

EATING FOR HEALTH AND THE ENVIRONMENT: AUSTRALIAN REGULATORY RESPONSES FOR DIETARY CHANGE

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The Australian food system significantly contributes to a range of key environmental issues, including harmful greenhouse gas emissions, air pollution, soil desertification, biodiversity loss and water scarcity. At the same time, the Australian food system is a key cause of public health nutrition issues that stem from the co-existence of over- and under-consumption of dietary energy and nutrients. Within these challenges lie synergies and opportunities, because a diet that has a lower environmental impact generally aligns with good nutrition. Australian State and Federal initiatives to influence food consumption patterns focus on individual body weight and 'soft law' interventions. These regulatory approaches, by focusing on select symptoms of food system failures, are fragmented, reductionist and inefficient. In order to illustrate this point, this article will explore Australian regulatory responses to diet-related illnesses. The analysis will support the argument that only when regulatory responses to diets become embedded within reform of the current food system, will substantial improvements to human and planetary health be achieved.

I INTRODUCTION

The environment, human health, agriculture and food are intimately connected. In reflection of this, research addressing food security over the last decade has shifted away from a singular focus on agriculture, towards adoption of a food systems approach.¹ The food systems approach encompasses the activities that take place from production to consumption and considers the impacts of these activities on sustainability and food security.² Both in Australia and at the international level, the need to incorporate environmental considerations into food choices is

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¹ See generally John Ingram, Polly Ericksen and Diana Liverman, *Food Security and Global Environmental Change* (Routledge, 2010).

² Only a brief description of food systems is sufficient for the purposes of this article. As a result, the description of the food system approach provided here does not incorporate the feedback loops or external drivers that are present in a food system. For more information on food systems see, John Ingram, 'A Food Systems Approach to Researching Food Security and Its Interactions with Global Environmental Change' (2011) 3 *Food Security* 417; Clare Hinrichs, 'Conceptualizing and Creating Sustainable Food Systems: How Interdisciplinarity Can Help' in Alison Blay-Palmer (ed), *Imagining Sustainable Food Systems: Theory and Practice* (Ashgate Publishing, 2010) 17; Diana Liverman, Polly Ericksen and John Ingram (eds), *Governing Food Systems in the Context of Global Environmental Change* (Earthscan Publications, 2010); Polly J Ericksen, John SI Ingram and Diana M Liverman, 'Food Security and Global Environmental Change: Emerging Challenges' (2009) 12 *Environmental Science & Policy* 373.

recognised as critical for progressing public health, food security and environmental sustainability.³

This article will explore emerging understandings of sustainable diets at international governance levels and examine these meanings within the Australian context. Following this, regulatory responses to food consumption patterns will be identified, categorised and evaluated against the goal of sustainable diets. This discussion will illustrate how Australian regulators have sought in a limited, overly-simplistic way to influence food consumption patterns. Furthermore, it will highlight the reluctance of Australian governments to regulate the food industry, and the various tactics used by industry groups to influence the existence, form and effectiveness of regulatory responses. Various approaches to regulatory reform that Australia could adopt to move towards sustainable diets are identified.

II DEFINING SUSTAINABLE DIETS

Sustainable diets are healthy eating patterns that align with the needs of society, the environment and the economy for current and future generations.⁴ While no legal definition of sustainable diets exists in Australia, there is a large body of scholarly work across various disciplines that explore sustainable diets.⁵ Consequently, international bodies have started recognising the growing body of research and initiatives related to sustainable diets. In 2010, the Food and Agriculture Organisation of the United Nations ('FAO') convened an International Scientific Symposium entitled 'Biodiversity and Sustainable Diets'. At this Symposium, the accepted definition of a sustainable diet was the following:

[t]hose diets with low environmental impacts which contribute to food and nutrition security and to healthy life for present and future generations. Sustainable diets are protective and respectful of biodiversity and ecosystems, culturally acceptable, accessible, economically fair and affordable; nutritionally adequate, safe and healthy; while optimizing natural and human resources.⁶

³ Sharon Friel, Laurel J Barosh and Mark Lawrence, 'Towards Healthy and Sustainable Food Consumption: An Australian Case Study' (2014) 17 *Public Health Nutrition* 1156, 1156.

⁴ This explanation is based on the definition of sustainable development provided by World Commission Environment and Development, *Our Common Future, Annexe 1: Summary of Proposed Legal Principles for Environment Protection and Sustainable Development Adopted by the WCED Experts Group on Environmental Law*, Transmitted to the General Assembly as an Annex to document A/42/427- Development and International Co-operation: Environment (4 August 1987) ('Brundtland Report') ch 2, para 1. This report defined sustainable development as '...development that meets the needs of the present generation without not compromising the ability of future generations to meet their needs'.

⁵ See eg, Judith Buttriss and Helen Riley, 'Sustainable Diets: Harnessing the Nutrition Agenda' (2013) 140 *Food Chemistry* 402; Ferne Edwards et al, 'Climate Change Adaptation at the Intersection of Food and Health' (2011) 23 *Asia-Pacific Journal of Public Health* 91S; Tim Lang, 'Reshaping the Food System for Ecological Public Health' (2009) 4 *Journal of Hunger & Environmental Nutrition* 315; Markus Vinnari and Petri Tapio, 'Sustainability of Diets: From Concepts to Governance' (2012) 74 *Ecological Economics* 46; Elizabeth Lipski, 'Traditional Non-Western Diets' (2010) 25 *Nutrition in Clinical Practice* 585; Arto O Salonen and Tuula T Helne, 'Vegetarian Diets: A Way Towards a Sustainable Society' (2012) 5 *Journal of Sustainable Development* 10.

⁶ 'Sustainable Diets and Biodiversity: Directions and Solutions for Policy, Research and Action' (FAO: Nutrition and Consumer Protection Division, 3 November 2010) 7.

FAO's principal officer of Nutrition and Consumer Protection stated that this definition '[r]eaffirmed the notion that the health of humans cannot be isolated from the health of ecosystems'.⁷ The definition is now the most commonly cited in the literature and in various government policies on sustainable diets. In line with the developments at the international level, various European Union member States including the Netherlands, Sweden, Germany and France have created guidelines for food choices that integrate health and environmental sustainability.⁸

Besides being a standalone concept, sustainable diets are connected to food security. Food security exists when 'all people, at all times, have physical and economic access to sufficient, safe and nutritious food to meet their dietary needs and food preferences for an active and healthy life'.⁹ It is commonly understood as having four limbs: availability, accessibility, adequacy and stability. The adequacy limb is the most relevant for sustainable diets as it concerns '...the appropriate use of food, based on knowledge of basic nutrition to maintain sufficient energy and nutrient intake. Utilisation also includes knowledge of food preparation, cooking and storage, and the ability to make appropriate food choices'.¹⁰ Food utilisation encompasses food safety and waste, as well as malnutrition (including malnutrition associated with obesity) and micronutrient deficiencies.¹¹ As a result, 'adequacy' is considered to have three sub-elements, which are: the nutritional value of food; the social value in terms of food as part of social and cultural gatherings; and food safety.

The human right to food is more comprehensive than food security and incorporates the obligation of the State to respect, protect and fulfil people's entitlements to food.¹² In addition, transnational food corporations have responsibilities to 'respect human rights' including the right to adequate food and 'should address adverse human rights impacts with which they are involved'.¹³ The

⁷ Ibid.

⁸ German Council for Sustainable Development, *The Sustainable Shopping Basket* (2011) <http://www.nachhaltigkeitsrat.de/uploads/media/Brochure_Sustainable_Shopping_Basket_01.pdf>; Health Council of the Netherlands, *Guidelines for A Healthy Diet: The Ecological Perspective* (2011) <<http://www.gezondheidsraad.nl/en/publications/healthy-nutrition/guidelines-healthy-diet-ecological-perspective>>; Swedish National Food Administration, *The National Food Administration's Environmentally Effective Food Choices*, proposal notified to the EU in accordance with Directive 98/34/EC of the European Parliament and of the Council (2009) <http://www.slv.se/upload/dokument/miljo/environmentally_effective_food_choices_proposal_eu_2009.pdf>. The Swedish guidelines have since been withdrawn because the EU Commission found that the dietary recommendations, which included the suggestion that people eat more locally produced food, would contravene the EU's trade agreements. See, US Department of Agriculture, 'Sweden Withdraws Proposal on Climate Friendly Food Choices', Global Agricultural Information Network Report SW1007 (12 February 2010) <http://gain.fas.usda.gov/Recent%20GAIN%20Publications/Sweden%20Withdraws%20Proposal%20on%20Climate%20Effective%20Food%20Choices_Stockholm_Sweden_12-1-2010.pdf>.

