

CRASSH Cambridge talk, October 19th 2011, Nell Crowden

Human health and climate change: aspects of generation, development, dissemination and advocacy.

The research that I will talk about today was undertaken as part of my history of medicine masters. I've been looking into the subject of health and climate change, and aspects of its generation, development, dissemination, and advocacy. **Today, I will start with some key dates and sources, then go on to discuss the context of generation, and then look at some aspects of development and advocacy in this field.**

So, let's start with some dates to give you a structure to the subject.

1988 The Intergovernmental Panel on Climate Change, the IPCC, was established by three United Nations agencies; the World Meteorological Office, the World Health Organisation, and the UN Environment Programme.

In 1990 the IPCC's First Assessment Report was published, and since then, the IPCC has had three subsequent assessment reports published in 1996, 2001, and 2007, all of which include health impacts.

In 1991 the health journals *Environmental Health Perspectives* and the *British Medical Journal* ran the first articles on climate change slash global warming and health.

1993 saw the first definitive book on health and climate change *Planetary Overload*, by Tony McMichael.

1996 and 2003 saw two books published on this subject, jointly by WHO/WMO/UNEP.

And of course from 1991 onwards there have been numerous papers on health and climate change. But the key dates to remember are the 4 Assessment Reports in 1990, 1996, 2001 and 2007, because they have reviewed the most up to date published science.

More recently, in 2007 the IPCC was awarded the Nobel Prize for Peace, and the following year, WHO declared climate change its theme for World Health Day.

In 2009, the *Lancet* medical journal declared that 'climate change is the biggest global health threat of the 21st century'.

So how did we get here?

Let's go back to the 1980s, to see what was going on to unite the term climate change with the term health in the first place.

I will focus most of the talk on the beginnings of this subject, because unlike a disease, which has a tangible cause; whether it's a virus, or bacteria, climate change has very different characteristics as a health threat; human behaviour is the driver in this 'disease'.

So how did health and climate change emerge as a subject?

Well, I can't give you a definitive answer, but approximately, the two were linked in the late 1980s in institutions such as the UN, the London School of Hygiene and Tropical Medicine, other universities, and governments, for instance the Australian and American governments. Our next question is then, what were the wider environment, health, and global conditions during this decade that facilitated the ideas of climate change and health to be linked?

The following five areas and concepts emerged as themes:

1. We have the field of Biometeorology;
2. The field of 'Public health'
3. The term 'global'
4. The term 'Global environmental threat'
5. And the term 'Global health'

These 5 areas cover the bases of health, climate, climate change, environment, and global and international concepts.

Firstly, we'll look at Biometeorology....

Medical literature on the impacts of an environment on health goes back centuries, from Classical Chinese works on the Winds, to Hippocrates' 'Airs, Waters, Places'.

More recently, in 1956, the International Society of Biometeorology was founded by a geologist, a meteorologist and human physiologists at the UNESCO headquarters in Paris.¹

This showed one example of the links between environment and ecology by a United Nations agency, whose intention was aiding communication between scientists of different nationalities.

In 1986, the first international conference 'Climate and Human Health' was held in Leningrad and, co-sponsored by the UN's World Meteorological Office, World Health Organisation, and the UN Environment Programme. This conference looked at current, natural changes in climate and health, rather than possible future climate change scenarios. It is though still a foundation from which climate change and its health impacts emerged, given the later engagement of the same UN agencies two years later, with the establishment of the IPCC.

In a 1991 paper, Janice Longstreth cited biometeorology² as a field from which health and climate change emerged as a scientific discipline linking 'atmospheric processes and living organisms, including plants, animals, and humans.'³

For our second contributor, we look to the field of Public Health.

Public health has been regarded by some as the appropriate field to address climate change and its health impacts. But why should public health professionals be chosen as part of the response team? Nicholas King, specialist in the history of science and medical anthropology, observed that, and I quote,

Public health has long been concerned with protecting its citizens against threats perceived as having external origin. It has thus been 'international,' and closely allied with ideologies of national security and international commerce since its earliest days.⁴

End quote

1 Ibid.

2 Longstreth, 1991, 'Anticipated Public Health Consequences of Global Climate Change', *EHP*

3 Retrieved on 26/08/09, from http://www.biometeorology.org/what_is_bm/index.cfm

4 Nicholas B. King, 'Security, Disease, Commerce: Ideologies of Postcolonial Global Health,' *Social Studies of Science*, (2002) p764

Global warming is a prime example of a threat from ‘outside’, but it is also contributed to by human behaviour from within our own country.

