Tax Working Group
Te Awheawhe Tāke

Tax Working Group Public Submissions Information Release

Release Document

September 2018

taxworkingroup.govt.nz/key-documents

Key to sections of the Official Information Act 1982 under which information has been withheld.

Certain information in this document has been withheld under one or more of the following sections of the Official Information Act, as applicable:

[1] 9(2)(a) - to protect the privacy of natural persons, including deceased people;

[2] 9(2)(k) - to prevent the disclosure of official information for improper gain or improper advantage.

Where information has been withheld, a numbered reference to the applicable section of the Official Information Act has been made, as listed above. For example, a [1] appearing where information has been withheld in a release document refers to section 9(2)(a).

In preparing this Information Release, the Treasury has considered the public interest considerations in section 9(1) of the Official Information Act.

Canterbury
District Health Board
Te Poari Hauora ō Waitaha

Submission on Future of Tax

To:	Tax Working Group Secretariat PO Box 3724, Wellington 6140
Submitter:	Canterbury District health Board) Attn: Chantal Lauzon Community and Public Health C/- Canterbury District Health Board PO Box 1475 Christchurch 8140
Proposal:	The Tax Working Group has been established in order to examine improvements in the structure, fairness, and balance of the tax system.

SUBMISSION TO THE TAX WORKING GROUP

Details of submitter

1. Canterbury District Health Board (CDHB).

2. The submitter is responsible for promoting the reduction of adverse environmental effects on the health of people and communities and to improve, promote and protect their health pursuant to the New Zealand Public Health and Disability Act 2000 and the Health Act 1956.

3. The Ministry of Health requires the submitter to reduce potential health risks by such means as submissions to ensure the public health significance of potential adverse effects are adequately considered during policy development.

Details of submission

4. We welcome the opportunity to comment on the Future of Tax. The future health of our populations is not just reliant on hospitals, but on a responsive environment where all sectors work collaboratively.

5. While the most obvious link between tax and health is the financing of the health system, the relationship is far broader. Although health care services are an important determinant of health, health is also influenced by a wide range of factors beyond the health sector. Health care services manage disease and trauma and are an important determinant of health outcomes. Health creation and wellbeing (overall quality of life) are also influenced by a wide range of factors beyond the health sector.

6. These influences can be described as the conditions in which people are born, grow, live, work and age, and are impacted by environmental, social and behavioural factors. They are often referred to as the 'social determinants of health.[1] Barton and Grant's Health Map[2] shows how the various influences on health are complex and interlinked. Tax is an upstream determinant of health and a just

[1] Public Health Advisory Committee. (2004). *The Health of People and Communities. A Way Forward: Public Policy and the Economic Determinants of Health*. Public Health Advisory Committee: Wellington.
[2] Barton, H and Grant, M. (2006) A health map for the local human habitat. *Journal of the Royal Society for the Promotion of Healt*h; 26 (6)252-253. http://www.bne.uwe.ac.uk/who/healthmap/default.asp

society. Tax revenue is also vital in providing funding for public services which impact on a broad range of these determinants.

7. The most effective way to maximise people's wellbeing is to take these determinants into account as early as possible during decision making and strategy development. Initiatives to improve health outcomes and overall quality of life must involve organisations and groups beyond the health sector if they are to have a reasonable impact.[3]

8. A well performing tax system is a major contributor to public welfare. Strong tax systems can provide regular, sustainable revenue for healthcare and funding for public services which impact on a broad range of determinants. Tax structures also affect society and the economy in many ways beyond a narrow financing focus: equity, in its many dimensions, impacting investment and growth; sustainability of the environment; and many other concerns central to the achievement of the UN Sustainable Development Goals.[4]

9. Strong tax systems also contribute to a more equitable and democratic society. Small changes to the redistribution of wealth can have a big impact on poverty, a key determinant of health. Inequity is itself linked to a number of health conditions, including hypertension, heart disease, mental health disorders, accidents, ulcers, and cirrhosis.[5] More equitable societies are healthier societies.

10. The importance of tax to health improvement has been summarised by the 'Five R's' framework.[6] First, tax can improve *representation* and democratic accountability, and help make governments more responsive to the needs of its citizens. Second, tax can create a *revenue* stream for a universal pool of public finance for health care and other public services. Third, progressive taxation when combined with appropriate public spending can help *redistribute* wealth and income and mitigate social and health inequalities. Fourth, the *re-pricing* of harmful products (e.g.

