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The Demise of Effects-based Resource Management

what went wrong with internalising the externality?

Abstract

A core principle underlying the Resource Management Act 1991 (RMA) is that of effects-based resource management: managing the effects of activities on the environment, rather than the activities themselves. In economics parlance, this has strong links to the concept of internalising the externality, where the costs or benefits of activities are borne by those undertaking the activities, rather than by third parties. When externalities are internalised, society's wellbeing is improved. However, the widely held view is that the RMA has not made society any better off. A contributor to this was the poor implementation of the internalisation principle in the RMA, particularly the limited use of price signals, high transaction costs, and the poor application of cost–benefit analysis. The replacement for the RMA, the Natural and Built Environment Act (NBEA), proposes to shift the focus away from an effects-based approach to an outcomes-based one. While the NBEA could be used to better implement an internalisation principle, its proposed drafting does not always attempt to do so, and its explicit shift to an outcomes-based approach is likely to make it even more difficult for externalities to be internalised.

Keywords Resource Management Act, effects-based, externalities, internalisation, Natural and Built Environment Act

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When the Resource Management Act (RMA) was enacted in 1991, it was based around a principle of effects-based resource management. In broad terms, an effects-based approach seeks to manage the adverse effects of activities on the environment, and contrasts with an outcomes-based approach, which seeks to designate the desired outcomes from activities. In an effects-based approach, people and communities are left to undertake activities that provide for their own wellbeing, provided any adverse effects of those activities on the environment are, to use the language of the RMA, avoided, remedied or mitigated.

The effects-based approach of the RMA has strong links to economic theory, particularly the economic concept of 'internalising the externality'. When an action by one party has an adverse effect on other parties not involved in the original action (an 'externality'), the costs of those adverse effects should be borne (or 'internalised') by the party generating the externality. When externalities are internalised in decentralised and competitive markets, economic theory holds that the overall net wellbeing of society is maximised.

In theory, therefore, if the effects-based approach of the RMA had led to externalities being internalised, society should be better off. However, the widely held view is that the RMA has not enhanced society's wellbeing, in terms both of protecting the environment and fostering urban development. In late 2022 the government introduced legislation to repeal and replace the RMA, the Natural and Built Environment Act (NBEA), which has an outcomes-based, rather than an effects-based, approach to resource management. In the NBEA, an outcomes-based focus is on specifying and promoting positive environmental outcomes from human activity, rather than managing the effects of that activity. While the effects-based approach would still be an element of the NBEA, the intention is to shift away from solely managing effects to focusing more on outcomes.

The RMA's perceived lack of success and the move away from the effects-based approach begs the question: did something go wrong with the approach of internalising the externality? It is apparent that an internalisation principle has not worked well, and that socially beneficial outcomes have not been achieved. This might be attributed in part to the RMA having objectives beyond just managing adverse effects (such as the matters listed in parts 6 and 7 of the RMA), or to the difficulties in managing effects when responsibilities are split between central and local government. However, as I explain in this article, a supporting factor is that the practical implementation of the internalisation principle in the RMA has been unsatisfactory, and it is this poor implementation that has contributed to the RMA not achieving socially beneficial outcomes.

The effects-based approach of the RMA focuses on allowing people to undertake activities that are in their own best interest, provided that the adverse effects of those activities are appropriately addressed.

After discussing in the next section the nature of the RMA and the internalisation principle in more detail, I will explain how there are three issues with the way in which this principle was applied: (1) there was very limited use of price signals to reflect the costs of externalities within the actions that generate them; (2) the RMA process made it costly and time consuming for affected parties to negotiate between themselves to resolve externality problems; and (3) the poor application of cost–benefit analysis meant that it was difficult to assess socially beneficial outcomes when price signals or negotiation were not available.

These three issues have meant that externalities have not been internalised to an appropriate extent, and this in turn has contributed to poor environmental and urban development outcomes. The proposed new legislation, the NBEA, has the potential to address each of these issues. Nonetheless, as I discuss in my concluding section, attempts to resolve at least some of these issues through the NBEA are limited, and the need to address them has been undermined by the new legislation's shift away from an effects-based approach.

