantled. If we look at the performance figures for the past decade, it is almost inconceivable that Scottish agriculture could have survived without either production subsidy or the single farm payment that is now available. Scottish agriculture needs to be able to perform alongside the most efficient agriculture in Europe, but there will continue to be a subsidy component. It would be almost impossible for us to unhitch from that in the short term, although people such as Tangermann have talked about degressive support to the farm sector and that appears to be part of European thinking. However, that might require much stronger support of pillar 2-type payments, some of which could support a much stronger development of, for example, the local food sector—the rural development plan, in other words.

Liam McArthur: I want to pick up on Bill Slee's comments about abattoirs. He might not be aware

that although Orkney's abattoir is bigger than the ones in Islay and Mull, the throughput is still such that waste is dealt with only once a week and there are serious problems with on-transport, which makes the business potentially unviable. That raises questions about the regulatory framework, in relation not just to dead stock but to livestock. The European Commission has issued a consultation on further restrictions on the transportation of live animals, despite there being no body of evidence that things have changed in the couple of years since the rules were set.

When we discuss high-quality sustainable management of not just livestock but resources in general, I question whether we are blurring the signals, given the feedback that we get from consumers, who continue to buy on the basis of price. What can we do to improve the situation, rather than simply drive through a regulatory environment that is not reflected in the retail sector, with its two-for-one offers, supersizing and unseasonal food? Andrew Fairlie talked about consumption patterns. We have not got things right. We are perhaps quick to legislate without taking a broad view of the benefit that will arise from the legislation and the consumption patterns that will support it.

Adam Harrison: A simple thing that the Government could do to help the situation would be to deliver the guidance on sustainable procurement that it has been promising to produce for two or three years and for which we have been waiting since the Schools (Health Promotion and Nutrition) (Scotland) Act 2007 was passed. There are endless reports on how good sustainable procurement can be for local economies and, potentially, for the environment. However, without the guidance and the effort that would be made if guidance were issued, sustainable procurement will not happen. It would be valuable to have clear guidance that we should use the full-life-cycle environmental impact as well as the social and economic impacts of the £85 million a year that taxpayers in this country spend on the public procurement of food to do some good. The Government could achieve results relatively easily.

Dr Bowbrick: Probably the first question that I ask when I go to a country to do a food policy analysis is about the exchange rate. If a country is running an overvalued currency it is, in effect, taxing its farmers' exports and subsidising imports. For much of the past 30 years we have run an overvalued currency, because it happened to suit the City of London. That is affecting the viability of Scottish and English agriculture. Recent changes in currency and the devaluation—in effect—of the United States dollar have changed markets throughout the world. Being efficient is not a technical matter; it is about who is most efficient given the exchange rates.

I am worried about the wide range of issues that were discussed during the meeting this morning. We must start by considering the basics: have we got enough food for this year, next year and the year after that? Have we got a system? When we have an interlocked system we can start adding to it. The discussion paper "Choosing the Right Ingredients: The Future for Food in Scotland" raised 80 or 100 issues to do with food policy, but we cannot deal with so many issues. If the Government makes 80 different policies on 80 different strands, the policies will clash with one another and prevent one another from working, and we will end up with a food policy that has no effect or whose effect is the exact opposite of what it should be, as I have witnessed quite often. The issue for the committee is to try to cut down the number of issues that it considers to a maximum of about 10.

The Convener: Ten would be way more than we could manage. We have to cut it down considerably. Today's exercise will help us to zero in on some of the key areas.

Dr Renwick: I want to return briefly to the issue of competitive agriculture. It is clear from the make-up of farm income that the majority of farms could not survive without the single farm payment in its current form. We have to be careful about how we think about this issue. As long as the single farm payment exists, there is no incentive for farmers to wean themselves off it and to become more efficient. Initiatives such as the profit without subsidies approach try to get farmers into the mindset that they should put the payment to one side and consider how to make their business profitable. We all need support for a while, and there might be an argument under Tangerman for a digressive system to allow people to move away from it, but we need to be in the mindset that we need agriculture that is profitable without support. How we get there is the challenge. It will take time, but we need to get into that mindset, rather than think that we need to keep the single farm payment to maintain agriculture.

John Scott: I am a farmer, so I declare an interest in all this. The reality in Scotland and elsewhere in the world is that the supermarkets understand and know every farmer's costs for every commodity in the world, whether grapes in South Africa, avocados, or lamb on the west coast of Scotland. I see an underclass of farmer developing—men and women who are never out of overalls seven days a week. They experience subsistence living, which is no different in sub-Saharan Africa or the west of Scotland—it just comes down to an accident of birth. Until farmers worldwide are given a fair return from the marketplace—which they are not getting at the moment—they cannot live without support, as you suggest.

Dr Renwick: There is an issue here. A classic example comes from our own farm in the south of England. We grew seed peas for Birds Eye, for which we were given a price per tonne. However, as soon as the area payment was introduced in 1992, Birds Eye immediately reduced the price because it realised that we were getting an area payment as well. As you say, because the supermarkets understand the system, they adapt what they pay on the basis of the policy. If the policy did not exist, they would not be able to do that.

John Scott: It is a matter for policy makers and Government to ensure that, if a proper and genuine free market exists, it is somehow regulated.

The Convener: How do you have a proper free market that is somehow regulated?

Judith Robertson: There is a pot of issues around the global dynamic of trade. I sometimes wonder who the subsidies are subsidising and whether they are, in fact, subsidising the retail industry—farmers receive the subsidy, but it is passed on to the retail industry to generate massive profit. Tracking the degree of impact in relation to the spending power of the retailer, farmer or others in the supply chain reveals a huge amount about who is winning and who is losing in the process. The situation is the same globally. We talked about the impact of subsidies on farmers in Scotland. The impact on developing countries of subsidies for farmers in Scotland is also massive, because farmers in developing countries do not access the subsidies and they cannot compete with massively subsidised farmers in the global market.

