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Dear Sir or Madam,

WWF submission to Australia's Future Tax System Review

Thank you for the opportunity to make a submission.

Overview

Humanity depends on services provided by the Earth's natural ecosystems to sustain life¹. However the "ecosystem services" that both sustain and form healthy natural ecosystems – clean freshwater, soil formation, cycling of nutrients (so that soils stay productive), vegetation to prevent soil erosion and dryland salinity, and biodiversity to regulate pests and diseases – are nearly always public goods that have limited commercial value to individual producers. This encourages individual producers to maximise their returns by exploiting the public goods. Producers have little choice but to do otherwise; they are selling into a competitive market which both fails to properly price ecosystem services and which fosters wasteful consumption (as demonstrated – for example – by the quantity of food thrown away by Australians each year: see below) or excessive consumption (as demonstrated by the level of obesity in Australia).

This submission proposes that wasteful consumption and environmental degradation be addressed by the introduction of an environmentally weighted goods and services tax with the whole of the net amount raised being used to restore and protect Australia's biodiversity, water resources, vegetation and soils, and to develop and promote new sustainable agricultural systems.

¹ WWF's Living Planet Report shows that we are consuming the resources that underpin ecosystem services faster than they can be replenished and that our global ecological footprint – as measured by the Living Planet Index – now exceeds the world's capacity to regenerate by about 30 per cent. If our demands on the planet continue at the same rate, by the mid-2030s we will need the equivalent of two planets to maintain our lifestyles: see, Living Planet Report 2008, http://assets.panda.org/downloads/living_planet_report_2008.pdf (accessed 3 May 2009).



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Wasteful consumption

Each year Australians throw away about three million tonnes of food worth about \$5.3 billion².

Wasting food – and other household consumables – has severe environmental consequences:

- Throwing away a kilo of beef wastes the 50,000 litres of water which was consumed in its production³ and 51.7 kilograms of greenhouse gas emissions emitted⁴;
- Throwing away a kilo of white rice wastes about 2,385 litres of water⁵;
- Throwing away of a kilo of potatoes wastes about 500 litres of water⁶;
- Rotting waste emits about 16.6 million tonnes of greenhouse gases each year⁷ (about 2.9% of Australia's total emissions);
- Throwing away a pair of jeans wastes 10,850 litres of water⁸;
- Throwing away 1 kilogram of building concrete wastes the 170 Megajoules of energy used to produce it⁹
- Throwing away 1 kilogram of synthetic flooring or similar rubber wastes the 110 Megajoules used to produce it.¹⁰

At the same time, Australia's environment continues to decline, largely as a result of agriculture and forestry to produce food, fibre and building materials, and urban development (largely in the coastal hinterland):

- About one-quarter of Australia's surface water management areas were classed as highly used or overused in 2000 and the available evidence points to a continued decline in waterways Australia-wide¹¹;

² The Australia Institute, 2005, *Wasteful Consumption in Australia*, Discussion Paper number 77

³ CSIRO Land and Water, Wayne Meyer, 1997, *Water for food – The continuing debate*, http://www.clw.csiro.au/issues/water/water_for_food.html (accessed 5 May 2009)

⁴ Department of Climate Change, *End use allocations of emissions*, <http://www.climatechange.gov.au/inventory/enduse/index.html> (accessed 4 May 2009)

⁵ CSIRO Land and Water, Wayne Meyer, 1997, *Water for food – The continuing debate*, *op cit*

⁶ CSIRO Land and Water, Wayne Meyer, 1997, *Water for food – The continuing debate*, *op cit*

⁷ Commonwealth of Australia, National Greenhouse Gas Inventory 2006, <http://www.climatechange.gov.au/inventory/2006/index.html> (accessed 5 May 2009)

⁸ A.K. Chapagain et al, 2006, *The water footprint of cotton consumption: An assessment of the impact of worldwide consumption of cotton products on the water resources in the cotton producing countries*, http://www.waterfootprint.org/Reports/Chapagain_et_al_2006_cotton.pdf (accessed 5 May 2009)

⁹ Commonwealth of Australia, *Your Home Technical Manual*, Fourth edition, 2008

¹⁰ Commonwealth of Australia, *Your Home Technical Manual*, Fourth edition, 2008

¹¹ Australian Bureau of Statistics (ABS) 2006, 1370.0 *Measures of Australia's Progress 2006*, page 3.



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- About 5.7 million hectares of land are affected by or at a high risk of developing dryland salinity¹²;
- The available evidence points to a continued decline in Australian biodiversity¹³.

