

# How useful is public engagement in deciding research priorities?

One recent report has examined how research funding is allocated in the biosciences.<sup>1</sup> Another touches on public views on research council funding, in the context of a public dialogue on synthetic biology.<sup>2</sup>

Here, **Helen Wallace** and **Patrick Middleton** focus on the practice of public engagement as a way of determining priorities in research funding.

## Patrick Middleton wants views from outside the scientific community

There are few who argue that taxpayer-funded science should not aim to enhance our quality of life. But with a limited pot of money, how can funds be spent most effectively? In recent years, public engagement has been held up as one route by which this conundrum might be solved.

In its broadest definition, public engagement is about more than policy setting. It includes helping funders to be accountable to tax payers, letting researchers view their work in a broader context, and challenging our assumptions. However, when it is about informing policy, then we need to answer: How can expertise from outside of the scientific community be harnessed to ensure that research policy and funding are able to meet the needs of society?

### BBSRC activity

Over the last 15 years or more, the Biotechnology and Biological Sciences Research Council (BBSRC) has, with others, tried to answer these questions and to bring wider perspectives into its strategy setting. The 1994 consensus conference on biotechnology was the first of its kind in the UK. Since then, BBSRC has worked at a number of levels to address individual issues around the research it funds. Some examples include: large scale dialogues on stem cells (with MRC: the Medical Research Council) and synthetic biology (with the Engineering and Physical Sciences Research Council). Other examples: online tools to discuss food science; UK-wide

attitudinal studies to look at research priorities around ageing (with MRC); consultations on strategic plans; and the involvement of interested organisations in drafting funding calls in areas such as crop science or insect pollinators (under the Living with Environmental Change programme<sup>1</sup>).

But all this activity is meaningless unless it is asking the right questions, and the answers have a route to influence the research agenda. BBSRC tries to do both these things with the aid of its Bioscience for Society Strategy Panel, one of seven high-level panels that report directly to BBSRC's Strategy Advisory Board. Part of the Panel's role is to highlight to BBSRC what questions it should be asking, and what issues need attention.

### Varied success

Needless to say, the success of these various attempts to engage with perspectives outside of the science community has varied. Some, for example, have just identified a list of generic issues. However, we have learnt from past experience. We are currently working hard to ensure the recently published synthetic biology dialogue report<sup>2</sup> has an impact beyond the research councils.

But we still struggle with some aspects, like involving all those people and organisations who have a stake in the research we fund. An invitation to take part in an open consultation often fails to illicit a response, yet policy made in response to the consultation may subsequently be criticised by the

'non-respondents'. We do not want a blame game but clearly there is a disconnect here. Indeed, involving all voices in a discussion is often a limiting factor on how successful a public engagement activity can be. So how can we make public engagement as effective as possible?

### Suggestions please

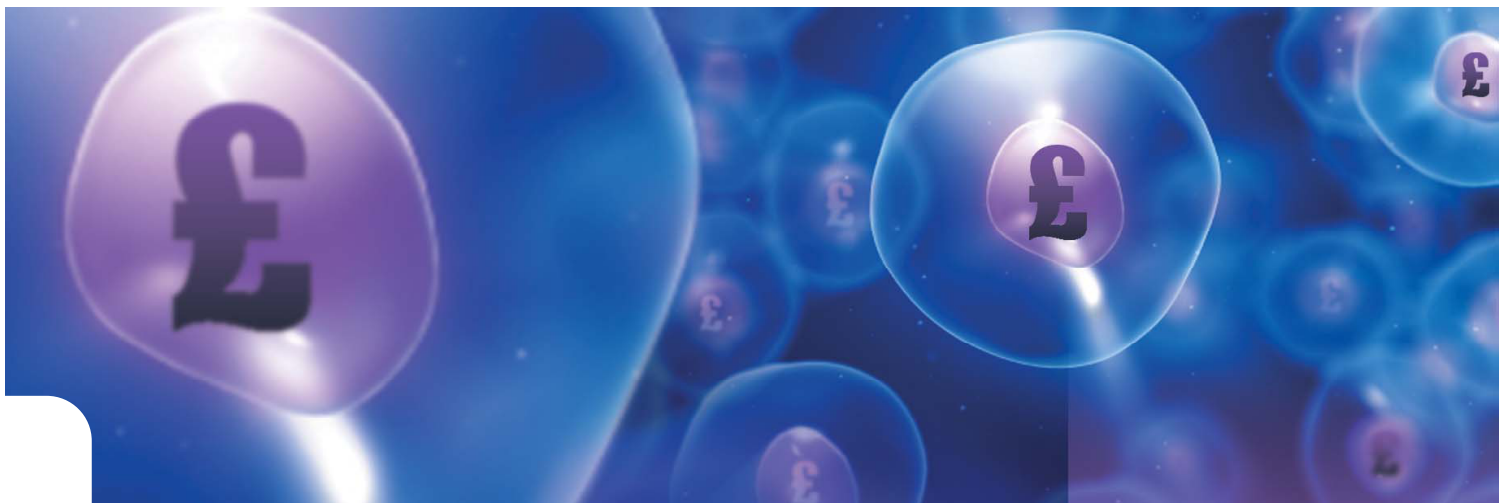
This is not a question we can answer alone. Our plans for future public engagement on bioenergy and food security are still in development. One proposal is that, rather than run one large dialogue, we might use a range of different events that use different techniques to discuss different aspects of issues with different audiences, and then use outputs to distil key issues.