Although the British Government's rhetoric in relation to trade justice and free trade rules is positive in support of developing countries, the deals that are being negotiated by the EU through the economic partnership agreements are far from fair—they are biased towards the interests of the private sector in the north. They are not going to benefit poor farmers in the south. They are not even going to benefit the national economies of southern countries. Those deals, which have the interests of rich, consuming nations at their heart, are being negotiated consistently, as we speak. Any interests in relation to the environmental impact of the whole deal are absolutely off the table. We need a reality check about what is really happening in the trade agreement negotiations. It is difficult for developing countries to challenge those because—we talk about this issue endlessly—they lack any power over markets. That has an inequitable impact on women and poor farmers across the world.

14:30

Hugh Raven: Going back to the issue of local food—I apologise for taking us back three quarters of an hour—I want to comment on an interesting point that was made earlier but which was not explored further, about the barriers to developing a stronger local food economy. Andrew Fairlie mentioned that Scottish farmers are not very good at coming together in co-operatives. Bill Slee said that the local food economy will always remain relatively small but will, nonetheless, play a more significant part than it does at the moment. I agree with both of those comments.

There is no doubt that Scottish farmers seem particularly ill-equipped to co-operate. If there is a single cause for the difference between the local food economy in Scotland and that of continental countries such as France, it is the Scots' apparent inability to co-operate with each other. There are innumerable examples of farmer and grower co-operatives being set up in Scotland and elsewhere in the UK but not working. Farmers need greater encouragement to co–operate, to ensure security and continuity of supply—

The Convener: There is an historical bias against consensus in our culture.

Hugh Raven: That is an interesting cultural comment, on which I will not elaborate right now, but that point may be something to do with why we have such highly individualistic farmers in this country. That individualism is not replicated elsewhere, so that might account for part of the problem. In fairness to the Scottish Government, a lot is being done to encourage co-operation through the new co-operation scheme under the Scottish rural development programme, but it is too early to tell whether it will succeed.

However, there are other ways for producers to co-operate even if they are not part of a co-operative. In some areas, people have developed so-called food sheds—Professor Slee's submission uses the term "foodshed" in a topographical manner, analogous to that of "watershed", whereas I am talking simply about a warehouse—where they can aggregate their products in a way that ensures that local buyers have a sufficient diversity of supply to meet their needs. In other words, a food shed is simply a local hub. Such co-operation is happening, although not quite as much in Scotland as elsewhere in the UK, where it has been pioneered by the local food movement.

Another way of improving links is through farmers markets, as the committee heard earlier when it heard from the Scottish Association of Farmers Markets. The deputy convener knows a bit about this subject. Street markets are also important. Why is it that our street markets in

Scotland have been in decline for so long? Why do we not invest in our wholesale market facilities, which are commonplace in every French and Italian town? We have not invested in the wholesale markets that supply street markets because we have relied on the supermarkets to provide for our food needs. We need more local markets and more community-supported agriculture. That is another model that would allow better links between producers and consumers.

Let me mention just two other points. We have already heard about processing facilities and abattoirs. It was good to hear positive references to the local abattoir on Mull, but such facilities should be available in other places, too. We need not just local abattoirs but local bottling plants and packing plants. Local facilities should be available across the food chain—not just for meat but for eggs, dairy, vegetables and fruit. In addition, if we have all those bits in place, we still need to ensure that the basis of local markets is guaranteed through public procurement. In other words, we need to ensure that we do the things that Adam Harrison mentioned earlier, as exemplified by East Ayrshire Council, which buys local unprocessed organic food for its school meals. If those four components are put together, the barriers to local food are removed. That could make a big difference to the scale of the local food economy in Scotland.

Professor Slee: I want to return to the point about there being 80 issues in "Choosing the Right Ingredients". The issues need to be narrowed down significantly, but food occupies a fairly unique place in policy. We can probably get down to five main important policy areas. One is food safety. There has sometimes been concern about almost overzealous food safety regulation—we will all be familiar with the Lanark blue saga, which perhaps shows overregulation in the system.

Another issue that we have not touched on but which is important in Scotland is food and health. There is a clear and important connection between diet and coronary heart disease. That is a huge issue that cannot be ignored in considering food policy in Scotland. We should compare Scotland, which is the sick man of Europe in terms of coronary heart disease, with Finland and how it addressed a similar situation there. Important public policy lessons from that need to be addressed.

We have touched more on food production and the environment, which is another area in which policy is important. The fourth issue is to do with fair and competitive practices. That includes international dimensions, which Judith Robertson of Oxfam talked about, and the issues of corporate power in the food supply chain and the need for effective regulation of that power. The final issue, which has also only been touched on, is how food policy in a broad sense connects to rural development. The SRDP connects partially to food policy, but it remains to be seen whether there are enough elements in the policy to dynamise and develop the local food sector.

The Convener: I want to raise a potential obstacle that was mentioned this morning but which nobody has touched on this afternoon. Hugh Raven described the coherent picture that is needed, but he did not mention the skills capacity to do some of the things that he mentioned. I guess that that applies to some of Bill Slee's comments, too. We just skip over the ability to establish the necessary skills to do what we want to do. Does anybody have a comment on that?

Professor Slee: Some of the most alarming data in "A Forward Strategy for Scottish Agriculture: Next Steps" and the various reviews of agricultural strategy in Scotland are on the difference in performance between the top third and the bottom third of farmers. There is a skills gap.

The Convener: The issue is not only about farmers.

Professor Slee: No—I am using that as an example. The top third of Scottish farmers perform reasonably well financially, even when times are hard, but the performance of the bottom third is absolutely appalling. That implies that there is a skills gap. I think that we would find highly differential performance in other sectors, too. Investment in human capital is important throughout the agri-food system. With new initiatives on reconnecting hotels, restaurants and ordinary consumers to local farmers who can offer direct sales, there is a lot of new learning to be done.

The Convener: So you endorse some of Andrew Fairlie's criticisms about the capacity in agriculture to pick up on what is needed. The next question is whether the research shows differences geographically. For example, does it factor in crofters, who farm part time? How nuanced is that research?

Professor Slee: A lot depends on local individuals who are prepared to invest effort and to dynamise solutions. Arran has been mentioned, and we could talk about the local food networks on Skye. Local food successes tend to involve dynamic individuals who are prepared to invest a great deal of effort in their promotion and development. I am not sure how far that should be a matter of public policy and how much it should be endogenously determined by the existence of public-spirited and dynamic individuals. I suspect that we need a balance of both, but we do not want to create long-term state subsidy for local

food—we want local food to get up and run by itself.

