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vector

The Official Student Publication of the AMSA Global Health Network

Climate Change and Health Edition

Public Health Benefits of Climate
Change mitigation

GHN Update

**Code Green -
A Climate Emergency**

**Debunking the
Climate Change Myths**

What you can do
about climate change!



AMSA GHN

Also inside: Creative stories from your fellow medical students on global health!

contents

issue 11 april 2010



- 3 EDITOR'S NOTE
- 4 CLIMATE CHANGE: DEBUNKING THE DEBUNKERS
- 6 A VERY GOOD IDEA
- 7 CARBON FOOTPRINT, CULTURAL FOOTPRINT: WHAT YOU CAN DO ABOUT CLIMATE CHANGE
- 8 WHAT'S IN IT FOR US?: THE PUBLIC HEALTH BENEFITS OF CLIMATE CHANGE MITIGATION
- 10 HEALTH ECO-EVANGELISTS PUT RECORD STRAIGHT
- 11 CLIMATE FEVER
- 12 INTERNATIONAL HEALTH? GLOBAL HEALTH? PUBLIC HEALTH? DOES IT REALLY MATTER WHAT WE CALL IT?
- GLOBAL HEALTH NETWORK UPDATE
- 13 VICTORIAN STUDENT AID PROGRAM
- 13 GLOBAL HEALTH LECTURE SERIES
- 14 CODE GREEN - A CLIMATE EMERGENCY: AN INITIATIVE OF THE AMSA THINKTANK
- CREATIVE PIECES
- 15 PERSPECTIVES
- 16 AT A GLANCE: SOLOMON ISLANDS

the
climate change
and health
edition

editor's note

KRUTHIKA NARAYAN
VIKRAM JOSHI
RAMI SUBHI

The foundation of Medicine and its practice has been based upon a few profound principles. And though the Hippocratic Oath has often been modified to reflect the modernity of the age, the doctors who swore by it recognised the fundamental value of selflessness, sensibility and sacrifice.

Yet the inequity in 21st century global health care, the burden of non-communicable disease and issues in children's, maternal and indigenous health would suggest that perhaps Hippocrates got it wrong.

Global health care now faces a challenge that seems to encompass all such issues: that of climate change. Climate change as the context for exacerbating further inequity in global health and presenting new challenges such as mass migration and displacement is

future uncertainty have even more profoundly exacerbated the divide between developed and developing nations in committing to, let alone answering, these question.

However, what lies beneath the surface is clearly a newly shaping global consciousness. As with any work in progress, challenges and philosophical questions arise. Individuals and communities, alike are facing them. With the turn of the century, the concept of 'global citizenship' has come to the fore, forcing us to be more aware of our neighbours and their neighbours also. Given that basic human struggles are still being endured, it is no easy task then to recognize what legacy we might leave for future generations or what future impact our actions can have on each other.

This ultimately seems to be the troublesome link between climate change and health: the struggle for a global response to climate change has come full circle with our struggle for a practical, economical approach to global health care organization and practice in light of the new challenges climate change presents.

This issue of Vector attempts to come to terms with many of these questions. Climate change myths are explored, the role of the medical community and students alike are defined, the benefits of action are discussed and so too are the costs of inaction.

What is clear is that there is no road map to use, no guiding examples that History can present us with to charter this new territory. What is even clearer is that Hippocrates did not get it wrong. And fundamental to the solutions raised in this issue of Vector are those same values of selflessness, sensibility and sacrifice that are now being asked of everyone, not simply doctors alone.

“ though the Hippocratic Oath has often been modified to reflect the modernity of the age...the inequity in 21st century global health care would suggest that perhaps Hippocrates got it wrong ”

becoming a key concern of medical practitioners and administrators alike.

To complicate the issue, climate change itself has not been grappled with adequately. The wavering global response has, for many, been simply due to the economics of climate change. Focus has centred upon how the burden of responsibility for climate change should be shared: should it be proportionate with a country's current contribution, or should an agreement recognise the past as well? At the same time, recent global economic meltdowns, present fragility and

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Cover Photo: Composite Image by Alexander Murphy //Base Images by Spekulator (sxc.hu) and Asifthebes (sxc.hu)





Climate change: debunking the debunkers

WORDS AND PICTURES CATHERINE PENDREY, MEDICAL STUDENT, MONASH UNIVERSITY

Climate myths circulating in the public domain are reaching dangerously high levels. Many of us are unsure of their truth or hesitate to respond, whilst others amongst us react with dismissive fury.

But for the good of all of humanity and our planet we all need to move forward together, to a greener and healthier future. So let us, calmly, examine those climate myths one by one.

The world is not becoming warmer OR the world is cooling.

Warming of the climate system is evident from observations of increases in global average air and ocean temperatures, widespread melting of snow and ice and rising global average sea level (Figure 1.1)[1].¹ The International Panel on Climate Change (IPCC)¹ confirm that the evidence is overwhelming.

Those who question global warming often assert that since 1998 the world has cooled. This myth arose because the warmest years in the instrumental record of global surface temperatures (which begins at around 1850) are 1998 and 2005. The period between 1999 to 2004 was cooler than 1998 and some identify this as the beginning of a cooling trend. However, climate systems are complex and affected by many attenuating factors, so that better understanding is gained from long-term trends, rather than isolating a few years of the climate record.

The IPCC identified El Niño as the reason for hotter temperatures in 1998. 'No such strong anomaly was present in 2005' and this has not disrupted the long term trend² [2]. The earth's average surface temperature has risen by 0.74 °C since the late 1800s and is expected to increase by another 1.8-4° C by the year 2100. This represents a rapid and profound change, should the necessary action not be taken. Even if the minimum predicted increase takes place, it will be larger than any century-long trend in the last 10,000 years [1].

