Health equity and sustainability: extending the work of the
Commission on the Social Determinants of Health

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Abstract
The final report of the WHO Commission on Social Determinants of Health presents opportunities to promote synergies between health equity and action on sustainability, including reducing global warming. The report makes important recommendations for political and economic reform, but stops short of calling for major change to the conventional neo-liberal model of economic development and growth. Yet the challenge of global warming appears to make growth according to this model unfeasible. In this paper we explore opportunities in the work of the Commission for combining goals of health equity and sustainability, and discuss ideas for economic reforms which further challenge the dominant model, and seek to accommodate the imperatives of reversing climate change.

Key words: social determinants; health equity; climate change; economics
Introduction

The Commission on the Social Determinants of Health (CSDH) was launched by the World Health Organisation in 2005 and its final report released in August 2008 (CSDH 2008). Its central task was to consider how action on the social determinants of health could result in greater health equity globally and within countries. Its mandate was to cover the situation of poor, middle-income and rich countries. The Commission’s report makes three overarching recommendations, to:

1. Improve daily living conditions in which people are born, grow, live, work and age.

2. Tackle the inequitable distribution of power, money and resources – the structural drivers of daily living conditions – globally, nationally and locally.

3. Measure and understand the problem of health inequities and assess the impact of action.

It is evident that each of these areas will affect and be affected by the extent to which natural environments are supportive of or detract from health and health equity. The Commission’s understanding of how social determinants influence health equity is based on an understanding that ill-health (and unequal health outcomes) are produced through a chain of causation, shaped by broader social, environmental and economic context; starting with the underlying social stratification that characterises most contemporary societies. There are four main points on this chain where intervention can be useful:

1. Decreasing social stratification (for example redistributing wealth)

2. Decreasing exposure to factors that threaten health (for example reducing adverse climate events)
Reducing the vulnerability of people to health damaging conditions and strengthening the community and individual level factors which promote resilience (for example increasing the capacity of people to live lifestyles that are environmentally sustainable)

Providing accessible, equitable and effective health care (for example universal public health coverage based on a model of primary health care [CSDH 2008, p. 95].)

The CSDH report acknowledged the importance of environmental sustainability to human health but did not go into detail concerning the overlap between the goals of health equity and environmental sustainability. This paper firstly explores implications of the report for action on climate change and health, and ways in which the agendas of health equity and environmental sustainability can be joined and each used to advance the other. Secondly we consider the current global commitment to economic growth as a paradigm for advancing health and well-being and suggest that this paradigm needs to be changed in order to advance the goals of individual and social health, equity and environmental sustainability.

Climate change, health and equity

The CSDH report was published at a time when the global community was coming to terms with the fact that it is facing potentially catastrophic climate change primarily through a process of global warming (IPCC 2007) that would have the effect of damaging human health in a number of different ways (Costello et al. 2009). Health is likely to be affected directly by increased exposure of localised populations to heat waves and other extreme weather events. However, far greater impacts are forecast to
come about indirectly, through the cumulative effects of climate change and allied forms of environmental degradation on food and water supplies, living conditions in cities and coastal areas, displacement of populations and the spread of some vector-borne diseases (Baum 2008, Costello et al. 2009, McMichael et al. 2008). It is also likely that mental health will be adversely affected both by the direct trauma of extreme events, and by longer-term effects of climate change on social stability (Berry et al. 2009). This will add to existing projections of mental illness as a major and growing cause of the global burden of disease (Mathers and Loncar 2005).

When viewed with a concern for equity it is manifestly clear that the causes and effects of anthropogenic climate change contain a basic form of inequity: being that those making the least contribution to causing the problem stand to suffer most from its effects (Costello et al. 2009). The emerging evidence on the health impacts of climate change all point to the conclusion that these will fall disproportionately on low income countries and poor people (Confalonieri et al. 2007). Table 1 presents several major factors that characterize climate change and summarises the equity perspective for each, including health equity considerations.

