



Climate Change

- more light, less heat

Issues and challenges vary tremendously in their degree of complexity, however we could probably all agree that Climate Change represents a particularly complex challenge. Given the need for urgent, large scale and coherent action involving a wide range of stakeholders, what can be done?

The dimensions of complexity

Climate Change is 'complex' in many dimensions, for example:

- Political - the challenge demands global co-operation on a scale never before attempted
- Economic - the costs of adaptation and mitigation are potentially enormous, with no clear 'right answer'
- Social - adaptation and mitigation require behaviour change, again on a scale never before seen
- Technical – the science is complicated, even for those who understand it, and the picture will inevitably change as new data comes in and as new analyses are developed

These dimensions of course interact – for example any uncertainty in the science can undermine confidence and hence the political power to progress urgent mitigating actions.

Tackling complexity

Complexity is not necessarily a 'bad thing'. Our complex environment has evolved to allow us to do complex things, such as global trade. However, a key lesson from complexity and systems thinking is that you have to fight complexity with complexity (a principle that goes back to Ross Ashby's 'Law of Requisite Variety').

A consequence of this is that it is not just a nice idea to involve a wide range of individuals and organisations to solve a complex issue, but it is *absolutely necessary*. However, any individual has a unique world-view - how could it be otherwise, given all the potential variations in individual experience and learning? Organisations also develop their own world-view (often expressed as 'culture'). These variations pose a substantial communication barrier which needs to be overcome to make progress. If we don't understand where the other person(/organisation) is 'coming from', we don't exchange information in an effective way, and we can't make meaningful decisions.

Common characteristics of Climate Change challenges

I am aware of a number of initiatives around the UK tackling different aspects of mitigation and adaptation in the context of Climate Change. A common feature is the involvement of many (generally between 5 and 20) organisations, each having their own world-view, and related set of priorities. It seems to me that the biggest risk here is of 'stasis', with little or no visible progress. It may well be that everyone is busily pulling in different directions, and like Brownian motion (a scientific reference, not a political one) creating a lot of action but going nowhere fast (you can add your own political point here if you wish...)

The good news

The good news is that Homo Sapiens has developed a range of techniques to address complex, messy, 'wicked' problems. The bad news is that our species has not yet systematised and institutionalised these methods, relying still largely on 19th and 20th century approaches such as 'reports' and 'meetings'.

Perhaps we need to start employing our full range of 21st century capabilities to take on the enormous 21st century challenge of Climate Change.

Peter Miles, 28 Nov 09