Humans are not the cause of global warming.

This argument often takes several forms:

- Global warming is part of natural cycles.
- CO₂ in the atmosphere is natural and

the 'small' changes in concentration caused by humans are not dangerous to life.

- Temperature and CO₂ correlate across time. The fact that temperature often begins to rise shows that CO₂ is not the cause of global warming.

To respond to this myth we need to detect that warming is occurring (see Myth 1.) and then attribute this warming to different causes. These potential causes can be classified as:

- » Natural forces
- » Anthropogenic (human) forces

The IPCC, in mapping all the natural and anthropogenic forces with potential to change the global climate, found that:

- » 'Most of the observed increase in global average temperatures since the mid-20th century is very likely due to the observed increase in anthropogenic greenhouse gas concentrations'
- » Over this period solar radiation was found to be the most powerful natural force affecting climate and it is 'very likely that it is not due to known natural causes alone'¹ [1].

These conclusions are based on the instrumental temperature record, not computer modelled past reconstructions. Thus, scepticism about computer models should not equal scepticism about climate change. There are now many robust models, which can allow us to look further back into the climate record and learn more about the relationship between CO₂ and temperature. The following is an ex-

¹ The Intergovernmental Panel on Climate Change (IPCC) is an independent body founded under the auspices of the World Meteorological Organization (WMO) and the United Nations Environment Programme (UNEP). It assesses the scientific literature and provides vital scientific information to the climate change process [2].

² Brett Parris is an economist with many years experience working for World Vision, and a lecturer and researcher in Deakin and Monash Universities, whose work focuses on the interaction between economic development, poverty and the influence of climate change.

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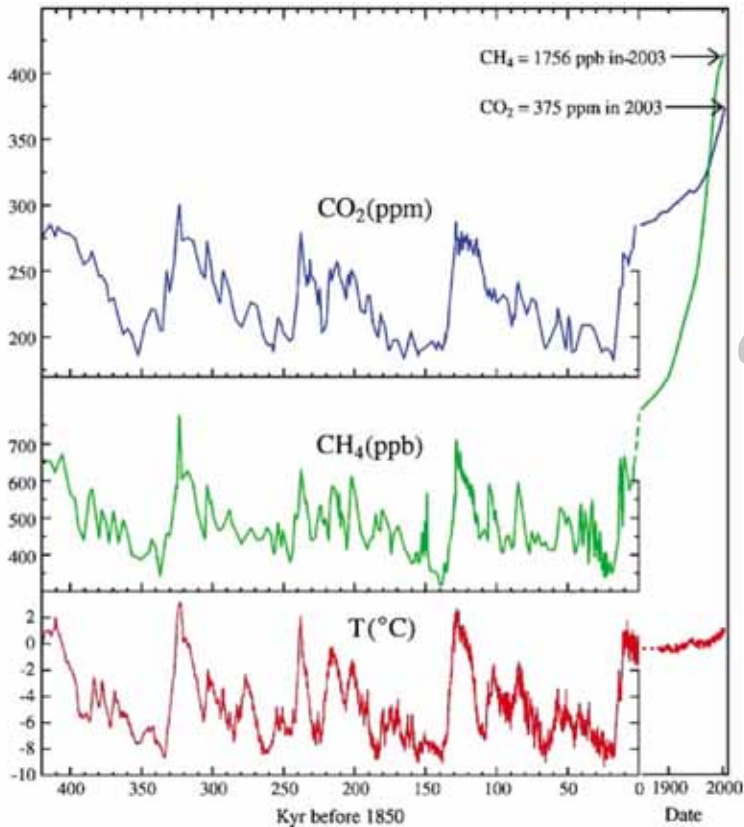
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planation by Dr Brett Parris²:

This chart 'shows the relationships between carbon dioxide (CO₂), methane (CH₄) and temperature for the last 430,000 years (or 430 kyr) from Antarctic ice cores and from data from the last century. Temperature doesn't respond in lock-step with the changes in gas concentration. In fact, coming out of the ice ages temperatures generally started to rise first, driven mainly by changes in the Earth's orbit and the angle of the tilt of the Earth's axis. [But] the rise in greenhouse gases strongly reinforced the warming, increasing higher temperatures and their duration. Temperatures have now risen by around 0.8°C since pre-industrial times and another 0.6°C rise is expected because of gases we've already emitted.

A large proportion of the scientific community do not endorse anthropogenic warming.

It is frequently represented in the media and public arena that scientists remain uncertain and divided about the existence of anthropogenic climate change. This is not the case. The IPCC's conclusion is based on a fully transparent review of scientific literature that was intensely scrutinized by experts and governments [1]. The consensus was further tested by Oreskes who analysed 928 papers from an objective search for the term 'climate change' in refereed journals. Of the 75% of papers that took a position on the con-

sensus, all agreed that humans had significantly contributed to recent warming [4].

'Climategate' proves that climate change and climate change science is bogus.

The main controversy of 'Climategate' was about the authenticity of data used in computer modelled reconstructions of past climate—a field of climate science known as paleoclimatology. Doubts raised about possible manipulation of this data was used to discredit the

truths behind climate change.

This is a myth because, as discussed in Myth 1, direct measures of atmospheric green house gases and temperature, not past reconstructions, were used to support the conclusion of the initial 1995 IPCC Report, and therefore, the IPCC's conclusions are independent of conclusions drawn using the data in question [5]. Even if we dismiss all past climate reconstructions, we can still confidently demonstrate the existence of anthropogenic climate change. [2,5]

Australia is not a big player, what we do here does not matter.