An environmentally-weighted GST

WWF submits that the Review should recommend the establishment of an additional GST weighted to encourage the consumption of sustainable commodities and discourage wasteful and excessive consumption, particularly of high-environmental impact commodities. To ensure public support for the environmentally-weighted GST all money raised (less the costs of administration and enforcement) should be applied to repair and support Australia's biodiversity, water resources, vegetation and soils and sustainable agricultural systems. The distribution of this funding should be subject to a transparent, robust and repeatable monitoring and verification system which publicly reports on the environmental outcomes achieved (or otherwise). With the addition of some suitable metrics, the system of national environmental accounts proposed by the Wentworth Group of Concerned Scientists might provide a suitable basis¹⁴.

The data necessary to support an environmentally-weighted GST is available in Australia today, and in most cases more sustainable production systems or less environmentally-impactful commodities are presently available. Others would emerge after the introduction of the tax.

WWF submits that the environmentally-weighted GST be comprised of three bands representing commodities (and services) with a low, medium and high environmental impact (bands of 2.5%, 5% and 10% might be considered appropriate). The environmental impact be assessed on the impact production of the commodity or service has on Australian primary energy use, water use and land disturbance relative to the economy-wide average for all economic sectors. Greenhouse gas emissions could also be incorporated into the environmentally-weighted GST if the Carbon Pollution Reduction Scheme (CPRS) is not passed into law by Parliament, or fails to adequately restrain the growth in emissions or a decision is made not to apply the CPRS to agriculture and forestry.

The University of Sydney and CSIRO have used a transparent and repeatable methodology to calculate the environmental impact – based on primary energy use, water use, land disturbance and greenhouse gas emissions – of 135 sectors of the Australian economy. The methodology expresses each environmental indicator as an intensity – that is, by per \$1 of final demand or per \$1 spent to consume – and compares the impact of each sector with that of the average for all sectors. The methodology and the results of the application of the model

¹² Australian Bureau of Statistics (ABS) 2006, 1370.0 *Measures of Australia's Progress 2006*, page 3.

¹³ *Australian State of the Environment Report 2006*, <http://www.environment.gov.au/soe/2006/index.html> (accessed 3 May 2009).

¹⁴ *Accounting for Nature: A Model for Building the National Environmental Accounts of Australia*: http://www.wentworthgroup.org/docs/Accounting_For_Nature.pdf (accessed 4 May 2009).



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are contained in the report, *Balancing Act – A Triple Bottom Line Analysis of the Australian Economy*¹⁵.

For example, in the case of Sector 103 (beef cattle and calves) *Balancing Act* indicates that water use is 18 times the average for all sectors, land disturbance is 58 times the average, and greenhouse gases 26 times the average. As a result beef cattle would be considered a very high environmental impact activity and be taxed at the highest rate. On the other hand, sector 106 (poultry and eggs) has water use twice the average, land disturbance three times the average and greenhouse gases twice the average. Accordingly producing poultry and eggs would be considered a low environmental impact activity, and taxed at the lowest rate.

It should be noted that there are significant opportunities to design beef production systems with lower environmental impact and such measures would be an appropriate use of a proportion of the funds raised through the environmentally-weighted GST. Alternatively, beef producers might decide to transition into lower environmental impact forms of production, for example, native game, or to higher-value production which obtains a greater price, and therefore is less susceptible to wasteful or excessive consumption, Wangu beef, for example.

Thus, an environmentally-weighted GST would provide a price signal to discourage the wasteful or excessive consumption of high environmental impact commodities and encourage the consumption of lower environmental impact commodities and services. Ultimately this would encourage the adoption of lower environmental impact forms of production by producers and manufacturers. It would also provide a reliable and transparent source of funding with which to correct the market-failure created by the lack of a financial incentive for ecosystem services, creating a new, low environmental impact economy in part replacement of the existing, wasteful, high-environmental impact economy.

The environmental weighting system could be reviewed and refined each decade as production systems improve, natural systems are repaired, new issues emerge and new data becomes available.

Social Impacts

Figures 1, 2 and 3 below show a high correlation between annual per capita income and per capita greenhouse emissions, water and ecological footprint with embodied greenhouse emissions, water and ecological footprint increasing as annual per capita income increases.

¹⁵ <http://www.csiro.au/resources/BalancingAct.html> (accessed 4 May 2009).