---

3 McGinnis, J.M., Williams-Russo, P., Knickman, J.R. (2002). The case for more active policy attention to health promotion. *Health Affairs.* 21(2): 78 – 93.

[4] Platform for the Collaboration on Tax. (2018). Platform Partner's Statement at the Closing of the Conference. http://www.worldbank.org/en/news/statement/2018/02/16/platform-for-collaboration-on-tax-first-global-conference-on-taxation-and-sdgs

[5] Blouin, C., et al. (2009). Trade and social determinants of health. *The Lancet*. 373(9662): 502–507.

[6] Mccoy, D., Chigudu, S., Tillmann, T. (2017) Framing the tax and health nexus: a neglected aspect of public health concern. *Health Economics Policy Law*. 12(2):179-194.

tobacco, alcohol and unhealthy food) via taxation can help reduce their consumption. Fifth, taxation provides a route by which certain harmful industries can be *regulated*.

General Comments

11. In its role of promoting and protecting the health of its population, the CDHB has a number of recommendations related to taxation for consideration which would improve health outcomes for the community.

12. The CDHB supports the use of the Living Standards Framework and taking a broader view of taxation that includes social costs.

13. As noted in the submission's background paper, the ageing population will result in increased government expenses due to higher healthcare spending and slower revenue growth from lower labour force participation. Ageing is of particular concern for the CDHB, the District Health Board region with second largest population and the largest total population over 75 years,.[7] By 2026, one in every five people in Canterbury will be over 65 and the number of people aged over 85 will have doubled. Chronic diseases disproportionately affect older adults and contribute to ongoing disability and increased need for long-term health care. Ageing is associated with a growing need for acute health care services and ongoing chronic illness that sometimes requires long-term care.[8] However, when older people are in good health, they will need relatively fewer health care resources. Policies that allow a healthy ageing of the population include enhanced prevention services to tackle obesity, smoking and mental illnesses, as well as better coordination of health and long-term care services. These policies need vision, long-term planning and investment but comprehensive prevention strategies and a well-funded health system will allow more people to age healthily and will help to ensure future health services are properly equipped to accommodate population ageing.[9]

---

[7] Canterbury District Health Board. (2014). Our region. http://www.cdhb.health.nz/About-CDHB/Pages/Our-Region.aspx

[8] Cornwall J, Davey J. (2004). *Impact of Population Ageing in New Zealand and the Demand for Health and Disability Support Services, and Workforce Implications*. New Zealand Institute for Research on Ageing (NZiRA) and the Health Services Research Centre (HSRC), Victoria University of Wellington. Wellington: Ministry of Health.

[9] Keene, L. et al. (2016). Funding New Zealand's public healthcare system: time for an honest appraisal and public debate. *New Zealand Medical Journal*. 129(1435): 10-20.

14. Taxes on unhealthy products can produce major health gains, and the evidence shows these can be implemented fairly, without disproportionately harming the poorest in society. While one of the most common arguments opposing 'behavioural' taxation is the claim that such taxes are regressive, the latest research has found that taxes on alcohol, tobacco, and sugar-sweetened beverages offer a particularly effective strategy for reducing chronic disease among the poorest people in society who are disproportionately affected by unhealthy products.[10] The burden of preventable non-communicable disease associated with tobacco, alcohol and obesity is itself regressive. Although low-income households may often bear the largest financial burden they also receive the largest health benefits.[11] Although the direction and size of the equity effects of price policies depend to a large extent on the measures used to assess them in no case are these effects unequivocally regressive. Where taxes or tax increases do generate regressive tax burdens, the positive financial effects linked with health improvements that are triggered by taxation should also be considered.

15. The CDHB recommends that the Tax Working Group recommend that research be commissioned to explore into the link between tax and health in New Zealand.