The Convener: In the research that you mentioned, were the poorer-performing farmers the hill farmers and crofters? Is that what is being counted?

Professor Slee: No. Some dynamic individuals on Skye responded to Shirley Spear at the Three Chimneys and are now supplying salad crops for the local food sector. In almost all the eight or 10 sectors of Scottish agriculture, variation exists right across the board. It is not a question of being small or big.

The Convener: So whichever sector we look at, there is the same third of poorer-performing farmers.

Professor Slee: It is not about small and big; it is about the economic, marketing and technical skills of the farmers.

The Convener: Alan Renwick wishes to contribute. Is it specifically on this point?

Dr Renwick: It is. We have done a lot of work at the SAC on technical efficiency. The same point is true across the board: no matter how we categorise, in the same geographical regions and on the same types of farm, we still find a wide spread of performance.

The Convener: Is that different to any other industry?

Andrew Fairlie: No. Exactly the same situation might apply to chefs, for example.

The Convener: All industries will have a top third.

Hugh Raven: Including politicians.

The Convener: Indeed. So your experience is that the same situation is mirrored in your industry.

Andrew Fairlie: Absolutely. It is all very well for us to go on about all the benefits of buying locally, good marketing and so on, but if the product is not dealt with properly, it is an absolute waste of time. There is a huge skills gap in my industry. There is an attitude of, "I don't understand it and I don't want to understand it." It is almost too easy not to cook nowadays.

The Convener: You are at the top end of your industry.

Andrew Fairlie: Yes.

The Convener: The bottom end might be the transport caff, or something.

Andrew Fairlie: It is the local pub, hotel and everything underneath. At the top end, we are very well served in Scotland. Underneath that, there is a huge skills gap in producing and providing good, fresh, locally sourced food.

Liam McArthur: We are focusing on the producer end of things, which I can understand, but, to an extent, we have glossed over the fact that, as consumers, our relationship with food is not as informed as it should be. Mention has been made of what happens in France and Spain. I dare say that it is a result of many things, but the appreciation of food and of the meaning of mealtimes among people there is significantly different compared with Scotland. In Belgium, farmers markets and other local markets did exceptionally well on Sundays, when no supermarket was allowed to open, so farmers markets ruled the roost for that day, although that was not enough to drive people's appreciation of food. What more could we do to increase awareness of what good-quality food is and to become a more demanding clientele, whether we are dining out at Gleneagles, in the local hotel or wherever?

The Convener: I am conscious that we are getting into what Peter Bowbrick might call balsamic vinegar territory. I am aware of the point—before Peter comes jumping in.

Bill Wilson: Peter Bowbrick proposed a list of 10 points, and Bill Slee has given us a list of five points. I wonder what other committee members think. Would they take the same list of five main points or would they take different points? I will remind members of Bill Slee's points, in case they have not taken them down. If I have noted them down correctly, they are: food safety regulation, food and health, food production and environment, fair and competitive practices, and food and rural development. Do other committee members have views on those five points?

The Convener: Do you mean witnesses?

Bill Wilson: Yes, I meant to say witnesses.

Dr Bowbrick: We have terms of reference consisting of half a page. You can look at them to guide your policy.

Alasdair Morgan: I was going to jump in at the balsamic vinegar stage, but I suspect that the point about quality is important. We tend to get dewy-eyed about local produce, thinking only of the tasty, good-quality produce. Equally, there is some rubbish local produce. That is where the supermarkets have scored. Their stuff is not all top quality, but people know that they get a pretty uniform product there, which is always the same. We might rail against it, but the supermarkets have been very successful. The same thing applies with beer, for example. We might effectively get keg muck, but it is of uniform quality. Real beer can be excellent, but with a bad

cellarman it can be dreadful. Anyway, I declare an interest.

John Scott: Alasdair Morgan has just described the bottom third, so to speak.

14:45

Andrew Fairlie: You perhaps underestimate how much people's knowledge and interest in food has changed dramatically even over the past five years. In the restaurant, I see that people's interest in the provenance of their food is growing all the time. I do a lot of work in schools, which is a lot easier now than it was 10 years ago, because even schoolchildren are beginning to cotton on to food issues. That is really exciting.

Dr Bowbrick made the point about balsamic vinegar. The global politics of food and how that relates to third world countries is not my area of expertise, but from a Scottish perspective and from my side of the industry, people are genuinely interested—more than they ever have been—in food, food safety and food procurement.

Liam McArthur: In that case, why do we tolerate the sandwiches that are still produced by so many British hotels, cafes and restaurants?

Andrew Fairlie: We tolerate it because that is all that is available.

The Convener: That is a whole separate inquiry.

Karen Gillon (Clydesdale) (Lab): I am interested in schools, in how we educate a new generation of children about their eating habits, and in what children want and expect when they grow up. With regard to school lunches, the debate is about quality as well as cost and availability; it is all right to provide something for nothing, but not if it is not edifying or tasty. Children will not be encouraged if vegetables are cooked for too long; there may be a skills gap in that regard. How can we as politicians—or the public sector—play a more active part in that side of things? What can we do to drive change in how our children are fed during the school day?

Adam Harrison: In answer to Bill Wilson's question about the limited—I hope—list of priorities that we ought to deal with, a review of the Scottish diet action plan produced some clear objectives. The overarching objective was not to approach the problem as a series of separate health, rural development or environment issues, but to seek to integrate them.

One of the interesting things that WWF did at the time of the work on school meals was to look at the ecological footprint of Scotland's diet, and to compare the average diet that is consumed in Scotland with Government guidance on healthy eating. That research showed something like a 20 per cent drop in the ecological footprint, which is an indicator of the environmental burden of the food. We are trying to reach a win-win situation, and we are asking whether a healthier diet can mean an environmentally sustainable diet.

