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Submission on the Public Consultation Draft of an Appendix to the Australian Dietary Guidelines

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Vegan Australia is pleased to have the opportunity to provide a submission to the public consultation on the draft of an Appendix to the Australian Dietary Guidelines

We note that an extension was granted for our submission (deadline Tuesday 6 November). As our organisation is run entirely by volunteers, we appreciate the additional time.

About Vegan Australia

Vegan Australia is a non-profit national organisation that aims to promote veganism to the broader Australian public. Vegan Australia envisions a world where all animals live free from human use and ownership. Compassion is the foundation of Vegan Australia - compassion towards animals, people and the earth. Vegan Australia believes that the starting point for people to put this

compassion into action is to become vegan and to encourage others to become vegan.

We would be happy to discuss any aspect of this submission or to expand on any of the information that we have included.

Greg McFarlane, CEO Vegan Australia

Submission for the
PUBLIC CONSULTATION DRAFT ON AN APPENDIX TO
THE AUSTRALIAN DIETARY GUIDELINES

By Stephanie L Marks and Jennifer G Maverick

Climate change and the consequences of global warming are prominent global environmental issues (Bulkeley, 2000). Excessive production of greenhouse gases [GHG] by society has exacerbated the natural global warming effect and altered the Earth's climatic cycle (Garnaut, 2008). Industrial processes, waste, transport, land use and forestry, and agriculture are primarily responsible for the release of GHG's and thus contribute directly to climatic variation (Garnaut, 2008). Trends indicate that global emissions are likely to double between 2005 and 2030 (Garnaut, 2011). More specifically, recent statistics reveal that Australia's per capita emissions are among the highest in the world (Garnaut, 2008), a figure projected to increase considerably over the next decade (Garnaut, 2011). To battle these issues the following have become defining features of Australian government environmental policy: the reduction of GHG emissions, the 'carbon footprint' of Australians and sustainable living measures (Department of Climate Change and Energy Efficiency, 2012).

However, it should not be the responsibility of government policy to reduce GHG emissions and thus the resultant effects of such emissions. The nature of this problem requires both collective and individual ethical responsibility (Potthast &

Meiisch, 2012) as human action exerts continued pressure on the environment. Every constituent of society has a 'carbon footprint'. An individual's carbon footprint is defined as their impact on the environment (measured annually) resulting from particular lifestyle choices of which diet is a substantial contributing factor. Food production and consumption exerts great pressure on the environment from the initial resources consumed in production through to the delivery of the end product to the plate. As consumers, we indirectly contribute to the emissions released by agriculture and food production, as our choices dictate the necessity for these industries. For example, an individual is not simply purchasing an animal-based product (e.g. meat, seafood, dairy, eggs, etc.), but also engaging in the process of transforming plants into animal proteins and other nutrients, a process deemed extremely inefficient and polluting (Baroni, Cenci, Tettamanti, & Berati, 2007).

Comments related to the specific proposed guidelines:

To aid your understanding of our comments, please refer to the following definitions for clarification:

Animal-based diet: an “omnivorous” diet inclusive of animal-derived products such as meat, poultry, seafood, dairy and eggs, as well as plant foods.

Plant-based diet: a “herbivorous” diet inclusive of plant foods such as fruit, vegetables, nuts and seeds in the absence of animal-based products.

Guideline 1

Numerous studies have indicated that plant-based diets cause less detrimental impact on the environment in comparison to other dietary lifestyles

(Leitzmann, 2003; Pimentel & Pimentel, 2003; Reijnders & Soret, 2003). As such, individuals should increase their consumption of unprocessed plant-based foods to reduce their carbon footprint and should be encouraged to avoid consumption and/or overconsumption of animal-based products, processed foods and drinks.