**Table 1.** Climate change and health equity.

<table>
<thead>
<tr>
<th>Issue</th>
<th>Equity perspective</th>
</tr>
</thead>
<tbody>
<tr>
<td>Countries have a differential impact on volume of GHGs, especially when historical contributions are taken into account (i)</td>
<td>The emissions of rich countries have a bigger impact on low and middle income countries (Figure 1)</td>
</tr>
<tr>
<td>Urban areas are major emitters of GHGs (ii)</td>
<td>Urban areas in rich countries emit much more GHGs (ii) yet low &amp; middle income cities will suffer most (iii)</td>
</tr>
<tr>
<td>Transport is major emitter of GHGs (i)</td>
<td>Private motorized transport is the preserve of rich countries and rich people in poorer countries</td>
</tr>
<tr>
<td>Agriculture activity accounts for one-fifth of GHGs (ii)</td>
<td>Much of the agriculture activity is to provide food for rich countries (iii) yet poorer countries suffer most from its impact.</td>
</tr>
<tr>
<td>Increased number of adverse climatic events (heat waves, floods, storms) (iii)</td>
<td>Low &amp; middle income countries have less resources to respond and their cities more vulnerable to these events (e.g. to sea level rise)</td>
</tr>
<tr>
<td>Climate change is likely to have caused excess deaths and will do so in the future (iii)</td>
<td>Largest health risks are to children in poorest communities (iv)</td>
</tr>
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The World Health Organization (WHO) has shown graphically how the estimated number of additional deaths already attributable to climate change is concentrated in low and middle-income countries (Figure 1).
Figure 1. WHO Estimate of deaths attributable to climate change in 2000, by WHO sub-region

Deaths from climate change

![Map showing deaths from climate change by WHO sub-region](image)

This distribution of deaths sits alongside the fact that populations of low- and middle-income countries have a much lower impact on the global environment than rich countries. For example, per capita emissions of greenhouse gases (GHGs) in the USA are over seven times higher than in China and 19 times higher than in Africa. Housing and transport in urban areas, mainly in rich countries, account for 33% of GHGs collectively, and the agriculture sector which is increasingly directed at production for rich countries accounts for 18% of emissions (Campbell-Lendrum and Corvalan 2007).

These inequities between nations in terms of historical and current per-capita contributions to climate change and the likely effects are a major factor influencing
current international negotiations on mitigation and adaptation (Raghunandan 2009). We will discuss the implications of this later in the article.

**Social Determinants of Health & Climate Change**

What do the findings of the CSDH have to offer in support of efforts to take action on climate change and build recognition of the nexus between health, equity and sustainability? (Chan 2009, Haines *et al.* 2009b). Firstly, despite longstanding forecasts of major adverse effects on health (McMichael *et al.* 2004), current debate on climate change mitigation continues to focus most attention on ‘economic losses, social disruption, and lost environmental amenity’ (McMichael *et al.* 2009, p. 2123). This is despite the fact that ‘health impacts are often the largest single contributor to the costs of environmental damages’ (Campbell-Lendrum and Corvalan 2007, p.114).

McMichael and colleagues argue that this ‘blind spot’ is caused in part by the recent dominance of a biomedical model of disease causation, focused on genetic factors, germ theory and individual choices and behaviours (2009, see also Rose 1985). One of the goals of the CSDH has been to redress this tendency. The Commission identifies how broad social, economic and political factors act as determinants of differential health outcomes in populations, by shaping proximal living conditions and the distribution of socioeconomic advantage or disadvantage either within nations or between them (Blas *et al.* 2008, CSDH 2008). The release of the CSDH Report provides an opportunity to explicitly identify climate change as another macro-level determinant of population health (McMichael *et al.* 2009). Left unaddressed, the combined effects of socioeconomic determinants and climate change are likely to drive global health inequities to greater extremes. Thus efforts to mitigate climate change can be promoted as vital preventative public health measures in their own

The CSDH has also built strong arguments for action in a range of areas, especially in developing-country settings, where the potential for synergies with the climate change agenda are clear. For example, poor urban populations in low-income countries are recognised as especially vulnerable, and already subject to worse health outcomes due to factors such as poor housing and sanitation, air pollution, and unemployment. Recent decades have seen massive shifts of rural populations into major cities, and around 70% of urban populations in developing countries live in slum-like conditions (Campbell-Lendrum and Corvalan 2007). The Commission is very clear that both health equity and sustainability need to be placed at the heart of urban governance and planning, and calls for action in areas such as affordable housing, water and sanitation, urban design, and public transport. It also highlights the importance of retaining healthy, economically viable rural populations (CSDH 2008, Ch. 6). Initiatives in many of these same areas will be essential to avoid expected significant increases in GHG emissions if developing-world cities continue to grow unabated (Campbell-Lendrum and Corvalan 2007).