Contrary to popular belief, Australia is a significant global green house gas emitter. Australians have the highest per capita levels of greenhouse gas emissions in the world [6]. Australia ranks 15th in terms of total green house gas emissions (1.5% of the global total) [7]. It is also the world's largest coal exporter, with 233 million tonnes or 30% of the world total in 2005-06 [8]; each tonne producing 2.7 tonnes of greenhouse gas emissions [9].

India, China and the USA are the main polluters and responsibility lies with them to act on climate change.

Responsibility lies with everyone and we need unprecedented global coopera-

tion to achieve a safe climate for all. However, two principles have been applied to determine who should do how much:

1. The amount of green house gases that countries have already emitted into the atmosphere to date
2. The wealth and means of a country to mitigate climate change

The guiding principle is that all people are entitled to an equal quota of green house gas emissions. The United Nations Framework Convention on Climate Change aims to shift developed economies to green and sustainable, whilst recognising that 'per capita emissions in developing countries are still relatively low and that the share of global emissions originating in developing countries will grow to meet their social and development needs [1]' which include reducing vulnerability to climate change [1].

Debate about an Emissions Trading Scheme (ETS) is the same as debate about global warming.

These two concepts are often confused. The Emissions Trading Scheme (ETS) is one strategy that aims to facilitate the transition to a low emissions economy using market based forces. The essential concept is that carbon credits must be bought to offset emissions, such that low emissions products have a competitive advantage and will increase in demand. The Australian government's ETS is one example of emission trading. Opposition to emissions trading or the government's ETS does not necessarily imply opposition to global warming or other mitigation strategies.

Fossil fuels are essential to provide 24hr power supply.

Fossil fuels are not the only source of continuous power output. Renewable energy alternatives include:

- » Biomass, geothermal hot rock and wave power[12]

There are also strategies to provide reliable power supply from renewable energy sources with intermittent output, including [11]:

- » Energy storage technology, especially for solar thermal energy sources.
- » Multiple power sources over geographically dispersed areas.
- » Interconnected 'intelligent' grids able to efficiently match supply and demand. ☺

a very good iDEA

WORDS

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In early December, just prior to the much-hyped United Nations climate negotiations in Copenhagen, 40 medical students, representing 11 medical schools, descended upon Melbourne for 'iDEA', the inaugural gathering of the student division of Doctors for the Environment (DEA).

Environmental sustainability, economics, social justice, and, of course, politics all grapple for our attention in the day-to-day reporting of climate change. Yet the disturbing predictions about how climate change will impact global health are being largely ignored, by both the media and the medical fraternity. There was also concern amongst the students that the public health curricula of all Australian medical schools fail to address these issues. This is despite a danger so real that last year the Lancet was moved to name climate change 'the biggest global health threat of the 21st century'.

Richard Di Natale, a former GP and upcoming Greens senate candidate, provided some food for thought as he discussed his growing concern about how to truly 'make a difference'. His career has progressed from general practice through public health to more active political involvement. Similarly, Dr Merryn Redenbach, a paediatric registrar from the Royal Children's Hospital (Melbourne), spoke about her experiences as ship's doctor

with the marine wildlife conservation organisation Sea Shepherd.

From a medical perspective, several speakers addressed the specifics of how the medical profession might choose to act on climate change. ANU academic Dr Colin Butler, co-founder and director of the Benevolent Organisation for Development, Health and Insight, discussed sustainability and global health, introducing us to the primary, secondary and tertiary health effects of climate change, and the complex interactions between them.

Taegan Edwards, from the University of Melbourne, a Research Fellow in the area of climate change and social justice, spoke about the typical responses and coping mechanisms of people to the issue of climate change. Comments from the audience showed that she had touched on a personal note and reflected experiences that were familiar to many.

Students were also fortunate to have a round-table session with DEA Honorary Secretary and Emeritus Professor of Medicine at Adelaide University, Dr David Shearman. Likewise, Dr Bill Williams of the Medical Association for the Prevention of War (MAPW), an organisation which lead the movement against nuclear weapons, spoke enthusiastically about being a campaigner and, as a doctor, provided much encouragement and confidence that things can change.

Those whose actions are already making waves in the medical sector included Monash medical student and AMSA thinktank member Michael Loftus, and Dr Forbes McGain, a consultant anaesthetist at the Western Hospital in Victoria. Michael spoke about AMSA thinktank's recent 'Climate Code Green' campaign, resources for which included a highly-acclaimed short video (that was scheduled to be screened at COP15) and an accom-

panying booklet on health and climate change. Dr McGain spoke about his seminal research into 'green hospitals'.

Attendees were encouraged to be mindful of their carbon footprints whilst travelling to the conference, with many students opting for train or coach rather than flying. Most impressively, three Tasmanians cycled for three days from Hobart to Melbourne University (with a bit of help from the Bass Strait ferry)!

All in all, iDEA was a wonderful opportunity to hear from academics and doctors whose daily work enables them to explore the relationship between health and the environment. Many difficult questions were raised; no easy solutions were found. Despite this, we are confident that, in time, solutions will be found and embraced. DEA students aim to generate awareness and knowledge about what our responsibilities and potential contributions are, both as individuals and as professionals. 🌍

This is an abridged version of a conference report first accepted by and published in the Australian Medical Student Journal (Volume 1, Issue 1). Please visit www.amsj.org to access the full report.

For more information on the work of DEA, resources and links visit www.dea.org.au or email Janie Maxwell, the national student representative at: deastudents@gmail.com.

