TUESDAY 8 NOVEMBER 2011

11.35 am

Witness: Professor Sir John Beddington

USE OF THE TRANSCRIPT

1. This is an uncorrected transcript of evidence taken in public and webcast on www.parliamentlive.tv.

2. Any public use of, or reference to, the contents should make clear that neither Members nor witnesses have had the opportunity to correct the record. If in doubt as to the propriety of using the transcript, please contact the Clerk of the Committee.

3. Members and witnesses are asked to send corrections to the Clerk of the Committee within 7 days of receipt.
Members present

Lord Krebs (Chairman)
Lord Broers
Lord Crickhowell
Lord Cunningham of Felling
Baroness Hilton of Eggardon
Baroness Neuberger
Baroness Perry of Southwark
Lord Rees of Ludlow
Earl of Selborne
Lord Wade of Chorlton
Lord Warner
Lord Willis of Knaresborough
Lord Winston

Examination of Witness

Professor Sir John Beddington, Government Chief Scientific Adviser, Government Office for Science.

Q107 The Chairman: Good morning and welcome to Sir John Beddington, Government Chief Scientific Adviser. Thank you very much for making time to come and give us some evidence into this inquiry into the role of departmental Chief Scientific Advisers. In a moment, I would like to ask you to introduce yourself for the record. You are very familiar with the proceedings here so you know that we are being webcast and sotto voce comments will be picked up by the microphones. You also know that if you wish to make any opening statement, you have an opportunity to do so, if not then we will lead off straight into the questions. Perhaps I could invite you to introduce yourself for the record.

Sir John Beddington: Thank you Lord Krebs. I do appreciate the situation we are in and I have no intention of making an opening statement.

The Chairman: Yes, and could you just say who you are for the record?

Sir John Beddington: I am John Beddington, I am UK Government Chief Scientific Adviser.
Q108 The Chairman: If I could kick off by asking a general question about how you see the role of the departmental Chief Scientific Advisers and whether or not that role has changed during the period of your service as the Government’s Chief Scientific Adviser?

Sir John Beddington: Yes, I think the basic role probably has not changed in the sense that my own role has not changed; one has responsibility for the quality of science and engineering, and science in the wider sense including social science. I think that is still the role of the Chief Scientific Advisers, albeit quite clearly there has been an expansion in the number of departments that now have Chief Scientific Advisers. I think that the spread of expertise, which is obviously an issue, is really quite wide. I suppose the point that I occasionally make facetiously is that my job is arguably impossible because it expects one to have a knowledge and an expertise across all aspects of science and engineering in government. It is fair to say that when I first came to this job, apart from being somewhat daunted, it did seem to me that it was essential that one had a wide range of expertise among the Chief Scientific Advisers and indeed that the penetration of Chief Scientific Advisers into the community needed to be widened. To an extent, I think that has been pretty successful. There is still work in progress. I am pleased with the way that things have developed. The direction of travel has been good in the sense that there is now an appreciation that departments need to function with a Chief Scientific Adviser. That appreciation varies within departments and it varies probably properly within departments because of very different roles and so on.

I think that one of the things that I have been concerned about, and we may expand on in a moment, is there has been, in terms of the Departments of Business, Innovation and Skills and the Department for Transport, a hiatus in recruitment. To some extent I can be reassuring to the Committee about that: we interviewed for the position in the Department
of Transport yesterday and I am interviewing for the position in BIS tomorrow. This is a final interview with the appropriate panel to decide on that.

There are some other issues that have been good in terms of direction of travel. I think that the Chief Scientific Advisers are very collaborative. When I took the job, there were mainly formal meetings; there was the occasional dinner but there was nothing in terms of actually meeting very regularly. One of the things that I think this Committee is aware of, because I think others have touched on it in their evidence, is that I now have regular meetings of the Chief Scientific Advisers network—on a drop-in basis; not everybody attends on each occasion obviously—on Wednesday mornings for breakfast. In response to requests from a couple of Chief Scientific Advisers who have young children, we are actually extending that. We are actually going to effectively have three breakfast meetings a month and one lunchtime meeting a month. That will be instituted in the new year. I think that is right. It was a perfectly reasonable request and we probably should have anticipated it, but we had actually people who were making their arrangements and even though they had young children, still came. It has not been too bad.

The other area that is really important is that we have tried to extend our engagement with the key academies. I meet regularly with Sir John Bell and his successor Sir John Tooke at the Academy of Medical Sciences. We meet regularly with The Royal Society; Paul Nurse in fact attends these breakfast meetings and we have agreement with Sir John Parker that he will be attending a breakfast meeting early next year. In terms of the British Academy, I will perhaps get on to that because I suspect you want to talk to me about social sciences more generally but there are two things I would say in terms of that arrangement. We have engaged in a number of informal meetings with the academy to get that input. In particular, one thing I would highlight with the role of the academies, which extends to one of my other jobs, as the Chairman of the Council for Science and Technology, is that we now have ex
officio, as members of the Council for Science and Technology, the presidents of the four
academies. So we now have the presidents of the Royal Society, Royal Academy of
Engineering, Royal Academy of Medical Sciences and the British Academy attending as ex
officio for that.