Specific comments

Please refer to Appendix A

Summary

16. The CDHB supports making improvements to the New Zealand tax system as an appropriate fiscal measure to improve population health outcomes, in particular harm from alcohol, smoking, and climate change, as well as rates of obesity and diabetes. The CDHB also supports hypothecating (ringfencing) a proportion of the

[10] Niessen, L.W., et al. (2018). Tackling socioeconomic inequalities and non-communicable diseases in low-income and middle-income countries under the Sustainable Development agenda. *Lancet*. (published online 4 April) *www.thelancet.com/journals/lancet/article/PIIS0140-6736(18)30482-3/fulltext. doi:10.1016/S0140-6736(18)30482-3.*

[11] Sassi, F, Belloni, A, Mirelman, AJ et al. (2018). Equity impacts of price policies to promote healthy behaviours. *Lancet*. (published online 4 April) http://dx.doi.org/10.1016/S0140-6736(18)30531-2

revenue from alcohol and tobacco excise tax towards prevention and treatment of associated harms.

Conclusion

17. Thank you for the opportunity to submit on the Future of Tax.

Person making the submission

[1]

Evon Currie

Date: 30/04/2018

General Manager
Community & Public Health
Canterbury District Health Board

Contact details

Chantal Lauzon
For and on behalf of
Community and Public Health
C/- Canterbury District Health Board
PO Box 1475
Christchurch 8140

[1]

Appendix A: Specific Comments

Section Reference	Position	Reasons
Chapter 4: Taxes and Behaviour	18. In line with the CDHB Position Statement on Alcohol[12], the CDHB recommends increasing excise tax on alcohol by at least 50% to reduce alcohol-related harm.	18.1. CDHB are gravely concerned about the effect that misuse of alcohol has, either directly or indirectly, on the health and wellbeing of all New Zealanders and particularly the disproportionate effect that it has on the most vulnerable members of society. 18.2. Alcohol is a major public health issue in New Zealand. The 2016/2017 New Zealand Health Survey found 1 in 5 adults (20%) drank alcohol in a way that could harm themselves or others.[13] Alcohol contributes to acute harm, over 200 diseases and an estimated 800 deaths a year.[14] The knock-on effects of harmful drinking on others is inflicting an unacceptably high price on families, communities, and society as a whole. Alcohol related harm was estimated to be cost society $4.4 billion in 2005/2006.[15] As alcohol is widely available and promoted in New Zealand, changing the drinking culture will require changes to the regulatory environment.

[12] Canterbury District Health Board. 2012. Position Statement on Alcohol. Available at: https://www.cdhb.health.nz/About-CDHB/corporate-publications/Documents/CDHB%20-%20Alcohol%20Position%20Statement%20-%20July%202012.pdf

[13] Ministry of Health. 2017. Annual Data Explorer 2016/17: New Zealand Health Survey [Data File]. URL: https://minhealthnz.shinyapps.io/nz-health-survey-2016-17-annual-update

[14] Connor, J., Kyff, R., Shielf, K. et al. 2015. The burden of disease and injury attributable to alcohol in New Zealanders under 80 years of age: marked disparities by ethnicity and sex. New Zealand Medical Journal, 128 (1409), 15-28.

[15] Slack, A. Nana, G. 2012. Costs of harmful alcohol use in Canterbury DHB. Wellington: BERL. https://www.healthychristchurch.org.nz/media/84020/berl_costsharmfulalcoholusecdhb.pdf

		18.3. Raising the alcohol price, in line with the 5+ Solution, is an internationally evidence-based way to reduce alcohol-related harm[16], including a range of negative health outcomes.[17] Evidence shows that when prices go up, alcohol consumption goes down.[18] Systematic reviews have shown increases in alcohol prices reduce alcohol-related disease and injury outcomes, alcohol-impaired driving, motor vehicle crashes, motor vehicle injuries, death from cirrhosis, alcohol dependence, sexually transmitted infections, and violence.[19] In addition, suicide rates among young men are responsive to alcohol price increases.[20] 18.4. The cost of alcohol has been shown to be an important determinant of consumption across a range of drinking groups, including young people and heavy drinkers.[21] 18.5. Taxation is likely to be a more-cost effective means of reducing alcohol-related problems than other alcohol polices.[22] 18.6. An increase in the excise rate of between 50 to 100 percent is likely to give major net benefits to the New Zealand economy, as detailed in the Law Commissions'