Another key conclusion of the review—which was headed by Tim Lang, who was mentioned this morning—was that we need to get the business behind the food chain involved in these questions as much as Government and civil society are. He pointed out that we can talk about the issue until we are blue in the face, but until the people who provide the food on our plates are as engaged as the rest of us are, progress will be only an aspiration and not a reality. We need to think hard, as we did in tackling the smoking problem. Perhaps we have gone as far as we can do with encouraging and cajoling people, and we need to think about better regulation to effect some of those changes.

The Convener: Where does choice lie in all that?

Adam Harrison: Choice is part of education, which was the question that was asked. People need to understand the implications of their choice, with regard to their personal health, to environmental health or to societies around the world. Just as we ought to improve labelling about the sourcing of food, perhaps we ought to label with regard to other impacts of food.

John Scott: Figures from the Food and Agriculture Organization suggest that global food production will have to rise by 50 per cent by 2030, which is only 22 years away. What does the panel feel about that? What role should Scotland play in meeting an increasing global demand for food? Could we double our production? Should we be trying? What part has research to play?

Judith Robertson: I do not know whether Scotland could double its production; that is not in my area of expertise. However, clear proposals have existed for years for doubling food production globally. The proposals relate to investing in rural agriculture. A total of 80 per cent of the world's poorest people live on subsistence agriculture. They live not in cities or towns, but on the land. Globally, in the past 20 years, the amount of investment in such producers has gone down massively. The amounts that are invested now are very small and virtually insignificant. Economies could be made much more food secure, and could easily double their production, if there were proper and detailed investment in poor producers—supporting their access to markets, and sustaining their business processes.

John Scott: How would you bring that about—in sub-Saharan east Africa in particular?

Judith Robertson: I would increase aid flows. In 2005, the G8 made clear commitments at the Gleneagles hotel to increase aid flows. The promise was to deliver $50 billion annually to developing countries, but that promise is not being kept. We are currently $30 billion below target. A condition that was attached to those aid flows was that investment would be in countries' Government strategies that invested in rural agriculture and in health and education systems at local level.

Analysis has shown that climate change will impact massively on people's vulnerability. For example, if sea levels rise even by a metre, millions of people in Bangladesh will be put off their land. There will be untold poverty, and changing weather patterns are already causing such poverty. There will have to be investment in adaptation measures to combat the negative impacts of climate change, and the estimate is again $50 billion. However, that is a small amount of money when we consider what our Government has just paid to help Northern Rock out of its financial predicament, and when we consider what we are investing in the Iraq war.

The figures that I have mentioned are not the investment that the British Government might make but the investment that international Governments might make. The only thing that is preventing it is a lack of political will. Anything that the Scottish Government could do to prop up that political will in Britain would be hugely welcomed.

Dr Bowbrick: It is probably infinitely easier to double the production of sub-Saharan Africa than to double the production of Scotland. It would be relatively cheap, although there are problems of corrupt Governments, lack of research and bad price policies. In effect, those price policies are taxing small farmers out of existence. It goes back to exchange rates. We are taxing their exports, subsidising imports, and wrecking farmers' businesses.

The Convener: I will bring in Bill Slee. What will be the future capacity of agriculture in Scotland? Remembering what Michael Gibson said this morning, we must not exclude fisheries and aquaculture from our consideration of food production.

Professor Slee: Food production could and would increase in Scotland if there were significantly higher prices, but a key issue is the increased volatility of agricultural prices that has been highly evident in the past 18 months or so. We have seen significant improvements in the beef and sheep sectors, but we have seen enormous volatility in grain prices, which have come back a great deal this year.

That issue has arisen because we now operate under a much more global trading system, which will make farmers loth to invest, especially when long-term decisions are involved. For example, if a farmer wants to keep a heifer calf now to produce beef, it will be three years or so before they can produce a return on that. Given price volatility, I suspect that farmers will not respond to rising prices. The production cycle in cereals is much shorter.

One or two sectors in Scotland have an advantage. Coming back to Alan Renwick's pea example, very warm nights in Lincolnshire and other parts of eastern England in which peas are produced cause the crop to go past its ideal processing point very quickly. I talked to a pea viner in eastern Scotland who was extremely happy at the global warming effects in southern England because they advantage eastern Scotland. I suspect that eastern Scotland, the Moray firth and the whole eastern seaboard of arable land in Scotland may experience a dynamic supply response in field vegetable production. However, I am not so sure whether that benefit will extend to other parts of Scotland, which have seen, according to the recent SAC report, very large amounts of stock coming off the hills in some regions. However, there is no doubt that that stock is coming off the hills because of the current unprofitability of production.

If prices change, therefore, there will be a supply response. I do not believe that we could double output in many sectors of Scottish agriculture, but there could be a significant increase in some sectors.

John Scott: You mentioned instability in the markets. In essence, the WTO carrying on down the direction of travel in which it was going before it came to a grinding halt would be a market-driven solution for food production. If we are to consider food security, we must take the peaks and troughs—in other words, the instability—out of the market. I do not want to put words in your mouth, but how would you take the peaks and troughs out of the market to secure food for years to come in years of plenty and years of famine?

Professor Slee: I am not sure that we have a simple solution. Countries such as New Zealand used to operate with buffer stocks. We used to operate with deficiency payments, then we went into a tariff barrier, which was a variable import levy policy. Such policies protect us from year-to-year variations at the country level, but if things start to go wrong—in other words, if production continues to increase—we can end up completely bankrupting an economy. That is what happened in the early 1990s in New Zealand, when the cost of storing the buffer stock was too great for the Government to bear. Thereafter, New Zealand went on to a much more free-market policy. We may have to look to better risk management in the

farm sector so that farmers can live through volatility in prices and accept the rough with the smooth. However, that is a rather different environment from the one that European farmers have been used to for a long time.

Adam Harrison: I want to explore some of the issues around where increased global production will happen, which will be in countries such as Brazil and Indonesia that have abundant cheap land and labour. There are serious concerns about what that might mean for the iconic environments in which that expansion happens. Agriculture is the biggest driver of native habitat loss around the world and the biggest consumer of water used by man, so we have concerns. Equally, however, I have experience from my work with major commodities—soya in Brazil and palm oil in Indonesia—in which the entire supply chain has got together and tried to sort itself out in terms of certification of how to produce the commodities and expand production without damaging the environment. Those involved have also tried to look for the win-wins in which resource efficiency for those commodities translates into less pollution and less use of soil and water, which pleases environmentalists like me, and is money saving for the producer and the supply chain. There is optimism that such matters can be resolved and sustainable solutions can be found, not only for the producers but for the consumers.