The other area that I would like to focus on that I think has been a moderate success
following a problem is dealing with the science advisory committees that advise government.
As we are all aware, there was a problem in the Home Office on the chair of one of those
committees and that was unfortunate, but in fact prior to that and indeed subsequent to that
I have enhanced it by having regular meetings with the chairs of all the science advisory
committees in government. The development of the principles that followed on from the
problems that we faced was adopted by the previous Government and has subsequently
been adopted by the current Government and is indeed part of the Ministerial Code. Those
principles have a very central role for the Chief Scientific Advisers: namely, that if there is a
problem between an advisory committee, or individuals in the advisory committee, the first
port of call to try to mitigate that is very much the Chief Scientific Adviser of the
department. I and the Science Minister are there if that has not been working. That is all I
would say other that the fact that I think there is a genuine camaraderie among the Chief
Scientific Advisers; there are regular bilateral and trilateral discussions between them which
do not involve me in issues across government.

The final point which I would seek to make in terms of how it has changed is our
relationship between the Chief Scientific Advisers, the Research Councils and the Research
Councils’ Chief Executives. The first thing I would say is Adrian Smith is considered a
member of the Chief Scientific Advisers; he comes to the breakfast meetings. He is not
formally there but he clearly is somebody who should be attending and should be part of it,
which he is content to do. We meet the Chief Executives of the Research Councils very
regularly. There was an initial formal relationship that we met within the confines of the committee of Science Advisers and what we have done is move that to a much more informal arrangement. We meet regularly with them; in fact, there is a dinner planned with them for next week. That is extraordinarily helpful in terms of taking forward issues that go across the Research Councils but also go into different parts of government.

Finally—I do assure you, Mr Chairman, this is finally—it has occurred to me that one of the areas that we needed to enhance was our linking in with the main research-based universities. In discussion with Adrian Smith, who obviously has the responsibility for higher education, we have invited the Vice-Chancellors of the key research-active universities to a meeting with the Chief Scientific Advisers. I have indicated that an appropriate person may be the Pro-Vice-Chancellor for Research or something. That meeting is scheduled for March where the Chief Scientific Advisers and the heads of the key universities will be able to talk because I think there is a lot of mutual help that could actually be done there. Having said I will not give an opening statement, I now have given a very long one but it was at least in answer to your question, Lord Chairman.

**Q109 Lord Warner:** Sir John, as you know the whole issue of understanding public attitudes and how people change behaviour, is becoming a major feature for all Governments. Therefore the role of social sciences in this area is important. Do you feel that we have got enough consistency across departments in this particular area? Do you feel that it is actually asking quite a lot of Chief Scientific Advisers or even, dare I say, Government Chief Scientific Advisers to try to spread themselves over social sciences as well as what we might call the harder sciences? Or do we need to actually return to this issue of a Government Chief Social Scientist and more consistency across the departments in the way social sciences advice is available to Ministers and policymakers?
Sir John Beddington: I see this as pretty much a work in progress. When we had a Chief Scientific Adviser in the Home Office who had actually come from a social research background, in Paul Wiles, he had to play two roles. He was head of the social research in government as well as being the most senior social scientist in government. That worked extremely well and that was the early days of my tenure as chief scientist. Following his departure, as head of the Government Social Research Service, an appointment of two people was made—Jenny Dibden and Richard Bartholomew—and they are actually working pretty well, in a sense, as Heads of Profession. They link in through the rest of the Government Heads of Profession through the Heads of Analysis group that is chaired by Nick Macpherson who is, as you will know, Permanent Secretary to the Treasury. I attend that as Chief Scientific Adviser, and Head of the Science and Engineering profession in government, the Chief Economist attends, the Chief Actuary now attends, the Chief Statistician attends. In a sense, all the analytical disciplines, including legal, are present at those meetings. There is a fair bit of work that has been done. That being said, I do believe that there is a case for very carefully considering whether we should have a Chief Social Scientist in government. Quite where they would sit, my own preference would be that they would sit within my office. In fact, by geography that would be about 50 metres from Sir Adrian Smith’s office. This would work quite well, but in response to another inquiry the Government have indicated that they are going to be considering this and will weigh pros and cons.

