Public Health Association
AUSTRALIA

Public Health Association of Australia submission to the Senate Community Affairs Committees' inquiry on Australia's domestic response to the World Health Organization's (WHO) Commission on Social Determinants of Health report "Closing the gap within a generation"

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Contents

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Introduction

The Public Health Association of Australia Incorporated (PHAA) is recognised as the principal non-government organisation for public health in Australia and works to promote the health and well-being of all Australians. The Association seeks better population health outcomes based on prevention, the social determinants of health and equity principles.

Public Health

Public health includes, but goes beyond the treatment of individuals to encompass health promotion, prevention of disease and disability, recovery and rehabilitation, and disability support. This framework, together with attention to the social, economic and environmental determinants of health, provides particular relevance to, and expertly informs the Association's role.

The Public Health Association of Australia

PHAA is a national organisation comprising around 1900 individual members and representing over 40 professional groups concerned with the promotion of health at a population level.

Key roles of the organisation include capacity building, advocacy and the development of policy. Core to our work is an evidence base drawn from a wide range of members working in public health practice, research, administration and related fields who volunteer their time to inform policy, support advocacy and assist in capacity building within the sector. PHAA has been a key proponent of a preventive approach for better population health outcomes championing such policies and providing strong support for the Australian Government and for the Preventative Health Taskforce and National Health and Medical Research Council (NHMRC) in their efforts to develop and strengthen research and actions in this area across Australia.

PHAA has Branches in every State and Territory and a wide range of Special Interest Groups. The Branches work with the National Office in providing policy advice, in organising seminars and public events and in mentoring public health professionals. This work is based on the agreed policies of the PHAA. Our Special Interest Groups provide specific expertise, peer review and professionalism in assisting the National Organisation to respond to issues and challenges as well as a close involvement in the development of policies. In addition to these groups the Australian and New Zealand Journal of Public Health (ANZJPH) draws on individuals from within PHAA who provide editorial advice, and review and edit the Journal.

Advocacy and capacity building

In recent years PHAA has further developed its role in advocacy to achieve the best possible health outcomes for the community, both through working with all levels of Government and agencies, and promoting key policies and advocacy goals through the media, public events and other means.

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Summary of Key Points

PHAA welcomes the opportunity to provide input to the Community Affairs Committees Inquiry into Australia's domestic response to the World Health Organization's (WHO) Commission on Social Determinants of Health report "Closing the gap within a generation", including the:

(a) Government's response to other relevant WHO reports and declarations;
(b) impacts of the Government's response;
(c) extent to which the Commonwealth is adopting a social determinants of health approach through:
  (i) relevant Commonwealth programs and services,
  (ii) the structures and activities of national health agencies, and
  (iii) appropriate Commonwealth data gathering and analysis; and
(d) scope for improving awareness of social determinants of health:
  (i) in the community,
  (ii) within government programs, and
  (iii) amongst health and community service providers.

The following submission relates primarily to terms of reference (c) and (d) as outlined above.

PHAA's input in relation to these terms of reference is grouped under the following key priority areas:

1. Research and Data Needs;
2. Whole of Government responses;
3. Complex Needs and Social Inclusion; and
4. Contribution of the Natural Environment.

Research and Data Needs

Public health research has a history of underfunding in Australia relative to the level of funding available for medical research. Public health research has considerable potential to make a direct and central contribution to Australia's National Research Priorities. It makes a direct contribution to the priority of 'Promoting and Maintaining Good Health' and can also build synergies between health and other goals such as environmental sustainability. By informing effective strategies for health promotion and disease prevention across the life course, public health research can help to control the demand for, and public costs of, medical care. A continued focus on biomedical research, and on new forms of medical intervention (valuable as they may be), will not achieve our national research priorities in health, and may indeed contribute to growth in public costs of medical treatments. Public health research can support action to address the social determinants of health, so as to promote the public good and reduce health inequities.

