

Tyndall Centre Presentation

Some likely Questions:

1. You make only vague commitments to complementary funding - explain your strategy?
2. You present two options with regard to a building at UEA - how dependent are you on ICER?
3. How will this large Consortium be managed? What experience do you have?
4. How will you instil a sense of 'togetherness' to the Centre when the members will be in 9 different places?
5. RP1 seems central to your vision, and yet I wasn't convinced about how you could make the integration work across the other five RPs.
6. Although you are clearly aware of the global dimension to the problem, your proposed work makes little mention of global climate policy. Why is this?
7. I am interested to see you propose some work looking at the nuclear option. Please explain your thinking about this?
8. What would you say are the major weaknesses of your bid?
9. How do you propose the Research Director and Executive Director will work together? What separation of duties will you propose?
10. In what ways do you see yourself working with the Hadley Centre and UKCIP?
11. This proposal strikes me as too ambitious - you cannot do it all, and certainly not with only £10 million.
12. How will the new Centre relate to the Climatic Research Unit, already well established in its field?
13. You talk a lot about sustainable solutions to climate change? What do you see these to be and how will your Centre accelerate these forward?
14. What is the value-added of the Consortium?
15. What does DTI get for its £70k p.a.?
16. I am interested to see you have involved JIC in your discussions. How does Tyndall Centre relate to the biotechnology research agenda?

Tyndall Presentation

The Consortium of institutions that Tim, Brian and myself are representing this morning is very excited by the establishment of a national Climate Change Centre for the UK. The vision of such a Centre that the three Research Council's have developed, we believe not only allows for a strong base of integrated climate change research from which to inform public and policy debates in this country, but also offers an opportunity for the UK to establish a world-leading Centre for such inter-disciplinary activity.

This 10-minute presentation will focus on the key characteristics of the Tyndall Consortium bid that we believe will make this enterprise successful.

SLIDE 1: The Tyndall Vision Statement

The Tyndall Centre's Vision Statement reflects this excitement and this opportunity. Here I provide just thumbnail's of our five key statements that you will find at the beginning of our proposal. Taken together, these statements summarise what we believe the Centre can contribute to the climate change challenge.

- **undertaking innovative, integrated and interactive research** - this summarises the central research philosophy of the Centre, not least its focus on interactive research. By this we mean research being conducted openly *with* society, not operating behind closed doors with a hidden agenda or reflecting vested interests (scientists understanding of the public).
- **identifying critical rates of change** -
- **creating opportunities to implement strategies** - we will be biased in favour of finding sustainable solutions and, more importantly, we will undertake research to enable effective implementation of these solutions.
- **training strategic thinkers and young scientists** -
- **sharing research findings with stakeholders and being enriched through dialogue** - the Tyndall Centre regards communication and the public understanding of climate science and its implications as extremely important and we therefore dedicate significant resources to these activities. The dialogue with stakeholders emphasises again our commitment to an interactive research process.

SLIDE 2: Excellence and Experience in Practice

Let me now turn to summarise the strengths of the Tyndall Consortium - the reasons which we hope will persuade you that we are best placed to make this new national research Centre a world-leading success.

- **a Centre consisting of internationally-renowned research groups committed to integrated research** - the constituent parts of our Consortium have all made significant contributions to climate change research. As an example of this, of the six IPCC Co-ordinating Lead Authors here in the UK (excluding the three from the Hadley Centre), five of them are associated with our bid (plus numerous other contributing Lead Authors). **We are all committed, both in principle and in practise, to the necessity of integrated research** - our existing research record bears out this commitment and we have been at the forefront of integrated research initiatives in the UK and Europe over the last decade and more. ENV at UEA epitomises this experience in inter-disciplinary research.
- **Consortium members have pioneered new methodologies across a wide spectrum of issues relevant to climate change** - this pioneering spirit goes right back to the founding of CRU in the early 1970s (first to recognise climate change was important) and then in the early 1990s when we implemented the first IAM for climate change (ESCAPE) for DG-Environment. Other pioneering and creative work has been at SPRU Heat&Power model for energy projections (DTI) and Process Integration technology developed at UMIST for improving energy efficiency and throughput, with thousands of world-wide applications. This innovative and creative research has often been undertaken in partnership with other Consortium members we have many examples of bi-lateral research co-operation within the Consortium.
- **we have agreed new partnerships to allow this creativity to further flourish ('Extending the Frontiers' with MIT; Newton Institute)** - this demonstrable potential for innovative research will be further boosted by new initiatives taken by the Tyndall Centre. Thus our partnership with U.Cambridge and MIT Joint Program on the Science and Policy of Global Change to run an annual series of 'Extending the Frontiers' seminars offers a means to fashion new research objectives, and the enthusiastic support offered by the Isaac Newton Institute in Cambridge to our approach offers another avenue to harness world-leading mathematical expertise to 'solve' some methodological issues in integrated climate change modelling. We will also look at the creative potential of using either of our building options for demonstrating the integration of PV or low energy technologies into architectural design.