From my own perspective, I think that within individual departments obviously issues of social research will come up in a variable way. In a sense, do we feel an absence? I probably do not; I do not feel there is any sort of desperate problem. In a sense, all Chief Scientific Advisers are expected to cover all the science and engineering in their department. I have to do it for the Government as a whole. In a sense, my query is: do we need a Chief Chemist?
Chemistry, not everyone is familiar with it. It is a substantial branch of a rather hard science. Is there any difference between not having a Chief Chemist or not having a Chief Social Adviser? I think there is a case to be made both ways but I pose this as an issue. We have got to try to ensure that social research and social science more generally plays directly into scientific advice. It is important to make a distinction regarding social science, because the economists think themselves social scientists and I do not think anyone would query whether in fact there was a lack of economists providing advice to Government. They might but I do not think so. In terms of social researchers, we are thinking about subjects like demography, social anthropology, sociology and social research generally.

One of the things that I think, and we may touch on it later, is that I was very keen when we had reviews of the quality of evidence in government departments that that review would extend much wider than science and engineering, which had hitherto been the case but went into analysis and evidence base generally. For example, we have had reviews of DfID and the Department for Education, where we have actually had individuals who have been helping us on the review panel who came from a social research or a statistical background. That is one way to deal with it. If I were to say what would be ideal, I do think a Government Chief Social Researcher would be helpful. I think it would improve things, not just as a figurehead but actually to be able to be involved. What I have done in the interim is I have very much engaged with the ESRC, initially with Ian Diamond, as the Chief Executive, and subsequently with Paul Boyle, so we actually do get a fairly coherent input in from social research in from that level of expertise. In addition, as I mentioned, we are trying to involve the British Academy. Perhaps a little later I might indicate quite how we are engaging at these levels.

If I could just refer to my notes for a second, we had a sponsored event with Paul Boyle and Sir Adam Roberts in June that involved Jennifer Dibden who is the Head of Social Research. We had about 100 academic social scientists attending and essentially the subject area of it
was to work out how social research could better help in government. It was well attended and it was a good meeting. Most of the Chief Scientific Advisers have social research in their departments and engage with them. Professor Watson was before you and I did read the transcript of that, indicating that he did engage fairly regularly with it. It is a very long answer but it is a long question. In summary, I would say it is a work in progress and I do believe that it would be better to enhance the social research in government and having a Chief Social Researcher I think would be one way of doing that.

**Q110 Lord Winston:** It is a long answer, John, but I feel there is stuff missing there. How do the Government assess the impact of issues that are presented to the public: for example if you take the case of MMR and the failure of the uptake of vaccine? I think regarding our failure of understanding of what really caused the anxiety among mothers and our response to that, if we do not have a social scientist really clearly in post, how do we deal with those issues in different departments?

**Sir John Beddington:** There is some work in the Cabinet Office, through David Halpern, who was actually providing input along these lines, and there are issues. I have an inability to understand why the public as a whole and as individuals reject the potential utility of GM organisms. I think social research would help one understand that in a better way. I agree with you and there is definitely an issue here; we need to be enhancing it and improving our game. There is an increasing understanding that this is important and I think that departments do understand this but there is obviously a variation between them. The worry that I have would be, suppose I was mandated and said, “Look, the next Chief Scientific Adviser really ought to be a social researcher”. I do not think that is the appropriate way to behave because I think we should get the best person for the job and I would expect their job description to mean that they understand and are able to communicate and have an appropriate network of social researchers.
Lord Cunningham of Felling: Sir John, the Committee has learnt in the course of this inquiry that there are wide variations between how Chief Scientists interface with their departments. For example, we had one who had very, very frequent meetings with the Secretary of State and one who could not remember having a meeting with the Secretary of State or not, which was quite extraordinary. Is there any set of guidance, principles or best practice? Where should a Chief Scientist be placed in the organisational structure of a department to ensure they are given the best opportunity to work successfully?

Sir John Beddington: I do not think it is one-size-fits-all, in the sense that there are big variations in departments’ use of science, engineering and analysis more generally. I have never had a Chief Scientific Adviser say to me, “I have a major problem here”. My preference is that they are able to engage at the highest level.

Lord Cunningham of Felling: Excuse me, if the person had a major problem, they might not want you to know that.

Sir John Beddington: That is an interesting thought and indeed how would I answer that? I would not be able to prove the negative. I know you talked to Carole Willis and she was the person, I believe, who could not remember whether she met her Secretary of State. I read the transcript. I think one of the things that is important is really the science and engineering analysis reviews more generally. If I may, because I know this is a concern to you, there was a science and engineering analysis review of the Department for Education—it was I think DCSF in those days—and it was very, very positive. Let me just read, if I may with your permission Mr Chairman, briefly. It said, “DCSF’s focus on the need for an analytical and evidence-based approach has been a strong priority over a decade. This focus has been further strengthened by the Department’s current Director of Research and Analysis (also DCSF’s Chief Scientific Adviser) and her direct engagement of the Permanent Secretary, Directors General and other Directors in the evidence-based, analytical approach”. That was
in independent review; I can give you the names of the review, and it was extremely positive both about the way the department dealt with it and in fact the engagement of Carole Willis at high levels, not to the Secretary of State but to the Permanent Secretary. This was a very strong, very positive review both of the department’s evidence-base and of her role.