⁹ *Rome Declaration on World Food Security and World Food Summit Plan of Action*, Food and Agriculture Organisation of the United Nations (13-17 November 1996) para 1.

¹⁰ 'The State of Food Insecurity in the World: The Multiple Dimensions of Food Security' (Food and Agriculture Organisation; The International Fund for Agricultural Development; World Food Programme, 2013) 21.

¹¹ Ibid.

¹² *International Covenant on Economic, Social and Cultural Rights*, opened for signature 16 December 1966, 993 UNTS 3 (entered into force 3 January 1976) art 11.

¹³ John Ruggie, Guiding Principles on Business and Human Rights: Implementing the United Nations 'Protect, Respect and Remedy' Framework, UN Doc HR/Pub/11/04 (2011) art 11; Endorsed by the United Nations Human Rights Council, Human Rights And Transnational Corporations And Other Business Enterprises, 17th sess, Agenda Item 3, A/HRC/RES/17/4 (6 July 2011).

former Special Rapporteur on the Right to Food, Olivier De Schutter, argues that the right to food means more than ‘a right not to starve’¹⁴ and that ‘States should discharge their duty to fulfil the right to adequate food by taking immediate measures to progressively make a transition to more sustainable diets’.¹⁵ In this context, De Schutter’s work explores the interdependencies between biologically diverse, sustainable farming practices and dietary diversity.¹⁶

Consistent with this interpretation of the right to food, the Voluntary Guidelines to Support the Progressive Realization of the Right to Adequate Food in the Context of National Food Security (*‘Right to Food Guidelines’*) refer throughout to sustainable diets.¹⁷ In various ways, the *Right to Food Guidelines* advise States to take measures that are consistent with facilitating sustainable diets. For instance, the guidelines provide that States should be taking measures to strengthen dietary diversity and healthy eating habits in order to fulfill the right to food.¹⁸ Additionally, the *Right to Food Guidelines* encourages the prevention of unbalanced diets that may lead to malnutrition, obesity and degenerative diseases,¹⁹ and requires states create initiatives that increase the production and consumption of healthy, nutritious, diverse foods.²⁰ Consequently, there is emerging guidance relating to a state’s human rights obligations to facilitate not only healthy diets but also dietary diversity, which require farming practices that foster safety and biodiversity.

III SUSTAINABILITY OF THE AVERAGE AUSTRALIAN DIET

The sustainability of the average Australian diet can be broadly established by examining, amongst other factors, dietary trends, food waste levels and food safety issues.²¹ Globally, Australian meat consumption is second only to the United States, as the average Australian consumes 116 kilograms of meat each year, which is around three times as much as recommended by government guidelines.²² An extensive body of work shows that meat-based diets require far more energy, land

¹⁴ Olivier De Schutter, Report of the Special Rapporteur on the Right to Food: The Right to an Adequate Diet: The Agriculture-Food-Health Nexus’, UN Doc A/HRC/19/59 (26 December 2011) para 1.

¹⁵ *Ibid* para 38.

¹⁶ Olivier De Schutter, *Report of the Special Rapporteur on the Right to Food: The Transformative Potential of the Right to Food*, UN Doc A/HRC/25/57 (24 January December 2014) 9, para 17. In relation to sustainable farming practices, also termed agroecology, De Schutter explained ‘There are strong environmental arguments in favour of agroecology. But agroecology also provides other social and health benefits. Diverse farming systems contribute to more diverse diets for the communities that produce their own food, thus improving nutrition’.

¹⁷ Food and Agriculture Organization of the United Nations, Voluntary Guidelines to Support the Progressive Realization of the Right to Adequate Food in the Context of National Food Security, 127th Session of the FAO Council (November 2004).

¹⁸ *Ibid* para 10.1.

¹⁹ *Ibid* para 10.2.

²⁰ *Ibid* para 10.3.

²¹ These are some of the common factors across work from academic and domestic and international institutions. See eg, Shivani Reddy et al, United Kingdom Sustainable Development Commission, *Setting the Table: Advice to Government on Priority Elements of Sustainable Diets* (2009); Tara Garnett, ‘What Is a Sustainable Healthy Diet?’ (Discussion Paper, Food Climate Research Network, April 2014). See also, Salonen and Helne, above n 5; Barbara Burlingame and Sandro Dernini, ‘Sustainable Diets: The Mediterranean Diet as an Example’ (2011) 14 *Public Health Nutrition* 2285; Friel, Barosh and Lawrence, above n 3.

²² Current Worldwide Annual Meat Consumption per Capita (2012) ChartsBin <<http://chartsbin.com/view/12730>> based on information from the FAO 2013, Current Worldwide Annual Meat Consumption per capita, Livestock and

and water resources than a plant-based diet.²³ In turn, the over-consumption of meat is a causal factor of climate change and a range of health problems.²⁴

Australians are comparatively high consumers of manufactured or processed foods.²⁵ The value of Australian food imports in 2011-12 was \$11.3 billion, which is 8.6 per cent higher than in 2010-2011.²⁶ These imports are largely: soft drink, oil and fat, cordial, syrup, bakery products and confectionary.²⁷ Generally, ultra-processed food, like confectionary, requires more resources than food that is unprocessed or minimally processed, requires post-harvest chemicals and results in a range of waste by-products.²⁸ In fact, food processing companies are one of the main polluters of those industries that create products for end consumers.²⁹

The industrial agriculture practice of specialising in crop or animal breeds for mass production has resulted in the degradation of biodiversity and the simplification of human diets.³⁰ It is well-established that diet-related diseases are associated with an inadequate intake of vegetables and fruits, and the over-consumption of energy-dense, nutrient-poor foods.³¹ Accordingly, Australian

Fish Primary Equivalent, Food and Agriculture Organization of the United Nations <<http://faostat.fao.org/site/610/DesktopDefault.aspx?PageID=610#ancor>>.

²³ See eg, David Pimentel and Marcia Pimentel, 'Sustainability of Meat-Based and Plant-Based Diets and the Environment' (2003) 78 *The American Journal of Clinical Nutrition* 660S.

²⁴ See in particular, Henning Steinfeld et al, 'Livestock's Long Shadow: Environmental Issues and Options' (The Livestock, Environment and Development (LEAD) Initiative, Food and Agriculture Organisation, 2006) <<ftp://ftp.fao.org/docrep/fao/010/a0701e/a0701e00.pdf>>.

²⁵ Paola Espinel and Christine Innes-Hughes, 'Apparent Consumption of Selected Foods and Household Food Expenditure' (Monitoring Update, Physical Activity Nutrition Obesity Research Group, September 2010) <http://sydney.edu.au/medicine/public-health/prevention-research/news/reports/Monit_update_apparentconsumption_161210.pdf>.

²⁶ Commonwealth, Department of Agriculture, Fisheries and Forestry, *Australian Food Statistics 2011-12* (2013) <<http://www.agriculture.gov.au/SiteCollectionDocuments/ag-food/publications/food-stats/daff-foodstats-2011-12.pdf>>.

²⁷ *Ibid.*

²⁸ See generally, Berit Mattsson and Ulf Sonesson, *Environmentally-Friendly Food Processing* (Woodhead Publishing, 2003); GT Kroyer, 'Impact of Food Processing on the Environment—an Overview' (1995) 28 *LWT - Food Science and Technology* 547. For a particular case study, see David Pimentel et al, 'Reducing Energy Inputs in the US Food System' (2008) 36 *Human Ecology* 459.

²⁹ Tran Thi My Dieu, 'Food Processing and Food Waste' in Cheryl J Baldwin (ed), *Sustainability in the Food Industry* (John Wiley & Sons, 2012) 23, 25 citing P Fryer, *Clean Technology in the Food Industry, in Clean Technology and the Environment* (Blackie Academic & Professional: London, 1995). See also Jos Frijns, Phung Thuy Phuong and Arthur PJ Mol, 'Ecological Modernisation Theory and Industrialising Economies: The Case of Vietnam' (2000) 9 *Environmental Politics* 257.

³⁰ Denis Lairon, 'Biodiversity and Sustainable Nutrition with a Food-Based Approach' (Food and Agriculture Organisation of the United Nations, 2009) 31; Emile A Frison et al, 'Agricultural Biodiversity, Nutrition, and Health: Making a Difference to Hunger and Nutrition in the Developing World' (2006) 27 *Food & Nutrition Bulletin* 167; Álvaro Toledo and Barbara Burlingame, 'Biodiversity and Nutrition: A Common Path Toward Global Food Security and Sustainable Development' (2006) 19 *Journal of Food Composition and Analysis* 477.