Carbon footprint, cultural footprint:

What you can do about climate change

WORDS AND PICTURES IMOGEN HAMEL-GREEN, MEDICAL STUDENT
UNIVERSITY OF MELBOURNE

If you're reading this, you probably already know a lot about the impacts of climate change on health. You probably also know a lot about global health inequalities and how climate change is likely to make these worse. The question is, what are you going to do with this knowledge?

Hopefully, you've already started to make changes in your life. Flying less, buying green energy, becoming vegetarian/vegan, riding a bicycle – these are simple but important ways to reduce your carbon footprint. Unfortunately, reducing your own carbon footprint isn't going to avert dangerous climate change in the long run - you need to get other people/

have the biggest impact.

How does one increase one's cultural footprint? Talking to friends and family is a good start, and shouldn't be underestimated. But, if you've already ear-bashed your friends and family repeatedly, it may be time to try something different. One approach that has been tried at the University of Melbourne is to start a medical students' environment group.

The University of Melbourne Green Health Group (UMGHG) formed in February 2009. Its aim was to channel the skills and enthusiasm of Medicine, Dentistry and Health Science students at the University of Melbourne to create positive environmental change within the health sector and broader society.

During 2009, UMGHG organised various activities to educate both medical students and the public about the health

If you want any advice on setting up a group, contact UMGHG at greenhealthgroup@gmail.com. For more information about DEA, contact deastudents@gmail.com. For more information about UMGHG, see <http://greenhealthgroup.wordpress.com>

average of 14.5 tonnes CO₂ annually. To put this in context, the average Australian emits 20.5 tonnes of carbon annually, which is higher than the 19.7 tonnes emitted by the average American. By comparison, China – which emits more carbon overall than any nation – has a per capita average of about 4.5 tonnes. In India, emissions are just 1.1 tonnes per person.

Thus, on average, those who participated in UMGHG's carbon footprint competition emitted significantly less carbon than the average Australian. Unfortunately 14.5 tonnes of carbon per person is still far from sustainable. Current research suggests that in the medium and long term, a world-wide average of 2 tonnes of carbon dioxide per person per year is the maximum allowable quantity for sustainable life on earth.

Members of UMGHG also participated in – and helped to organise – the inaugural Doctors for the Environment

Australia (DEA) national student conference, held 5-7 December 2009 at Newman College. This proved to be an inspiring, exciting and productive few days, resulting in the establishment of a national network of medical students active on issues relating to health and environment. Many new projects are planned for 2010,

with lots of opportunities for involvement both on campus and nationally.

So, as you can see, there are many ways to expand one's cultural footprint, including setting up a medical student's environment group and getting involved with DEA. No doubt you've got lots of ideas of your own about what you can do, so get a few people together at your campus and turn these ideas into reality. ☺

Medical students, alongside other students and staff at the University of Melbourne, participate in an event organised by the University of Melbourne Green Health Group to mark Avaaz's international day of action on climate change, 21 September 2009



the nation to reduce their/its carbon footprint as well!

This is where the concept of a 'cultural footprint' comes in. Your cultural footprint is the influence you exert on the attitudes and beliefs of those in your social network, community, and broader society. While many of us focus on reducing our carbon footprints, few of us focus on increasing our cultural footprints; but it is via our cultural footprints that we stand to

have the biggest impact. These included a public forum on 'Bushfires, climate change and health', production and distribution of recycled lecture pads to medical students, and participation in Avaaz's international day of action on climate change (see photo).

In addition, UMGHG ran a carbon footprint competition for medical students. This revealed that those who participated in the competition emitted an

Image by obywatel (sc:hu)



What's in it for us?

The Public Health Benefits of Climate Change Mitigation

WORDS RON CHEUNG, MEDICAL STUDENT, UNIVERSITY OF SYDNEY

192 countries met in Copenhagen in an effort to reduce greenhouse gas emissions and avert the adverse effects of climate change. Such effects include: species loss, disruption of ecosystems, population displacement, damaged livelihoods, altered agricultural productivity and economic imbalance on regional and local levels [1]. Health professionals may be burdened with the fallout from increased frequency and intensity of heat waves, reduction in cold-related deaths, increased

floods and droughts, changes of distribution in vector-borne diseases, changes in the risk of disasters and malnutrition [2]. Logically then, mitigation strategies to reduce emissions should also have benefits on global public health. Unfortunately, these benefits have not received significant attention in international negotiations [3]. This article intends to give a concise overview on the connection of several strategies with public health and to strengthen the case for mitigation. ►

//image by /kfpics (sachin)

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Low Carbon Power Generation

What? A term that describes the use of zero carbon sources such as wind, solar and geothermal, low carbon sources such as nuclear and natural gas, as well as carbon-limiting innovations such as carbon capture and storage.

So? If emissions are reduced, it is predicted that there would be a reduction in particulate air pollution and consequently, mortality. The largest effect would be in India, where particulate air pollution is the greatest, and the smallest in the European Union (EU), where electricity production from fossil fuels is quite clean. Studies predict significant reductions in mortality from acute lower respiratory tract infections (ALRI), chronic obstructive pulmonary disease (COPD), and ischemic heart disease (IHD). Costs of implementing low emission electricity production would be substantially offset by reduced pollution-related mortality, especially in China and India [4].

Efficient Household Energy

Why? Residential energy use makes up a large part of our carbon emissions. High per head emissions countries like the UK and low per head emissions countries like India require different approaches. In the UK, focus would be on changes to insulation, ventilation control, fuel use, and occupant behaviors, whereas in India, where simple stoves are widely used, a national program to introduce 150 million low-emission cook stoves has been proposed.