**Q112 Lord Cunningham of Felling** Forgive me if I just follow that very briefly: I did not say there should be a one-size-fits-all method but presumably there must be some best-practice thinking about how this works, or is it just left to each department to make its mind up how it is going to work?

**Sir John Beddington:** No, I think best practice, I would say, is to consider whether it is working. That is why I brought in the evidence-base there. I can quote you another practice where it was less successful but access was there. I do not think there is a one-size-fits-all solution. I do not think it is a necessary or indeed a sufficient condition for good science and analytical advice in general but in terms of how I would see it, I would think that in terms of the major science-using departments, I would hope that there would be access at the very, very least to the Permanent Secretary and in ones that have a very significant analytical component I think they should have access to Secretary of State or Ministers. That would be my preference. To an extent, that has been achieved over the last three or four years but it is not complete. You do raise a good point: they would not tell me if there was a problem, but if there are issues we would address them. The reviews that we do are completely independent. They are panels from outside government doing that review. If there was a problem, I think those reviews would reveal it. Indeed, some of those reviews have revealed quite significant failures within departments but I do not think those failures are entirely dependent on, for example, access. I think that it is complicated; you can have good practice and my preference would be for access. All of the current departmental Chief Scientific
Advisers with major components tend to report either to the Director General or the Permanent Secretary level; there are some anomalies that I need to ponder.

**Q113 Lord Willis of Knaresborough**: I asked the series of questions about how many times departmental advisers had actually met Secretaries of State and the responsible Minister not to try to cause any problems but just to illicit an answer that gave an indication as to where in fact was the interface between Departmental Chief Scientific Advisers and the ministerial team. It worries me, I have to say, that twice in your last answer to Lord Cunningham you have indicated that interfacing with the Permanent Secretary is adequate. I would like to know why you feel that an interface with the Permanent Secretary, who is the gatekeeper to the Minister and to the Secretary of State, is adequate for the sorts of challenge function and the evidence-base function that is necessary for a departmental Chief Scientific Adviser.

**Sir John Beddington**: I refer to the reporting line rather than gatekeeping role, Lord Willis, and it was the reporting line I was quoting. In terms of the access, I consider access to the Permanent Secretary to be absolutely necessary. Whether in fact that Permanent Secretary in a sense stops advice going further, I am not aware of that—again the point that Lord Cunningham made is maybe I would not be—but I think I would rely further on the fact that when you have done reviews this has not been revealed as a particular problem, though there are definite problems. For example, in the review that was done at BIS, where the panel was extremely critical of the culture within the department, I have taken that up and BIS is in the process of recruiting, we are interviewing tomorrow. What that effectively said was we have an excellent Chief Scientific Adviser but there was little enough motivation with some policy officials to actually ensure that what was potentially excellent advice from the then incumbent Brian Collins went through.
Q114 Lord Willis of Knaresborough: Can I just interrupt there? I have read the reports, too, and not one of those reports has made any criticism, including the BIS report, of the Permanent Secretary. Surely this was a failure of the Permanent Secretary, about the culture in BIS.

Sir John Beddington: These reports are actually shared between myself and the Permanent Secretary. The way that we developed these things was following practice that I do not think was very efficient, which was essentially having reviews that lasted a couple of years that were criticism from outside and that did not involve the Permanent Secretary in dealing with the issue. We took that practice to the Heads of Analysis meetings and said, “Look, this is a problem because in a sense you are getting criticism from outside and defensive responses, which we know are very straightforward to be done within the Civil Service”. Actually, these reviews are an agreed text between the Permanent Secretary and myself, so I note your point, but I think the fact that the Permanent Secretary is a joint author of those reviews indicates that they would take them on—they take on the points because the points that come under review are indeed endorsed by themselves—and the practice is that after four months there would be a response from the department to the recommendations and a further year after that there would be a review about how recommendations from the review have actually been adopted by the department. Therefore, to an extent, the Permanent Secretary is saying, “Yes, I agree”.

Q115 Lord Wade of Chorlton: You mentioned the issue of whether it was working. Surely it is working when the Minister and legislation, ministerial decisions, are based upon a scientific understanding of the issue. Are you satisfied that that happens?