[16] Anderson P, et al. (2009). Effectiveness and cost effectiveness of policies and programmes to reduce the harm caused by alcohol. *Lancet*. 373(9682):2234–46.
[17] Babor T, et al. (2003). *Alcohol: No ordinary commodity. Research and public policy*. New York: Oxford University Press.
[18] Ibid.
[19] Wagenaar, A.C., Salois, M.J., Komro, K.A. (2009). Effects of beverage alcohol price and tax levels on drinking: a meta-analysis of 1003 estimates from 112 studies. *Addiction*. 104:179-90.
[20] Markowitz, S., Chatterji, P., Kaestner, R. (2003). Estimation the Impact of Alcohol Policies on Youth Suicides. *The Journal of Mental Health Policy and Economics.* 6:37-46.
[21] Chaloupka, F.J., Cummings, K.M., Morley, C., et al. (2002). Tax, price and cigarette smoking: evidence from the tobacco documents and implications for tobacco company marketing strategies. *Tobacco Control*. 11:i62-i72.
[22] World Health Organization. (2007). WHO Expert Committee on Problems Related to Alcohol Consumption. *WHO Technical Report Series*, 944.

		Report.[23] Based on the reduction in health harms and health costs alone, it reported an estimated annual benefit of $60 to $70 million. It concludes that significant excise rate increases meet the public interest test as indicated by its benefit-cost analysis. There would also be savings and reductions in alcohol-related crime, improvements in family wellbeing and many other benefits associated with decreased alcohol consumption.[24] 18.7. Increasing the excise rate by 50 percent would increase the price of alcohol by an average 10 percent, which has been estimated to reduce overall consumption by 5 percent, and possibly more long term.[25] The increased costs borne by non-excessive drinkers are modest: the reduction in the external cost of heavy and moderate drinkers is greater than any welfare loss experienced by light drinkers who never drink heavily or regularly. 18.8. Excise tax should be adjusted so that alcohol products are taxed directly on level on ethanol. A single tax rate would eliminate existing anomalies and ensure the tax system is based on the actual alcohol content, encouraging consumers toward lower price, lower strength beverages. Taxing on ethanol level may also help reduce inequalities, especially among heavy drinkers.

[23] New Zealand Law Commission. (2010). *Alcohol in Our Lives: Curbing the Harm – a report on the review of regulatory framework for the sale and supply of liquor*. Wellington: Law Commission.
[24] Marsden Jacob Associates. (2009). *The Benefits, Costs and Taxation of Alcohol: Towards an analytical framework (A report prepared for the New Zealand Law Commission)*. Wellington: Marsden Jacob Associates.
[25] New Zealand Law Commission. (2010).

Chapter 4: Taxes and Behaviour	19. The CDHB recommends using revenue from an increase in excise tax on alcohol to reduce harm amongst high-risk consumers.	19.1. The tax-payer funded health system absorbs significant costs due to alcohol related harm. Health-related alcohol harm includes poor mental health, cancer, acute injuries and chronic disease. In Canterbury alone, alcohol-related harm was estimated to have cost the health system $62.8 million in 2011.[26] 19.2. Approximately 23,000 people are treated in the publicly-funded health system each year for alcohol or other drug addictions[27] and 3.9% of health loss from all causes in New Zealand (measured in disability-adjusted life-years) is estimated to be attributable to alcohol.[28] 19.3. The revenue from any increase in excise tax should be used for prevention, treatment and rehabilitation services. This position is supported by the New Zealand Medical Association.[29] An increase in price resulting from a tax increase is likely to be more acceptable to the drinking public if there is a transparent process whereby the revenue generated goes specifically to evidence-based harm reduction strategies. 19.4. Insufficient funds are currently allocated for the prevention of alcohol-related harm. While the Health Promotion Agency levy on alcohol products supports the provision of alcohol-related advice and research, the New Zealand alcohol excise