Having demonstrated our excellence and experience, let me know turn to the ways in which the Tyndall Centre research programme will bring a distinctive value-added approach to the climate change challenge

SLIDE 3: Value-added Research

- **integrated assessment will inter-link geographic scales, temporal dimensions, innovative methodologies and decision frameworks** - the Tyndall Centre approach to IA will embrace scales from global, through national to local, will

consider the interaction of processes and decisions on time-scales ranging from the short to the long-term, and these IA tools will be designed and used in an interactive and participatory research environment.

- **carbon management strategies will be informed by climate science, by the inequity of climate impacts, and by the scope for technological innovation** - it is essential that all three of these dimensions are brought to bear in the design of robust and sustainable carbon management, i.e., there are scientific, ethical and technological issues involved in the design of mitigation strategies.
- **extreme event analysis allows for the application of precaution in designing physical, social and institutional adaptability under conditions of uncertainty** - adaptation to climate change will often be paced through the occurrence of extreme weather events and/or by the possibility of abrupt climate change. Our research in this area will inform the process and the ultimate goals of climate change adaptation, in physical, social and institutional dimensions.
- **coastal zones are among the most vulnerable domains; designing for coastal resilience is a test case for the resolution of climate politics** - we pay particular attention to coastal zones since sea-level rise is one of the most robust of climate impacts, because over 20% of the world's population live in these regions, and because many of the issues of conflict about climate policies will be played out in these environments.
- **climate futures are partly what we make them to be, either by default or by conscious intervention: Tyndall Centre research will facilitate the latter approach** - the future climate of the latter half of this century is not yet determined; it will in part be shaped by decisions we take as a human family over the next 25 years. Tyndall Centre research by looking at the long-term drivers of change will articulate the options we have in shaping the climate of the future.

Let me finish my presentation with a slide that relates the work and role of the Tyndall Centre to the wider research, stakeholder and governance communities.

SLIDE 4: The Tyndall Centre is Connected

This is of course selective and a heuristic device, but it shows how important it will be for the Tyndall Centre to relate to these different communities. The diagram indeed emphasises not just the desirability, but the necessity for such a Research Centre operating vibrantly at the heart of the climate change debate between government/academia/the public. The Tyndall Centre will therefore bring excellence and experience to this debate, conducting research in an interactive environment, and communicating openly across these three domains of collaborators and stakeholders.

Let me just draw attention to some examples of these links and why the Tyndall Consortium is well placed to make them function:

- Hadley Centre and UKCIP as pre-existing, DETR-funded centres; our Consortium has a long track-record of engagement and collaboration with these centres (cf. Appendix 10).
- The MRC and BBSRC: currently not engaged in the vision or funding of the Centre and potentially somewhat peripheral. Through our links (MRC/NERC Co-op. and JIC) we have the opportunity to bring them into the circle.
- The proposed Climate Change Technology Centre, suggested by ACBE as a means to enhance and speed the development of near-market new energy technologies that will contribute to climate change mitigation. We would see a very close relationship between the Tyndall Centre and such a body should it come to be.

And as an icon of the Tyndall Centre philosophy operating at the centre of these three domains, we are proposing to co-sponsor an evening lecture and discussion event through the FST on a topic such as 'Identifying robust policy responses to climate change'. The new Director, Dr Dougal Goodman, has already agreed his support in principle.

I trust this has given you the flavour of our bid, the unparalleled strengths and experience we bring to bear to this climate change challenge, and has explained some of our thinking about why we have designed the Centre in the way we have.

All three of us will be happy to answer your questions. Thank you.