Public health research is quite different from bio-medical research. It focuses on the health of whole populations and is concerned with documenting the incidence of disease, understanding the origins of disease, determining what factors make for healthy populations and evaluating the impact of measures (including policies, programs and social changes) that keep populations healthy and free from disease. Public health research is multi-disciplinary and includes epidemiology and the full range of social sciences (including sociology, psychology, economics, anthropology and ecology). Public health research focuses on how social, economic, physical and natural environments shape

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health and health-related behaviours. It also includes much health services research, especially that which monitors the effects on whole populations. Public health research addresses upstream structural drivers of health inequities (such as trade, macroeconomic policy, labour markets, environmental change etc.) and conditions of daily living that affect health (health care, urban environment, working conditions and social relations). Public health research also covers evaluation of interventions, so as to determine what works in improving population health.

One of the central concerns of public health research is with increasing health equity, through actions to address the gradient in health status across social groups and to improve the health of vulnerable groups.

Aboriginal health is a particular focus of public health research, and to address the Council of Australian Government building blocks endorsed by the Commonwealth, requires an understanding of the social determinants impacting on the lives of Australia's Aboriginal and Torres Strait Islander people. To inform policy and program decision-making a gap that has been identified within Aboriginal and Torres Strait Islander research is the lack of evidence in intervention research specifically the evaluation of health interventions.

Another identified gap in Aboriginal and Torres Strait Islander research is translational research to evaluate the effectiveness of strategies used to implement policies to improve health service delivery and health outcomes. What we need to know is how these strategies can be scaled up within the health system.

To effectively close the gap in Aboriginal and Torres Strait Islander Health the NH&MRC needs to fund 'real' research that is 'solutions focused' with research that is aligned to addressing health policy that directly impacts on Aboriginal and Torres Strait Islander people.

Statistics focusing on individuals - as per the 'top down approach' – are not particularly useful, because to make any changes towards closing the gap we need to start presenting research data where the research, the methodology and the unit of analysis is developed in collaboration with communities or families and this means using the 'bottom up approach'.

Research funding needs to be allocated to research for Aboriginal and Torres Strait Islanders that becomes the basis of which to inform policy decisions.

Beyond the general need for increased funding support for various forms of public health research in Australia, we suggest that particular areas of research priority include:

- Understanding social determinants of physical and mental health in Australia;
- Evaluation of public health interventions;
- Aboriginal and Torres Strait Islander health research;
- Health and social policy research, to understand what kinds of policy are best placed to support gains in population health and well-being, and improve health equity;
- Health services research, including in primary health care;
- Research on translation of public health evidence into effective public policy;
- Understanding, managing and preventing the adverse health effects of climate change; and
- Examining the impact of trade and macroeconomic policy on health and health inequities.

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Further, it is vital that NH&MRC is directed to fund research in this area, especially in relation to interventions.

For references and further information on research and data priorities key to the Commonwealth's adoption of a social determinants of health approach and improving awareness of social determinants of health, please see **Attachment A** - PHAA's Submission to the Review of Health and Medical Research in Australia – 2012.

Whole of Government Responses

The PHAA welcomed the recent Catholic Health Australia-NATSEM Report: The Cost of Inaction on the Social Determinants of Health[1]. The economic analysis of the cost of inaction on the social determinants of health to Australia adds to extensive international evidence and complements compelling equity and rights-based arguments for action.

The PHAA acknowledges that action on the social determinants of health is essential to protecting and promoting population health and wellbeing. Every wave of the Household, Income and Labour Dynamics in Australia (HILDA) Survey has thus far reported a clear difference in health status of the cohort when stratified by socio-economic classification. This is supported by evidence from other countries around the world, and particularly from Australia where Aboriginal and Torres Strait Islander peoples are at a social, economic and health disadvantage within a developed nation.[2,3]

The relationship between social determinants and health and wellbeing is evident not just when considering physical health, but also mental health. The overall prevalence of common mental health disorders follows a social gradient, with high rates of problems associated with low income, insecure housing, limited education, recent unemployment, high-demand or low-control work, child abuse or neglect, poor neighbourhood conditions, and low social support.[4] The World Health Organization has described the relationship between social determinants and mental health, and the need for action, as follows:

