



Submission to Tax Working Group

The Environmental Defence Society welcomes the opportunity to make a submission to the Tax Working Group on the Future of Tax in New Zealand. We think that a fundamental review of the system presents a valuable chance to improve both social and environmental outcomes.

Summary

The Tax Working Group asked for submissions on issues set out in its paper *Future of Tax* and, in particular, on solutions to problems that the Group, or submitters, have identified. We address four issues discussed in the Paper and two further issues that were not raised. They are:

1. The destruction of biodiversity and ecosystem services, which has been encouraged by the absence of tax on natural capital depletion, untaxed capital gains achieved by its depletion, and the tax-deductibility of expenses incurred to achieve its destruction;
2. Wealth inequality arising from low taxation on returns from real property relative to other forms of income;
3. Excessive dependence of tax revenues on GST and income and company taxes, given falling company taxes internationally and declining workforce participation; and
4. Funding climate change and superannuation costs.

The two further issues that were not addressed are:

5. The need for land use changes¹ necessary to transition the economy towards carbon-neutrality. The difficulties with bringing agriculture into the Emissions Trading Scheme indicate a need to align incentives within the tax system with the goal of substantially reduced net greenhouse gas emissions from agriculture.
6. The weak incentives in the current system for primary producers to transition from commodity volume growth (producing more product) to added value production (producing less, higher value product). The reason for this is that (untaxed) environmental inputs are cheap relative to (taxed) labour and other input costs required for adding value.

¹ The recent draft report *Low Emissions Economy* published by the Productivity Commission discusses the land use changes needed for transition toward a low-emissions economy.

These issues are addressed throughout the sections that follow. More generally, we encourage a holistic view and use of the tax system. Its primary purpose may be to raise revenue, but it has significant potential to modify behaviour in positive ways. As *Future of Tax* points out, this has been under-utilised in New Zealand, with some exceptions.

The tax system is already being used to discourage drinking and smoking. Those activities are harmful to individuals (in a way, the tax system is seeking to protect people from themselves). But such activities have an impact on society as a whole – they cause a burden on the public health system, and can lead to a variety of negative impacts on people other than the drinker or smoker. We observe that the grounds for taxing environmentally harmful activities are similar.

Environmental sustainability should be a consideration that permeates all aspects of the tax system, not just “environmental” taxes. Taxes can have many consequences for environmental well-being, even if they do not directly concern the environment *per se*. We encourage the Group to keep implications for sustainability at the forefront of its mind when proposing any kind of tax, not just “environmental” taxes.

We also observe that early in the Paper, the principle of “efficiency” has been described as minimising impediments to economic growth and avoiding biases in the use of resources. Later in the paper, this is described in a more nuanced way. We think that it is important to recognise, consistently, that an efficient system does not have to be neutral as to the costs and benefits of activities – particularly those using or impacting on public resources (the “environment”). The language of “well-beings” is also preferable to that of “economic growth”.

An Environmental Footprint Tax

One solution that we think merits further investigation is a form of land tax, set according to the intensity of land use and consequent impact on the environment. This tax would be assessed from satellite imagery. It is not a traditional tax on land *per se*, and we prefer to call it an “environmental footprint tax”. In order to give effect to the Government’s promise not to tax the family home, the tax would have a threshold, in that it would only be payable by land owners whose environmental footprint exceeds that of a family home. It would normally be paid annually, but could be capitalised and paid from sale proceeds if means-testing shows that an annual payment is unaffordable (for example, retirees).

An environmental footprint tax would be intended primarily to pursue environmental outcomes, and implement the polluter/user-pays principle, by:

- Reducing incentives to destroy biodiversity and degrade ecosystem services, by internalising at least some of the environmental costs of economic activity;

- Increasing incentives to sustain biodiversity and ecosystem services, by providing rebate payments for their maintenance.

It could also have desirable social outcomes, by:

- More fairly and evenly distributing the tax burden across different sources, thereby enabling materially lower income, company and/or consumption taxes.
- Mitigating wealth inequality, which in part arises from low taxation on returns from land-based assets relative to other forms of income.