³¹ Even the Australian Dietary Guidelines recognise this, see eg, National Health and Medical Research Council, *Australian Dietary Guidelines: Providing the Scientific Evidence for Healthier Diets in Australia* (2013) 1, where it is explained that 'Most of the burden of disease due to poor nutrition in Australia is associated with excess intake of energy-dense and relatively nutrient-poor foods high in energy, saturated fat, added or refined sugars or salt, and/or inadequate intake of nutrient-dense foods, including vegetables, fruit and wholegrain cereals.' See also, World Health

people who are overweight and obese are likely to develop seemingly paradoxical nutrient deficiencies.³² Data from Australian Nutrition Surveys reveal that only 6 per cent of Australian adults meet the recommended amount of fruit and vegetable serves.³³

Alongside being plant-based, not ultra-processed and diverse, a sustainable diet is safe and secure.³⁴ While Australia has a comparatively safe food supply, food-borne illnesses have increased by 44 per cent in the last two years.³⁵ In relation to food security, Australia does have adequate quantities of high-quality food when supplied by both domestic production and imports.³⁶ The *National Food Plan: White Article* expresses concern over future food security in Australia, but remains confident that Australia will produce and import adequate food.³⁷ However, a growing body of work asserts that Australia, like other nations, has increasing levels of food insecurity caused by, for example, environmental degradation, food price increases and climate change driven disruptions.³⁸ As discussed in Part II of this article, different forms of malnutrition including obesity are indicators of food insecurity because nutritional quality is one aspect of food security (under the food utilisation limb). With this in mind, an indicator of food insecurity in Australia is the fact that 70 per cent of Australian males and 56 per cent of Australian females were either overweight or obese in years 2011-12.³⁹ This suggests, though is far from conclusive, that a

Organization, 'Diet, Nutrition and the Prevention of Chronic Diseases', WHO Technical Report Series 916 (2003) s 5.3.

³² Tania P Markovic and Sharon J Natoli, 'Paradoxical Nutritional Deficiency in Overweight and Obesity: The Importance of Nutrient Density' (2009) 190 *Medical Journal of Australia* 149 <<https://www.mja.com.au/journal/2009/190/3/paradoxical-nutritional-deficiency-overweight-and-obesity-importance-nutrient>>.

³³ Commonwealth, Australian Bureau of Statistics, *In Pursuit of 2&5: Fruit and Vegetable Consumption in Australia* (1301.0 Year Book Australia, 2012) <<http://www.abs.gov.au/ausstats/abs@.nsf/Lookup/1301.0Main+Features2362012>>.

³⁴ The FAO definition of a sustainable diet, above n 6, provides that a sustainable diet is 'safe and healthy' and is a diet that contributes to food and nutrition security. Additionally, aspects of a sustainable diet, such as affordability of food, food safety and nutritional quality are dimensions of food security. Food safety, food security and sustainable diets are closely interrelated concepts. Food security is the broadest of these concepts. It could be argued that sustainable diets are a dimension of food security.

³⁵ Mike Stewart, 'Reports of Food Borne Illness Up 44 Percent from Two Years Ago' *Australian Institute of Food Safety* (Brisbane), 3 December 2012 <<http://www.foodsafety.com.au/2012/12/reports-of-food-borne-illness-up-44-from-two-years-ago/>>.

³⁶ Commonwealth, Department of Agriculture, Fisheries and Forestry, *National Food Plan: Green Article* (2012) 284.

³⁷ Commonwealth, Department of Agriculture, Fisheries and Forestry, *National Food Plan: White Article* (2013) 56-59.

³⁸ See eg, Report of the Prime Minister's Science, Engineering and Innovation Council, *Australia and Food Security in a Changing World: Can We Feed Ourselves and Help Feed the World In The Future?* (October 2010); Quentin Farmar-Bowers, Vaughan Higgins and Joanne Millar, *Food Security in Australia: Challenges and Prospects for the Future* (Springer, 1st ed, 2012); Geoffrey Lawrence, Carol Richards and Kristen Lyons, 'Food Security in Australia in an Era of Neoliberalism, Productivism and Climate Change' (2013) 29 *Journal of Rural Studies* 30.

³⁹ Commonwealth, Australian Bureau of Statistics, *Summary of Key Issues, Health: Overweight and Obesity* (2013) <<http://www.abs.gov.au/ausstats/abs@.nsf/Lookup/by%20Subject/4125.0~Jan%202013~Main%20Features~Overweight%20and%20obesity~3330>>.

significant proportion of Australians are experiencing overnutrition, where there is an oversupply of nutrients and energy relative to what is required for healthy bodily functioning.⁴⁰

A large body of work has shown the connections between poverty, obesity, hunger and food insecurity.⁴¹ A recent, critical piece of work involved a mail survey in disadvantaged suburbs of Brisbane.⁴² It found that one in four households were food insecure. In this context, food insecurity was strongly associated with a lack of money to buy food.⁴³ In addition, an emergent area of research has found that Australian people who are food-insecure are more likely to be overweight or obese, as well as underweight, than food-secure Australians.⁴⁴ In line with this, the Australian government has found that obesity is most prevalent in the most disadvantaged communities, First Nations Peoples and people from overseas.⁴⁵ Accordingly, the health impacts of the Australia food system have disproportionately affected disadvantaged sectors in society and the prevalence of food insecurity suggests that diets are unsustainable.

Food waste levels across Australia are concerning. Food waste generates greenhouse gas emissions including methane and carbon, and reflects a loss of natural resources such as water and fossil fuels used to produce the food. Baker et al, in a study for the Australia Institute, found that Australians spend \$5.2 billion a year on food that is not consumed.⁴⁶ Accordingly, more money is spent on food that is wasted than is spent on running the Australian Army every year.⁴⁷ In relation to environmental impacts, the National Waste Report estimates that one-third of Municipal Solid Waste and one-fifth of commercial and industrial waste streams are food waste.⁴⁸ Food waste is clearly a significant issue in Australia, but it also presents a number of opportunities. For instance, food waste can be used to create soil-enhancing compost and various non-governmental organisations have been created to respond to the demand for an efficient distribution of food in

⁴⁰ See eg, Mickey Chopra, Sarah Galbraith and Ian Darnton-Hill, 'A Global Response to a Global Problem: The Epidemic of Overnutrition' (2002) 80 *Bulletin of the World Health Organization* 952.

⁴¹ See eg, Sherry A Tanumihardjo et al, 'Poverty, Obesity, and Malnutrition: An International Perspective Recognizing the Paradox' (2007) 107 *Journal of the American Dietetic Association* 1966.

⁴² Rebecca Ramsey et al, 'Food Insecurity among Adults Residing in Disadvantaged Urban Areas: Potential Health and Dietary Consequences' (2012) 15 *Public Health Nutrition* 227.

⁴³ *Ibid.*

⁴⁴ See eg, Wendy Foley et al, 'An Ecological Analysis of Factors Associated with Food Insecurity in South Australia, 2002–7' (2010) 13 *Public Health Nutrition* 215; Rebecca Ramsey and Danielle Gallegos, 'Associations Exist between Food Insecurity, Poor Diet, Chronic Illness and Obesity among an Australian Population' (16th International Congress of Dietetics, Sydney Convention & Exhibition Centre, Sydney, NSW, September 2012) <<http://eprints.qut.edu.au/55250/>>; Jane Dixon et al, 'The Health Equity Dimensions of Urban Food Systems' (2007) 84 *Journal of Urban Health* 118.

⁴⁵ Commonwealth, Australian Bureau of Statistics, *Overweight and Obesity in Adults, Australia 2004-2005, Socioeconomic Characteristics* (2008) <<http://www.abs.gov.au/ausstats/abs@.nsf/Latestproducts/4719.0Main%20Features32004-05?opendocument&tabname=Summary&prodno=4719.0&issue=2004-05&num=&view=>>.

⁴⁶ David Baker, Josh Fear and Richard Denniss, 'What a Waste: An Analysis of Household Expenditure on Food' (Policy Brief No.6, The Australia Institute, November 2009) 25.

⁴⁷ *Ibid.* 5.