> *Put simply, mental disorders are inequitably distributed, as people who are socially and economically disadvantaged bear a disproportionate burden of mental disorders and their adverse consequences. A vicious cycle of disadvantage and mental disorder is the result of the dynamic interrelationship between them... Population-level interventions targeting social determinants of mental disorders are likely to exert small but, from a public health point of view, potentially important effects of population mental health, given the high prevalence of mental disorders.*[5]

Recognising the need for action outside of the formal health system, state governments have articulated their commitment to addressing health inequities that result from or are associated with the social determinants of health.[6] Despite this, action on the social determinants of health is often overlooked, which only serves to maintain the status quo. The adoption of a 'health in all policies' approach – the systematic consideration of the health impact of policies in all sectors – is therefore strongly advocated.[7] In 2006, based on data from developed nations of Europe and from the UK, a World Health Organisation publication proposed approaches to tackling social inequities in health.[8] The Commission on Social Determinants of Health in 2008 resulted in the seminal document calling

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for global efforts to close this health gap in a generation, Australia's response to which is the focus of the current inquiry.[9] The need to address the social determinants of health has been recently reaffirmed in the Rio Political Declaration on Social Determinants of Health (2011), which calls for governments to take action on social determinants, to create "vibrant, inclusive, equitable, economically productive and healthy societies..."

Clearly, the cost of inaction is substantial. Population projections from Wave 8 of HILDA (2008) indicate that nearly 14 per cent of Australians aged between 25 and 64 are disadvantaged by virtue of the fact that they live in Australia's poorest 20 per cent of households, one of every four would have left high school before completing year 12; nearly 500,000 (4 per cent) live in public rental accommodation, and over one in five individuals experience a low level of social connectedness.

The Catholic Health Australia-NATSEM Second Report on Health Inequalities[1] presents the cost of Government inaction on social determinants of health in terms of the loss of potential social and economic benefits that otherwise would have accrued to individuals in the most disadvantaged socio-economic groups if they had had the same health profile as those who are least disadvantaged. The tremendous cost-savings accrue from avoiding a chronic illness in half a million Australians of working age, saving about 2.3 billion dollars in hospital expenditure, annual savings of $273 million from reduced Medicare services and generating 8 billion dollars in earnings if this group enters the workforce. Further savings accrue from annual savings of 4 billion dollars in welfare support payments and another 184.5 million dollars from fewer Pharmaceutical Benefit Scheme scripts being filled. In particular, it is important to emphasise the importance of early intervention for mental health disorders, with a focus on the youth population and the societal and economic benefits to be gained from this.

It is essential that Australian governments address the social determinants of health to improve people's health and well-being. This 'Whole of Government' approach should include:

- The Senate Standing Committee on Community Affairs conducting a Senate inquiry to investigate the effectiveness of whole-of-government policy solutions to address the social determinants of health, and promote mental and physical health and wellbeing;
- Development of a comprehensive policy framework to address the social determinants of health and reduce health inequities;
- Federal and State Governments adopting a 'Health in all Policies' approach;
- Continued implementation of the recommendations of the 2008 WHO report[9], including:
    - Investment in policies and programs that improve the conditions of daily life – the circumstances in which people are born, grow, live, work and age; and
    - Policies that reduce the inequitable distribution of resources.

A copy of the PHAA Response to the Catholic Health Australia-NATSEM Report 'The Cost of Inaction on the Social Determinants of Health' is provided at **Attachment B**.

Complex Needs and Social Inclusion

The PHAA and the Alcohol and Other Drugs Council of Australia (ADCA) jointly hosted a roundtable at Parliament House on 28 June 2012, bringing together key non-government organisations (NGOs) at the national level to discuss the idea of a multi-sectoral approach to addressing complex needs in

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service delivery; and how NGOs can engage with the Government's broader Social Inclusion Agenda to achieve better outcomes.

The meeting/roundtable was sponsored by the Hon Mark Butler MP, Minister Assisting the Prime Minister on Mental Health Reform, Minister for Mental Health and Ageing and Minister for Social Inclusion. Attendees at the national NGO meeting included: Families Australia; Australian Medical Association; Mental Health Council of Australia, Australian Council of Social Service; Australian Medicare Local Alliance; Carers Australia; Consumer Health Forum; Homelessness Australia; National Congress of Australia's First Peoples; Australian Therapeutic Communities Association; National Aboriginal Community Controlled Health Organisation; as well as representatives from both DoHA and the Department of Prime Minister and Cabinet.