Sir John Beddington: I thought about this because you questioned some of the Chief Scientists about whether there have been failures. I have actually thought about that. In my case, I think one failure that I would absolutely point to is the fact that the Department of
Health and the NHS still fund homeopathy, which is crazy. I have spoken on many occasions to say this is completely crazy. Despite that, the Department of Health and the NHS still fund it. I do not understand quite what the reasons are. The information that came back to us was to do with patient choice or some such. I do not accept it. I have spoken out both in fora like this and publically to say that this is completely unacceptable and that there is no scientific basis for this. That is a failure I have acknowledged in terms of science advice.

In other areas there have been other failures but they tend not to be about science and evidence but about process. I regret that we do not have a Chief Social Researcher; this is a proposal I made several years ago as soon as Paul Wiles left his job. That has not been accepted. I regret, for example, that there was a hiatus in the Department for Transport and BIS in appointing a Chief Scientific Adviser after the incumbent moved on. We will be lucky to have somebody in for the new year but there has been effectively eight or nine months of hiatus. That is a failure for me to convince the departments how important that is. In terms of these areas where evidence has been really taken up, there are lots of examples within government departments where scientific evidence I think has been taken in developing policy. I do not believe there are issues that I have encountered anyway where policy is driving the evidence-base. That might be queried and I would be happy to explore that on an individual case.

The area where I have found it most pleasing because it can be inconvenient is to do with how we deal with emergencies. I think that the latest emergency that I dealt with via the SAGE mechanism was the one dealing with the earthquake and subsequent tsunami in north-eastern Japan and the problems with the nuclear power station there. There was a real rush to remove personnel and move embassies from Tokyo. The question that we were posed was: should we do it? Should we move our Embassy personnel, should we evacuate our personnel? France was doing it; Germany was doing it, and many other countries were doing
it. To an extent, the advice we gave out was absolutely not. No necessity whatever and government took that on. We did not move our Embassy, we did not evacuate our personnel and that was actually quite difficult when France, who is a well-known nuclear power, was doing it. That is encouraging, although it does not mean to say it will always happen in terms of national emergencies where this occurs.

I am sure that there will be occasions where scientific evidence has been presented and different policy decisions are taken on it. There were some occasions with the previous Home Secretary, in the previous Government, where I was very concerned about how she was dealing with drugs and the classification of drugs. She had essentially been quoted in the Guardian saying that, irrespective of the evidence, she would be taking the decision not to reclassify. I wrote to her and she clarified that. I would not say that scientific evidence entirely is taken into account there; I think that it is really important that it is. I think that we all recognise in this room that science evidence is not the only evidence; there will be financial, and indeed political, considerations.

Q116 Lord Rees of Ludlow: To be effective, these advisers themselves need some support in terms of staff and resources. Are you confident they are getting that especially in the light of evidence that in one or two departments the posts are being downgraded?

Sir John Beddington: There is a real issue here. I think the issue is exacerbated of course by the cutbacks that followed the comprehensive spending review. The evidence we got from the review of BIS was there were completely insufficient resources to support the Chief Scientific Adviser and that needed to be enhanced. That, I believe, is a work in progress and we will just have to see. In terms of the downgrading from the Permanent Secretary level in the Ministry of Defence—from Permanent Secretary to Secretary General—I do have concerns. I think there are real issues about that downgrading, which may in fact be almost to do with appearance. The role has changed and I believe you have Sir Mark Welland in
front of you at some stage and you should explore with him in more detail how the role has changed. My understanding is that there are very substantial financial responsibilities that the current role has and that the new role will change. You probably should explore that in more detail with him. My concern was: would you be able to get somebody of the right quality, who would command the right respect, in the external community? Also, it is arguable, and I believe Lord Oxburgh made this point on an occasion, whether in fact you would command sufficient respect within the MoD itself, which is almost by definition a fairly hierarchical organisation.

Q117 Lord Rees of Ludlow: With the Americans is also important.

Sir John Beddington: Yes, indeed. I cannot comment on that in a sense that I am sitting on a panel to appoint a new Chief Scientific Adviser to the Ministry of Defence at this stage so I prefer not to comment on it, other than to say this is a thing that we need to be looking at. We need to be looking at it in a way that we pose the sort of questions you are posing: is that penetration good? I do not want to comment on the candidates but once the candidates have been appointed the hope is that that candidate will be good. I think I would have failed in my duty if we do not have somebody who can command respect outside and would command respect, particularly in terms of nuclear discussions with the USA and, I would add, France. I think that that is a work in progress. We need to do it. The good thing the MoD has done is actually they did persuade Sir Mark Welland to stay on until they had someone new through in the post and I think that was a very good process. He is working currently three days a week to ensure things continue.

Q118 Lord Warner: You described in some detail, Sir John, the way these departmental reviews work. Do they ever have contact with ministerial teams—not just the Secretary of State but ministerial teams—to ask them about their ability to access scientific advice,
including social science advice and what their preferences would be? Is there a ministerial
dimension to it?