Thirdly, we look at the term ‘Global’

The emergence of a ‘global’ discourse in the 1980s stemmed from ideas about the interconnectivity of people and nations. This was particularly but not exclusively in terms of politics and economics, as international markets became closer entwined. The decades of cold war polarised many parts of the world, which also served to increase links between countries. By the end of the 1980s the term ‘global’ could really apply to a sense of a shared global identity.

For our fourth topic, we look at the ‘Global Environmental Threat’.

During the 1980s there was a shift from local and regional environmental issues, to a global environmental viewpoint. Mark Maslin, a professor of climatology at UCL, said that in the 1980s, and I quote,

Suddenly the environment becomes global, the environmental threat becomes global and the whole ozone debate puts us in a new dimension.⁵

End quote.

The Secretary of IPCC from 1988 – 2002, Dr. Sundararaman, expanded upon this: in addition to ozone depletion, there was, ‘the pollution of the oceans and ambient air quality. All these led to the idea of common goods and of global commons.’⁶

So climate change and ozone depletion were presented as just two of a few pressing environmental issues. With increased public and political awareness of Hansen’s research findings on ozone depletion over Antarctica, international and political action created the 1987 UN Montreal Protocol, which limited ozone-depleting CFC emissions. Maslin claimed that it was the globalisation of the environment that was essential.⁷ This marked a key precedent for climate change to follow.

Let’s look now to Concepts of ‘Global’ Health

If climate change is a threat to ‘global health,’ what does ‘global health’ mean? Well, when looking at health on a scale larger than national, two of the most commonly used terms have been ‘international’, and ‘global’. You may have also heard ‘world health’, or ‘transnational health’.

⁵ Maslin, 1/06/09, Interview

⁶ Narasimhan Sundararaman, 30/08/09, Interview via email

⁷ Maslin, 1/06/09, Interview

A 1999 survey by Brown et al. showed that in a sample of leading health professionals, half thought there was no difference between ‘global’ and ‘international’ health, but half saw a need for a new terminology, because the concepts were ‘profoundly different.’⁸

Lee, from LSHTM, contrasted the two, and I quote,

Global health, as opposed to *international health*, is about trans-border flows of people, goods, services, technologies, and ideas that impact upon the determinants of health on many levels: local, national, regional, international, and global.⁹ End quote.

The concept of global health isn’t new, though, as Haines observed concerning the 1919 flu pandemic. He said that ‘the concept of global threats to health predated the terminology of global health by a long way.’¹⁰

He went on to add that the term ‘global health’ is in itself problematic; because it is ‘concerned more with health in low income countries’¹¹.

This is in keeping with the World Health Organisation mission, whereby the term ‘world health’ has greater emphasis on improving health in developing nations.

The anthropologist, Keane, proposed that, ‘global analysis of health will continue as processes of globalisation.’¹² So the globalisation mechanism indicates how ‘global health’ is in part a response and reaction to global economic and political trends.

My last point on global health comes again from Brown et al.’s paper. Rather neatly, they actually attributed part of the generation of ‘global health’ to the work of environmental health professionals. And I quote,

Another strong source for the term ‘global health’ was the environmental movement, especially debates over world environmental degradation, global warming and their potentially devastating effects on human health.¹³

⁸ Theodore M. Brown, Marcos Cueto, and Elizabeth Fee, 2006, ‘The World Health Organisation and the Transition From International to Global Public Health’ *AJPH*

⁹ Kelley Lee, ‘Globalisation – a new agenda for health?’ eds Martin McKee, Paul Garner, and Robin Stott, *International Cooperation in Health*, (2001, Oxford) p17/25

¹⁰ Haines, 18/07/09, Interview

¹¹ Ibid.

¹² Ibid. p237

¹³ Brown, Cueto, and Fee, 2006, ‘The World Health Organisation and the Transition From International to Global Public Health’ *AJPH*

So, part of what contributed to the whole idea of ‘global health’, was global warming itself!

