

## Our approach to the Arctic is new

### Dr Tavis Potts

“In a way, science has hit the buffers when it comes to the Arctic. This most inhospitable of regions is changing more rapidly than any other place on earth. Yet despite the wealth of research on the Arctic, we know little of how this vast area will look in 20, 30, 50 years time. We don't know how climate change will affect its four million people and the wildlife living in the region, or what impact it will have on the interactions between society and nature.

There is a drive now to get away from traditional research, which is oversimplifying what's happening. Scientists have always thought of the Arctic simply as 'the Arctic' – one huge region rather than the many small localities making up the whole.

We think that's not the only view scientists should be taking because it ignores all the complexities of human lives, of different governments and of local ecosystems. We have taken this on board and the work we are planning will embrace the cultural and social complexities that have largely been ignored.

### Culture

One of the most neglected areas of research has been the culture and history of indigenous peoples. One island, King Island, has more than 160 local words to describe the different uses of various parts of the island. A few of those names have no English translation and the elders among the remaining King Islanders say those words come from the group's ancient language. Younger King Islanders - people who were not brought up on the island – seldom learn either the Inupiaq or English names for the island.

Similarly, no-one has considered how the EU's ban on trading seal products will affect local economies. Communities in Greenland cannot feed themselves properly because the traditional seal product market has collapsed. At the same time, farming is developing in Greenland for the first time since the Vikings were there, so much so that you can now grow broccoli. And what will happen if Greenland, which has now established Home Rule from Denmark, becomes completely independent? That would send shockwaves through the Arctic's indigenous communities.

There may be nine billion barrels of oil close to Greenland's coast awaiting discovery and already, oil exploration is going on left, right and centre across the Arctic. No-one knows how a massive oil spill, perhaps from a new rig in a newly opened oil field, or from a tanker navigating the Northwest Passage for the first time, will affect Arctic ecosystems.

Coastal erosion is destroying shoreline infrastructures, villages are being relocated but people from elsewhere are migrating towards the poles, to escape different problems, problems that climate change is also creating. The impact of all of these things could be huge, but there has been no research.

### A home

People forget that the Arctic is a home to people and has been settled for millions of years. It is changing at an unprecedented rate because of global warming and we could be looking at ice-free zones in summer as soon as 2030.

Our research will concentrate on four areas: we want to develop a framework for linking science and policy; we will re-examine the scale for dealing with rapid change and adaptation - in other words, integrate large and small-scale research; we plan to look at the bio-cultural diversity of the Arctic region – what one Inuit community thinks and does is completely different from another

community 100 miles away; we will research the environmental policies of different countries and their roles.

## **Debate**

The Arctic provides 40% of Europe's fish and most of the continent's gas. Until now, the five coastal Arctic states have been fairly isolated but now the EU is getting a lot more involved politically, causing considerable friction. Asian countries, particularly China and South Korea, are also becoming more interested because of the potential mineral wealth of the Arctic and because shipping lanes are opening up as the ice melts.

The Arctic nations are facing new external forces as the region warms up and develops. That means more debate over conservation versus development. We want to explore what change means for governments and on the ground.

There have been many Arctic conferences but none has fully integrated all the areas of expertise that our group is offering. That's where our approach is different. As lawyers, scientists and anthropologists we are committed to working closely together, doing the field work and talking to people about what's happening at indigenous and government levels. We are planning several activities which potentially include a conference panel and a book.

There needs to be a lot of work done on reforming governance in the region, at local and national level. We talk about sustainability a lot but it isn't so easy to apply.

Development could help people living in the Arctic but also make things worse. The consequences of climate change for the region, and for the rest of the world, are profound.

We don't have the science to know what will happen but we, as a diverse group of experts, are starting to put that right. The Arctic is a laboratory for studying global climate change and that is what we plan to do."

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