Sir John Beddington: It is a perfectly good question and when you asked it, I thought, “No,
we do not and we probably should”. To the extent that I am there, and whether in fact
there is sufficient scientific advice, if Ministers are unhappy with it, I suspect their first port of
call is their own Permanent Secretary, which may have problems, but it also should be their
Chief Scientific Adviser or me. I think it is fair to say that, for example, following last year’s
very severe winter the Department for Transport approached me and asked me to produce
a review on whether or not we could actually predict this. That is one example of where a
Minister was essentially saying that they were not getting enough within the department so
they had to go outside. There are obviously reasons that there is expertise from outside that
you would not pull in. Your point is a good one. If I may, I will reflect on it and I think that
we would need to do it. In a sense, it may be a bit late because we conducted these reviews
for the last two years. We just started on the one on the Foreign Office and the final one is
going to be the Treasury at the tail end of this financial year. It is a good question and I had
not thought about it.

Q119 Lord Crickhowell: Sir John, you referred to a critical review of the department and
concerns about delays in appointments both being referred to the Permanent Secretary. If
there is a very critical review of the department, oughtn’t that report automatically go to
Ministers and not just to a Permanent Secretary?

Sir John Beddington: Let me focus on that, because the particularly critical one was at BIS.
It was an odd time in a sense that Simon Fraser, who was then Permanent Secretary, moved
off to run the Foreign Office just after this review was presented. There was an interim
Permanent Secretary in Philip Rutnam, and Martin Donnelly only took over the job as
Permanent Secretary some months later so there were circumstances that meant the action
was not working too well. In terms of the review report, obviously that also was straddling change of government. I, certainly, have talked about the report to the Science Minister, David Willetts, though I have not talked about it to the Secretary of State, Vince Cable. I certainly raised that within BIS. Because it is a shared issue, it is public knowledge; the reviews are published on the website. Newspapers and media people more generally have commented on it. I have not actually been involved with briefing a Secretary of State following a review, whether critical or laudatory, other than an occasional meeting saying, “That was a good review”, or, “There is a problem”. Again, I think it is arguable. It is slightly difficult in my position because, as I explained in my answer to Lord Willis, I do share this review with the Permanent Secretary and if the Permanent Secretary is worried, and they have a critical review and they are aware of it and they have endorsed it, I would have thought that they would choose to actually tell the Secretary of State, but I cannot confirm that.

Lord Crickhowell: I have to say that if I was Secretary of State and there was a very critical report about something in my department and it was going to be published on the website, I would be furiously angry if it had not been said to me first.

Sir John Beddington: Yes, that is a thing not for me but for the Permanent Secretary.

Q120 Baroness Perry of Southwark: Sir John, my question is about the role you, as the Government Chief Scientific Adviser, play in ensuring that the CSAs in their departments are performing their roles effectively. That is obviously a two-way question, involving both your role with the CSAs themselves and helping them be effective but also the intervention you are able to make with the department to ensure that they are using their CSAs effectively, not only with the department, as others have said, but with Ministers as well.

Sir John Beddington: First, in terms of formal reporting, none of the Chief Scientific Advisers report to me, I have no line-management responsibilities for any of them. Those
line responsibilities lie within their departments, either as I said to Permanent Secretaries or Director Generals, so to that extent, that is it. I do have meetings pretty regularly with the Chief Scientific Advisers and what you might call fireside chats or critical-friend discussions and so on; they goes on pretty regularly. If I was really worried that a Chief Scientific Adviser was really not getting it or was essentially failing to operate, I would act to meet with them. I had such an occasion, and for obvious reasons I do not want to name the individual, but I did actually have to say to an individual, “You are not doing your job properly, you are failing. You need to turn it around”.

Baroness Perry of Southwark: That would be through the review you would know that.

Sir John Beddington: It was not, in fact; a Permanent Secretary called me and said, “I am very worried about X”.

Q121 Baroness Perry of Southwark: How would you know if someone did not jog your arm, so to speak: in this case, the Permanent Secretary saying, “Things are not going well”? How would you know if things were not going well?

Sir John Beddington: You would see that in terms of the sort of evidence and the sort of activities that were coming out. For example, if there was a real problem that scientific advice was shown to be wrong or completely ignored, I would hear about it. I think that if there is a situation where, for example, the Chief Scientific Adviser was lacking credibility within their department, either because they were not good at their job or they exaggerated or they claimed that there was certainty when there was uncertainty, those sorts of things would just come to me. I have a staff that I would expect to be monitoring that. I think you would also see because very few departments actually have policy areas that are completely independent of all other aspects of government, so I would be expecting other Chief Scientific Advisers saying, “I am a bit worried about X because what is happening in that department is odd”.
Q122 The Earl of Selborne Sir John, it is clearly important that Chief Scientific Advisers not only perform well within their department but they collaborate effectively among themselves, and you referred to your breakfast meetings. Now perhaps I should declare an interest because I chair one of the collaborative research programmes dealing with environmental change; we have 22 partners including Research Councils and government departments. It is a clear that a good Chief Scientific Adviser can enhance a collaborative cross-cutting programme that provides excellent value for money and a lot of ownership of the research results. Other departments—I do not wish to name any such departments—are clearly less inclined and have it less in their culture to collaborate and to see the advantages. When you are assessing and assisting your Chief Scientific Advisers, do you give particular importance to the need to get this cross-departmental collaboration on the research programmes going?