⁴⁸ Leah Mason et al, 'National Food Waste Assessment: Final Report' (Report prepared by the Institute for Sustainable Future, UTS for the Department of Sustainability, Environment, Water, Population and Communities, June 2011) 3 citing the Department of the Environment, Water, Heritage and the Arts, National Waste Report (2010).

Australia.⁴⁹ In summary then, the evidence suggests that the average Australian diet is unsustainable across a range of factors. However, Australia, unlike perhaps some middle income and developing countries with similar diet-related issues, has substantial opportunities to improve given the widespread availability and access to high-quality food in Australia.

IV AUSTRALIAN REGULATORY RESPONSES

As the following Part will illustrate, the responses of Australian regulators to peoples' food choices generally fall into one or more of the following three groups: guidelines, education and research or private mechanisms of regulation ('co-regulation' and 'self-regulation'). The responses in all categories demonstrate that Australian regulators prefer to focus on overweight and obesity levels as opposed to the broader food consumption issues. The current regulatory tool reflects a 'soft law' approach that emphasises personal weight management and a voluntary and collaborative approach to regulating the food industry. It positions the food industry as part of the solution along with an emphasis on obesity prevention through physical activity and personal and corporate responsibility. Such an approach generally aligns with the regulatory responses in the United Kingdom, Canada and the United States.⁵⁰

A *Australian Dietary Guidelines*

The 2003 Australian dietary guidelines included an appendix that raised future dietary guidelines incorporating a greater emphasis on sustainability, as '...the problems caused by non-sustainable systems become more starkly obvious'.⁵¹ Yet, it was not until 2011 that the National Health and Medical Research Council ('NHMRC'), which is responsible for Australian dietary guidelines, considered incorporating environmental sustainability.⁵² The released draft was an appendix to the main guidelines, entitled 'Australian Dietary Guidelines through an Environmental Lens'. This draft acknowledged that 'The concept of sustainable dietary patterns is not new but it is a complex issue and there are many gaps in our understanding of what this may include within the Australian context'.⁵³ However, the drafters found that evidence concerning the bi-directional relationship between food and environment had increased since 2003. Additionally, the public consultation in

⁴⁹ See eg, OzHarvest an organisation that collects excess food from businesses and delivers it to over 500 charities that provide food for disadvantaged sectors of society (<http://www.ozharvest.org/what-we-do/>). See also, Jae-Jung Lee et al, 'Effect of Food Waste Compost on Microbial Population, Soil Enzyme Activity and Lettuce Growth' (2004) 93 *Bioresource Technology* 21 where the authors found that lettuce grown with composted food waste grew larger than the lettuce grown with commercial fertiliser.

⁵⁰ See eg, HD McCarthy et al, 'Body Fat Reference Curves for Children' (2006) 30 *International Journal of Obesity* 598, where the situation in the UK is described as follows: 'Under successive governments, UK policies on diet have relied heavily on more and better education for consumers to make healthy choices, based on the notion that consumer behaviour will shape markets.' For the US approach, see eg, Kelly D Brownell et al, 'Personal Responsibility and Obesity: A Constructive Approach to a Controversial Issue' (2010) 29 *Health Affairs* 379.

⁵¹ National Health and Medical Research Council, *Australian Dietary Guidelines: Incorporating the Australian Guide to Healthy Eating* (2003) 1.

⁵² National Health and Medical Research Council, 'Public Consultation Draft on an Appendix to the Australian Dietary Guidelines: Australian Dietary Guidelines through an Environmental Lens' (Draft for Public Consultation, December 2011) 1.

⁵³ *Ibid.*

preparation of the Guidelines showed that individuals and organisations are seeking to make food choices that integrate both dietary advice and environmental consequences.⁵⁴

The content of the draft encompassed a brief explanation of sustainable dietary patterns, discussion on the methodologies employed to ascertain environmental impact and practical guidelines and tips. The draft's crux was the identification of the corresponding benefits for environmental sustainability of following the dietary guidelines in the main text.⁵⁵ Subsequently, the draft reflects the emerging understandings of the links between over-consumption, diet-related illnesses and environmental sustainability. Relegating the connection between unsustainable consumption, environmental degradation and diet-related illness to one of the appendices does seem to downplay the synergies between sustainability and diets.⁵⁶ Furthermore, it is perhaps unlikely that the average Australian consumer would read past the guidelines through to the appendices.

Groups that provided submissions in support of the draft appendix included the Dietitians Association of Australia and the Cancer Council.⁵⁷ Recommendations from these groups included that, without a comprehensive environmental labelling system, the general public will have difficulty ascertaining whether a particular food product is sustainable. Farming groups had largely a negative response to the draft. For example, farming representative, Mike Keogh, argued 'Think how comforted Australians would be in knowing their starvation diet of hand-harvested native grass seeds, packaged and processed using only renewable energy and recycled article, is actually solving all the world's problems as they eat'.⁵⁸ The draft appendix was not suggesting a complete diet overhaul in line with environmental sustainability. It was simply explaining the potential co-benefits to the environment of following the dietary guidelines in the main text. For example, the first practical tip is 'Buy and consume foods and drinks that are consistent with the Australian Dietary Guidelines'. Additionally, the submission to the draft appendix from the National Farmers' Federation argued that the evidence regarding sustainable diets was not based on work by qualified agricultural scientists, and instead was sourced from experts in policy, public health, epidemiology and physics. This seems to overlook the significant role and expertise of public health professionals in food systems and sustainable diets.⁵⁹ Such criticisms reflect the difficulties of sustainable diets,

⁵⁴ National Health and Medical Research Council, above n 52, 1.

⁵⁵ Ibid 3-4.

⁵⁶ This point was also raised in Liz Millen, 'Response to Proposed Appendix to NHMRC Dietary Guidelines: Australian Dietary Guidelines through an Environmental Lens' (Sydney Food Fairness Alliance, 1 November 2012) 1 <http://sydneyfoodfairness.org.au/wp-content/uploads/2013/01/sffa_response_proposed_env_appendix_adg_2012.pdf>.

⁵⁷ Kathy Chapman, 'Submission from Cancer Council Australia to the National Health and Medical Research Council on the Draft Appendix to the Australian Dietary Guidelines: Australian Dietary Guidelines through an Environmental Lens' (Cancer Council Australia, 2012) 1 <<http://www.cancercouncil.com.au/wp-content/uploads/2010/11/NHMRC-Dietary-Guidelines-Appendix-Australian-Dietary-Guidelines-through-an-environmental-lens.pdf>>; Annette Byron, 'Submission Regarding Australian Dietary Guidelines through an Environmental Lens' (Dietitians Association of Australia, November 2011) 1 <http://daa.asn.au/wp-content/uploads/2013/01/DAA_NHMRC_Environment-Appendix_final.pdf>.

⁵⁸ Mike Keogh, 'There's a Major Beef over Dietary Guidelines' *The Sydney Morning Herald* (online), 23 February 2011 <<http://www.smh.com.au/federal-politics/society-and-culture/theres-a-major-beef-over-dietary-guidelines-20110222-1b402.html>>.

⁵⁹ National Health and Medical Research Council, above n 52, 2, which states that 'Assessing the relationship between the food system and its impact on the environment requires evidence from agriculture, environmental and economic

as while the drafters did draw on agricultural science research, inter-disciplinary collaboration will need to improve.⁶⁰

In 2013, the final Australian Dietary Guidelines were released. Appendix G, entitled 'Food, Nutrition and Environmental Sustainability', advises Australians to avoid overconsumption and food wastage and to ensure food safety and seasonal food choices.⁶¹ It explains that 'Eating nutrient-dense foods...provides health benefits and reduces the environmental impact associated with foods'.⁶² Subsequently, the Appendix acknowledges that 'Discussing sustainability in the context of consumption habits not only has the potential to improve population health but also supports the objective of achieving a sustainable food supply with improved food security'.⁶³ No practical tips or guidance on sustainable foods or dietary patterns is provided as the practical tips and guidelines were removed from the final version. In the end, sustainable diets are discussed as an aside to the main text and only explored in a vague, aspirational way. Nevertheless, Appendix G is a pioneering step towards incorporating sustainable diets into Australian policy and law. It paves the way for future developments that recognise the significant links between nutrition and the environment.