So? Household energy interventions have greater potential to improve public health in low-income settings. If India's cook stove program were completed, 87% of households would have a cleaner source of energy, leading to less particulate air pollution and a reduction in mortality from ALRI, COPD and

IHD. The immediate benefits include a reduction in ALRI's in children, whereas the effect on IHD and COPD would take more time to become apparent [5].

Alternative Urban Land Transport

Why? Transport accounts for a quarter of global CO2 emissions and three quarters of that is from road traffic [6]. Strategies include introduction of low-emission motor vehicles, increasing active transport (walking, cycling etc) and the creation of safe urban environments that facilitate active transport.

So? Lower-emission motor vehicles would reduce the health burdens from urban outdoor air pollution, but a reduction in the distance travelled by motor vehicles could have a greater effect. An increase in the distances walked and cycled would lead to large health benefits. Largest gains would be from reductions in the prevalence of IHD, cerebrovascular disease (CVD), depression, dementia, and diabetes [7].

Reduced Livestock production & consumption

Why? The agriculture sector contributes 10–12% of total greenhouse-gas emissions worldwide. Four fifths of these emissions come from livestock. A combination of technological improvements in processing products from animal-sources, and reducing the production of foods from animal sources would be effective in significantly reducing emissions [8].

So? Diet modification via reduced intake of saturated fat from animal sources could lead to both reductions in emissions, and in the incidence of IHD and other CVD at an individual level [8].

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HEALTH-ECO-EVANGELISTS PUT RECORD STRAIGHT

WORDS LIZ O'BRIEN, MEDICAL STUDENT, UNIVERSITY OF NOTRE DAME (FREMANTLE)

The good news is that we're still alive. The bad news is that our collectively poor state of 'being' here in the West isn't likely to change in a hurry.

We're wedded to all the things that make our environment suffer and our connection to it wane; things that also happen to make us fat, tired, irritable, socially isolated. Like wizzing around the world willy nilly and buying all the latest mod cons. Thinking it's all good.

Over the past decade Australia is visibly more bling. Cars, iphones, McMansions and other visible signs of wealth (perhaps heavily financed) oozes out of most upwardly-mobile humans I interact with, myself included. Unfortunately the spin-off from this consumerist value system is that we "are generally more concerned about building large fences to protect our plasma screens than meeting our neighbours" says Mardie Townsend, A/Prof of Public Health at Deakin Uni. Is it any wonder that there are increasing rates of perceived and actual social connectedness and depression?

According to Mardie there once was a time when we all went to the playing fields of a Saturday for club net(or foot) ball, where parents (wo)manned the canteen. This was followed by a family day of rest, at which time most people routinely marched off to a mass or service of some shape or form. Everyone took time out. Many joined groups like the Lions club, Rotary or the Country Women's Association (CWA). Thus, you knew most people in your local area. You spent time with them.

With rapid growth in our urban populations there are many faceless people out there in our Aussie cities. We tend not to strike up small talk to people we haven't yet met on the footpath (or train/bus etc):

» lest we be castigated as 'strange'

- » due to lingering fear instilled by 'stranger-danger' campaigns
- » our busyness
- » the fact we don't see the intrinsic benefit in being friendly
- » social conditioning (no

“ so although we've progressed in leaps and bounds in the realm of technology, the kind of real progress people are after seems to be languishing ”

one else does it)

- » because we are rarely on the curb/footpath/train/bus due to our newfound affection for air-conned gyms (over pavement jogging or cycling to work) and the relative affordability of 4-wheeled transport and garages.

So although we've progressed in leaps and bounds in the realm of technology and it's accessibility to the common woman and man, the kind of real progress that most people are after – that of wellbeing and a sense of belonging to a real and layered community – seems to be languishing. Aside from satisfactory relationships, other markers of wellbeing include participation in meaningful activity (either in the realm of citizenship i.e. participation in community groups, occupation or volunteering), living in a well preserved natural environment and contact with nature, and opportunities for creative expression, all of which are less likely to be actualised the more time we exist occupied in a flurry of individualised work-play activity.

Thus until we curb our carbon addiction, and rectify our warped value system, our propensity to improve our public health - that beast of our collective physiques, minds and souls, or sum of our individual person parts – will continue to take an irrevocable turn for the worse. ☹



//Image by Daquella Manera (Flickr.com)



Climate fever

WORDS KITTY SOUTAR
MEDICAL STUDENT
UNIVERSITY OF SYDNEY

Our planet, just like the human body, exists thanks to a beautiful, complex order in a delicate balance that maintains the earth's homeostasis. Millions of interdependent systems, feedback loops and micro-ecosystems mirror the organisation of the human body.

The earth's oceans, forests and ice masses might seem like huge, inert entities but these are actually the organ systems of the planet. The forests are its lungs, ocean currents as essential as the bloodflow, and seasons keep time in the same way circadian rhythms tie together the diverse processes of our bodies. Each step in every mechanism relies upon certain conditions, one of which is a specific optimum temperature.

Furthermore these systems, despite their complexity, have an extraordinary capacity to adapt to physical stress. We have been subjecting the earth to steadily increasing levels of stress, without respite, for almost 200 years now, with a rapid acceleration in the last few decades. At the same time as releasing more carbon into the atmosphere and heating up the planet, we've been undermining the

planet's reserve capacity by obliterating its forests and introducing foreign pollutants into our land and water systems. Over the last few years, the resilience of the planet has begun to buckle.