The RMA and an internalisation principle

The effects-based approach of the RMA focuses on allowing people[1] to undertake activities that are in their own best interest, provided that the adverse effects of those activities are appropriately addressed. This approach has strong links to economic theory. Within a branch of economics known as welfare economics, which is concerned with people's wellbeing (welfare), economic theory holds that the overall net wellbeing of society will be maximised by allowing people to make their own decisions in a decentralised and competitive market setting.

However, this theory is subject to some specific conditions. One of those conditions relates to the concept of an externality. An externality is a cost or benefit imposed by the actions of one party on a bystander – a person not involved in the original action, and who did not choose to incur a cost or benefit. A common example is that of pollution: one person's actions may pollute the environment, which imposes costs on others who use the environment, but are not involved in the original polluting action. For the aforementioned welfare economics theory to hold, externalities need to be internalised. That is, the costs or benefits associated with externalities should be borne by the person undertaking the action that generates the externalities, rather than the bystander.[2]

The language of the RMA is consistent with this theory. The section 5 purpose statement refers to 'enabl[ing] people and communities to provide for their social, economic, and cultural well-being and for their health and safety' – that is, people can act in their own best interest. Under the RMA, this is to be done 'while … avoiding, remedying, or mitigating any adverse effects of activities on the environment' – that is, externalities are to be internalised.

Consistent with this, in a lecture published in 1995 describing the legislative evolution of the RMA, Simon Upton discusses the effects-based approach of the RMA. He states that 'the further we went the more we realised an effects-based view of the statute made an internalisation principle the logical approach to resource management' (Upton, 1995, p.37). While other concepts (such as that of sustainable management) were ultimately also incorporated into the RMA, Upton states that the view taken in developing the RMA was one 'in which the Government's proper statutory concern was with the externalities of market outcomes and … seeking to create incentives to internalise those externalities wherever possible' (ibid.).

If the effects-based approach of the RMA had led to externalities being appropriately internalised, then economic theory would suggest that the allocation and management of resources under the RMA would have maximised the net wellbeing of society. However, the widely held view is that the RMA has not made New Zealanders any better off. A 2020 review of the RMA by the Resource Management Review Panel, chaired by Tony Randerson, found that the RMA has (among other issues) not sufficiently protected the natural environment and not achieved good outcomes for urban areas. The Randerson Review also concluded that '[t]hirty years on it is clear the "effects-based" approach was not implemented as intended in relation to both maintaining environmental standards and providing an enabling approach for development in urban areas' (Resource Management Review Panel, 2020, pp.16–17, 57).

Geoffrey Palmer and Richard Clarke, in discussing 'why the RMA failed', make similar points, noting that the RMA did not produce sound environmental outcomes, and nor was urban development handled well. Of specific relevance, they also state that '[e]xternalities adversely impacting on the environment were not sheeted home to and reflected in the costs of the activities that engendered them' (Palmer and Clarke, 2022, p.4).

The perceived failure of the RMA has led to a shift away from the effects-based approach. The RMA's intended replacement, the Natural and Built Environment Act, is focused on promoting positive outcomes. The explanatory note to the Natural and Built Environment Bill states that 'The NBE Bill shifts the focus of the current resource management system away from managing adverse effects to promoting positive outcomes'.[3] An important reason for the failure of the RMA is what both Palmer and Clarke and the Randerson Review touch on: the effects-based approach of the RMA was not properly implemented, which meant that externalities were not being internalised.

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But why was this the case? After all, the RMA did implement an 'avoid, remedy, mitigate' principle as a means of internalising externalities. If people had been appropriately avoiding, remedying or mitigating externalities, then would this not have led to an appropriate level of internalisation, producing better environmental and urban development outcomes? In the following sections I set out three reasons why externalities have not been appropriately internalised, despite the language of the RMA.