B *Education, Programmes and Research: Targeting Individuals for Weight Loss*

Since 2008, a flood of initiatives based in food consumption has been taken. Initiatives undertaken by the Federal or State Governments include:

- The 'Measure Up' marketing campaign, targeting groups at risk of becoming overweight or obese;⁶⁴
- The 'Taking Preventative Action Report' after which the Government agreed to establish an Australian National Preventative Health Agency ('ANPHA'), and to extend the reach of marketing campaigns to encourage healthier eating and exercise;⁶⁵
- 'Swap it, Don't Stop It' public campaign to supplement its various other healthy life style campaigns at national and state levels and across various platforms.⁶⁶
- Creation of mandatory food and drink rules for state school tuckshops.⁶⁷

disciplines, as well as research from primary and other industry bodies. Government reports are also useful, especially in the areas with policy implications such as carbon accounting'.

⁶⁰ Ibid.

⁶¹ National Health and Medical Research Council, *Australian Dietary Guidelines* (Appendix G: Food, Nutrition and Environmental Sustainability, 2013).

⁶² Ibid 130.

⁶³ Ibid 134.

⁶⁴ Commonwealth, Department of Health and Aging, Measure up Campaign, <<http://www.measureup.gov.au/internet/abhi/publishing.nsf/Content/campaign-lp>>.

⁶⁵ Commonwealth, Department of Health and Aging, Report of the National Preventative Health Taskforce, *Taking Preventative Action: A Response to Australia - the Healthiest Country by 2020* <<http://www.preventativehealth.org.au/internet/preventativehealth/publishing.nsf/Content/nphs-roadmap-toc>>.

⁶⁶ Commonwealth, Department of Health and Aging, the National Preventative Health Agency, *Swap Tips - Swap it, Don't Stop it* <<http://swapitqld.org.au/>>.

⁶⁷ Queensland, Department of Education and Training, *Smart Choices* <<http://education.qld.gov.au/schools/healthy/food-drink-strategy.html>>. The 'Green' category includes those foods that are encouraged and promoted, and these foods include fruit, vegetables, sandwiches, wraps and water. The

- ‘Shape up’ national campaign that aims to reduce Australians waist measurements by showing people how they can make simple lifestyle changes.⁶⁸
- ‘Healthier.Happier’ interactive public campaign run by the Queensland government promotes making ‘small changes’ so you can ‘look and feel better’. The changes suggested are mostly eating less ultra-processed foods and exercising.⁶⁹

Generally, the approach of Australian regulators has been to focus on overweight and obesity, and promote the uptake of exercise and lower food energy intakes. This approach does not address the causal connection between the unsustainable, industrial means of producing, processing and distributing food with the resulting unsustainable diets.

Conventional wisdom and research generally holds that overweight and obesity results from an energy imbalance, that is, too many calories ingested and not enough used. Recently, this simple, arguably mechanistic, equation has been doubted.⁷⁰ A large body of work has found that caloric restriction has a poor long-term effect as commonly there is a gradual return to baseline weight.⁷¹ A focus on dieting, reflected in the current approach by Australian governments, is strongly associated with overeating,⁷² depression,⁷³ low self-esteem,⁷⁴ poor body image,⁷⁵ weight cycling,⁷⁶ and eating disorders.⁷⁷

‘Amber’ categories are those foods and drinks that should not dominate choices and should be avoided in large serving sizes. These foods are, for example, meat pies, meat hamburgers, muffins and microwaved lasagne. The ‘Red’ category are those foods and drinks that are supplier on no more than two occasions per school term, and includes food such as chocolate, chips, soft drink and lollies.

⁶⁸ Commonwealth, Department of Health and Aging, National Preventative Health Taskforce, *Shape Up Australia*, <<http://shapeup.gov.au/>>.

⁶⁹ Queensland, Department of Health, *Healthier. Happier*. <<http://healthier.qld.gov.au/about/>>.

⁷⁰ Jane E Brody, ‘Counting Calories? Your Weight-Loss Plan May Be Outdated’ *The New York Times* (online), 18 July 2011 <<http://www.nytimes.com/2011/07/19/health/19brody.html>>.

⁷¹ Paul Thomas (ed), *Weighing the Options: Criteria for Evaluating Weight-Management Programs* (Committee to Develop Criteria for Evaluating the Outcomes of Approaches to Prevent and Treat Obesity, Food and Nutrition Board, Institute of Medicine, 1995) <http://www.nap.edu/catalog.php?record_id=4756>; Adam Gilden Tsai and Thomas A Wadden, ‘Systematic Review: An Evaluation of Major Commercial Weight Loss Programs in the United States’ (2005) 142 *Annals of Internal Medicine* 56; Erik Hemmingsson et al, ‘Weight Loss and Dropout During a Commercial Weight-Loss Program Including a Very-Low-Calorie Diet, a Low-Calorie Diet, or Restricted Normal Food: Observational Cohort Study’ (2012) 96 *The American Journal of Clinical Nutrition* 953; RR Wing ‘Treatment Options for Obesity: Do Commercial Weight Loss Programs Have a Role?’ (2010) 304 *JAMA* 1837.

⁷² Audrey J Ruderman, ‘Dietary Restraint: A Theoretical and Empirical Review’ (1986) 99 *Psychological Bulletin* 247.

⁷³ FE Edwards and DB Nagelberg, ‘Personality Characteristics of Restrained/binge Eaters versus Unrestrained/nonbinge Eaters’ (1986) 11 *Addictive Behaviors* 207.

⁷⁴ Sara Ann Muir Feero and Liz Steadman, ‘An Exploration of the Relationship between Self-Esteem, Health Knowledge, Chronic Dieting and Body Shape Accuracy’ (2010) 130 *Perspectives in Public Health* 186; Margherita Ferrante et al, ‘The Role of Weight Status, Gender and Self-Esteem in Following a Diet among Middle-School Children in Sicily (Italy)’ (2010) 10 *BMC Public Health* 241.

⁷⁵ JP Baird, R McIntyre and KR Theim, ‘Effects of Dieting History Saliency on Self-Esteem and Perceived Body Image in College Women.’ (2007) 49 *Appetite* 276.

⁷⁶ Michael R Lowe et al, ‘Restrictive Dieting vs “Undieting”’: Effects on Eating Regulation in Obese Clinic Attenders’ (2001) 26 *Addictive Behaviors* 253.

⁷⁷ GC Patton et al, ‘Onset of Adolescent Eating Disorders: Population Based Cohort Study over 3 Years’ (1999) 318 *British Medical Journal* 765.

Instead, public health literature is finding that obesity is caused by interactions between a diverse range of factors, including: environmental,⁷⁸ political,⁷⁹ neurological,⁸⁰ social,⁸¹ economic,⁸² psychological, genetic⁸³ and physiologic.⁸⁴ Commonly, these interactions fall under the umbrella term ‘obesogenic’ environment. Specific factors may include: pharmaceutical-induced weight gain; sleep debt; reductions in smoking; genetic effects; central heating and cooling; and industrial chemicals.⁸⁵ This constellation of potential factors highlights the complexity of issues at play that are often outside of an individual’s control or even awareness; as well, it forms a stark contrast to simplistic regulatory responses based on an individual’s energy in/energy out model.

Personal responsibility is an appealing ideology because it does not affront powerful, wealthy vested interests and places the burden for change on the individual, personal level.⁸⁶ Yet there is a strong mass of evidence that indicates these regulatory tools are ineffective even though they are palatable politically and in corporate interests.⁸⁷ The ‘Swap It, Don’t Stop It’ social marketing campaign illustrates this point. This campaign features the blue balloon man, Eric, who wants to get rid of his balloon belly by exercising more and lowering his calorie intake. The campaign tells us that we can make some simple swaps that will help us ‘lose our bellies’ without ‘missing out on the things’ we love. Positively, the campaign promotes plant-based diets and reducing levels of ultra-processed food consumption. However, narrow lifestyle interventions are relatively futile, as Laverack explains: ‘The changes necessary for Eric to lead a healthier life actually requires a change in the structures in which he lives’.⁸⁸ As a result, the top-down, individual-based measures have created a simplified message about health and well-being. Public campaigns like ‘Swap It, Don’t Stop It’, and the other campaigns listed above, often lead to ‘victim-blaming’ where it is the

⁷⁸ See eg, Mia A Papas et al, ‘The Built Environment and Obesity’ (2007) 29 *Epidemiologic Reviews* 129.

⁷⁹ See eg, Julie Guthman, ‘Teaching the Politics of Obesity: Insights into Neoliberal Embodiment and Contemporary Biopolitics’ (2009) 41 *Antipode* 1110; Liselotte Schafer Elinder, ‘Obesity, Hunger, and Agriculture: The Damaging Role of Subsidies’ (2005) 331 *British Medical Journal* 1333.