Sub-standard housing may in turn make people more vulnerable to heat waves, and with many major cities on the coast, people living in low-lying or steep areas are especially vulnerable to flooding or landslides caused by extreme weather events. Thus actions to improve impoverished urban environments will assist the affected populations to adapt to the effects of climate change.
A range of existing initiatives demonstrate the potential to tackle both health equity and sustainability at the level of individual cities. Bentley (2007) has shown how the WHO-led Healthy Cities movement has sometimes taken on environmental sustainability as part of its mandate. The Local Agenda 21 (ICLEI Local Governments for Sustainability 2010) sustainability campaign has a social justice component which could easily be expanded to consider health equity. The WHO’s new Urban Health Equity Assessment and Response Tool is aimed at doing just this (WHO 2010). It will be important that WHO supports initiatives in urban health and encourages them to bridge equity and sustainability. Local level initiatives can complement changes in national and international policies, which are discussed in the following section.

Population growth has an impact on both health equity and sustainability and yet is often silent in debates about both. The Commission’s focus on the central importance of gender equity is helpful as it states clearly that better education for women will lead to smaller families and better health for infants and children. Sen (2001) maintains that fertility will be reduced following the promotion of female literacy, work opportunities and open discussion about family size and contraception. Containing the size of the world’s population is also vital to achieving environmental sustainability (Butler 2008) so once again the two agenda have much in common.

**Economic development, health equity and sustainability**

The Commission’s Report was published a month before the global financial crisis took root. It documents the ways in which current patterns of globalisation perpetuate and even deepen inequities rather than challenge them. Its criticism included appraisal of international institutions such as the World Bank and
International Monetary Fund and the impact of their policies on health. In poor countries, World Bank economic policies and neo-liberal prescriptions for government policy have lead to weakened public sectors (including national health systems) and a ‘brain drain’ of health-professionals; creating the conditions for a perfect storm to ravish the health of their populations – most tragically in Africa (Lewis 2005). Globally, the activities of trans-national corporations are increasingly criticised as both giving themselves unprecedented power and economic rewards, while paying scant attention to reducing global warming and other environmental damage (Hamilton 2003, Korten 2006). Prior to the global financial crisis (apart from a few weak civil society voices) there has been an international consensus that neo-liberal economic and social policy solutions would result in a trickle down that would finally deliver health for all. The Commission (building on the work of its Globalization Knowledge Network) did note the mistakes of the neo-liberal agenda and called for the necessary structural changes to the global economic system to make for a fair globalisation in which inequities between and within countries are reduced. They didn’t, however, go to the next step of calling for a significant change to the neo-liberal model, and endorsed the paradigm of economic growth. Yet it seems if environmental sustainability is to be achieved then continuing with the current model of economic growth is not feasible. There is no reason why health equity could not flourish under an alternative economic paradigm, particularly one which places emphasis on the well-being of the mass of the world’s population rather than small global elite which had flourished under the current model.

Elsewhere one of us (Baum 2008) has suggested four areas in which change is needed if equity and sustainability are to be promoted by the economic system: new
indicators of economic and social development, restriction the domination of transnational corporations, fairer taxation, and fair terms of global trade.