Few, if any, price signals

In any undergraduate microeconomics textbook, a standard approach to internalising externalities is to use a price signal to reflect the social costs (or benefits) of the externality. Indeed, externalities themselves can be considered as unpriced (or mispriced) transactions, because the costs/benefits of those transactions fall on third parties rather than those involved in the transaction. As an example of the price signal approach, in the case of negative externalities from pollution, a price signal may involve imposing a tax on the polluter, or implementing a cap-and-trade regime, where the polluter must purchase tradable permits sufficient to cover its pollution. Such approaches take the cost of the externality, and through a pollution tax or the price of tradable permits they impose that cost on the person whose actions generate that externality (rather than on third parties), thereby internalising the externality.

A well-designed and implemented price signal framework strengthens incentives for environmental enhancement. Using the pollution example again, if a polluter faces a tax or is required to purchase permits to cover its pollution, the polluter has a strong incentive to lower its costs by reducing the amount it pollutes. Investment in new, 'greener' technologies would also be incentivised by such price signals – for example, where such investment allows private investors to avoid environmental taxes. In this way, price signals incorporate environmental improvement objectives in

the financial incentives of individuals and businesses.

Since its enactment, the RMA has always contemplated the use of price signals, referred to in the Act as 'economic instruments'. Section 24(h) empowers the minister for the environment to consider and investigate 'the use of economic instruments (including charges, levies, other fiscal measures, and incentives) to achieve the purpose of this Act'. Other sections of the RMA also provide for economic instruments in specific cases. For example, sections 135, 136 and 137 allow for, respectively, a tradable permit regime for coastal permits, water permits and discharge permits. Section 112 allows regional councils to charge royalties for the use of geothermal resources and coastal extraction of resources such as sand and shingle.

Despite these provisions, there has been limited investigation, and even less implementation, of price signals as a means of addressing externalities under the RMA. Indeed, the Randerson Review found that, while there was some progress in the use of price signals for climate change and waste disposal, economic instruments were 'underused' (Resource Management Review Panel, 2020, p.332). There have certainly been enough suitable candidates for the use of price signals. The Randerson Review refers to, among others, resource royalties (e.g., for mineral extraction), environmental bonds, and user charges in respect of water, waste water and congestion (ibid., pp.360–2). Other examples that have been used overseas include price signals in respect of wetlands (wetland mitigation banking, which effectively provides compensation for land development of wetlands) and endangered species preservation (conservation banking, involving the purchase of credits where development can adversely affect threatened or endangered species) (Keohane and Olmstead, 2016, pp.224–8).

It is also clear that the 'avoid, remedy, mitigate' approach of the RMA does not utilise a price signal to internalise externalities. Where externalities arise, people are effectively being asked to internalise externalities, rather than incentivised to do so via a price mechanism. While the former may achieve some level of internalisation (and I return to the way in which this is assessed later in this article), it is unlikely to be to the same extent as would be achieved by a price level. Indeed, where price signals are a viable approach, regulatory approaches that do not utilise price signals are, in most cases, inferior to using prices to cost-effectively address externality problems (see, for example, Keohane and Olmstead, 2016, ch.9).

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In short, the absence of price signals has meant that those generating externalities from resource management activities in New Zealand have not faced the full costs of those externalities. This has limited the efficacy of an internalisation principle, and likely contributed to the poor environmental and urban development outcomes under the RMA.

High transaction costs hampering negotiated solutions

Price signals may not be the best way of internalising externalities in all circumstances. Many examples of negative externalities under the RMA arise from relatively unique circumstances that might not be amendable to a standardised pricing mechanism. For example, it could be difficult to use a price signal framework to internalise the adverse effects on a property owner's views of a neighbour building a high fence that blocks those views,[4] or to price the adverse effects on historic heritage values of building a new road.[5] These examples contrast with externalities arising from, say, water quality or air pollution, where the adverse effect is relatively standardised (e.g., nitrogen pollution or carbon emissions) and more suitable to a pricing framework.

There is, however, an alternative approach for internalising externalities when price signals may not be appropriate, which is to allow the affected parties to negotiate or bargain to achieve the efficient solution. Using the example of a property owner who builds a high fence which impedes a neighbour's views, the fence-building property owner can offer compensation to their neighbour in an amount sufficient to offset the value loss from the impeded views. The result is that the party building the fence bears the costs of the adverse effects of their actions on the neighbour's view: i.e., it internalises the externality with the fence-building property owner.