Guideline 2

Lean meat and poultry, fish, eggs, tofu, nuts, and seeds, and legumes/beans

We suggest a change from “lean meat and poultry, fish, eggs, tofu, nuts and seeds, and legumes/beans” to a more general description such as “Protein Sources”. We agree with the practical considerations put forward by the appendix, which suggests individuals attempt to reduce environmental impact by choosing protein sources that have a lower environmental impact. However, we contend that the appendix should suggest non-animal derived alternatives as preferred over animal-derived protein sources (e.g. pork, poultry, eggs and seafood) as production of all non-animal derived protein sources have a lower environmental impact (Reijnders & Soret, 2003). Non-animal, plant based derived protein suggestions may include: tofu, tempeh, nuts and seeds and legumes/beans. The argument for the inclusion of such suggestions is based on the following arguments:

- A plant-based diet can contribute the same amount of protein as a meat based diet at considerably lower emissions. It is estimated the same amount of protein can be produced by plants for the per capita annual emission of only 0.1 tonne, whereas the same amount of protein from animal based sources requires a minimum per capita of 6.2 tonnes of emissions or 62

times the emissions of plant sourced protein (Holper & Torok, 2008; Lenzen & Dey, 2010; Pelletier & Tyedmers, 2010).

- Environmentally, a diet comprising animal-based products is extremely inefficient in comparison to a plant-based diet (see Table 1).

Animal-Based Protein Source	Energy Input	Protein Output
Lamb	50 kcal	1kcal
Beef	40kcal	1kcal
Eggs	39kcal	1kcal
Milk	14kcal	1kcal
Plant-Based Protein Source	Energy Input	Protein Output
Grains	2.2kcal	1kcal

Table 1. A comparison of production efficiency across protein sources.

*Note: Data provided was sourced from Pimentel and Pimentel (2003) and Reijnders and Soret (2003).

- One calorie of beef requires 40 calories of fossil fuels. Although less, one calorie of milk requires 14 fossil fuel calories, which is still substantial. Grain production, however, is extremely efficient, requiring only 2.2 calories of fossil fuels to produce one calorie of grains (Pimentel & Pimentel, 2003). In addition to the data in this table, research has also indicated the inefficiency of fish protein production. For example, analysis indicates that one gram of protein from fish requires approximately 14 times the amount of fossil fuels

in comparison to the production of vegetable protein (Reijnders & Soret, 2003).

- Seventy per cent of the world's freshwater is consumed by the animal farming and agriculture industries. Evidence indicates that the planet's freshwater supplies are not sufficient to service future generations with our current Western dietary lifestyle (Baroni et al., 2007).
- Beef is the single food with the greatest impact on the environment (Baroni et al., 2007).
- The detrimental environmental impacts of the meat industry are large and recommendations to limit production and thus consumption are evident worldwide. Expert recommendations have been made for the UK to reduce its beef herd by 90% by 2030 to meet climate emission goals (Harper, Wexler, Kemp, & Perez-Minana, 2010). A major factor of this outcome is due to ruminant animals contributing to carbon dioxide (CO₂) and Methane (CH₄) emissions, two significantly detrimental greenhouse gases. Such emissions could be drastically reduced by excluding products from ruminant animals such as cattle, sheep and goats.
- Life cycle analysis indicated that diets inclusive of animal-derived products have a higher impact on the environment in comparison to plant-based diets (Baroni et al., 2007).

Milk, yoghurt, cheese

It is further suggested under Guideline 2 that the public not be encouraged to consume dairy (milk, yoghurt, cheese etc.). This argument is based on the following:

- All the nutrients found in milk are readily available in plant-based food sources. Thus the most beneficial environmental choice is one that omits dairy (Lanou, 2009).