In humans, the huge functional reserve of the liver will mask a disease process for years, until the organ finally reaches decompensation. At the point where a problem becomes clinically evident, the disease state can be so advanced that cure is no longer a possibility. Instead, there is a rapid, systemic deterioration, and the establishment of positive feedback loops that exacerbate the patient's condition.

When people talk about run-away climate change, this is what they are envisioning.

The scary thing is, trying to predict when and where these 'tipping points' will occur is extremely difficult. Yes, there is sophisticated mathematical modelling that is used to predict changes, but the models are not perfect. Increasingly there is evidence that many predictions about the speed and severity of climate change have been too conservative.

Trying to deal with this 'climate fever' is akin to treating an entirely unknown patient (a new species, if you like) who is suffering from a disease

you've never encountered.

When the analogy is drawn out in this way, to then look at how the world's leaders are attempting to address the problem can be quite shocking. Our leaders will try to tell us that there is such a thing as a 'safe' fever of a 2 degree rise in global temperature (though they cannot even make a binding commitment to limit warming to this level). This target (now considered by many as simply impossible to reach) would directly threaten the lives and livelihoods of about 600 million people across the globe. Any doctor who attempted to manage a patient with such callousness would be at risk of being struck off for negligence.

When you think about the planet as a human body suffering from a prolonged fever, and a fever that *we don't know how to treat*, it's easy to see why climate scientists are so alarmed.

There's still time to cool this fever. The community movement continues to gather momentum and demand immediate, decisive action to reduce the impacts of climate change. Doctors and health professionals, medical students included, must raise their voices about this issue, and state that they will not gamble with the health of the planet nor its citizens.



INTERNATIONAL HEALTH?
GLOBAL HEALTH?
PUBLIC HEALTH?

DOES IT REALLY MATTER WHAT WE CALL IT?

WORDS RAMI SUBHI, MEDICAL STUDENT
UNIVERSITY OF MELBOURNE

What is global health? How does it differ from international health, or for that matter, from public health in poor countries? These terms have been used interchangeably by academics, politicians and the general public; and any distinction has been similarly blurred in the past in this magazine.

But is there any benefit from dwelling on such semantics? Does it matter what we call it if we all agree on the fundamental precept of striving towards equity of health outcomes for all people, particularly for the underserved?

A consortium of universities published a viewpoint in the *Lancet* in June 2009 arguing that we should agree on a common definition of global health, taking pains to distinguish it from 'international health' and 'public health' [1]. They stressed that ambiguities in definitions would "obscure important differences in philosophy, strategies and priorities for action", and would make it even more difficult to "reach agreement on what we are trying to achieve, the approaches we must take, the skills that are needed, and the ways we should use resources."

Many principles of public health, in-

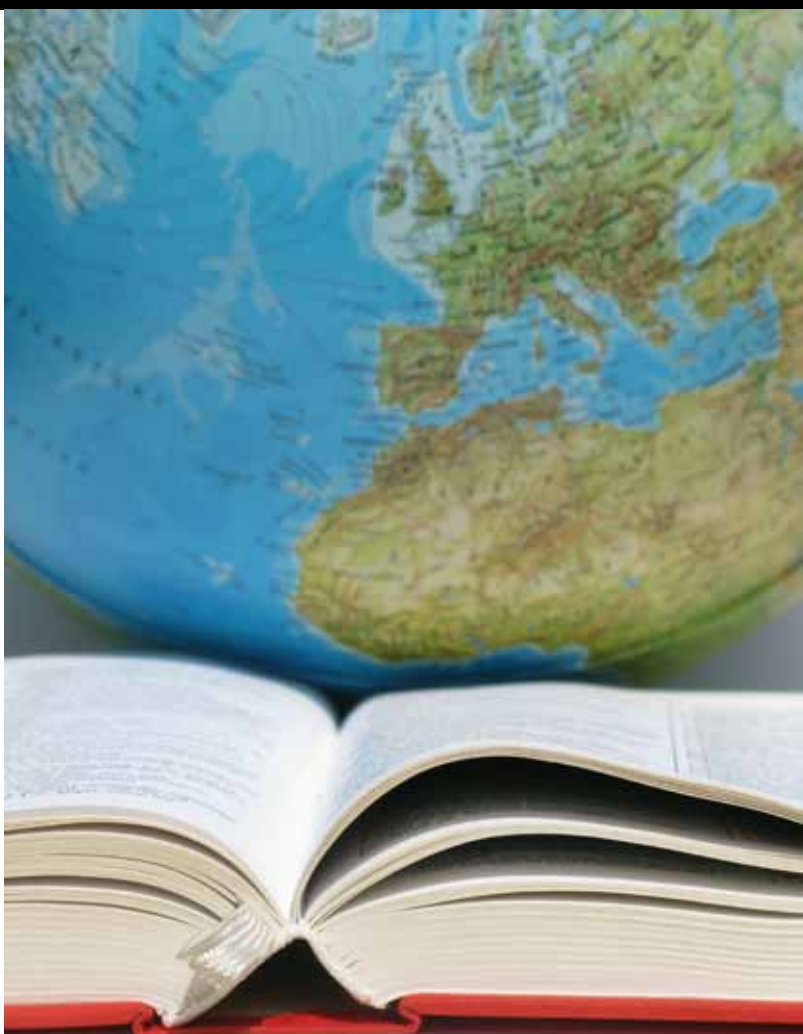
ternational health and global health are similar: a focus on populations, on equity, on prevention and on evidence. A clear distinction between public health and both international and global health is that the former focuses on one's own country, while the latter two extend to other countries. International health differs from global health in that it assumes a unidirectional flow of efforts, knowledge and money from rich nations to 'developing nations', aimed at solving 'their problems'. Therefore, much of the international health agenda is about addressing issues unique to the developing world, focussing on strategies to reduce mortality and morbidity from such killers as HIV/AIDS, pneumonia, malaria and malnutrition. The hallmark of international health in the last 20 years has been maternal and child health, with the best-known interventions (and those that spring to most people's minds when international health is mentioned) being those delivered in mass campaigns, running vertically and often independent of countries' health systems (eg. mass vaccination).