An environmental footprint tax would have all the merits of a land tax as described by the 2010 Victoria University Tax Working Group, while being rather more progressive. It might also prove to be among the least disliked of possible tax initiatives due to its:

- reasonableness (charging something for environmental impacts – the idea that a polluter or user should pay);
- highly progressive nature (the land area owned and the intensity of its use are, with some important exceptions, correlated with wealth);
- ability to allow landowners to manage and control their personal tax liabilities via good land use and management actions;
- ability to reward people for good actions, not just penalise them for bad ones (rebates for maintenance and enhancement of biodiversity and ecosystem services);
- benefits to Maori provided by rebates associated with low-intensity land uses;
- potential to complement and fill gaps in the Emissions Trading Scheme (particularly for agricultural activities);
- potential to ameliorate some failures of our resource management system (such as positive incentives for land use change);
- relatively small compliance or transaction costs for tax payers.

An environmental footprint tax would have variable impacts on property values. It would depress the value of large, intensively used properties, while increasing the value of land with low-intensity uses. Thus owners of large and/or intensively developed property are likely to be most detrimentally affected. However, the key result would not be the redistribution of wealth (not all large landowners are wealthy relative to small or non-landowners). Rather, the key result would be the introduction of strong incentives to manage New Zealand's natural capital in a sustainable manner, and the recognition that we should internalise costs of resource use. A user or polluter should pay unless there is a specific policy decision taken that the rest of society *should* subsidise the actions of a few.

In keeping with the Government's promise not to tax the family home, we envisage a tax would include an untaxed footprint allowance, equivalent to that of a family home. The tax would apply only to that part of the footprint exceeding

this level. In that way, an ordinary family home and adjacent land could be excluded, but not a lifestyle block or farm. The tax levied on a property would be calculated as depth (expressed in dollars) times land area (hectares) in each category summed across the entire property, less the untaxed per-landowner footprint allowance representing the family home. Of course, what constituted a “family home” would need to be defined, but that is a problem of policy detail rather than a conceptual difficulty. For example, an allowance equivalent to 1000m² of impervious surface would effectively exempt the family home and some associated land and infrastructure.

While we understand that the exclusion of the family home is a core element of the TWG Terms of Reference, we feel that it is important to recognise that this exclusion does compromise the contribution that any tax on land or capital can make to goals for housing affordability, wealth inequality and fair taxation.

The remainder of this submission describes the concept of an environmental footprint tax, and its key design features. It concludes with some discussion of its strengths and weaknesses relative to other options under consideration. The case for an environmental footprint tax has been made previously by Stephens et al. (2016)² and Brown and Stephens (2017)³. However, we emphatically note that research and modelling is needed to adequately understand the impact on policy goals of varying category definitions and tax rates. If the Tax Working Group has a mind to pursue the potential of an environmental footprint tax, then we suggest that this research and modeling should be a high priority.

Taxing capital and environmental inputs

Products and services delivered by economic activity depend on many inputs. These include financial and built capital, labour (in the broad sense, not only manual labour), and natural capital (the services provided by the environment). A non-distortionary tax system would spread taxation evenly across each of the three categories of inputs and consumption of outputs. However, as explained in *Future of Tax*, the New Zealand tax system is heavily weighted towards taxing the consumption of outputs (such as GST), labour (i.e. income tax) and company profits (i.e. company tax). There is comparatively little taxation on capital and environmental *inputs*.

This produces distortions. For example, a failure to tax capital encourages the accumulation of the least-taxed forms of capital (such as housing) and hence wealth inequality. A failure to tax environmental inputs to the same degree as

² Brown, M.A. and R.T.T. Stephens (2017) ‘Big issues, bigger solutions: are bottom lines enough?’ *Policy Quarterly* 13 (3), pp.40-45.

³ Stephens, R.T.T., S. Greenhalgh, M.A. Brown and A. Daigneault (2016) ‘Enhancing the tax system to halt the decline of nature in New Zealand’, *Policy Quarterly*, 12 (1), pp.26-34.

other inputs promotes high rates of greenhouse gas emissions, biodiversity loss, and degradation of ecosystem services at the expense of employment. It also leads to an economy weighted towards environmentally intensive commodity volume production (such as milk and hamburger meat) rather than sustainable high-value-added production (such as manuka honey products and eco-tourism).

We submit that an environmental footprint tax could reduce these distortions and their harmful effects, particularly if the footprint tax were large enough to enable material reductions of taxes on income, profit and consumption.