[26] Slack, A. Nana, G. (2012). *Costs of harmful alcohol use in Canterbury DHB*. Wellington: BERL.
[27] National Committee for Addiction Treatment. (2008). *Investing in addiction treatment: a resource for funders, planners, purchasers and policy makers*. Christchurch: NCAT.
[28] Ministry of Health. (2013). *Health Loss in New Zealand: A report from the New Zealand Burden of Diseases, Injuries and Risk Factors Study, 2006–2016*. Wellington: Ministry of Health. http://www.health.govt.nz/nz-health-statistics/health-statistics-and-data-sets/new-zealand-burden-diseases-injuries-and-risk-factors-study-2006-2016
[29] New Zealand Medical Association. (2015). *NZMA Policy Briefing: Reducing alcohol-related harm*. Wellington: NZMA. https://www.nzma.org.nz/__data/assets/pdf_file/0017/42542/Alcohol-Briefing18.may.FINAL.pdf

		tax base goes into the consolidated fund - $985 million in 2016/17.[30] More resources are needed within the health sector to prevent alcohol-related harm and treat conditions and injuries related to alcohol, including mental health and addiction services. A greater proportion of the revenue generated from alcohol excise taxation should be dedicated to fund treatment, in particular mental health and addiction services, and an increased level of inter-sectoral harm prevention strategies, increased enforcement of supply control measures, and research.
Chapter 4: Taxes and Behaviour	20. The CDHB recommends continuing the regular increases on tobacco and using a proportion of the revenue from excise tax on tobacco for prevention of smoking and treatment of smoking-related conditions.	20.1. The CDHB supports the continuation of the regular tax increases on tobacco. 20.2. Increasing the price of tobacco (through taxation) acts both as a disincentive for young people to take up smoking, as well as an incentive for those who smoke to quit. The recent pattern of annual tobacco tax increases in NZ has been associated with a 23 percent reduction in tobacco consumption per adult (for the period 2010 to 2014).[31] 20.3. New Zealand modelling work indicates large health cost savings from raising tobacco taxes ($3.8 billion saved over the lifetime of the current NZ population). This is even when accounting for the extra health costs from the longer lifespan of ex-smokers.[32]

[30] The Treasury of New Zealand Government. (2017). *Government Revenue – Financial Statements of the Government of New Zealand (for the Year ended 30 June 2017)*. Retrieved from http://www.treasury.govt.nz/government/financialstatements/yearend/jun17

[31] Laugesen M. (2015). *Analysis of Manufacturers' Returns on Tobacco. Report to the Ministry of Health for 2014*. https://www.health.govt.nz/system/files/documents/pages/tobacco-returns-2014-analysis-report.pdf.

[32] 5.Blakely, T., et al. (2015). Health, health inequality, and cost impacts of annual increases in tobacco tax: Multistate life table modeling in New Zealand. PLoS Medicine. 12(7):e1001856.

		20.4. Although tobacco tax is typically described as being a regressive tax overall, actual increases in this tax can be progressive due to the typically greater price sensitivity of low-income populations. Indeed, two systematic reviews indicate that tobacco price/tax increases tended to have a positive impact on equity (i.e., in terms of reduction in inequalities in smoking prevalence by socioeconomic status for both adults[33] and youth.[34] 20.5. A proportion of revenue from excise tax on tobacco should be dedicated to fund better and more effective tobacco control initiatives and services. It is needed to counter tobacco control underfunding and can be highly cost effective compared to other health interventions. This is supported by the World Health Organization recommendation to earmark taxes to promote tobacco control.[35] Stop smoking services must focus on those groups with high smoking prevalence (e.g., Māori, mental health consumers) to help offset the hardship experienced by these groups when price increases. 20.6. In New Zealand, 59 percent of smokers support a rise in tobacco tax if used for quit support, especially for those most deprived and financially stressed.[36]

[33] Brown, T., Platt, S., & Amos, A. (2014). Equity impact of population-level interventions and policies to reduce smoking in adults: a systematic review. *Drug Alcohol Dependancy*. 138:7-16.

[34] Brown, T., Platt, S., & Amos, A. (2014). : Equity impact of interventions and policies to reduce smoking in youth: systematic review. *Tobacco Control.* 23(e2):e98-105.

[35] Ministry of Health. 2002. Future Funding of Health and Disability Services in New Zealand: Report to the Director-General of Health. Wellington: Ministry of Health.

[36] Wilson N1, Weerasekera D, Hoek J, Li J, Edwards R. (2010). Increased smoker recognition of a national quitline number following introduction of improved pack warnings: ITC Project New Zealand. Nicotine Tobacco Research. 12:S72-7.