To return to procurement, certified produce—whether it is fish from Scottish seas certified by the Marine Stewardship Council or palm oil from Indonesia certified by the Roundtable on Sustainable Palm Oil—is available and one can specify such produce. We ought to look for opportunities to ensure that the added value of doing something sustainable is passed on to the producer through the supply chain.

15:00

Hugh Raven: I will reinforce the emerging consensus that the appetite for food is unlikely to double in Scotland, so I do not think that there will be a significant increase in production in Scotland. Having said that, I am sure that, as Professor Slee said, the dynamics of the market will change Scottish production.

I will add one dimension of increasing demand that we have missed. We anticipate a global human population of 9 billion by the middle of the century, but we should also anticipate an additional population of 4 billion human-equivalent livestock. It is topical to mention the impact of that, not least in light of the comments by the chairman of the Intergovernmental Panel on Climate Change who, speaking in London last night, said that we should eat less meat.

We should eat less meat but, lest I be howled down in a meat-producing country, we need to break that down further. We do not need to eat much less meat in Scotland, which will remain a specialist meat producer, particularly a specialist red-meat producer. Over the past generation, we have accustomed ourselves to eating a lot more white meat than we did when our parents were around, and that white meat depends on products that we do not grow in abundance in this country. In other words, we import cereals that we could feed to people and feed them to pigs and poultry instead.

I apologise to my friends in the pig and poultry industries, but they do not have such a bonnie future as red-meat producers in Scotland. Scotland will be a specialist red-meat production country, in addition to diversifying into other crops as we heard from Professor Slee. We will become much more self-sufficient with regard to some of the things that we currently import, including a lot of fruit and vegetables that we could grow here. We have the best possible soft-fruit growing conditions in Scotland but our soft-fruit industry is declining year on year and has declined massively over the past two decades.

The Convener: Some of those consumption changes are driven entirely by price. The reason why so much white meat, particularly poultry, is now eaten in comparison with 50 years ago is that the production methods have changed radically. Once upon a time, virtually all the chickens were free range and nobody thought that they were rearing free-range chickens. However, once the concept of battery farming was introduced and the price fell, the consumption spike started to go up.

Hugh Raven: I agree with you up to a point. It is certainly true that a decline in husbandry costs was associated with intensification, but the cost of feeding the creatures has gone up enormously in the past two or three years with the increase in grain prices. Almost all global analysts think that the current grain price increase is not a flash in the pan. I take Professor Slee's comment that the grain price has come back a bit in the recent past but, nonetheless, all the projections are that grain prices will remain much higher than they have been historically. If that is the case, we will not be able to afford to produce large quantities of white meat in Scotland. However, using our natural advantage—namely grass—we produce beef cattle and sheep well. We will continue to do that, but we will produce much less white meat because we will not be able to afford it.

The Convener: We can explore further some of the possibilities for our food production capacity that are connected with being more efficient, fuel consumption, grain prices and other matters that are adding cost in Scotland.

Dr Renwick: About eight points have arisen that I want to address.

The Convener: That is the problem with a round-table discussion.

Dr Renwick: The first of my points follows on from Hugh Raven's point. The call to eat less meat must take into account how efficient the beef and sheep sectors are at converting grass into food. We have the advantage in Scotland, and that is a key point.

I was interested in the price volatility issue. I attended a conference at the European Association of Agricultural Economists, in Ghent, and on the first day there was a big session about the impact of price volatility. It asked exactly the question that John Scott asked—we have price volatility; what can we do about it? The FAO made it clear—a bit like Bill Slee's response—that buffer stocks are not the answer. Economists can draw nice diagrams showing how buffer stocks work, but in practice they are virtually impossible to—

The Convener: That is what not to do. Is the FAO able to tell us what to do?

Dr Renwick: That was the difficulty—I thought that it was going to give us the answer. It concerns me that, having moved away from price support, which effectively gave us stable prices and gave signals to farmers to produce—although, okay, they overproduced—we still have the economic problem of instability, which can have damaging effects and lead to underproduction because of price volatility. Policy needs to get a grasp on what we can do to address that problem while not encouraging oversupply.

The Convener: And?

John Scott: So, what is your answer, then?

Dr Renwick: It is difficult. It comes back to the other issue about doubling our capacity. There are fundamental problems in talking in that way. For example, in Scotland, we have a sustainable forestry strategy that argues that we should increase forestry in Scotland to cover 25 per cent of the land area. So, one policy is working in that direction while we are talking about food security. You also heard this morning about the biofuels debate. I have always been nervous about discussion of biofuels in Scotland. I think that we need to understand its implications for Scotland.

In dealing with instability, it is easier to say that we need to be aware of it. I am saying not that we need simply to maintain capacity just in case, but that we need to ensure that we are producing the economically correct amounts, not underproducing because of instability. I admit that I was an advocate of buffer stocks—

The Convener: Who decides the correct amount to even it out?

John Scott: If it is left simply to the market to decide it, the market will produce the instability that you talk about.

Dr Renwick: Yes; it has always been clear that there is a market failure. Okay, freer trade may iron that out across the world to some extent, and we would always argue that our protectionist policies have, in the past, exacerbated the instability. It can be shown clearly that if one or two big countries begin to protect, they push their instability on to the world market and make it more unstable. Freer trade will help to remove some of that.

Judith Robertson: I could say lots in response to that. However, I want to bring biofuels into the equation around food security globally. They are playing a huge role at the moment, and some of that is being driven by northern Governments' policies around targets on biofuels in the fuel supply. However, Oxfam is saying "Don't go for those targets", because the production of biofuels is not regulated sensibly or sustainably. The kind of model that Adam Harrison talked about in relation to palm oil does not exist for biofuels; therefore, land grabs, deforestation and a range of not just unsustainable but seriously damaging processes are occurring globally. That potentially institutionalises a further industry structure that is not in our best interests.