⁸⁰ See eg, Peters et al, ‘Causes of Obesity: Looking Beyond the Hypothalamus’ (2007) 81 *Progress in Neurobiology* 61.

⁸¹ Nicholas A Christakis and James H Fowler, ‘The Spread of Obesity in a Large Social Network over 32 Years’ (2007) 357 *The New England Journal of Medicine* 370. Compare with other Articles which assert social networks are not critical: Ethan Cohen-Cole and Jason M Fletcher, ‘Is Obesity Contagious? Social Networks vs Environmental Factors in the Obesity Epidemic’ (2008) 27 *Journal of Health Economics* 1382.

⁸² Odelia Rosin, ‘The Economic Causes of Obesity: A Survey’ (2008) 22 *Journal of Economic Surveys* 617.

⁸³ Christopher G Bell, Andrew J Walley and Philippe Froguel, ‘The Genetics of Human Obesity’ (2005) 6 *Nature Reviews Genetics* 221.

⁸⁴ For a general overview, see eg, Suzanne M Wright and Louis J Aronne, ‘Causes of Obesity’ (2012) 37 *Abdominal Imaging* 730; Martina Basic et al, ‘Obesity: Genome and Environment Interactions’ (2012) 63 *Arhiv Za Higijenu Rada i Toksikologiju* 395.

⁸⁵ Emily J McAllister et al, ‘Ten Putative Contributors to the Obesity Epidemic’ (2009) 49 *Critical Reviews in Food Science and Nutrition* 868.

⁸⁶ Glenn Laverack, ‘Individualism or Activism for Health in Hard Times?’ (2013) 21 *Journal of Public Health* 385.

⁸⁷ Fran Baum, ‘Cracking the Nut of Health Equity: Top Down and Bottom up Pressure for Action on the Social Determinants of Health’ (2007) 14 *Promotion & Education* 90; Walter Wymer, ‘Rethinking the Boundaries of Social Marketing: Activism or Advertising?’ (2010) 63 *Journal of Business Research* 99; Lawrence M Wallack, ‘Mass Media Campaigns: The Odds Against Finding Behavior Change’ (1981) 8 *Health Education & Behavior* 209; Marvin E Goldberg, ‘Social Marketing: Are We Fiddling While Rome Burns?’ (1995) 4 *Journal of Consumer Psychology* 347; Linda Brennan and Wayne Binney, ‘Fear, Guilt, and Shame Appeals in Social Marketing’ (2010) 63 *Journal of Business Research* 140.

⁸⁸ Laverack, above n 86, 385.

individual who is held wholly responsible for dietary-related illnesses. Freudenberg et al analysed 135 public health marketing campaigns, which took place between 1980-1995 in the USA, that aimed to educate lower-income people on ways to prevent heart disease, substance abuse, HIV or violence.⁸⁹ This study found that most interventions failed to meet their objectives because each campaign was aimed at a particular problem and targeted the individual rather than the structural factors that contribute to the existence of the problem and impact on the overall health of the community. Consequently, Freudenberg et al suggested that an ecological model be adopted that can inform more comprehensive interventions.⁹⁰ A review in Australia had similar findings. Walls et al determined that a more effective approach would be to enact legal and policy instruments that change the range of factors in the surrounding environment which impact on food consumption choices.⁹¹

Going one step further, an essential body of work is examining the ‘causes of the cause’, that is, the reasons for the rise in diet-related illnesses. It highlights how economic growth, undernutrition, malnutrition, over-nutrition and environmental sustainability are linked.⁹² The core argument is that economic growth is subject to diminishing returns.⁹³ Economic growth reaches a point where it is creating health and well-being for people and the environment, but then keeps growing to the extent that it causes overconsumption problems such as obesity or unsustainable carbon footprints.⁹⁴ This observation has some weight given that the prevalence of human diseases has rapidly increased along with environmental degradation.⁹⁵ In line with this, numerous studies show a close link between risk factors for non-communicable diseases and greenhouse gas emissions.⁹⁶ Assuming this viewpoint is correct, narrow attempts to prevent or reduce diet-related illnesses or even to more broadly promote sustainable diets will continue to have little effect at a population-level.⁹⁷ In adopting this viewpoint, the social, economic and political emphasis on consumption

⁸⁹ Nicholas Freudenberg et al, ‘Health Promotion in the City: A Structured Review of the Literature on Interventions to Prevent Heart Disease, Substance Abuse, Violence and HIV Infection in US Metropolitan Areas, 1980-1995’ (2000) 77 *Journal of Urban Health: Bulletin of the New York Academy of Medicine* 443.

⁹⁰ *Ibid* 453–454.

⁹¹ Helen L Walls et al, ‘Public Health Campaigns and Obesity - a Critique’ (2011) 11 *BMC Public Health* 136.

⁹² Garry Egger, Boyd Swinburn and FM Amirul Islam, ‘Economic Growth and Obesity: An Interesting Relationship with World-Wide Implications’ (2012) 10 *Economics & Human Biology* 147.

⁹³ Garry Egger and Boyd Swinburn, *Planet Obesity: How We’re Eating Ourselves and the Planet to Death* (Allen & Unwin, 2010).

⁹⁴ Garry Egger and John Dixon, ‘Obesity and Global Warming: Are They Similar “Canaries” in the Same “Mineshaft”?’ (2010) 193 *The Medical Journal of Australia* 635.

⁹⁵ D Pimentel et al, ‘Ecology of Increasing Diseases: Population Growth and Environmental Degradation’ (2007) 35 *Human Ecology* 653, where it is estimated that 40 per cent of world deaths are due to environmental degradation.

⁹⁶ Paul Wilkinson et al, ‘Public Health Benefits of Strategies to Reduce Greenhouse-Gas Emissions: Household Energy’ (2009) 374 *The Lancet* 1917; James Woodcock et al, ‘Public Health Benefits of Strategies to Reduce Greenhouse-Gas Emissions: Urban Land Transport’ (2009) 374 *The Lancet* 1930; Sharon Friel et al, ‘Public Health Benefits of Strategies to Reduce Greenhouse-Gas Emissions: Food and Agriculture’ (2009) 374 *The Lancet* 2016; Anil Markandya et al, ‘Public Health Benefits of Strategies to Reduce Greenhouse-Gas Emissions: Low-Carbon Electricity Generation’ (2009) 374 *The Lancet* 2006; Maggie L Grabow et al, ‘Air Quality and Exercise-Related Health Benefits from Reduced Car Travel in the Midwestern United States’ (2012) 120 *Environmental Health Perspectives* 68; Ting Xia et al, ‘Traffic-Related Air Pollution and Health Co-Benefits of Alternative Transport in Adelaide, South Australia’ (2015) 74 *Environment International* 281.

⁹⁷ Garry Egger and John Dixon, ‘Obesity and Chronic Disease: Always Offender or Often Just Accomplice?’ (2009) 102 *The British Journal of Nutrition* 1238.

and economic growth would need to transform before the law and policy surrounding sustainable diets, and diet-related illnesses in particular, can have a significant impact.

C Collaborative Approaches to Regulation of the Food Industry

The Australian food industry is dominated by subsidiaries of major multinational food and beverage companies.⁹⁸ Meanwhile, two supermarkets control the retail market.⁹⁹ The place of these companies within Australian society gives these groups influence over the formation of relevant laws and policies in Australia.¹⁰⁰ Examples of Australian regulators engaging in private governance to respond to unsustainable diets include:

- The ‘Food and Health Dialogue’: a non-regulatory medium for collaborative action between the Government and leading food manufacturers and retailers.¹⁰¹ This group agreed to set target reductions of salt in particular products.¹⁰²
- The ‘National Food Plan White Article’: this article deals with the Australian food system and highlights future collaborations with industry, the importance of flexibility, competition and reducing regulatory burdens on businesses.¹⁰³
- The star-labelling front-of-pack-label (‘FoPL’) scheme: Food industry representatives, public health groups and Australian governments were brought together to create a FoPL system. Together they created and agreed to a star-rating labelling system, similar to what is featured on white goods, movies and hotels. The stars would indicate the general nutritional qualities of food and would be a voluntary requirement as of June 2014, with the potential of becoming mandatory after two years.¹⁰⁴

Australian regulators have actively sought collaborations with food companies, which suggests that the food industry can be persuaded to market ethically and create sustainable products. Yet, these kinds of approaches may be set to fail because corporations and actors within corporations are legally required to focus on the interests of the company including profitability. The goal of providing sustainable, healthy foods is not necessarily going to align with legal requirements related to growing profitably.¹⁰⁵ In other words, the goals that corporations must pursue are at odds with the need for Australian society to move towards a sustainable diet and, in general, a

⁹⁸ ‘Australia’s Top 100 Food & Drink Companies’ (Food and Drink Business; IBISWorld; Yaffa Publishing Group, December 2012) 36 <<http://www.foodanddrinkbusiness.com.au/top-100>>.