To internalise externalities using negotiated solutions, the transaction costs of negotiation need to be low. That is, it should be sufficiently low cost for parties to come together to negotiate, including the costs of spending time in discussions, and having lawyers draft and enforce contracts. It should also be difficult for parties to behave opportunistically and attempt to 'hold up' negotiations to reach a better deal, or to free-ride on the benefits of the negotiations of others without bearing any of the costs.

However, a well-documented problem with the RMA is that it imposes significant costs on parties. The Randerson Review found that, throughout the life of the RMA, the process for obtaining a resource consent has been 'complex, costly and slow', with 'unnecessary debate, litigation and process involved' in consent applications that are

publicly notified (Resource Management Review Panel, 2020, pp.263, 266).

The potential for a small number of people to hold up decision making through a complex litigious process is also an issue in RMA decision making. The RMA permitted a wide range of interested parties to object to a proposed activity. This allowed those that may well have been engaged in opportunistic behaviour, rather than necessarily being adversely affected by an activity, to hold up the decision-making process, driving up transaction costs.

The Randerson Review appears to contemplate the potential for a negotiation framework to internalise externalities. The review noted that minor issues under the RMA could be resolved 'more simply, quickly and cheaply' if a dispute resolution process was utilised, rather than the normal resource consent hearing process (ibid., p.284). Nonetheless, such simple, quick or cheap negotiation processes have not been a feature of the RMA. It is the high transaction costs and the complex nature of decision making under the RMA that have likely made it very difficult for parties to reach negotiated solutions. This, in turn, is another reason for the poor implementation of the RMA's internalisation approach.

Poor application of cost–benefit analysis

Rather than using price signals or negotiated solutions to internalise externalities (or in instances where unique circumstances and multiple parties make such solutions more challenging to implement), the 'avoid, remedy, mitigate' language of the RMA might be interpreted as putting the onus on people themselves to internalise the costs of any adverse external effects that their actions generate. The RMA then goes to the next step by providing for a means of approval that external effects have been accounted for. For example, an application for a resource consent would require the approval by a decision maker (such as a council, independent hearings panel or the Environment Court) to confirm that the adverse effects have indeed been addressed to the appropriate extent.

Decision makers typically use a range of qualitative information to make such decisions, such as the views of qualified experts in various fields related to the externalities (e.g., traffic, noise, biodiversity, landscape, etc.). It may be that this information is sufficient for decision makers to rigorously assess whether externalities have been appropriately internalised. However, the views set out earlier in this article suggest that this has not been the case; that is, that the internalisation of externalities has not occurred to the desired extent. One likely contributing factor to this is the poor application of the tool of cost–benefit analysis.

Cost–benefit analysis is a widely used economic technique that provides for the systematic identification and quantification (in monetary terms) of costs and benefits. Cost–benefit analysis provides a way of assessing whether externalities have been appropriately internalised. It does so by analysing both the benefits from an activity and the costs of the externalities arising from the activity (along with any other relevant benefits and costs), allowing for an assessment of whether an activity's overall benefits exceed its costs.

However, cost–benefit analysis has been either poorly applied in RMA proceedings, or completely absent. It is often used in evaluating plans, plan changes and policy statements (as per the requirement of section 32(2) of the RMA). However, such evaluations often make no attempt at quantification, even where it is possible or useful to do so. The Resource Management Review Panel, in its issues and options paper, stated that '[t]here has often been poor application of cost benefit analysis as part of the regulatory process' (Resource Management Review Panel, 2019, p.35).

The RMA also refers in section 7(b) to 'the efficient use and development of natural and physical resources', and the case law has found it useful to apply the concept of economic efficiency under these provisions.[6] Economists use the technique of cost–benefit analysis to measure economic efficiency. Despite this, the case law gives contradictory views on its application as a way of assessing efficient resource use. For example, in *Meridian Energy Ltd v Central Otago District Council*, the High Court found that the RMA does not expressly require the use of cost–benefit analysis.[7] In contrast, in *Bunnings Limited v Queenstown Lakes District Council*, the Environment Court found that the 'correct test' of an efficient use under the RMA was one that measures costs and benefits.[8]

The poor application of cost–benefit analysis in RMA decision making, and the contradictory decisions as to its applicability, have contributed to the poor implementation of an internalisation principle in the RMA.