The increasing demand for biofuels is taking the food out of the mouths of poor families in many developing countries. We are not saying that there should not be a biofuels industry or that some of the fuel supply should not be replaced with biofuels; we are saying that that should not be done in a way that will completely undermine other perfectly adequate and realistic development processes. Also, it should be done not in a hurry, but to a timescale that allows a transition and the infrastructure to be put in place. For example, there is a huge opportunity for developing country Governments and farmers to take part in and contribute meaningfully to the biofuels industry. However, the way in which the system is set up means that that cannot happen. A regulated and managed transition process needs to be put in place to ensure that the distribution of the industry is equitable and sustainable.

Adam Harrison: As always, the problem that we face is the complexity of the issue. A huge number of factors have led to the current crisis. We have heard about the lack of storage capacity. Globally, we now take a last-minute approach to food supply. We have got rid of the food mountains that buffered demand and supply. We have also heard about the increasing demand for food as a result of rising and wealthier

populations. There has been a shift towards grain-fed animal products. There is also talk of increased demand for biofuels, but not even 2 per cent of global agricultural crops goes into energy production. Obviously, if demand grows as projected, that figure will increase.

An issue that has not yet been raised is the financial markets and the massive speculation of recent times. Money has been flowing out of the junk mortgage market in America. People have been looking for somewhere else to put their money, and that has driven up not only commodity prices but input prices for commodities such as fertilisers. It is difficult to see how Scotland can buffer itself from all of that or how it will work out what it needs to do in response.

The Convener: The infamous pork belly futures spring to mind.

Professor Slee: First-generation biofuels, including fuels from wheat and sugar cane and biodiesel from rape, are land hungry. A lot of investment is going into second-generation biofuels, which work on waste products, and there are also third-generation biofuels that come from algae. They offer promise.

We need to understand the demand for biofuels. Part of the explanation lies in the desire for fuel security in North America, but it also relates to the overriding imperative to replace the fossil hydrocarbons that we put in our cars and planes with something else so that we can continue to drive and fly.

This week, the Scottish Government adopted the very bold target of an 80 per cent reduction in greenhouse gases by 2050. Given that agriculture, forestry and land use contribute roughly 20 per cent of those emissions, everything else in Scotland will have to shut down or change dramatically if the target is to be met.

We have to think about where our hydrocarbons will come from and we need a research base that builds capacity in that direction. Of course, that will happen globally and not only in Scotland. If we look at the relative success and carbon efficiency of sugar-based bioethanol production in Brazil—albeit that there are problems—we can see the possibilities, but I suspect that we may well want to move on to second and third-generation biofuels to meet the needs that will exist. We must not throw the baby out with the bath water. We have to think about biofuels and their role in helping us to meet climate change targets.

Dr Renwick: I have a small point to make on speculation, about which there was much discussion at the conference to which I referred. A consensus emerged that speculation had not caused the problem. The report that I am giving is somewhat second hand, but I recollect that people said that speculation was not a major factor in rising prices.

Adam Harrison: I have a brief point on what Bill Slee said about Scotland's 80 per cent target for the reduction in greenhouse gas emissions. It seems strange that we think that we can continue to do as we have done before and still meet the target. This debate gives us the opportunity to say that we need to shift how we do things in food as in transport. We cannot continue as we are; we cannot just replace fossil fuels with biomass—

15:15

The Convener: What do we have to shift?

Adam Harrison: Electrification of transport is one example. The majority of trips in the world are for short distances, and are perfectly feasible with electric transport—

The Convener: The Rural Affairs and Environment Committee will not be able to consider that issue in the context of a food inquiry.

Adam Harrison: We are talking about renewable electricity generation. Instead of trying to get energy out of biomass, maybe Scotland ought to think about other ways of getting energy out of land or about using biomass for other things. We should be using biomass for heat rather than attempting to produce liquid transport fuels. That is a far more efficient way of using a piece of land and the biomass on that land. The problem is that it is all related and we cannot separate these things out.

The Convener: Can you pull anything out of the current food supply chain?

Adam Harrison: Exactly. The three biggest hitters in agriculture in terms of climate are the nitrates that are used in fertilisers, which were mentioned this morning; the methane from ruminants; and the carbon that is released from cultivating soil. All three need to be addressed. Some things will be relatively easy to address. Managing nitrogen and how it moves around the system means that we will be able to cut pollution of bathing waters and freshwater, which is already a priority for the Scottish Government. However, we will also need to address things such as the import of soya from Latin America to feed animals. Basically, we are importing nitrogen from the other side of the world and dumping it into Scottish rivers. That is not sustainable.

Another difficult issue is our approach to the cultivation of soil in order to cut carbon emissions. Luckily, at the moment, that is balanced by the amount of carbon that is locked up by afforestation, but perhaps there is an argument for more forests in Scotland and less agricultural land. However, if we just export the demand for food

elsewhere, we will not address the issue. That is why my opening point was that we need to consider the consumption impacts on climate and not just the production impacts.

Hugh Raven: I agree substantially with Adam Harrison, but I think that he missed one thing out, which is that we need more biodigesters—an issue that is related to food. We need to resolve our food waste problems and our other organic waste problems, whether it be straw, other crop residues or indeed the product of the slaughterhouse in Orkney that was mentioned by Liam McArthur. We need to be shovelling that into digesters and turning it into high-quality renewable fuel that is available locally.

Dr Bowbrick: Research is fundamental. For the past 25 to 50 years, Scottish agriculture has been exporting the results of its research programme. I have worked in several countries that have a research-based agriculture. Ireland is an obvious example. It has an integrated food-processing and production research unit. In New Zealand, £1 million a year is spent on the library journal subscriptions for horticulture alone—and all we know about is kiwi fruit. That represents a massive investment in agricultural research. The example of Zimbabwe is surprising. Until the 1990s, Zimbabwe led the world in tobacco and averaged 7 tonnes of maize an acre. It had a level of investment in research that Britain has never seen. It had luxury research institutes that moved farms every couple of years because they wanted new research facilities. That is a luxury that Britain does not have.