Figure 1. Relationship of per capita greenhouse emissions in personal consumption activities to annual per capita income for each suburb and shire in Australia. Notes: (a) states are colour coded; (b) data represent the full chain emissions for every good and service component of household consumption budgets; (c) average 19 tonnes per person of CO₂-e, maximum 50 tonnes per person; minimum 12 tonnes per person).¹⁶

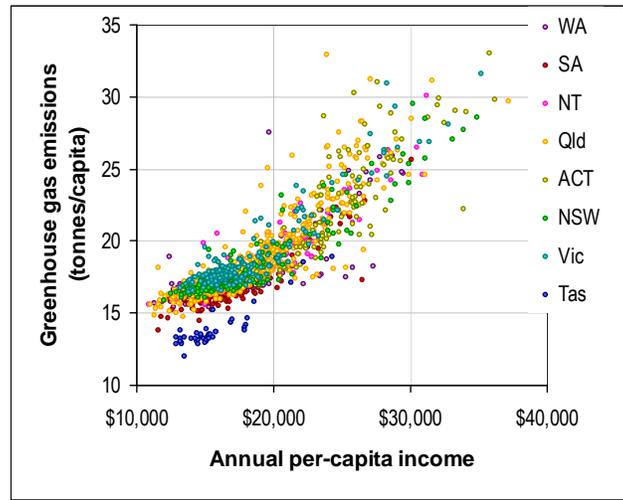
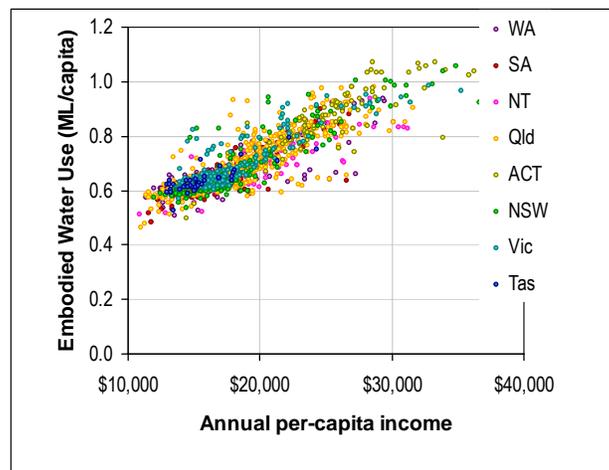


Figure 2. Relationship of embodied water use in personal consumption activities to annual per capita income for each suburb and shire in Australia. Notes: (a) states are colour coded; (b) data represent the full chain managed water use for every good and service component of household consumption budgets; (c) Average of 720,000 litres per person, maximum 1,800,000 litres, minimum 400,000 litres.¹⁷



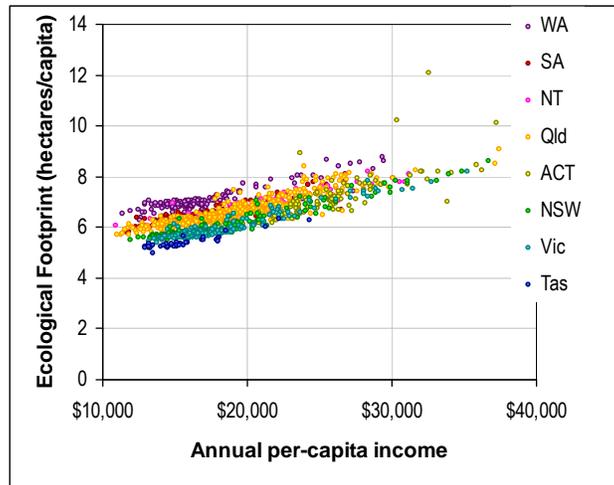
¹⁶ Dey C, Berger C, Foran BD, Foran MJ, Joske R, Lenzen M and Wood R (2007) *Household environmental pressure from consumption: an Australian environmental atlas*. In *Water Wind Art and Debate: How Environmental Concerns Impact on Disciplinary Research*, Ed. G Birch, Sydney University Press, <http://ses.library.usyd.edu.au/bitstream/2123/2104/1/WaterWindCh9Dey.pdf> (accessed 29-4-2009).

¹⁷ Dey C et al (2007) *Household environmental pressure from consumption*, op cit.



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Figure 3. Relationship of the ecological footprint of personal consumption activities to annual per capita income for each suburb and shire in Australia. Notes: (a) states are colour coded; (b) data represent the full chain footprint for every good and service component of household consumption budgets; (c) average 6.5 hectares per person, maximum 12 hectares per person, minimum hectares per person.¹⁸



Figures 1, 2 and 3 indicate that environmentally-weighted GST would have the most significant impact on more affluent Australians. This differs from the existing GST which has a disproportionate impact on low income earners.

However, public health and social welfare issues do arise as fruit, vegetables and dairy foods are all high in water content. However the impact of this on lower income earners could be addressed through the welfare and tax systems.

Export and Imports

The environmentally-weighted GST will apply to all goods and services including those that were imported. Imported goods would be assessed against Australian environmental indicators until such time as a world standard is established.

If you have any queries or require further information, please do not hesitate to contact me on 0410 086 986 or pтони@wwf.org.au, or Andrea Beier, Ecological Footprint Advisor, on 0404 485 118 or abeier@wwf.org.au.

Yours faithfully

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Program Leader Development and Sustainability

¹⁸ Dey C et al (2007) *Household environmental pressure from consumption*, op cit.