Environmental footprint

Here, we use the term ‘environmental footprint’ to mean a simple measure of the environmental effects derived from how a parcel of land is used. It has two dimensions:

1. land area (in hectares); and
2. footprint depth, which increases with the level of environmental impact typically associated with the land use and land cover. It is represented by increasing tax rates per hectare (in dollars).

Footprint depth can be negative, if land provides net environmental benefits (such as carbon sequestration, biodiversity maintenance, provision of ecosystem services). In this case we envisage that a tax rebate would be provided to the landowner. The rebate provides an incentive for landowners to manage land in ways that have positive environmental effects.

Table 1 illustrates possible categories of footprint depth, based on land use and land cover characteristics. We expect that these characteristics would be determined largely through remote satellite imagery⁴, supplemented by ground truthing and aerial photography as necessary. The annual environmental footprint tax levied on a property would be depth (expressed in dollars) multiplied by land area (hectares) in each category summed across the entire property, less the untaxed per-landowner footprint allowance (representing the family home).

Category 1 in Table 1 shows that the level of environmental impact is greatest for artificially impermeable surfaces (such as paved roads and buildings) that cannot support the most basic of ecosystem services (such as photosynthesis, water purification). Such uses rely on ecosystem services elsewhere to assimilate wastes and other harms produced on-site.

Category 2 includes highly disturbed artificial surfaces such as cultivated soil, clear-felled forest, unpaved roads, mines and quarries. These may retain some

⁴ We note that the resolution and frequency of available satellite imagery are increasing while acquisition cost is falling so that much of it is effectively free. Technologies for automated analysis and categorisation of land cover are also advancing rapidly.

capacity for photosynthesis and infiltration, but most wastes are not contained on-site, and their export exceeds assimilative capacity leading to pollution and contamination offsite. Category 3 captures intensively grazed pasture, which is a net exporter of nitrogen and greenhouse gas wastes. We associate these 'deep' footprint categories with the highest per hectare tax rates.

At the opposite end of the scale (categories 9 to 11) would be land with riparian vegetation, native vegetation, and natural water bodies that retain indigenous biodiversity and supply natural ecosystem services. These categories would qualify for a per hectare tax rebate. On some properties, the rebate may be sufficient to more than offset tax liabilities from intensively used parts of the property.

Table 1: Structure of the proposed environmental footprint tax. Land cover types and associated footprint characteristics are indicative; tax rates are entirely hypothetical; negative values indicate tax rebate rates. The tax system could be 'single tier' based on a flat (Tier 1) rate for each category, as shown in the first four columns). Alternatively, it could be a two-tier system with the addition of variable rates (Tier 2 footprint) within the category applied according to defined standards (the two right hand columns). Provision for the tax free family home and associated land could be achieved simply by waiving the first \$5000 of tax liability, this representing a house and paved area of 1000 square metres – a substantial family home.

Footprint category	Tier 1 land cover type	Tier 1 characteristics	Tier 1 footprint depth (\$ per ha)	Tier 2 sub-category	Tier 2 footprint depth (\$ per ha)
1	Paved surfaces; buildings	Impervious surface. All indigenous biodiversity eliminated, no ecosystem services ⁵ provided, wastes exported.	\$50,000	Conventional roof	\$50,000
				Green roof	\$30,000
2	Artificially bare ground; unsealed roads; quarries and mines; recently harvested forestry; feedlots; construction sites; settling and oxidation ponds	Natural ⁶ vegetation and many ecosystem services eliminated; negligible photosynthesis; waste exported with negligible on-site assimilation.	\$20,000	Wastes exported to air, ground or surface waters	\$20,000
				All wastes fully contained on-site	\$10,000
3	Frequently or recently disturbed but partially vegetated surfaces; cultivated soil; annual cropland; market gardens; recent afforestation	Natural vegetation and many ecosystem services eliminated; some photosynthesis; waste exported with some on-site assimilation.	\$10,000		
4	Irrigated pasture; orchards; irrigation water storage dams; domestic gardens and lawns; non-swimmable waters	Natural vegetation highly controlled; some basic ecosystem services remain; most waste exported.	\$8,000	>5kg N/ha/a exported	\$10,000
				2-5kg N/ha/a exported	\$6,000
				<2kg N/ha/a exported	\$4,000

⁵ Ecosystem services are the many and varied benefits that humans freely gain from the natural environment and from properly functioning ecosystems. They are often integral to the provisioning of clean drinking water, the decomposition and assimilation of wastes and the natural pollination of plants.