It is envisaged that the coalition of interests forged at the initial roundtable discussion will form the basis of a broader group and provide a strong foundation for the development of a wider advocacy agenda in relation to NGO approaches to addressing complex needs care planning and prevention initiatives, in collaboration with cross-portfolio Government initiatives. The group's agenda will be to:

> *'progress a collaborative and ongoing agenda/program of engagement and advocacy to break down structural and systemic barriers to the development and implementation of comprehensive, multifaceted, cross-sectoral approaches to achieving better health and social outcomes for people with complex needs.'*

At the first meeting, the group discussed at length some of the existing systemic and structural barriers to implementing flexible models of care. The minutes and action items from the meeting are provided as **Attachment C**, and we would appreciate the Committees' consideration of these issues in progressing the Australian Government's agenda in relation to adopting a social determinants of health approach and improving awareness of the social determinants of health.

Contribution of the Natural Environment

The PHAA would also like to raise with the Committees another so far largely neglected set of determinants of both individual and social health: i) the requirements for human health of a healthy, well-functioning environment; ii) the link between environmental damage and the causes of poor health in modern societies; and iii) the effects of environmental pollution in contributing to and worsening chronic diseases.

There are three inter related dimensions whereby a well-functioning environment contributes to human health. Firstly, is the range of ecosystem functions and cycles/ that provide clean air, fresh water, support food production (soil and insect life) and help manage human society's waste streams. [11,24]

Secondly, is the amenity which natural places and 'nature' provides for human psychological, cultural and 'spiritual' wellbeing.[10,13,21,26,29] 'Nature deficit disorder' is the term used to describe the symptomatology of increased rates of behavioural disorders, anxiety, and sadness observed among people with limited contact with nature.[23] The term 'solastalgia' is a new concept that has been developed within Australia . The term is used to describe the feelings individuals experience when

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environmental change has an impact on their home environment. It encompasses feelings that individuals may experience when separated from home such as distress, melancholia or homesickness. Many Australians living in rural and remote regions are at risk of solastaligia due to the poor adaptive capacity and capability of the environment and the community response to risks such as climate variability and high agricultural production policy. From a social determinants perspective, community wellbeing is vital for community sustainability and it is directly linked with, and dependent on, environmental sustainability and government agricultural policy.[10]

Thirdly, politically and economically equitable societies additional to good quality health care, determine good social and individual health and wellbeing. This approach fits the health promotion framework outlined in the 1983 Ottawa Charter and the more recent Commission on Social Determinants of Health.[15,33] For these three reasons the natural (and human-modified) environment plays a vitally important role in providing the foundations for all societies, including complex industrial societies; their wellbeing and health, their productivity, and their material, social and aesthetic conditions of living.

Humanity's relationship with the environment is dynamically interdependent; while we derive vital support from our natural environment, our own actions contribute to supporting or damaging the environment. As human numbers grow and economic activities intensify and extend, so the negative impacts on the environment's health-enhancing and, indeed, its life-supporting systems increase. Thus human political and economic behaviour has an influence on our ecosystem supports, which in turn affect our health.

Aspects of this topic are now of a scale and time-horizon beyond the conventional frame of reference for 'determinants of health'. Nevertheless, human-induced disruptions and depletions of environmental systems loom increasingly large as a fundamental, mostly negative, influence on health and longevity in coming decades in countries around the world.[25] Put simply, ecosystem and community health can be achieved by a balance between community, environment and the economy.

Environmental functions which contribute to, support and improve human health include:

- The co-benefits for health and ecological sustainability from, for instance, active transport (walking, bicycling) - with greenhouse gas emission reductions as well as improved urban air quality (and consequent reduction in respiratory and cardiac diseases) and improvements in psychological wellbeing with better community amenity.[18,27,32]

- Sustainable urban design permits active transport. Open and green natural spaces increase recreational potential for physical activity which reduces cardiovascular disease, and contributes to mental wellbeing. Furthermore, urban layout with features such as water and green spaces result in reduced 'heat islands' and cooler cities. Temperature stable house design contributes further. Such factors reduce demand for electricity and so reduce emissions and further improve air quality in addition to reducing risks of adverse effects from heat on very hot days.