I am wondering about two things. First, do we have sufficient research? Research is what we are marketing. Secondly, do we have a way of getting it to the farmers so that they can use it? The question was raised this morning. Are the farmers getting the skills set? That fits in with Adam Harrison's question.

The Convener: When Adam Harrison talked about nitrogen, it reminded me of a conversation that we had outside the room. I want to ask Bill Slee about the genetically modified nitrogen-fixing plants.

Professor Slee: There are a number of issues there. On research capacity, Scotland has probably been better at retaining its land-based research capacity than have other parts of Britain. It is a compliment to Scotland that, even before devolution, it managed to sustain that research infrastructure. However, it is not unproblematic, and more resource or some reallocation of resource might be required to meet contemporary needs.

We talked about genetic modification at lunch time, and Hugh Raven advised us against it in his introductory comments. If genetic modification could put the nitrogen-fixing capability of plants such as legumes into cereals, that would be an extraordinarily valuable outcome for the world. I have no idea how close we are to doing that, but it would go a long way towards addressing the world food problem because it would deliver organic nitrogen to plants that hitherto have not had that capacity. I would find it difficult to deny a hungry world that possibility.

Dr Renwick: I smiled to myself when Adam Harrison listed the areas of research because we are working in all of them. One project, which we call green pig, is considering the replacement of soya in pig diets with home-produced legumes. We are also doing some work for the Department for Environment, Food and Rural Affairs on marginal abatement costs for carbon emissions from agriculture. The key thing in that research is the ranking of the alternatives that are available to enable agriculture to reduce its emissions. We are gaining an understanding of which alternatives are viable and which are not. That understanding is not out there at the moment, so the research is useful.

In general, research is being done in the right areas and we are trying to address the questions.

The Convener: Andrew, do you consider whether food is genetically modified before you serve it or do you just say, "No, it doesn't matter"?

Andrew Fairlie: We do not use it.

The Convener: You deliberately avoid it.

Andrew Fairlie: Yes.

The Convener: Why is that?

Andrew Fairlie: Just because we do not know where it is going, I suppose. Again, it is not my area of expertise. I am sure that, from Oxfam's perspective, if GM is going to cure all hunger in the third world, we should go with it.

The Convener: I am not sure that that is Oxfam's perspective. That might be the opposite of its view. Is your perspective led by your decision-making process or is it consumer led, from where you sit in the food chain?

Andrew Fairlie: I would say that it is both, equally.

The Convener: So you are uncertain and the consumers are a bit resistant.

Andrew Fairlie: They are equally uncertain.

Judith Robertson: There is no easy answer, but at present genetic modification does not benefit poor producers. This is not my area of expertise, so forgive me if I use the wrong language. If genetic modification involves taking

out the seed potential of the plant, production is a one-off and farmers have to buy seeds every year in order to maintain production. At present, most poor farmers can get seeds from the food that they grow.

There is a huge issue around the processes, which are not necessarily intended to advantage poor farmers. They are intended to advantage the big businesses that invest in the research. From our perspective, it is a case of horses for courses. What will be the impact on the poor producer? Will it benefit their lifestyle or put them further into poverty? Our agency's goal is to reduce poverty, so we consider the issue from that perspective.

Hugh Raven: I want to temper the enthusiasm about GM, if I may. That is not the same thing as suggesting that we slam the door on GM for ever more, although some of my colleagues in the organic movement suggest that that is precisely what we should do. I do not advocate that, but a bit of sobriety about the limitations of the benefits of GM is appropriate. GM was introduced with fanfares and joyous predictions of increased yields, but not even the GM companies now claim that GM crops have increased yields.

The history of GM production over the past decade and more is that it produces no increases in yields. That is a fact, not opinion on my part; Monsanto will concede that that is the case. The history of GM production also indicates that GM crops are not better able to deal with aridity than conventional crops. In fact, if I may bang the drum specifically for organic farming, I point out that the best way to counteract aridity is to farm organically. That increases soil organic matter—soil carbon—which is the best way of retaining water that we have yet discovered. To avoid the problems of increasing aridity, we should farm more organically rather than more GM-dependently.

GM has also shown that it reduces labour requirements as it facilitates mechanisation of agriculture. In most of the world, the last thing that we need is to take more people out of farming. In most of the world, the majority of the population will remain involved in farming. Throwing them out of farming into some uncertain other future employment does not seem a good way of improving food security or meeting human needs.

Conversely, we have seen that the GM crops grown so far are significantly more chemical dependent than the alternatives. Indeed, they are bred to be chemical dependent. That is exactly why the GM crops that are grown commercially have been brought to market—they are resistant to certain patented chemicals.

Let us add to that a point that we have already heard from Judith Robertson, which is that a lot of the crops are so-called terminator technologies as farmers cannot keep the seed and continue to grow the crop. They become dependent on the agroindustrial complex—I hope that I am not misquoting Bill Slee—to supply their most basic ingredient in the form of seeds. That is another highly negative outcome of GM dependency, particularly in developing countries where seeds would traditionally be saved.

Finally, those comments do not even enter into the issue of food safety. I would contend that tests so far have been nothing like rigorous enough. We also saw the disgraceful treatment of a scientist in Scotland who raised food safety issues that have never been properly explored. There are a number of very good reasons to be cautious about GM dependency.

Peter Peacock: This question is on a different point. On more than one occasion in the past hour or so, we have touched on competing land uses. One question is whether there is a case for more forestry or more agricultural land, and there is also increasing recreational demand on land. As a committee, we are examining rural housing, in which one issue is a shortage of land for housing. We also recently made recommendations about using agricultural land for flood management. Should we be thinking about having more land for farming and agricultural production, or is that not an issue as we cannot make a big contribution to meeting the world's food needs and so should carry on in our present merry way? Are there views around the table on that issue?

Professor Slee: One thing that Europe has got right in the past decade is recognition of a multifunctional model of agriculture. That model can be transferred to forestry too. Many recreational and tourism needs will be well met by having proper multifunctional agriculture and forestry. Within Scotland, there is significant investment in amenity land for sport, shooting and so on. That can also deliver multiple benefits. We do not always get it right in the short term—and getting it right can place new demands on researchers—but in general the model of multifunctionality can be justified and sustained in Scotland.