2. Development of Climate Change and Health

Now let’s look at a few factors that during the 1990s and 2000s that have shaped the development of this subject. I won’t go into great detail about politics or economics, as you will already know much about these relating to climate change on its own. The areas I will cover are:

1. **Research Funding and Characteristics**
2. **UK Dissemination, Advocacy and Action Groups**

1. Research Funding and Characteristics

Haines is well qualified to look back over the funding and characteristics issues. I will quote him at length, as he gives a clear picture of the situation. He said that,

To be honest it’s been quite difficult to get money to do research in this area, so a lot of the articles have been more at the level of conceptual thinking and outlining what the problem is, or theoretical pathways by which health could be influenced by climate change. There is still a lack of empirical research, and that’s partly due to the technical difficulties of doing it because often in the countries where you want to study the impacts the data is very poor and people are not collecting long-term data on trends in relation to climate; you need to study it for decades to get consistent trends.¹⁴

Furthermore, and I quote,

It spreads across all these different research councils and it’s notoriously difficult to get them to work together and put their money into a common pot.¹⁵

Tony McMichael, who wrote Planetary Overload, and who has often co-authored with Haines echoed the above. He listed the factors restricting research on health and climate change as:

Conservative world-views and concepts of ‘research’ within government and funding agencies and a lack of a strong precedent for broad, novel, multidisciplinary research (perhaps warranting multiple-source funding)¹⁶

The wide reaching nature of the subject has restricted its advancement through lack of a funding framework, though in recent years, there has been more funding available, for example from the Wellcome Trust.

¹⁴ Haines, 18/07/09, Interview

¹⁵ Ibid.

¹⁶ McMichael, 29/07/09, Interview

2. UK Dissemination, Advocacy and Action Groups

Now, I will pick out some of the key episodes in the UK which have contributed to the development of climate change and health. These include a conference, medical journals, and the emergence of related organisations.

We'll start with the RCP Conference

The conference, 'Climate change and its impacts of health,' comprised a day of lectures from experts, who outlined what climate change is, why and how it has happened, the implications for how people live, and the health impacts. This was delivered to an audience of around three hundred health professionals, some of whom continue to work in this field.

Now we will look to the medical journals

Two UK medical journals have been key players in communicating climate change and health to the medical profession. Fiona Godlee, editor of the *BMJ*, compared the two journals, and pointed out that *Lancet* editor, Richard Horton placed emphasis on the need for the science whereas Godlee, said the *BMJ* focus was on the need for advocacy as well.

Reactions to doctors engagement with climate change

Many doctors supported the need for action on climate change, in light of its health impacts. However, there was a backlash to doctors engagement with climate change. Debates went on in the *BMJ* as physicians opposed that they should involve themselves with climate change. In response to Godlee and Stott's article, 'What should we do about climate change?'¹⁷ one consultant radiologist pointed out the 'huge or ridiculous cars'¹⁸ doctors usually have, and the amount of electricity hospitals used, and thus 'doctors in particular and the NHS in general are in no position to lecture others on "carbon footprints."'¹⁹ From another angle, a contingent of environmentalists heavily criticised Godlee and Ian Roberts for speaking out against climate change whilst flying round the world for their jobs.

Lastly, we look at key UK organisations

In the past 5 years some UK organisations have been established out of concern the health impacts from climate change. They are:

Medsin Healthy Planet Campaign (2006/2007)

Climate and Health Council (2007)

¹⁷ Robin Stott and Fiona Godlee, 2005, 'What should we do about climate change? Health professionals need to act now, individually and professionally.' *BMJ*

¹⁸ William T Stevenson, 2006, 'Doctors leading climate change is self delusional', *BMJ*

¹⁹ *ibid.*

NHS Sustainable Development Unit (2008)

Centre for Sustainable Healthcare (2008)

There are other organisations too, who deal with climate change and health in the UK and abroad.

What's next?

Although this is the history of health and climate change, I would argue that increasingly the theme of sustainability and health is taking over from that of climate change and health.

Sustainability and health presents a positive future direction, whereas greater granularity on health impacts of climate change is usually negative. Sustainability and health has the added benefit that, for those of us who aren't climate scientists, we do not even have to go into climate science, which can be difficult to debate with confidence when from another discipline, for example health. On a personal level I would say that you have to be very resilient or detached to work on such a negative subject long term, whereas there are many more positives to be found when working in sustainability and health. In terms of 'global health' – that should include the researcher as well as the subject!

If anyone would like to contact me, or would like a copy of this transcript, please email me on nwscrowden@gmail.com

Thank you very much for listening, I hope that you found some of it useful and interesting, and I wish you the best of luck for your studies.

Nell Crowden, October 2011