⁹⁹ For more information, see eg, Carol Richards et al, ‘A Toothless Chihuahua? The Australian Competition and Consumer Commission, Neoliberalism and Supermarket Power in Australia’ (2012) 21 *Rural Society* 250.

¹⁰⁰ David Stuckler and Marion Nestle, ‘Big Food, Food Systems, and Global Health’ (2012) 9 *PLoS Medicine* e1001242.

¹⁰¹ Australian Government Department of Health and Ageing, ‘Industry Engagement’ <<http://www.foodhealthdialogue.gov.au/internet/foodandhealth/publishing.nsf/Content/industry-engagement>>.

¹⁰² Australian Government Department of Health and Ageing, ‘Summary of Food Categories Engaged under the Food and Health Dialogue to Date’ <http://www.foodhealthdialogue.gov.au/internet/foodandhealth/publishing.nsf/Content/summary_food_categories>.

¹⁰³ National Food Plan, above n 37.

¹⁰⁴ Commonwealth, Department of Health and Aging, *Legislative and Governance Forum on Food Regulation- Final Communique* (2014) <<http://www.health.gov.au/internet/main/publishing.nsf/Content/mr-yr14-dept-dept006.htm>>.

¹⁰⁵ See eg, *Corporations Act 2001* (Cth) ss 180-181 for the civil obligations of a director to the company in regards to decision-making. For instance, a director is required to make decisions that are in the best interests of the corporation.

sustainable lifestyle.¹⁰⁶ In relation to this, Australian food industries including transnational agrifood corporations increase profit margins by reaching larger markets, tempting people to buy more food and cutting production costs by, for example, sourcing food from cheaper sources.¹⁰⁷ A report by Kraft Foods Australia/New Zealand stated: ‘It is well understood that the success of the food industry is based on growth. Effective innovation strategies require a lightly-regulated marketplace at domestic levels’.¹⁰⁸ Reflecting this, food industries process foods so that the food is moreish, dense in debatably addictive nutrients,¹⁰⁹ long in shelf-life and transportable across long distances.¹¹⁰ While these processes are highly effective at generating profit, it tends to reduce the nutritional value of food and dramatically increase its environmental impact.

Commentators are pointing to tobacco companies and arguing that the food industry is employing the same strategies to slow or thwart formal, binding regulations.¹¹¹ Corporations that sell products that harm consumer health, such as those that sell tobacco, alcohol and ultra-processed food, have a pattern of attempting to prevent any policy or legislative measures that may reduce their profits.¹¹² In line with this, Brownell and Warner compared the empirical and historical evidence around tobacco and food industry practices, responses and strategies to influence regulation, research and public opinion. They concluded:

Food is obviously different from tobacco, and the food industry differs from tobacco companies in important ways, but there also are significant similarities in the actions that these industries have taken in response to concern that their products cause harm.¹¹³

Various strategies used by the food industry to avoid regulatory measures include: creating biased research findings; co-opting policy makers and health professionals by promoting partnerships

¹⁰⁶ Stuckler and Nestle, above n 100.

¹⁰⁷ David Stuckler et al, ‘Manufacturing Epidemics: The Role of Global Producers in Increased Consumption of Unhealthy Commodities Including Processed Foods, Alcohol, and Tobacco’ (2012) 9(6) *PLoS Medicine* 1001235 <<http://journals.plos.org/plosmedicine/article?id=10.1371/journal.pmed.1001235>>.

¹⁰⁸ Report by Kraft Foods Australia, quoted in Simon Talbot and Alastair Furnival, ‘Unlocking Australia’s Innovation Capacity - Creating a Vibrant Australian Food Manufacturing Hub in the Asian Century’ 7 <http://www.mondelezinternational.com.au/~media/innovationhub/en/pdfs/about_us/innovation/foodindustrywhitepaper-final.pdf>.

¹⁰⁹ For a literature review on addictiveness of certain foods, see, eg, Timothy J Richards, Paul M Patterson and Stephen F Hamilton, ‘Fast Food, Addiction, and Market Power’ (2007) 32 *Journal of Agricultural and Resource Economics* 425.

¹¹⁰ On this point, see Michael Moss, ‘The Extraordinary Science of Addictive Junk Food’ *The New York Times* (online), 20 February 2013 < <http://www.nytimes.com/2013/02/24/magazine/the-extraordinary-science-of-junk-food.html>>.

¹¹¹ Eliot Marshall, ‘Public Enemy Number One: Tobacco or Obesity?’ (2004) 304 *Science* 804; Jonathan D Klein and William Dietz, ‘Childhood Obesity: The New Tobacco’ (2010) 29 *Health Affairs* 388; Jess Alderman and Richard A Daynard, ‘Applying Lessons from Tobacco Litigation to Obesity Lawsuits’ (2006) 30 *American Journal of Preventive Medicine* 82; Mickey Chopra and Ian Darnton-Hill, ‘Tobacco and Obesity Epidemics: Not so Different after All?’ (2004) 328 *British Medical Journal* 1558.

¹¹² Lindsay Wiley, Micah Berman and Doug Blanke, ‘Who’s Your Nanny?: Choice, Paternalism and Public Health in the Age of Personal Responsibility’ (2013) 41 *Journal of Law, Medicine & Ethics* 88, 89-90. See also, Susanna Rankin Bohme, John Zorabedian and David S Egilman, ‘Maximizing Profit and Endangering Health: Corporate Strategies to Avoid Litigation and Regulation’ (2005) 11 *International Journal of Occupational and Environmental Health* 338.

¹¹³ Kelly D Brownell and Kenneth E Warner, ‘The Perils of Ignoring History: Big Tobacco Played Dirty and Millions Died. How Similar Is Big Food?’ (2009) 87 *The Milbank Quarterly* 259.

with scientists; petitioning politicians; funding campaigns of politicians who will oppose regulation; encouraging voters to oppose regulation by creating fears around ‘nanny state’ governments; supporting information-based approaches like TV advertisements; avoiding disclosure of relevant health and environmental information and emphasising individual responsibility.¹¹⁴ In line with this, a recent qualitative analysis based in New Zealand found that the food industry positions obesity as an economic burden and a result of poor lifestyle choices caused by lack of knowledge or character defects.¹¹⁵ The food industry was found to frame obesity as a consequence of an individual’s low levels of physical activity, rather than related to the structural issues, and so emphasised social marketing as the key strategy.¹¹⁶

Some of these strategies are evident in the recent controversy surrounding the Health Star-Rating FoPL scheme. To the surprise of the other participants and after the scheme was approved, industry groups involved began publicly criticising the scheme, including the Australian Food and Grocery Council, which is the peak body for the processed food industry.¹¹⁷ Following this, there was controversy surrounding the Health Department’s removal of the star-rating website. Health groups claim there was nothing wrong with the website so it should not have been removed. From their perspective, the taking down of the website was a deliberate delaying tactic on behalf of the Government due to pressure from industry groups.¹¹⁸ Despite research indicating that 62 per cent of consumers want the health star rating scheme, it remains unclear whether the Health Star-Rating scheme will be implemented.¹¹⁹

V THE WAY FORWARD: SUSTAINABLE DIETS AND THE LAW

The role of law within sustainable diets is problematic to say the least. Debates about the interface between law and diets revolve around themes of human rights, personal autonomy, liberalism, paternalism and the capacity of law to combat diet-related illnesses. In the context of sustainable diets, the ideological battles only intensify. In line with sustainability more generally, sustainable diets requires a ‘new value system, consciousness and worldview’. The complexity and scientific

¹¹⁴ Rob Moodie et al, ‘Profits and Pandemics: Prevention of Harmful Effects of Tobacco, Alcohol, and Ultra-Processed Food and Drink Industries’ (2013) 381 *The Lancet* 670.

¹¹⁵ GL Jenkin, L Signal and G Thomson, ‘Framing Obesity: The Framing Contest between Industry and Public Health at the New Zealand Inquiry into Obesity’ (2011) 12 *Obesity Reviews* 1022.