If we consider recent history, we see that much of the land, as long as it is not high in organic matter and high-carbon soils but has come out of agriculture in the hills and uplands, could conceivably sequester carbon effectively. I do not think that it is necessary to maintain exactly the stock of farmland that we have at the moment. In any case, over much of that farmland there is multifunctional use, including sporting use.

In the past, the Macaulay Institute has dabbled with the idea of agroforestry, which allows those different uses to be linked together quite

effectively. There might be scope for such developments in the future, although I suspect that they will take a slightly different form.

Adam Harrison: An example of multifunctional land use that is of key relevance to the committee is a flood plain. I do not see why land should be seen as being available only for flooding, only for forestry or only for agriculture. Meadows combined two functions. People would graze animals on a flood plain rather than try to grow crops that they knew would be lost two years out of five. It seems sensible for us to go back to that.

15:30

The Convener: I detect a sense of wind-down, so I will ask the witnesses whether there are any issues that they think we have spectacularly overlooked or failed to consider.

Dr Bowbrick: I return to the issue of who should do the work. World experts, preferably outsiders, must be brought in. We have had an extremely interesting discussion, but many of the suggestions have been made by single-issue people. That is natural—everyone is single issue in that everyone is focused on their own industry. We need outsiders to consider the issue.

Adam Harrison: A big sustainability impact of food that has been mentioned but not discussed in detail is the impact on fresh water. I am talking not only about the impacts of food production in Scotland on Scotland's rivers, lochs and groundwater—which is being addressed piecemeal in legislation, but on which a much more concerted effort and a much more focused expenditure of money are needed—but about the much bigger freshwater impact of all the commodities that we receive from around the world and the processing of that food. All the fruit and vegetables that are brought in from the Mediterranean are a case in point. People grow fruit and vegetables in those areas because they are dry and the climate can be controlled, but that involves drawing unsustainably on water resources. Supermarkets in the UK, France and Germany are the major customers for such produce. We need to think about the sustainability of food not just in Scotland but globally.

Hugh Raven: I will vindicate and oblige Peter Bowbrick by confirming that I come from a pressure group, albeit not a single-issue pressure group. As a representative of the Soil Association, I want to talk about soil. I suspect that that confirms Peter Bowbrick's suspicion.

Soil is that 6 inches of the surface of the earth that keeps us all alive. Governments around the world have not taken it nearly seriously enough. The Soil Association is not so named by mistake—we thought hard about what it was that created healthy plants, healthy people and a healthy biosphere. In its considerations about food, the committee should not disregard the importance of the primary source of food—the soil.

Dr Renwick: For my final point, I will revert to Hugh Raven's first point, which was about not looking for technological fixes. I believe that we should consider all the opportunities that technology offers to help us in such situations.

Judith Robertson: An issue that someone asked me to talk about in advance of the meeting is Malawi, so I will briefly do so now.

Food security issues are highly pertinent to Malawians and to the Scottish Government because it has a vested interest in that country and its development. At the moment, Malawi faces some quite difficult food security issues. There are good—or rather, mainly bad—reasons for that. One of them is to do with our insistence, globally, that when it comes to market process, one size must fit all. In effect, the liberalisation of economies that is a condition of countries receiving aid prevents them from making strategic decisions that would allow them to feed their people. An example is Malawi's decision to subsidise fertiliser, which bucked the trend of the one-size-fits-all approach to development. As a result, food production in Malawi has been transformed over the past few years.

Dr Renwick talked about food stocks and buffers. Malawi has put in place sensible institutions in that regard when it has been able to do so, but its approach has been undermined by free-market processes, which has put at risk the lives of millions of people. We must be aware of and stay alert to such issues, particularly given that our strong relationship with Malawi increases our understanding of the impact of issues that we are talking about in relation to Scotland.

Professor Slee: The key lesson to take away is that, although food is an almost uniquely multifaceted issue, during the past decade and a half we have gone down a route towards a global free-trade model, based on an ideological commitment to free trade. We have not fully understood the consequences of taking that route. There are environmental consequences, because we might not factor in the environmental cost of produce that comes from different parts of the world or that is produced under regimes that we would not allow in this country. There are also impacts on livelihoods, which Judith Robertson talked about.

I wonder whether we in Scotland—the home of Adam Smith, political economy and free trade—need to reflect on whether such an approach in its entirety is appropriate for something as complex as food and on whether we need a little more

regulation, particularly of the environmental dimensions but also of the social dimensions, so that we understand better how food policy impacts on people's lives and livelihoods and on the planet around us. I am not sure that we have quite got there yet.

Andrew Fairlie: All that sounds very grand, but I want to bring the discussion back to the Scottish perspective. It is fantastic that we are having this discussion at all. We have made progress, but as a chef and restaurateur—and as a food person—I hope that we can engage children and educate them about food. We have lost a generation, but we can do something about the generation that is coming up. I hope that we will continue to have such discussions in the years to come, but I hope that we will consider matters on a much more local—I mean Scottish—level, which is where we can make a difference. I am not sure that we can sort out global food problems, but we can sort out local problems.

The Convener: I thank all the witnesses who attended this afternoon's meeting. Some of you also sat in on the meeting this morning, to listen to the evidence. If you want to communicate something to the committee you can do so by contacting the clerks, who will circulate your comments to all committee members, so if you wake up at 3 am and think, "Damn it, I should have said such and such," you can act on it and—

Andrew Fairlie: Phone you.

The Convener: Do not phone us at 3 am, but let us know your thoughts.

The committee intends to conduct a full inquiry into food at some point, but we have not yet timetabled it into our programme. The purpose of today's exercise was to enable us to begin to grasp the complexities of the issue and start to focus on a remit for the inquiry. We might ask some of you to come back and talk to us again. Other witnesses might be displeased when we do not include 75 of the 80 or so themes to do with food. Peter Bowbrick said that we would be overreaching ourselves if we tried to consider too many issues and we agree with his assessment. We cannot consider all the themes, so issues that strongly interest some of you might not be included in the remit for our inquiry. You must bear with us.

That concludes the public part of the meeting.

15:39

Meeting continued in private until 16:10.

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