- Experience in the United Kingdom with the Sustainable Development Unit has shown that green health care options provide both more cost effective health care and reduced greenhouse gas emissions.[34]

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- The importance of operating within the planetary safe operating limits[28] has a strong health and health care dimension.[24]

- The health sector needs to become aware of, and start to plan a response to, other resource constraints that may directly affect health care, such as 'peak oil' or those effecting agriculture and food yields, such as 'peak phosphorus'.[14] In fact, the effects on agriculture and livestock productivity of resource 'peaks' compounding the effects of global warming will be very significant for human health and wellbeing through effects on food quality and availability. They deserve much more health sector attention.

- For Indigenous Australians the connection to country is fundamental to their health and wellbeing. In their view of health they are at one with nature and their country.

The underpinnings of many of the social determinants of chronic diseases are the same as the economic arrangements that cause environmental degradation. Examples include economic systems that engender a more stressful society, and those which support tobacco availability, energy dense low nutrition foods and reduced opportunities for exercise that elevate rates of diabetes and heart disease. Governments need to regulate economic activities especially those which operate using models that do not recognise the environmental and ecological costs and losses (some of them irreversible) that result from their actions. The persistent assumption that natural resources have only a commodity value; or that damages to ecosystem supports are legitimate (discountable) externalities (or, if the importance of ecosystem supports *is* recognised, their value is nevertheless estimated restrictively) all require challenge by the health sector.

Finally, environmental pollutants contribute to human illness. Such pollutants include urban (for example traffic) and industrial air pollution; residual lead in places such as Broken Hill, Port Pirie and Mt Isa and arsenic in soil and food. Evidence is emerging that chemicals play a significant role in developmental and other illnesses including congenital malformations, cancers, diabetes, allergenicity, generalised immune disorders, asthma, neurological and behavioural conditions, endocrine disruption, and, perhaps, obesity and autism.[12,16,17,19,20,22,30,31]

The PHAA submits that environmental protection and rehabilitation are important determinants of health. In that environmental protection and rehabilitation are socially constructed, they legitimately fit within the social determinants approach. PHAA believes the Commonwealth should be developing policy responses under the leadership of the Department of Health and Ageing to inform relevant Commonwealth programs and services, the activities of national health agencies, and Commonwealth data gathering and analysis. Further, PHAA recommends that environmental determinants of health and wellbeing be included in activity to improve awareness of social determinants of health in the community, within government programs, and amongst health and community service providers.

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Conclusion/Recommendations

PHAA welcomes the opportunity to provide input to the Community Affairs Committees Inquiry into Australia's domestic response to the World Health Organization's (WHO) Commission on Social Determinants of Health report "Closing the gap within a generation".

PHAA's input in relation to these terms of reference is grouped under the following four key priority areas, and includes the following recommendations:

1. Research and Data Needs

Beyond the general need for increased funding support for various forms of public health research in Australia, we suggest that particular areas of research priority include:

- Understanding social determinants of physical and mental health in Australia;
- Evaluation of public health interventions;
- Aboriginal and Torres Strait Islander health research;
- Health and social policy research, to understand what kinds of policy are best placed to support gains in population health and well-being, and improve health equity;
- Health services research, including in primary health care;
- Research on translation of public health evidence into effective public policy;
- Understanding, managing and preventing the adverse health effects of climate change; and
- Examining the impact of trade and macroeconomic policy on health and health inequities.

Further, it is vital that NH&MRC is directed to fund research in this area, especially in relation to interventions.

2. Whole of Government Responses

It is essential that Australian governments address the social determinants of health to improve people's health and well-being. This 'Whole of Government' approach should include:

- The Senate Standing Committee on Community Affairs conducting a Senate inquiry to investigate the effectiveness of whole-of-government policy solutions to address the social determinants of health, and promote mental and physical health and wellbeing;
- Development of a comprehensive policy framework to address the social determinants of health and reduce health inequities;
- Federal and State Governments adopting a 'Health in all Policies' approach;
- Continued implementation of the recommendations of the 2008 WHO report[9], including:
    - Investment in policies and programs that improve the conditions of daily life – the circumstances in which people are born, grow, live, work and age; and
    - Policies that reduce the inequitable distribution of resources.