Global health is more complex to define. It recognizes that in a globalized world like ours, physical boundaries are artificial and problems are rarely con-

tained within geographical or political borders. It aims for global health equity, but promotes mutual engagement, recognizing a two-way flow of information, experience and ideas between well-off developed nations and resource-poor developing nations. Its scope is more complex and encompassing than the traditional tropical and infectious disease agenda. This is critically important at a time when the majority of the world's population lives in countries undergoing an 'epidemiological transition' where issues such as chronic diseases, tobacco control, mental health and obesity are the leading threats to well-being and health. Global health also recognizes that health-worker shortages, under-supported institutions for training, and fragile health systems are as much barriers to achieving health and equity as is the HIV epidemic.

Definitions are important, in that they help us focus our objectives, realign our attitudes and shift our paradigms to be as effective as we can be in engaging in the ever-expanding field of global health. 🌐

[1] Koplan J, Bond C, Mesron M, Reddy S, Rodriguez M, Sewankambo N, Wasserheit J, Towards a common definition of global health. *Lancet* 2009; 373; 9679: 1993-1995



/image by lusi (sxc.hu)

global health network update

Victorian Students Aid Project

What is VSAP?

The Victorian Students' Aid Program (VSAP) is a student initiative run by medical students at the University of Melbourne, which delivers much needed equipment and health resources to disadvantaged communities globally.

Our vision is that all doctors worldwide will have essential medical supplies and equipment to treat their patients.

Recently, VSAP has elected to broaden its scope and fulfil the role of being the University of Melbourne's global health group. This financial year we will be taking on additional projects as well as expanding into the areas of education and advocacy.

Check out our website for more information on: our Teddy Bear Hospital community project, our Global Health Short Course being held in collaboration with the Nossal Institute for Global Health, and our Red Party fundraising event that raises money for HIV/AIDS research and awareness. One of our main, ongoing projects is the Wishlist Project.

What is the Wishlist Project?

The Wishlist Project aims to contribute to global health equity by sending targeted aid to hospitals in poorly resourced areas via medical students completing their elective placements there.

To ensure that we are supplying appropriate and effective equipment, the hospitals are asked to compile a 'wishlist' of the supplies and equipment that they require.



VSAP works with hospitals and medical suppliers in Australia to fulfil these wishlists and these donations are delivered with the medical student when they leave for their elective placement.

Since its inception in 2005, VSAP has delivered over \$30000 worth of equipment and monetary donations to countries as diverse as Guatemala, Tanzania, East Timor and Vietnam.

How can you be involved?

1. Student involvement – Helping VSAP to help others
2. Equipment and financial contributions for Wishlists
3. Assistance with airfreight, packaging, and transport would also be very welcome.

We are always looking for sponsors of medical equipment and supplies. If you would like to donate, please contact us by email.

Contact us

General enquiries:

vsap.aid@gmail.com

Sponsorship enquiries:

vsap.sponsorship@gmail.com

For more information, visit

<http://www.vsap.org.au>

Global Health Lecture Series

After attending the Global Health Conference, students from globalHOME (Sydney University's global health group) were inspired to educate their fellow students about global health by developing a lecture series to improve the global health awareness and skills of medical students.

The 8-part lecture series will be delivered by leading experts in the field from doctors, public health, and NGOs. The topics to be covered include: aid and poverty, healthcare in conflict settings, emergency response to natural disasters, tropical infectious diseases, climate change and its impact on health, malnutrition and indigenous health. This series will equip students with the necessary clinical and public health skills to understand global health issues that they may encounter whilst on elective or in their future careers.

The lecture series will feature case studies, scenarios, interactive discussion and is designed to appeal to students from across all years of the medical program. The lectures will be held on Tuesday evenings in March and May. Students from other universities are most welcome to attend.

Please sign up to our Yahoo Group (<http://groups.yahoo.com/group/globalhome>) to join our mailing list and keep up to date with details of our lecture series.



Senator Bob Brown addresses the audience at the Code Green launch

CODE GREEN A CLIMATE EMERGENCY

AN INITIATIVE OF AMSA THINKTANK

WORDS AND PICTURES
MICHAEL LOFTUS
MEDICAL STUDENT
MONASH UNIVERSITY

AMSA ThinkTank was established at Monash University at the beginning of 2009 with the three aims of informing medical students about contemporary health issues, developing students' skills in leadership, advocacy and policy writing, and acting as a policy making body for both MUMUS and AMSA. During first semester, the group looked at a trio of local, national and global issues, ranging from the Student Services and Amenities Fee to Climate Change and Health.

Due to the specific interests of the group, a large focus was given to the issue of Climate Change and Health, which culminated in the writing of a policy on this issue. This policy was taken to – and adopted by – AMSA Council in July, meaning that for the first time AMSA had policy on the 'greatest global health threat of the 21st century'.

Flushed with success from July's Council, the group hoped to use this policy as a platform from which to advocate on the issue. Supported by Doctors for the Environment Australia, a campaign was co-ordinated consisting of three key components – a students' guide to Climate Change and Health, a short and eye-catching DVD, and a symposium involving a number of experts to launch the initiative.