Sir John Beddington: Yes, you make a good point, Lord Selborne. In terms of environmental change you have support from a whole number of departments and the Chief Scientific Advisers involved in them. The other one I would highlight is food security, where essentially a number of departments have come and work closely together with the relevant Research Councils that are also operating. I think that there are clearly going to be issues where you cross departmental boundaries on issues where some degree of dialogue is essential. For example, following the recommendations of the Committee on Climate Change on the fourth cycle—I cannot remember the exact word of it—there was quite detailed discussion by the Chief Scientific Advisers on what the evidence base was and what the implications were, and we do that fairly regularly.

There are sort of clusters of Chief Scientific Advisers; you would expect DFID, DECC and Defra to be working fairly often together, that they would not often overlap with work on MoD but they might overlap from time to time with DCLG. Those groups have—and I
mentioned it in my earlier remarks—quite regular bilateral and trilateral discussions with Chief Scientific Advisers, which I have nothing to do with but I am aware continue. One of the ones, for example, that has involved a fair number of our Chief Scientific Advisers has been the discussions on how we would meet our emissions targets: a reduction of 80% of greenhouse gasses by 2050. Extensive and critical-friend reviews of the work that was done by DECC. In fact, only last Wednesday we had a reiteration of some of the work from the DECC people with Chief Scientific Advisers all around the table commenting. Not necessary commenting on the basis of departmental interest but I know, for example, Bernard Silverman from the Home Office was raising some serious issues about the way some of the estimation was done. It is not perfect, of course it is not, but I have not been alarmed. There has been no public falling-out or indeed private falling-out—to the extent that I am aware—between the Chief Scientific Advisers on any of the evidence base. There may be different decisions that taken by different departments but on the evidence-base I think we had a real consensus. It would be very odd if we did not.

**Q123 Lord Broers:** We have discussed a lot of this already but my specific question is: how do CSAs provide independent challenge and ensure that policies are evidence-based? At what stage or stages in the policy process should they be consulted? It has been my observation at times that policies that depend heavily on science and engineering just appear from somewhere. I would like to know whether you have a formal role with your CSAs in reviewing policies that have a heavy science-and-engineering content. My supplementary question is: should CSAs express their reasons for disagreeing with a policy decision publically and should the relevant Minister explain their reasons for the public policy?

**Sir John Beddington:** I think we should get scientific advice in as early as possible in the policy cycle. One thinks about the antithesis of developing policy and only then getting science and analytical advice; that would manifestly be inappropriate. There will be some
issues, for example, where there has been a political commitment to a particular policy, one for which scientific evidence is relevant. I think that Bob Watson raised this in the context of bovine tuberculosis with this Committee. I think that scientific advice is absolutely relevant to that but in a sense there was a commitment prior to the election that there would be a badger cull. In that situation, scientific advice should be saying, “This is the likely result of that”. Another one where I think there was a problem was the proposal for a third runway at a London airport. As far as I was aware, in the Department for Transport, the Chief Scientific Adviser was not involved in those discussions. I raised that with the Permanent Secretary and I think that is inappropriate.

I cannot say in the plethora of all government policy how in fact the evidence has been brought in and whether it has been brought in early enough in all cases; I am afraid I just cannot give you that complete assurance. I would say that I am not aware of really big, problematic issues where scientific advice has been ignored or indeed where scientific advice thoroughly undermines a particular policy. What I point out is that if you move away from the CSA’s role, which I would see actually included, in terms of the principles that were developed for scientific advice in government where Science Advisory Committees were providing advice and the Government did not accept it, there is the provision in that that the reason for that rejection would actually be explained.

Q124 Lord Broers: We heard evidence from Brian Collins that he felt, when asked about successes and failures, that he had failed to communicate, I think, some of what might have been his advice on off-shore wind, for example, and that that policy had appeared and was established without consultation.