		20.7. The case for earmarking tobacco (and alcohol) taxes for health programmes (particularly tobacco control) is supported by a study of the experience of eight countries. All saw benefits in having a predictable, secure source of funds for long-term interventions. The fact that the fund in each country represents only a small fraction of the total health budget and efficient use of the funds and clear reporting and accountability mechanisms made it easy to address traditional arguments against earmarking taxes.[37] 20.8. The current annual increases are unlikely to be strong enough to achieve Smokefree 2025 goals.[38] A series of regular tax increases, preferably at a higher level than the recent series of 10 percent annual increases, should be implemented up to 2025, accompanied by other enhanced tobacco control policies such as funding for prevention and quit programmes (ideally all funded with tobacco tax revenue). Although the data research is inconclusive on which approach is best in the long run, there may be advantages to switching to less frequent but larger increases to reach 2025 goals. Advantages include stimulating more attention by media and smokers which may stimulate more interest in quitting and being harder for the tobacco industry to smooth out price increases.
Chapter 4: Taxes and Behaviour	21. To address the epidemics of obesity and diabetes,	21.1. The consumption of sugar is a leading contributing factor for non-communicable diseases such as obesity, type-2 diabetes and tooth decay. In New Zealand,

[37] World Health Organisation. (2016). *Earmarked tobacco taxes: lessons learnt from nine countries*. Geneva: WHO.
[38]Cobiac, L.J., et al. (2015). Modelling the implications of regular increases in tobacco taxation in the tobacco endgame. *Tobacco Control 2015*. 24(e2):e154-160.

	there are a growing number of countries and regions that are adopting taxes on sugary drinks.	sugar sweetened beverages are a leading source of sugar in the diet of youth and the second leading contributor for adults.[39] A reduction in sugar-sweetened beverage intake will reduce the likelihood of developing these health conditions. 21.2. New Zealand currently has the third highest prevalence of obesity of all OECD countries, and our rates are rising.[40] Over a quarter of adults in Canterbury are obese.[41] This obesity epidemic imposes a heavy cost burden on the government, particularly via demand on health services. Such demand may be preventable should effective measures to reduce rates of obesity be implemented. 21.3. The World Health Organisation recommends tax on sugar-sweetened beverages as an effective fiscal measure to reduce risk of obesity, particularly in low-income consumers and children who are most influenced by price.[42] A tax on sugary drinks is a simple action that as part of a comprehensive suite of initiatives is likely to reduce the burden of dental caries, unhealthy weight gain, and type 2 diabetes. A sugary drinks tax is a straightforward action that would demonstrate serious effort to address childhood obesity and raise the public's awareness of the harms sugary drinks pose to health. 21.4. Taxes affect consumer prices and can be used to make unhealthy beverage options more expensive relative to healthy beverage options, thereby

[39] Health Promotion Agency. (2014). Consumption of sugary drinks among children and their parents or caregivers. *In Fact*. 3(2).
[40] Ministry of Health. (2017). Obesity. Retrieved from: www.health.govt.nz/our-work/diseases-and-conditions/obesity
[41] Ministry for Social Development. (2016). The Social Report 2016 – Te pūrongo oranga tangata (Obesity). Retrieved from: http://socialreport.msd.govt.nz/health/obesity.html#regional-differences
[42] World Health Organisation. (2016). *Report of the commission on ending childhood obesity*. WHO: Geneva

		incentivising healthier consumptive behaviour.[43] The Commission on Ending Childhood Obesity recommends the taxation of sugar-sweetened beverages for this reason noting that low-income consumers and their children in particular would be encouraged to make healthier choices whilst providing an indirect educational signal to the whole population[44]. Many studies have found that groups most at risk from obesity have greater price sensitivity.[45] 21.5. Several countries have introduced taxes on SSBs and there is emerging evidence to support their effectiveness. France implemented an excise tax on all soft drinks in 2011, Mexico introduced a 10 per cent tax on SSBs in 2014 and the United Kingdom have announced a tax on SSBs will be introduced from 2018. A recent study of the tax in Mexico showed that the tax on SSBs was associated with reductions in purchases of taxed beverages and increases in purchases of untaxed beverages. 21.6. The tax on sugar-sweetened beverages was introduced in Mexico in January 2014 increasing their price by around 10%. Evaluation of the tax on purchases found that by December 2014, purchases of taxed drinks had declined by 12