⁶ Natural vegetation means native or exotic plants, including weeds, that establish of their own accord.

Footprint category	Tier 1 land cover type	Tier 1 characteristics	Tier 1 footprint depth (\$ per ha)	Tier 2 sub-category	Tier 2 footprint depth (\$ per ha)
5	Improved dryland (i.e. not irrigated) pasture	Natural vegetation usually present but controlled; some basic ecosystem services provided; most waste exported.	\$4,000	>2kg N/ha/a exported	\$4000
				<2kg N/ha/a exported	\$3000
6	Unimproved pasture; low intensity pastoral use; forestry	Some natural vegetation present; some ecosystem services provided; little or no waste exported.	\$500		
7	Exotic shrubland (e.g. gorse, broom); Flow controlled swimmable water bodies (e.g. hydro lakes and rivers)	Little native biodiversity but some ecosystem services provided; little or no waste exported.	\$100		
8	Amenity plantings, wooded gardens and parks; modified but swimmable but uncontrolled water bodies	Restored vegetation cover; provision of ecosystem services are developing; little or no waste exported	-\$200		
9	Undisturbed riparian vegetation	Natural or planted riparian vegetation present, ecosystem services provided, wastes assimilated.	-\$4,000	Riparian strip <20m wide	-\$4,000
				Riparian strip >20m but <50m wide	-\$5,000
				Riparian strip >50m wide	-\$10000
10	Native vegetation, including native (tussock) grassland, shrubland and forest	Native-dominated vegetation, provides ecosystem services, no waste exported.	-\$5000	Unmanaged, not legally protected ⁷	-\$4,000
				Legally protected	-\$5,000
				Legally protected and managed for pest and weeds	-\$10000
11	Native wetland; Natural potable water bodies	Native dominated wetland, ecosystem services provided, no wastes exported.	-\$6,000	Not legally protected	-\$6,000
				Legally protected	-\$8,000

⁷ Permanent private covenant

Footprint category	Tier 1 land cover type	Tier 1 characteristics	Tier 1 footprint depth (\$ per ha)	Tier 2 sub-category	Tier 2 footprint depth (\$ per ha)
				Legally protected with natural vegetation buffer > 50m wide	-\$10000

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The single-tier taxation system could progressively develop over time into a two-tier system, as shown in Table 1. Under the single-tier system, there would be a single tax rate for each category. Land categorisation would be exclusively the role of the tax authority and there would be no transaction costs to the landowner (although there could be a degree of consultation).

Under a two-tier system, there could be multiple tax rates per category. The default setting would be the top rate, but the landowner would be eligible for a lower rate (or higher rebate) if key standards are proven by the landowner (a discretionary transaction cost). In this way, tax rates would reflect performance standards rather than arbitrary activity-based classifications. For example:

- Green roofed⁸ buildings could have a lower tax rate than conventional roofing, to reflect their reduced runoff.
- Pasture that is managed so as not to exceed specified nitrogen loss and/or soil compaction standards could attract a lower rate than pasture that releases greater quantities of nitrogen to surface and ground waters.
- Fully fenced riparian vegetation could attract a higher rebate than partially fenced riparian vegetation.
- Native vegetation with permanent legal protection (such as through a covenant) could attract a higher rebate. There could also be rebates for land that is destocked and receives a defined level of management of pests and weeds.

Nitrogen loss levels, soil health, greenhouse gas emissions, stocking rates, fencing standards, conservation management standards and legal protection standards could be among the variety of factors that might be used to define sub-categories associated with more favorable tax rates.

We do not envisage objective measurement of actual environmental effects at any site. The tax rate per hectare for each land cover category would be indicative of some combination of environmental impact, societal concern about typical impacts and many other policy considerations. It is therefore value-based and largely subjective. But it would be constrained within two technical requirements:

- the principle that increasing per hectare environmental impact is associated with higher tax rates
- primary footprint categories can only be based on land cover types that are reliably identifiable from satellite imagery, and all land cover types must be associated with a footprint category.