No doubt you can see as many problems with this approach as with others. But we are open to suggestions about how we can answer the question: How can we harness expertise from outside the scientific community to ensure that research policy and funding are able to meet the needs of society?

1. See [www.lwec.org.uk/](http://www.lwec.org.uk/)
2. D Battachary, J Pascall Calitz and A Hunter (INS-BMRB, 2010). Synthetic Biology Dialogue: BBSRC/EPSC/Sciencewise-ERC. See [www.bbsrc.ac.uk/web/FILES/Reviews/1006-synthetic-biology-dialogue.pdf](http://www.bbsrc.ac.uk/web/FILES/Reviews/1006-synthetic-biology-dialogue.pdf)



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## Public engagement must influence research priorities, argues Helen Wallace

Who decides what the priorities should be for investment in research, in terms of the big picture trends that will influence our future quality of life and our economy? These are political decisions that are largely unaccountable but which have profound effects on all of us.

GeneWatch recently published a major investigation of the research funding system for the biosciences.<sup>1</sup> We found that the entire system is now shaped by political commitments to the 'knowledge-based bio-economy'. This is deeply embedded in the system of incentives designed to measure and reward the output of researchers, as well as in the institutions that exist, including the BBSRC (Biotechnology and Biological Sciences Research Council).

This has a significant influence on who gets funded to do what. For example, a major shift of agricultural research efforts off farms and into laboratories has meant the loss of agricultural extension services, and shortages of skills in areas from soil science to plant pathology. Similarly, a political commitment to a future in which everyone will have their genome sequenced and stored in the NHS drove significant public investment in human genomics, as well as Blair's £12 billion decision to build a centralised system of electronic medical records.

### Anti-democratic

These decisions have been made in a manner best described as anti-democratic. Parliament was sidelined and billions of pounds of taxpayers' money were committed to visions of the future which were neither transparent nor accountable. Critics of GM crops and large-scale genetic databases were smeared as 'anti-science' and policy makers became deaf to real concerns about the vested interests promoting these approaches. The damage to public trust has been significant, as have the opportunity costs associated with the loss of investment in other areas and the failure to build a competitive economy.

Scientists have been left promoting and defending claims that are based on outdated views about biology, ignorance about social and economic realities, and mired in vested interests. For example, screening everybody's genome will not be of benefit to health because there are no genetic tests – either singly or in combination – that meet medical screening criteria for the general population. This idea originates with false claims by tobacco-funded scientists who wanted smoking cessation efforts to be targeted at a supposed 'genetically susceptible' minority of smokers. It is now driven by commercial attempts to use personal genomes as a way to market functional foods, drugs and skin creams to the healthy population.

### Limits of public engagement

Public engagement cannot replace the democratic accountability of governments for decisions about how taxpayers' money is invested for the future. But it can help to open up debate, improve public scrutiny, and help technological enthusiasts for particular approaches see the bigger picture, such as the implications of patenting seeds on the livelihoods of poor smallholder farmers.

However, public engagement is meaningless unless it is allowed to influence research priorities, with the aim of helping to direct research investments in a way that meets societal needs. It is also critical that participants are not fed empty promises or extravagant claims about feeding the world or curing cancer. This means alternatives must be on the table: for example, options for stricter regulation of the oil industry must be considered alongside Craig Venter's speculative claims that new synthetic bugs will one day clean up oil spills.

Research priorities would shift as a result of genuine engagement, and some pet theories and approaches would have to be abandoned. This need not harm blue skies research: but protecting it implies a return to valuing science for science's sake and for its role in policy decisions, not purely as a driver to bring new products to the marketplace.

1. H Wallace (2010), *Bioscience for Life? Who decides what research is done in health and agriculture?* GeneWatch. See <http://tinyurl.com/24izocr>

2. D Battachary, J Pascall Calitz and A Hunter (TNS-BMRB, 2010). *Synthetic Biology Dialogue: BBSRC/EPSCRC/Sciencewise-ERC*. See [www.bbsrc.ac.uk/web/FILES/Reviews/1006-synthetic-biology-dialogue.pdf](http://www.bbsrc.ac.uk/web/FILES/Reviews/1006-synthetic-biology-dialogue.pdf)



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