[43] Cornelsen L, Carreido A. (2015). *Health-related taxes on food and beverages*. Food Research Collaboration Policy Brief. http://foodresearch.org.uk/health-related-taxes-on-food-and-beverages/

[44] World Health Organisation. (2016). *Report of the commission on ending childhood obesity*. Geneva: World Health Organisation http://www.who.int/end-childhood-obesity/final-report/en/

[45] Gardiner, A. (2017). *Implications of a sugar tax in New Zealand: Incidence and effectiveness*. Wellington: Treasury. https://treasury.govt.nz/publications/wp/implications-sugar-tax-new-zealand-incidence-and-effectiveness-html

		percent overall with a higher reduction (17%) amongst households of lower socioeconomic status[46]. 21.7. As well as delivering price signals to consumers, a tax on sugar sweetened beverages may also have an impact on sugar consumption by encouraging product reformulation to reduce sugar levels. The "soft drink industry levy" which in being introduced in the United Kingdom (UK) appears to have resulted in a reported 10 percent reduction in the average sugar content of energy drinks in the UK – prior to the levy even coming into force.[47] 21.8. In relation to the appropriate tax rate, the CDHB notes recent research which has shown that reduction in consumption of sugar-sweetened beverages is proportionate to the amount of tax applied.[48] In New Zealand, recent research estimates that a 20 percent tax on fizzy (carbonated) drinks would prevent or postpone 67 deaths from cardiovascular disease, diabetes and diet-related cancers in New Zealand each year.[49] A tax would also reduce the prevalence of non-communicable diseases, such as obesity and diabetes.

[46] Colchero MA, Popkin BM, Rivera JA, Wen Ng S. (2016). Beverage purchases from stores in Mexico under the excise tax on sugar sweetened beverages: observational study. *British Medical Journal*. 352:h6704.

[47] Hashem, K.M., He, F.J., & MacGregor, G.A. (2017). Cross-sectional surveys of the amount of sugar, energy and caffeine in sugar-sweetened drinks marketed and consumed as energy drinks in the UK between 2015 and 2017: monitoring reformulation progress. *BMJ Open*. 7(12):e018136.

[48] Thow AM, Downs S, Jan S. (2014). A systematic review of the effectiveness of food taxes and subsidies to improve diets: Understanding the recent evidence. *Nutr Rev*. 72(9):551–65

[49] Ni Mhurchu C, Eyles H, Genc M, Blakely T. (2014). Twenty percent tax on fizzy drinks could save lives and generate millions in revenue for health programmes in New Zealand. *New Zealand Medical Journal*. 127(1389):92-95.

		21.9. While reports have highlighted the risk of consumers substituting unhealthy but non-taxed products as substitutes, overall, we believe that even a small shift in the right direction has positive health implications at a population level. 21.10. Health care costs in New Zealand attributable to overweight and obesity have been estimated to be $624 million.[50] Along with reducing related health care costs, a 20% tax on sugar-sweetened fizzy drinks could generate about $30 million revenue per year (factoring in reductions in consumption due to tax).[51] If other non-carbonated drinks high in sugar were included, such as sports drinks and cordials, then the revenue generated would increase. Revenue from such a tax could be used to support health promotion programmes to improve population health.
Chapter 7: Environmental taxation	22. The CDHB recognises the need to efficiently reduce greenhouse gases, thought such tools as the introduction of a carbon tax.	22.1. Climate, health and equity are inseparable[52]. Globally climate change is a critical public health issue. Climate change is affecting New Zealand and the health of New Zealanders as many factors that contribute to our health and well-being are threatened by climate change. Its direct effects result from rising temperatures and changes in the frequency and strength of storms, floods, droughts, and heatwaves—with physical and mental health consequences. Climate change acts as a threat multiplier, compounding many of the issues communities already