We suggest that the guidelines justify the inclusion of dairy and provide alternative sources for justifications provided (alternatives that have a smaller environmental impact such as soy milk, sesame seeds, tofu, kale, broccoli, beans etc as a source of calcium). This argument is based on the following two factors:

- 1) Dairy has a significant negative impact on the human body, particularly calcium levels (Barzel & Massey, 1998). Dairy intake has been linked to:
 - Osteoporosis (Sonnevile, Gordon, Kocher, Pierce, Ramappa, Field, 2012)
 - Cardiovascular disease (Lindahl, Lindwall, Spangberg, 1984) (Ernst, Pietsch, Matrai, Eisenberg 1986) (Szeto, Kwok, Benzie, 2004) (Ornish, Brown, Scherwitz 1990)
 - Cancer (Voskuil, Vrieling, van't Veer, Kampman, Rookus 2005) (Young, Metcalfe, Gunnell 2012) (Gonzalez, Riboli 2010) (Leitzmann, 2012) (Price, Allen, Appleby 2012.) (Farlow, Xu, Veenstra 2009) (Cramer, Greenberg, Titus 2000) (Larsson, Bergkvist, Wolk 2004) (Faber, Jensen, SØgaard 2012)
 - Diabetes (Saukkonen, Virtanen, Karppinen 1998) (Kimpimaki, Erkkola, Korhonen S, 2001)
 - Migraine and arthritis pain (Egger, Carter, Wilson, Turner 1983) (Mansfield, Vaughan, Waller, Haverly, Ting. 1985) (Kjeldsen-Kragh, Haugen, Borchgrevink 1991) (Hicklin, McEwen, Morgan. 1980) (Panush, Carter, Katz 1983) (Skoldstam 1986) (McDougall, Bruce, Spiller 2002)

- Acne (Adebamowo, Spiegelman, Danby 2005)(Adebamowo, Spiegelman Berkey, 2006)(Adebamowo, Spiegelman Berkey 2008)

Further,

- Dairy contains contaminants including pesticides and drugs (Baars, Bakker, Baumann 2004)(Outwater, Nicholson, Barnard 1997)

2) Although less intensive animal systems are less detrimental to the environment, all have unacceptable impacts compared with plant based sources of nutrients

- Due to the demand for dairy products, the dairy industry functions by way of mass production. Such mass production has a significant impact on the environment (Baroni et al., 2007). Impacts include but are not restricted to: the contamination and deoxygenation of waterways and streams, land degradation and damage to pastures and crops, the clogging of soils, and excessive growth of plants and algae (resulting in unsuitability of downstream water for domestic, agricultural and industrial use (Environment Protection Authority, 1997).
- The difference in the energy input to output ratio indicates that the consumption of non-factory farmed dairy products will reduce the demand for mass-production. This will not only reduce the individual's environmental impact, but also the dairy industry as a whole.
- The detrimental environmental impacts of the dairy industry are large and recommendations to limit production are evident worldwide. Expert recommendations have been made for the UK to reduce its dairy herd by 80% by 2030 in order to meet climate emissions goals. (Harper et al., 2010).

Enjoy a wide variety of nutritious foods

It is further suggested that under Guideline 2 the public be encouraged to consume a variety of nutritious plant-based foods that are predominantly organically farmed. This argument is based on the following:

- Chemical conventional production methods have a higher impact on the environment in comparison to organic methods according to Baroni et al. (2007)
- A lifecycle analysis conducted by Baroni et al. (2007) indicated that a chemical conventional omnivorous diet has the most detrimental environmental impact in comparison to chemical conventional vegetarian and vegan diets. Overall, an organic vegan diet creates the smallest environmental impact of all dietary choices based on what is involved and how little energy it requires to produce.

Guideline 3

We propose that the guidelines highlight that a reduction of all animal-derived products – meat, seafood, dairy and eggs in one’s diet is a valid method by which saturated fat can be reduced. This argument is based on the following:

- To date, authors have not been able to produce peer-reviewed literature that supports the contention that Australian meat is in fact lean.

- Most saturated fat consumed in the Australian diet would appear to be via animal-based products. Dairy products alone are the number one source of saturated fats in the American and Australian diets (U.S. Department of Agriculture and U.S. Department of Health and Human Services. Dietary Guidelines for Americans, 2010. 7th Edition. Washington, D.C.: U.S. Government Printing Office, December 2010. Available at: <http://www.cnpp.usda.gov/dietaryguidelines.htm>.)
(<http://www.heartfoundation.org.au/SiteCollectionDocuments/Tick-cheese.pdf>)

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