Beyond these two matters, we suggest that definition of categories and tax rates should be guided by:

- fiscal goals for the tax (how much revenue is required);

⁸ a roof that is covered in plants, which reduces stormwater run-off and lowers cooling costs

- economic goals (how substitutable it is for other taxes; any desired incentives for value added production);
- environmental goals (water quality; halting biodiversity loss; carbon sequestration and reducing GHG emissions);
- social goals (impacts on wealth inequality; incentives for environmental sustainability); and
- social and political considerations about impacts on sectoral interests (these considerations should be transparent and explicit).

Strengths and Weaknesses relative to other tax reform options

One of the most valuable outcomes of tax reform would be a rebalancing of tax on environmental and capital inputs to production, relative to taxes on labour and the consumption of outputs. Such a rebalancing would promote social, economic and environmental sustainability which is undermined by current tax policy. An environmental footprint tax, combined with lower income, company and/or consumption taxes, would promote employment and enterprise, help manage wealth inequality, promote environmental sustainability, support agribusiness in its transition from high volume, emission-intensive production to low-emission and value-added production. The transition would be supported by lowering the costs of labor through reduced income tax, company tax &/or GST, while increasing the cost of environmental degradation. This may also be a constructive way to help prepare agribusinesses for the likely emergence of synthetic milk and meat on the global market. Another advantage of the footprint tax is that it sets up a framework for a comprehensive high-level environmental monitoring system. It would enhance national and regional environmental reporting and could inform a variety of Resource Management Act processes.

The footprint tax could usefully be supplemented by much more specific environmental taxes, rebates and cap-and-trade schemes. Schemes for trading water takes and nitrogen emissions, subject to appropriate regulatory safeguards, may have potential for promoting economic efficiency while reducing pollution.

Income, company and consumption taxes

We have reservations about increasing income tax, company tax or GST as a way to improve the tax system. None of these options adequately addresses the dangerously distortionary effects of the tax system on our natural environment, on our greenhouse gas emissions, on our volume-based commodity production or on wealth inequality. However, we do not dismiss the potential for making our income tax more progressive with additional tax brackets (at, say, \$200,000, \$500,000 and \$1,000,000) and higher tax rates associated with each. This could improve perceptions of fairness and inequality. Similarly, there may be a case for a progressive company tax.

Capital Gains tax

While we do not comment on its overall desirability, we point out that a capital gains tax is not likely to be a silver bullet to improve the fairness of the tax system or mitigate its distortionary effects. If we relied only on a capital gains tax, revenue would be slow to accrue, and therefore much needed company and income tax adjustments could be excessively delayed. Issues identified in Appendix 2 of *Future of Tax* are difficult to resolve fairly, and so detract from the appeal of a capital gains tax.

We do not necessarily oppose the idea of a capital gains tax, but suggest that it would be inadequate to address our fundamental concerns. The environmental footprint tax proposal provides a way to tax returns from land-based property in a way that both improves fairness, is essentially progressive, and addresses distortions created by the current system.

Land Tax levied on capital value

The absence of a land tax (beyond our local government rating system) means our tax system is not as broadly based as it could be. Its absence leads to higher rates for other taxes (than might otherwise be the case) and contributes to wealth inequality. However, adoption of a conventional land tax based on capital land value would do nothing to address environment degradation, nor would it incentivise a move from commodity production to added-value products (or nudge agribusinesses toward low-emission operations). In fact, it could *add* to environmental problems, particularly if private land that is managed for its natural values (and so earns negligible financial return) were to be taxed. An ordinary land tax would require exemptions, akin to the rates exemptions allowed by most councils for private land under conservation covenants, for natural areas. A public good can legitimately be supported by (what would essentially be) public funds.

We suggest that a conventional land tax would be a missed opportunity to address the critical issues facing New Zealand. An environmental footprint tax would be a more appropriate and targeted approach to land taxation.

Royalties on water

We view natural surface and ground water as a public good part-owned by Māori and that a return to the public (and Māori) purse is due when taken for private benefit. Thus a royalty on the abstraction of surface and groundwater for private and commercial use is entirely appropriate both to recompense its owners and to encourage efficient use. However, we do not envisage a tax on taking water as being able to contribute in any substantive way to ameliorating water pollution issues because it does not alter incentives for the management of runoff and

point source discharges to freshwater. However, revenue could be hypothecated to freshwater improvements, which are rightly a public responsibility.

We thank the Group for the opportunity to make a submission on issues that are extremely important for New Zealand's future.