3. Complex Needs and Social Inclusion

PHAA seeks the Australian Government's assistance to break down identified structural and systemic barriers to the development and implementation of comprehensive, multifaceted, cross-sectoral

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approaches to achieving better health and social outcomes for people with complex needs. We believe that consideration of these issues is vital in progressing the Australian Government's agenda in relation to adopting a social determinants of health approach and improving awareness of the social determinants of health.

4. Contribution of the Natural Environment

PHAA believes the Commonwealth should be developing policy responses under the leadership of the Department of Health and Ageing to inform relevant Commonwealth programs and services, the activities of national health agencies, and Commonwealth data gathering and analysis.

Further, PHAA recommends that environmental determinants of health and wellbeing be included in activity to improve awareness of social determinants of health in the community, within government programs, and amongst health and community service providers.

Further detailed analysis and recommendations in relation to Australia's domestic response to the WHO Commission on Social Determinants of Health report and approach to addressing health inequities can be found in PHAA's recently adopted Health Inequities Policy at **Attachment D**.

Please do not hesitate to contact me should you require additional information or have any queries in relation to this submission.

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4 October 2012

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References

1. Brown, L, Thurect, L and Nepal, B. (2012) The Cost of Inaction on the Social Determinants of Health. Report No. 2/2012: CHA-NATSEM Second Report on Health Inequalities. National Centre for Social and Economic Modelling, University of Canberra. Available at: http://www.cathnews.com/uploads/doc/2012/06/CHA_NATSEM%20Cost%20of%20Inaction.pdf

2. Marmot M. Social determinants of health inequalities. Lancet 2005; 365: 1099–104. Social Science & Medicine 54 (2002) 1621–1635

3. Braveman P, Tarima E. Social inequalities in health within countries: not only an issue for affluent nations.

4. Fisher, M. & Baum, F. (2010). The social determinants of mental health: implications for research and health promotion. Australian and New Zealand Journal of Psychiatry, 44, 1057 – 1063.

5. Patel , V., Lund, C., Hatherill, S., Plagerson, S., Corrigall, J., Funk, M & Fisher, A.J. (2010). Mental disorders: equity and social determinants. In E. Blas & A.S. Kurup (Eds.). *Equity, social determinants and public health programmes*. (pp. 115 – 134). Geneva: World Health Organization.

6. Health Inequities Position Paper, VicHealth. Accessible at http://www.vichealth.vic.gov.au/en/Publications/Health-Inequalities.aspx?page=2

7. World Health Organisation & Government of South Australia (2010). Adelaide Statement on Health in All Policies. Accessible at http://www.who.int/social_determinants/hiap_statement_who_sa_final.pdf

8. Margaret Whitehead and Göran Dahlgren. Concepts and principles for tackling social inequities in health: Levelling up Part 1. WHOLIS E89383, accessible at http://www.euro.who.int/__data/assets/pdf_file/0010/74737/E89383.pdf

9. World Health Organization (2008) Closing the gap in a generation. Health equity through action on the social determinants of health. Final report of the commission on social determinants of health. Accessible at http://www.who.int/social_determinants/publications/en/

10. Albrecht G, Sartore GM, Connor L, Higginbotham N, Freeman S, Kelly B, Stain H, Tonna A, Pollard G. Solastalgia: the distress caused by environmental change. Australasian Psychiatry. 2007;15(S1):95-8

11. Butler C, Hanna EG. Cross-cutting threats to Human Health and Health Care systems: Biodiversity loss and ecosystem function In: Adegoke J, Wright C, editors. *Climate Vulnerability. Volume 1 Health*: Elsevier. 2013

12. Choi S, Yoo S, & Lee B. Toxicological characteristics of endocrine-disrupting chemicals: developmental toxicity, carcinogenicity, and mutagenicity. *J Toxicol Environ Health B Crit Rev,* 2004; 7(1):1-24

13. Connor L, Albrecht G, Higginbotham N, Freeman S, Smith W. Environmental change and human health in Upper Hunter communities of New South Wales, Australia. EcoHealth. 2004;1 (sup 2):47-58

14. Cordell D, Rosemarin A, Schröder J, Smit A. Towards global phosphorus security: A systems framework for phosphorus recovery and reuse options. Chemosphere. 2011; 84(6):747-58

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15. Commission on Social Determinants of Health (2008). Closing the gap in a generation: health equity through action on the social determinants of health: Final Report of the Commission on Social Determinants of Health. Geneva, World Health Organization.