Approximately 200 students gathered at Monash's Caulfield campus for the launch of the Code Green campaign, enticed by the prospect of hearing from an impressive lineup of speakers. Chaired by the Chancellor of Monash University, Professor Alan Finkel, talks (followed by a panel discussion) were delivered by Senator Bob Brown (former GP and leader of the Australian Greens), Professor Tony McMichael (epidemiologist and IPCC author) and Professor John Thwaites (former Victorian Minister for both Health and also for the Environment).

Tony McMichael expertly outlined the science and research around Climate Change

and its impacts on health, utilising examples from around the world and focusing on pertinent issues for Australia.

Bob Brown spoke passionately about our brief yet important role as custodians of this planet, and the sobering (yet hopefully motivating) thought of how future generations will view us. He lamented the lobbying system in Australia, working in favour of the already rich to pervert representative democracy away from looking after our long-term interests. Senator Brown also spoke of the freedom and responsiveness gained by working with a young organisation such as the Greens, and reflected upon how this did not exist in many traditional or well-established medical organisations he had encountered. He encouraged medical students to start their own groups, breaking free of any restrictive or outdated organisational cultures.

John Thwaites explored the policy challenges of this difficult issue; both in Australian context by drawing upon his experiences in Parliament, and in an international context by drawing upon his more recent experiences as a consultant in East Timor.

The DVD was well-received on the night, with Senator Brown promising the audience he would put a copy under the door of both Labor and Liberal party rooms. Excitingly, we

- The Code Green DVD, the student guide to Climate Change and Health, and audio from the symposium may all be found at: <http://amsa.org.au/content/code-green-climate-change>.
- Doctors for the Environment (DEA) is a voluntary organisation of medical doctors in all states and territories. Student membership costs only \$10. Information about the organisation and how to join may be found at: www.dea.org.au.
- AMSA's policy on Climate Change and Health may be found at: <http://amsa.org.au/content/official-policy>.

have recently learnt that the DVD was also shown by the WHO at the COP15 Climate Change Conference last December.

The Code Green campaign will continue in 2010, with the hope that comprehension of the health impacts of Climate Change will help frame the public's, the medical profession's and policy makers' understanding of this complex issue, and impress upon them the urgent need for significant action.



Launch of the Code Green campaign at Monash University

creative pieces



//images by maline (sxc.hu) and stevekr19 (sxc.hu)

Whole families ride around, four people packed onto one motorbike,
We own several cars per household.

Children accompany their parents down the street, hoping desperately to
sell their merchandise,
We waste time and watch the clock for a well-paid mundane job to finish.

Horrific injuries mar her perfect features; her leg is contorted; yet she is
silent,
A headache makes us whine.

Her lower leg is now removed, the bones far too smashed up for repair, but
her silent eyes bear little emotion,
We worry about how the large blemish on our forehead looks.

They cannot go to work as their daughter sits in the hospital – and the
financial consequences are far-reaching,
We think nothing of taking a day off for a minor ailment – the employer
will pay sick leave.

Their eyes, their minds, have seen and comprehended such massive trag-
edy,
Our life is paradise compared to this – how dare we complain about pos-
sessions, how we look, or the niggling pain at the back of our neck.

The sheer resilience of these people in the midst of hardships that keep
bombarding them, one after another – is truly inspiring – they still
stay strong.
And what's more: they still smile.

WORDS NICHOLA REICH
MEDICAL STUDENT
UNIVERSITY OF NEWCASTLE

at a glance solomon islands



Western Province //Image by Alice Truong

It's a sad state of affairs when your claim to fame is being among the most vulnerable to the effects of climate change. But for this reason, the once neglected small pacific islands countries have risen on the world stage. Collectively known as the Pacific Small Island Development States (PSIDS), which comprises small island countries such as Vanuatu, Fiji, Papua New Guinea, and the Solomon Islands, these states are living the impact of climate change in the here and now.

The Solomon Islands, located north east of Australia, is home to 500,000 people. The coast could not be more central to the way of life and traditions of the Solomon Islanders: fish is the main food; fishing is the favourite hobby and source of livelihood; boats and canoes are, in most places, the only means of transport. But in a saddening piece of irony, it is rising sea levels that threaten the future of these people.

The older doctors in the main hospital in Honiara (the capital) recall a time in the 1960s when the hospital was at least 100 metres from the waterfront. Now, there are merely 20 metres from the children's ward to the crashing waves.



Gizo hospital //Image by Brady Bouchard
(www.bradybouchard.ca/gizo)

Gizo hospital housing after Tsunami //Image
by Donna Hoerder (UNICEF Solomon Islands)



On the Western side of the country, Western province continues to be what most tourists recognize of the Solomon Islands; its beautiful lagoons attract divers from around the world. Walking carefully through Gizo hospital to avoid the collapsing decking beneath, the traces of the devastating 2007 tsunami become ever so apparent. The hospital which was once the referral centre for the surrounding islands, was, along with the rest of the island, washed away by violent waves.

Across the road, the locals rebuild another hospital to replace the old. Again it is built metres from the waterfront: there really is no other option given that most of the patients arrive by boats.

Further east, still in Western province, are small islands scattered across the water creating a magnificent sight of greens and yellows on the deep blue background of the ocean when seen from a birds eye view. The local's livelihoods are the dense forests that provide daily sustenance, material for shelter, and houses closely knit villages. But these too are under threat. Multi-national logging companies, willing to exploit the country's natural resources, have left entire islands stripped bare in exchange for a few thousand dollars paid off to the local villages: an amount that is anything but fair in a country where money can not buy security.



Honiara from the air //Image by Rami Subhi