**New indicators of economic and social development**

Currently the progress of societies is primarily measured in terms of economic growth through a single indicator such as Gross Domestic Product (GDP). This means that non-economic features of development are not counted and no account is taken of impacts on the environment or the well-being of citizens. There have been increasing calls for alternative measures of development which better capture social and environmental values (Boarini *et al.* 2006, Daly and Cobb 1990, Hamilton and Saddler 1997, Lawn 2006, Marmot *et al.* 2010, Roddick 2001). Some composite indicators have made moves in that direction, for example the Human Development Index (UNDP 2009), the Genuine Progress Indicator (Hamilton and Saddler 1997) and the Happy Planet Index (New Economics Foundation 2010) which assesses life satisfaction, life expectancy and a country’s ecological footprint. In September 2009, the Commission on the Measurement of Economic Performance and Social Progress, convened by French President Sarkozy, released a report advocating new measures of progress to supplement GDP (Stiglitz 2009). The Commission, led by Nobel-Prize winning economist Joseph Stiglitz, argued measurement of social progress through a purely economic accounting system is impossible, and instead recommended measuring *quality of life* – including assessments of subjective well-being, individual capabilities, and wealth distribution – and *sustainable development*, alongside an extended, modified GDP. The recently released Strategic Review of health inequalities in England argues strongly that,

- It is time to move beyond economic growth as the sole measure of social success…
- Well-being should be a more important societal goal than simply more economic
growth. Prominent among the measures of well-being should be levels of inequalities in health. (Marmot et al. 2010, p.12)

**Restricting the domination of transnational corporations**

An increasing number of commentators see the growth and power of transnational corporations (TNCs) as threatening the sustainability of environmental and human health (Baum 2008, Daly and Cobb 1990, Korten 2006, PHM et al. 2008). TNCs are seen to be lacking in social and environmental awareness and as putting profits above all other considerations. Concerns have been raised about their exploitation of workers, lack of allegiance to local communities, propensity to externalize environmental costs, and tax avoidance. The CSDH noted that while there is evidence of small moves towards greater social contribution these are of limited credibility, and that ‘corporate social responsibility is often little more than cosmetic’ (2008 p. 142). The Report suggested that corporate accountability may be a more meaningful approach, and is likely to require greater transnational and national regulation of TNC activities in order to protect environmental and public goods.

Korten offers a radical agenda of six measures for the control of TNCs:

1. Reforming the system of political campaign finance
2. Ending the legal fiction of corporate personhood
3. Establish an international agreement regulating TNCs and finance
4. Eliminate corporate welfare whereby TNCs receive direct public subsidies and tax breaks and externalize costs such as pollution, worker health and safety and dangerous and defective products
5. Restore money’s role as medium of exchange so as to eliminate financial speculation.
(6) Advance economic democracy to promote “human scale, stakeholder-owned enterprises” which link to local, communities.

(Korten 2006)

Such measures would limit the powers of TNCs and increase political opportunities to embed values of equity and sustainability in the governance of economic activity.

**Fairer taxation**

Taxation is a key mechanism by which governments can help create more equitable and environmentally sane societies. The CSDH’s report notes that the use of public finance from taxation is fundamental to improved welfare and equity for all countries whatever their level of development. Progressive taxation, whereby the better off members of society pay a greater amount of tax, is especially important to equity (Marmot *et al.* 2010, p. 22). Yet in most OECD countries the trend has been towards less progressive taxation. In Australia, for example, under the conservative Menzies Government in the 1950s the marginal tax rate on the top incomes was kept at 66 percent for six years and then at 60 per cent for the rest of its term in government. Since that time this rate has been reduced by successive governments (both Labor and Liberal). In the 2006 budget it was reduced to 42% for the top income earners and 40% for the next category down. Under the Rudd Government, comparable rates are currently 45% and 38% respectively.

Progressive and adequate taxation has historically provided a basis for the development of welfare states, the universal provision of public services and infrastructure in today’s rich countries (Szreter and Woolcock 2004). The Commission (2008, p. 121) cites evidence from Latin America which suggested that even a little redistribution of income through progressive taxation and targeted social
programs can go further in poverty reduction than many years of solid economic growth. Using taxation as an instrument of equity and sustainability will require all countries to strengthen their tax authorities and financial administrations. Equity of wealth distribution appears to be related to improved health status (Wilkinson and Pickett 2009), and thus government should be encouraged to use fiscal policies to reduce disparities in income and wealth distribution.