[50] Lal, A., Moodie, M., Ashton, T., Siahpush, M., and Swinburn, B. (2012). Health care and lost productivity costs of overweight and obesity in New Zealand. *Australian and New Zealand Journal of Public Health*. 36:550-6.
[51] Ni Mhurchu (2014)
[52] New Zealand College of Public Health Medicine.(2013). Policy Statement on Climate Change. (https://www.nzcphm.org.nz/media/67575/2013_11_6_climate_change_substantive_policy__final-corrected_.pdf)

		face and strengthening the correlation between multiple health risks, making them more likely to occur simultaneously. Indeed, climate change is not a single-system issue but instead often compounds existing pressures on housing, food and water security, poverty, and many determinants of good health.[53] Children, the elderly, people with disabilities and chronic disease, and low-income groups are particularly vulnerable. Existing health inequalities, having an economic base invested in primary industries, housing and economic inequalities and a greater likelihood of having low-income housing in areas vulnerable to flooding and sea level rise, all make climate change a particular risk for Māori. [54] 22.2. There is considerable concern to reduce energy consumption and promote the health of the environment across the New Zealand health sector. The CDHB is working to reduce our impact on the environment, having reduced our carbon emissions by 20 percent over the past three years and become Certified Emmission Measurement and Reduction Scheme (CEMARS)-certified. 22.3. Accelerated action is needed to further tackle climate change. Well-designed policies to reduce global greenhouse gas emissions will not only limit climate change and reduce the associated risks to human health but have the potential to improve population health and reduce health inequalities. There are many health co-benefits to environmental taxation, such as climate change stability, emission reductions, reduced air pollution and related mortality/morbidity.

[53] Watts, N., et al. (2018). The Lancet Countdown on health and climate change: from 25 years of inaction to a global transformation for public health. *The Lancet*. 391(10120): 581-630.

[54] Royal Society Te Apārangi. (2017). *Human Health Impacts of Climate Change for New Zealand*. Wellington: Royal Society Te Apārangi. https://royalsociety.org.nz/assets/documents/Report-Human-Health-Impacts-of-Climate-Change-for-New-Zealand-Oct-2017.pdf

		22.4. The only effective way for the world to reduce the impact of the climate crisis is to sharply drop emissions of greenhouse gases like CO_2. An effective way to do that is to make those emissions costly such as through a well-designed carbon taxation scheme—or a combination of carbon taxation and emissions trading scheme (ETS). 22.5. Carbon taxation creates an opportunity to improve environmental outcomes and diversify the tax base. When compared to other price-based mechanisms, carbon taxes have the broadest range, applying to all fossil fuels and all sectors, therefore supporting almost all forms of energy conservation and providing, potentially, a wide range of additional benefits.[55] Because of this broader scope, they can more easily reach individual consumers as well as industries. This can result in a greater range of wellbeing co-benefits. In addition, it may be easier to moderate inequitable effects of carbon taxes: revenue flows directly to central government and may be utilised to reduce adverse impacts on vulnerable groups such as low-income households.[56] 22.6. New Zealand has among the lowest effective carbon prices in the OECD. This strengthens the case for increasing our carbon price, and for considering a broader range of pricing instruments than just the ETS. Ideally an environmental tax should reflect the social cost of carbon, such as the health damage of a tonne

[55] Litman T. (2008). *Carbon Taxes. "Tax What You Burn, Not What You Earn"*. Melbourne: Victoria Transport Policy Institute.
[56] Dhar, D., Macmillan, A., Lindsay, G., Woodward, A. (2009). Carbon pricing in New Zealand: implications for public health. *New Zealand Medical Journal.* 122(1290):105-115.

		of carbon emitted which the OECD argues can be "very conservatively" set at EUR 30 (NZ$45) per tonne of emissions.[57] 22.7. A carbon pricing scheme that reflects the key principles of broad coverage, predictable implementation, revenue neutrality, and protection of low-income households could create a favourable environment for addressing our climate change obligations while improving wellbeing and equity. Careful design and revenue recycling, such as for better public transport, housing insulation in low-income areas or retraining programmes for workers in carbon-intensive industries, can ensure a progressive effect and has the potential to reduce wellbeing inequalities by improving the affordability and convenience of fossil fuel alternatives.[58]

[57] OECD. (2016). *Effective Carbon Rates: Pricing CO2 through Taxes and Emissions Trading Systems*. OECD Publishing, Paris. Accessible at: https://goo.gl/Sy7NMZ
[58] Dhar, D., Macmillan, A., Lindsay, G., Woodward, A. (2009). Carbon pricing in New Zealand: implications for public health. *New Zealand Medical Journal.* 122(1290):105-115.