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**SUBMISSION IN RELATION TO:**

**Discussion paper:**  
***“Inquiry Into a Sustainability Charter”***

**May 17, 2006**

**Environmental Conditions and Risks to Human Health:  
Why Sustainability Really Matters**

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## Overview Comment: Why Population Health is Central to this Discourse

My “take” on this crucial topic may differ from that in many of the other submissions. I do not have particular professional expertise in the five main “target” areas listed in the Inquiry’s Terms of Reference. However, as a long-time researcher and scientific reviewer in environment and population health, at national and international levels, I have a good working understanding of each of those five areas – built environment, water, energy, transport and the ecological footprint.

The main point of my submission is in relation to the *rationale*, the purpose, of striving for “sustainability”. Although generally under-recognised to date, the primary (anthropocentric) reason for our concern about non-sustainability is because today’s generally adverse trends in environmental conditions, ecosystem functioning and non-renewable resource management have huge, and growing, implications for human wellbeing, health and (in some parts of the world already) survival. This is not to discount the important and moral obligation that we humans have to sustain as much of this planet’s (wonderful) natural systems for their own sake – but, frankly, it is also a matter of absolute self-interest for us, as a species.

As many scientists and other writers are now making clear, human society, its economy and the psychological and biological wellbeing and health of its members depend absolutely on the natural environment and its life-support systems. (This point is alluded to on p. 8 of the Discussion Paper.)

I note, from the Discussion paper, that the Swedish Parliament has recognised this crucial linkage. Of the five fundamental principles underpinning their (1999) Environmental Objectives, the first-listed is “Promoting human health”. This, unfortunately, is an all-too-rare example of enlightened understanding as to why human societies need, today, to take action on the environmental/ecological sustainability front.

Much of our day-to-day discussion of “sustainability” focuses on achieving a balance between environmental conditions, social conditions and economic productivity. This, misleadingly, is referred to as “the triple bottom line”. However, those three entities are actually *means*; they are not *ends*. The true objective of our achieving a sustainable way-of-living is to ensure the continuation of good and equitable experience (both biological and social) for humans.

It is perhaps relevant to note that settled post-hunter/gatherer societies formed, from around 10,000 years ago, to improve security, produce and store food, share stories and skills, and satisfy the instinct for sociability. Their primary goal was *not* to maximise some reified economic parameter, such as GNP. In contrast, arising out of the recent course of industrialisation and modernisation is our tendency to dress up the process of societal “development” in overly economic concepts.

Issues such as global climate change, worldwide escalating ecosystem disruption and the growth of massive modern metropolises pose great new challenges to our capacity to maintain satisfactory, health-supporting, environmental and social conditions. These environmental changes and the attendant health risks are of unfamiliar scale and complexity – including the fact that they are, increasingly, becoming major determinants of *future* population health. They are casting lengthening shadows over the wellbeing and health of future generations.

Human wellbeing and health ought, then, to be the central criterion of “sustainability”.

## The Question of Targets

I understand that a prime task for the Sustainability Charter is to “specify measurable outcomes, over a certain period, with intermediate milestones”.

The Terms of Reference indicate that the five listed (and obviously important) target domains, for systematic and ongoing public reporting, are not exhaustive. That raises the challenge, then, of how measures of population wellbeing and health might also be incorporated into target-setting.

Two approaches are, in principle, possible:

1. Direct measures of population health outcomes
2. Incorporation of health risk assessment in the setting of targets for environmental indices that bear on population health

The former (use of direct measures), while very desirable, is not always readily operationalised – for two reasons.

First, health outcomes almost invariably have multivariate causation. This, of course, is well understood for all the usual indices – infant mortality, rates of major diseases (heart disease, diabetes, cancers, etc.), measures of mental health, life expectancy, etc. Hence, the monitoring of such health outcomes usually does not give *specific* information about the influence of recent changes in the environment.

Nevertheless, some health outcomes, such as changes in the geographic range of mosquito-borne dengue fever (or of the vector mosquito species itself), would be of specifically utility – in that case to indicate how ongoing climate change is changing the disease risk landscape in Australia. Likewise, adult suicide rates in rural communities are influenced by environmental changes (droughts, diminished freshwater availability, land degradation, etc.) that impair farm productivity and, hence, livelihoods.

The latter approach (consideration of health risk assessment) is more readily applicable, across a wide front of environmental indicators.

For example, if targets are to be set in relation to transport systems, then those targets should incorporate full-cost accounting with respect to the associated health risks and benefits. It is well recognised that transport systems confer freedom and mobility (though not in traffic-congested conditions!), cause road trauma, and contribute to local health-damaging air pollution.

However, the health impact spectrum of society’s transport choices is much wider than that. It includes:

- Influences on patterns of daily physical activity and, hence, on overweight and obesity. This in turn is rapidly emerging as a major determinant of the future burden of disease and premature death over the coming decades.

- Noise pollution: daily stress levels; sleep disturbance
- Physical fragmentation of some neighbourhoods/suburbs
- Influences on macroscopic urban/suburban layout, and consequences for community cohesion and patterns of daily interactions
- Generation of greenhouse gases. The local and distant health consequences of global climate change are becoming increasingly recognised and are now influencing policy discussions.

Similar arguments apply to each of the other major environmental compartments for which the proposed Charter might set targets for our society.

I would be happy to expand on any part of the above submission.

A handwritten signature in black ink that reads "A J McMichael". The signature is written in a cursive, slightly slanted style.

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