The Commission’s report also argues that the increasingly globalised nature of economic practices, including off-shore tax havens, strengthen the case for a system of global taxation. Relating to this it notes that taxing financial transactions to raise money for development is “now widely regarded as both feasible and appropriate” (2008, p. 125). It is widely acknowledged that TNCs avoid tax and there needs to be an international regulatory system that discourages these practices. Specifically in terms of environmental protection a carbon tax has been widely canvassed. This tax is likely to be progressive and would put a value on burning carbon in a way that doesn’t happen currently. Some argue for a policy of ‘contraction and convergence’, whereby overall carbon emissions are reduced to a sustainable level according to a defined global figure of per-capita emissions. Thus rich countries would be required to dramatically reduce emissions, while developing countries could increase theirs to enable economic and social development (Costello et al. 2009).

**Fairer terms of global trade**

Fairer terms of global trade will be essential to reducing the equity gap between countries. A central tenet of neo-liberalism is that market places should be on a level playing field and that trade should be a free as possible of tariffs and other encumbrances. In fact, as the work of the CSDH Globalisation Knowledge Network
showed global trade is very far from being on a level playing field and in fact works to the advantage of rich countries (Monbiot 2003, PHM et al. 2008). This is shown by the wide spread use of agriculture subsidies so that for instance a Japanese cow receives a subsidy of $8 US per day (Sharma 2005). The global trading system is complex and the CSDH report calls for it to be regulated so that low and middle income countries do much better and are able to achieve self-sufficiency in a manner that is equitable and sustainable. Mechanisms have to be created which encourage both fairer terms of trade and environmental sustainability; for example, improved prices for primary producers as incentives to improve land use and discourage deforestation.

At the same time, there are problems in assuming that low and middle income countries simply need fairer treatment within an expanding global economy where production and transport of goods remains dependent on fossil fuel consumption and environmental costs are inadequately reflected in pricing. Furthermore, fair trade arguments must avoid buying into the neo-liberal logic of economic growth for developing economies primarily driven by growth in export industries (e.g. mining and agriculture), reliant in turn on an unsustainable level of consumption in rich nations (PHM et al. 2008).

Finally, we propose that conventional economic thinking must undergo a paradigm shift, which recognises the local and regional scale as the most fundamental ‘locale’ in which basic conditions for human health and well-being are generated and reproduced between generations. This would require a shift in the overall balance of economic and social development activity towards the local. Such a change is implicit in some of the strategies discussed above, and has been a part of ‘alternative’
economics thinking for a long time. It need not and does not suggest that the national and international scales of political and economic activity are unimportant. Instead, it points toward a multi-level conception of economic and social affairs, in which the foundations play an especially important role in the stability, durability and equity of the whole.

**Conclusion**

The basic inequities built into the causes and effects of climate change must be acknowledged. Countries which have made and continue to make the greatest per-capita contributions to the problem have a responsibility to make the largest cuts in emissions. However, at the same time we believe the challenges of climate change and health equity are also an opportunity for low- and middle-income countries to take up a new 21st century model of social and economic development, rather than move down a path of neo-liberal style, fossil fuel-dependant economic growth that has no long-term future. Localised development strategies which combine goals of health equity and sustainability, and address social determinants of health, are an essential element of this new pathway (Blas *et al.* 2008, PHM *et al.* 2008). They sit alongside the need for sane macro-level economic strategies such as those canvassed above. National governments must have the mandate, skills and resources to institute universal public health and education programs. Although rich countries have achieved significant public health gains, the notion that conventional economic development is a necessary condition for such gains is wrong, as demonstrated by states such as Costa Rica and Kerala State in India (Baum 2008, p. 227-8) or by experience of industrial states such as the UK where state intervention using the
profits of industrial development for environmental and social improvement was crucial to health improvement (Szreter and Woolcock 2004).

A model of socioeconomic development focused on synergies between health, equity and sustainability is an important tool to guide change in both developed (Marmot et al. 2010) and developing countries, although the priorities may be different in each context. The goals of economic activity must move from quantitative growth to qualitative improvements in sustainability, social well-being and cultural vitality (Lawn 2006).

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