16. Dietert R, & Dietert J. Early-Life Immune Insult and Developmental Immunotoxicity (DIT) Associated Diseases: Potential of Herbal and Fungal-Derived Medicinals. CurrentMedicinal Chemistry. 2007; 14(10):1075-85

17. Giles-Corti B, Macintyre S, Clarkson JP, Pikora T, Donovan RJ. Environmental and lifestyle factors associated with overweight and obesity in Perth, Australia. American Journal of Health Promotion. 2003;18(1):93-102

18. Giles-Corti, B., S. Foster, et al. (2010). "The co-benefits for health on investing in active trnsportation." NSW Public Health Bulletin **21**((5-6) May-June 2010): 122-127

19. Hanna EG. *Environmental health and primary health care: Towards a new workforce model* [PhD. Research]. Melbourne: La Trobe University; 2005. Access via Thesis On-Line at http://www.lib.latrobe.edu.au/thesis/public/adt-LTU20061110.152550/

20. Heindel J. Role of exposure to environmental chemicals in the developmental basis of disease and dysfunction. *Reproductive Toxicology,* 2007; 23(3): 257-9

21. Higginbotham N, Freeman S, Connor L, Albrecht G. Environmental injustice and air pollution in coal affected communities, Hunter Valley, Australia. Health & Place. 2010;16(2):259-66

22. Lee D, Lee I-K, Porta M, Steffes M, & Jacobs D . Relationship between serum concentrations of persistent organic pollutants and the prevalence of metabolic syndrome among nondiabetic adults: Results from the National Health and Nutrition Examination Survey 1999-2002, Diabetologia, 2007; 50:1841-51

23. Louv, R., 2008: Last Child in the Woods. Algonquin Books of Chapel Hill.

24. McMichael AJ. Human population health: Sentinel criterion of environmental sustainability. *Current Opinion in Environmental Sustainability,* 2009. 1(1): 101-106.

25. McMichael AJ, Butler CD. Promoting global population health while constraining the environmental footprint. *Annual Review of Public Health* 2011; 32: 179–197

26. Peacock, J., Hine, R. & Pretty, J. (2007). Got the Blues, then find some Greenspace: The Mental Health Benefits of Green Exercise Activities and Green Care, Centre for Environment and Society, University of EssexRaffle, A. E. (2010). "Oil, health, and health care." BMJ **341**.

27. Rissel, C. E. (2009). "Active travel: a climate change mitigation strategy with co-benefits for health." NSW Public Health Bulletin **20**((1-2) January February 2009): 10-13

28. Rockström, J., W. Steffen, et al. (2009). "Planetary boundaries:exploring the safe operating space for humanity." Ecology and Society **14**(2): 32

29. Townsend, M. (2006). "Feel blue? Touch green! Participation in forest/woodland management as a treatment for depression". Urban Forestry & Urban Greening 5: 111–120.

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30. Weiss B. Vulnerability of children and the developing brain to neurotoxic hazards. Environ Health Perspect. 2000;108(3):375-81

31. Weselak M, Arbuckle T, & Wigle D & Krewski D. In utero pesticide exposure and childhood morbidity. Environ Res. 2007; 103(1):79-86

32. Woodcock, J., P. Edwards, et al. (2009) "Public health benefits of strategies to reduce greenhouse-gas emissions: urban land transport." The Lancet DOI: 10.1016/S0140-6736(09)61714-1

33. World Health Organisation (1986). Ottawa Charter for Health Promotion. Geneva, World Health Organisation.

34. Sustainable Development Unit (UK) http://www.sdu.nhs.uk/sd_and_the_nhs/

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