Sir John Beddington: I am not sure from his evidence whether it was when he was in Transport or whether he was in BERR which he was for a short time before its reorganisation into BIS. If he believes that to be the case then I have no reason to contradict
him. The issue of the balance of our development of energy has been subject to very detailed critical scrutiny because obviously there is an infinite number of potential solutions and what the trajectory is that will lead us to the 2050 80% reduction. That has actually been developed by DECC; it has been subject to critical review not just by the Chief Scientific Advisers but also by experts I brought in from the community. I think that the question that people posed is whether it is feasible to actually see the level of development of off-shore wind in terms of the practicality of the engineering. Those issues have been raised and the policy has been revised to reflect that. That may well have been the case at some stage when Brian was involved and I cannot comment on that. He did not raise it with me, but I think that if we take the actual point of asking whether we are concerned about off-shore wind, that has had a lot of critical scrutiny in terms of its technical feasibility and the investment profiles that are required. I think the good thing about the way that DECC is operating here is that its basic calculation algorithm is publically available so people can actually check it and query the calculation.

Q125 The Chairman: Could I ask a related question? We have heard quite a bit of evidence about the pros and cons of internal versus external appointees to the role of departmental Chief Scientific Advisers. I wonder if you could give us your view on whether or not, for example, all Chief Scientific Advisers should be external appointees who are more likely to be able to make independent challenge statements because their future careers do not depend on pleasing their masters in the Civil Service.

Sir John Beddington: I would have real concerns if the vast majority of Chief Scientific Advisers were not being appointed independently, from the external community. I would have real concerns, in particular, if the Chief Scientific Advisers had a significant role, as it were, in the subject matter of their department involving science in its broadest sense. I would have real worries there. In terms of the three departments where there has been no
external review—Education, the Treasury and the Ministry of Justice—they have rather different views. For example, James Richardson is going to be coming in front of you. I was not involved in the recruitment of James but I did talk in some detail at senior levels in the Treasury and said that I thought they needed to have someone who was completely credible as an economist and who was able to access at high levels within the Treasury, and I think James met that criteria.

I cannot say I would be unhappy if all Chief Scientific Advisers were appointed externally. I think that arguably might be an ideal. I do not think that is feasible in the near future and in a sense I think the question is: is this second best and, if it is second best, how second best is it? Am I really concerned? On that, in answer to earlier questioning I said I rely to an extent on the science reviews to tell me that there is a problem. There are a couple of things worth saying. One is that science and engineering move so fast that if you have a significant role with science and engineering, and I do include social science in that, it would be quite difficult to retain expertise within government in these areas so that an internal appointment would be adequate. I just do not think it would. In some areas, for example the economics of policy, it is arguable; I would not say it is necessarily ideal but it is arguable that you do have a continued level of expertise there.

Q126 Lord Willis of Knaresborough: We heard very different evidence from some of the departmental Chief Scientific Advisers about their budget. Bob Watson talked about having £1 million in his back pocket that he spends on whatever programme he wants. We were impressed with that and very excited. Others have absolutely nothing. In order for them to be able to carry out that challenge function so that they are able to actually commission research, should they have a budget and if so, how should that be arrived at?

Sir John Beddington: Some of them have massive budgets. The MoD has something in the order of £400 million in the control of the Chief Scientific Adviser. DfID has a massive
budget, David MacKay in DECC has a substantial budget, Sally Davies in the Department of Health has an enormous budget. Bernard Silverman, in the Home Office, has changed. The direction of change is interesting. Both in DfID and the Home Office, the Chief Scientific Advisers have been asked to essentially control the budget, which was not the case with their predecessors. That is interesting; that is the direction of travel that seems to be occurring. Absolutely, of course, one should have some discretionary spending. In terms of the sums, a number of them sit on research committees that actually decide how the money is allocated but an ad hoc system—whether it is £1 million for Bob and £30,000 for somebody else—might be attractive but I think that is very much within the Permanent Secretaries’ decisions on how that is operated.

There is an issue: if you control the research budget of your department, who is challenging whether that research is any good? I am not certain whether there is an ideal answer to that. In a sense, my instinct is that I would like to see the Chief Scientific Advisers with a science advisory committee, controlling budget and taking criticism from outside but I think not all departments have that, so in a sense the Chief Scientific Adviser provides a challenge function because they do not control the budget. That is an odd one; I do not think it is an ideal answer.

**Q127 The Chairman:** We are running out of time, Sir John. There was a fifth question that we were going to ask you about the measurement of CSAs’ performance. I wonder if you could send us your thoughts in writing about that because we have run out of time right now. How do you think that the performance of CSAs should be assessed? What sort of assessment criteria there should be? I know some government departments, such as Defra, have a scientific advisory council that works with CSA and Bob Watson in Defra; do you think that model is a model that should be rolled out across all departments?
Sir John Beddington: Yes, I have already said that in other fora. In fact most of the recommendations from the reviews that we have had indicate that the independent panels also feel things would help. I will write it.

The Chairman: I would like to draw the session to a close and thank you very much indeed for your responses to our questions. As you know, you will receive a copy of the transcript for you to make any amendments or corrections that you wish to make. That draws this session to a close and thank you very much indeed.