¹¹⁶ *Ibid.*

¹¹⁷ Ann Arnold, ‘Big Food Fight Continues after Senator Fiona Nash Controversy’ Background Briefing, *ABC News* (online), 30 March 14 <<http://www.abc.net.au/radionational/programs/backgroundbriefing/2014-03-30/5351422>>; Crikey Clarifier, ‘Why You’ll See Stars on Food Labels’ *Crikey*, 24 June 2013 <<http://www.crikey.com.au/2013/06/24/crikey-clarifier-why-youll-see-stars-on-food-labels/>>.

¹¹⁸ See eg, Lenore Taylor, ‘Fiona Nash Accused Of Misleading Senate Again Over Food Rating Scheme: Assistant Health Minister’s Claim Of “Unanimous Decision” To Perform Cost-Benefit Analysis Before Launch Is Disputed’ *The Guardian* (online), 14 February 2014 <<http://www.theguardian.com/world/2014/feb/14/fiona-nash-accused-misleading-senate-again-food-rating-scheme>> where the chief executive of the Public Health Association, Michael Moore, said ‘That would fit with an industry agenda to prevent or delay the uptake of a system that will allow parents to know how healthy the food is that they are putting in their children’s lunchboxes. The food industry doesn’t want to mount the direct argument against a system consumers want, but they want to undermine it quietly’.

¹¹⁹ CHOICE conducted a nationally representative survey of 1063 online Australians. The survey was open from the 5 and 9 December 2013. The results are weighted using Australian Bureau of Statistics data. Survey participants were shown images of the Daily Intake Guide and Health Star Rating. ‘Food Industry Failure on Front-of-Pack Labelling: Poll Shows Consumers Reject Industry’s Daily Intake Guide’ (12 December 2013) *CHOICE* <<http://www.choice.com.au/about-us.aspx>>.

uncertainty around sustainable diets means that there is likely no standardised sustainable diet and that, instead, a sustainable diet is determined by the context, including factors such as the geographic location and culture. Additionally, any discussion on sustainable diets must deal with some uncomfortable realities, such as the ways in which food is produced, the limits to growth and human dependence on a healthy environment. As with any regulatory responses to unsustainable consumption, moving towards sustainable diets is likely to conflict with neoliberal economic ideologies.

Perhaps before regulatory action around sustainable diets can take place, the social discourse surrounding legal responses to overweight and obesity will need to move away from an excessive focus on weight loss and personal responsibility. Transitioning from single-issue thinking to systematic understandings of the interface between human bodies, food and the environment is required before any substantial legal or policy developments can take place. Avoiding a strong personal responsibility-based approach would help to shift thinking, prevent fostering a salient form of discrimination and allow space for creative legal responses. Legal and health practitioners, researchers, government officials and media organisations have a role to play in this transition. During this process, law has a critical role in creating the conditions that allow people to have sustainable diets. As Gostin explains: ‘Law can educate, create incentives and deter; mandate safer product design...and alter the informational, physical and economic environment’.¹²⁰

From this point, there are a number of ways in which Australian regulators could proceed, and it is likely that a combination of various instruments will be more effective given the extent and complexity of the issue. Firstly, Australian regulators could influence food choices by changing the prices charged for certain food items. This could take the form of corrective taxes for unsustainably produced, unhealthy foods or subsidies or reduced taxes around sustainably-produced, healthier foods. The Goods and Services Tax is already applied on food apart from minimally-processed food products, so this may suggest that such regulatory interventions are relatively ineffective. In line with influencing food choice, Egger has analysed the idea of an individual carbon-trading scheme against the potential impacts such a scheme would have on lifestyle choices.¹²¹ Potential outcomes from implementation of such a scheme include an increase in personal energy-driven transport (walking, cycling etc). Secondly, Australian regulators could alter their public procurement rules. The Australian Government is one of the largest consumers of goods, and so has significant power to increase demand for food products that meet high environmental, social and economic standards. EU member States provide an example of how prioritising nutritious, seasonal, sustainably produced foods and allowing small producers to enter the tender process can shift populations towards sustainable diets.

Thirdly, Australian regulators could influence a shift towards sustainable diets by providing consumers with more information. One way to do this is to stop the movement towards the development of ‘ag-gag’ laws in Australia, laws which are designed to prevent people from

¹²⁰ LO Gostin, ‘Public Health Law in a New Century: Part I: Law as a Tool to Advance the Community’s Health’ (2000) 283 *The Journal of the American Medical Association* 2837, 2837.

¹²¹ Garry Egger, ‘Personal Carbon Trading: A Potential “Stealth Intervention” for Obesity Reduction?’ (2007) 187 *Medical Journal of Australia* 185 <<https://www.mja.com.au/journal/2007/187/3/personal-carbon-trading-potential-stealth-intervention-obesity-reduction>>.

documenting the treatment of farmed animals and, in doing so, from raising related public health issues.¹²² Ag-gag laws prevent community debate that could lead to: law reform, reduced meat consumption and better-informed consumers. Another approach is to create a State-regulated eco-label that is either mandatory or voluntary. An eco-label visually communicates to consumers information about the environmental impact of their food choices. In this way an eco-label recognises and rewards food producers with low environmental impacts and fosters more informed decisions by consumers.¹²³ In line with this, Australia will need to incorporate environmental sustainability into the main text of its dietary guidelines, which it has made progress towards, albeit gradually.

Lastly, the Australian government could re-structure its institutional arrangements and physical spaces to encourage sustainable diets. Health, food and environmental concerns do not fit into the existing, conventional agencies and departments that separately regard health, food and agriculture. Moreover, Australian regulators could reform planning laws to protect peri-urban agricultural areas and promote community gardens. Extensive research indicates that community gardens improve the health of participants, while providing other benefits such as enhanced social capital and carbon sequestration.¹²⁴ Consequently, there are a number of ways that law and policy can influence food consumption patterns to align with sustainable diets. Future work in this area will need to critique and expand on these potential regulatory responses.

VI CONCLUSION

Sustainable diets are critical for addressing the broader food-related sustainability issues evident at domestic and international levels. This article has outlined the emerging understandings of sustainable diets within international organisations and academia. Regulatory interventions by Australian regulators that relate to food consumption patterns were outlined. These responses were found to ignore or downplay the relationship between food consumption, health and the environment, and instead focus on weight-management, personal responsibility and collaborations

¹²² Following trends in the US to adopt more restrictive laws regarding the surveillance of farms, there have been various attempts at Australian State and Federal levels to introduce laws that prevent or deter activists or journalists from videoing or photographing agricultural practices that bring to light animal welfare issues. For a useful summary, see, 'Ag-Gag' Laws in Australia?: Discussion Paper (September 2013) RSPCA <http://www.rspca.org.au/sites/default/files/website/media-centre/Press-releases/RSPCA_Australia-Ag_gag_laws_in_Australia-Discussion_paper.pdf>. Two bills introduced recently may have the effect of limiting on-farm surveillance for public health and animal welfare purposes. For instance, the Criminal Code Amendment (Animal Protection) Bill 2015 (Cth) seeks to insert a new offence into the *Criminal Code 1995* (Cth) that makes it an offence to interfere with lawful animal enterprises and to not provide the visual evidence and copies to the correct government authority. Another example is the Biosecurity Bill 2015 (NSW) s 126, which allows an authorised officer to 'prohibit, regulate or control entry to or exit from any specific premises'.

¹²³ There are many different types of eco-labels. For a useful categorisation of eco-labels, see, Carolyn Deere, 'Eco-Labeling and Sustainable Fisheries' (IUCN; FAO, 1999) 6.

¹²⁴ Jonathan 'Yotti' Kingsley and Mardie Townsend, "'Dig In" to Social Capital: Community Gardens as Mechanisms for Growing Urban Social Connectedness' (2006) 24 *Urban Policy and Research* 525; Shawn Mark Somerset et al, 'School-Based Community Gardens: Re-Establishing Healthy Relationships with Food.' <<http://www98.griffith.edu.au/dspace/handle/10072/4764>>; Bethaney Turner, Joanna Henryks and David Pearson, 'Community Gardens: Sustainability, Health and Inclusion in the City' (2011) 16 *Local Environment* 489; Lacey Arneson McCormack et al, 'Review of the Nutritional Implications of Farmers' Markets and Community Gardens: A Call for Evaluation and Research Efforts' (2010) 110 *Journal of the American Dietetic Association* 399.

with food industries. The ineffectiveness of these approaches to either achieve their own aims or transition towards sustainable diets was discussed. If Australian regulators moved past the current approaches, then Australia would be in a position to explore innovative legal responses that improved and sustained the health and well-being of humans and the environment.