Conclusions

The effects-based approach of the RMA has strong links to the economic concept of internalising externalities; that is, ensuring that those whose activities generate adverse effects face the costs and benefits of those effects, including those costs/benefits that would have otherwise been borne by third parties. If implemented properly, this internalisation principle would result in outcomes that maximise the net wellbeing of society. The wellbeing of society includes not just the wellbeing that people get from undertaking economic activities of production and consumption, but also the wellbeing that they obtain from their use and appreciation of the environment.

However, the RMA has not achieved outcomes that maximise wellbeing, both in protecting the environment and fostering urban development. A contributor to this is that the RMA's internalisation principle has not been implemented properly, due to the limited use of price signals, high transaction costs preventing negotiated solutions, and the poor application of cost–benefit analysis. The result is that the cost of unpriced or mispriced externalities is being carried by third parties, rather than those whose activities engender the externalities.

Given that there is new legislation being drafted to replace the RMA, the Natural and Built Environment Act, there is the potential to correct this problem. Indeed, the environment minister's media release accompanying the introduction of the proposed legislation states that the legislation will 'cut red tape, lower costs and shorten the time it takes to approve new homes and key infrastructure projects' (Parker, 2022), which suggests an approach that lowers transaction costs. The legislation includes provisions for mediation (Natural and Built Environment Bill, s214), arbitration (s815) and alternative dispute resolution process (s244), all of which may also lower transaction costs to facilitate negotiated solutions. The proposed NBEA also includes provisions for internalising externalities through the 'polluter pays principle', defined as 'the principle that those who produce pollution should bear the costs of managing it to prevent damage to human health and the environment' (s417).

On the other hand, the proposed NBEA has shifted its focus away from the effects-based approach towards an outcomes-based approach. The legislation does retain some aspects of the effects-based approach: the purpose statement specifies not only that positive outcomes be achieved, but also that adverse effects be managed. However, the explicit shift in focus away from effects seems likely to undermine the legislative basis for internalising externalities. Moreover, there are likely to be cases where an outcomes-based approach conflicts with an effects-based approach, yet there is no guidance on how to manage such conflicts.

It is also not clear that the proposed [Natural and Built Environment Act] has appropriately corrected the various problems with the implementation of the effects-based approach in the RMA, particularly regarding price signals and cost–benefit analysis.

It is also not clear that the proposed NBEA has appropriately corrected the various problems with the implementation of the effects-based approach in the RMA, particularly regarding price signals and cost–benefit analysis. For example, the proposed NBEA refers only to the minister for the environment having the power to consider and investigate the use of economic instruments. This is similar to the language regarding economic instruments in the RMA, which, as noted above, has not led to any meaningful investigation or implementation of these instruments. In addition, the polluter pays principle in the proposed NBEA only applies in respect of contaminated land, and not other activities that might generate externalities for which a price signal approach is appropriate.

Regarding cost–benefit analysis, on a positive note, there is reference in the proposed NBEA to an assessment of benefits and costs in requests for independent plan changes (schedule 7, s71), and there is also inclusion of efficiency as a 'resource allocation principle' (s36). However, there is nothing in the legislation that looks to clarify the current contradictions in the case law as to whether cost–benefit analysis should be used to assess efficiency. Moreover, plans are guided at a higher level by a proposed national planning framework, and there is no requirement for an assessment of the costs and benefits of this framework (schedule 6, s6). The wording in the proposed NBEA for evaluating the national planning framework borrows some of its language from section 32 of the RMA, yet the wording related to a benefit–cost assessment in section 32 is conspicuous in its absence from the new legislation. The proposed NBEA also includes a list of 18 outcomes that must be provided for to achieve the purpose of the Act (part 1, s5), but provides no guidance on how to weight trade-offs between these outcomes (for which cost–benefit analysis would be a useful approach).

Therefore, despite its inclusion in the NBEA, we may well have witnessed the demise of the effects-based approach to resource management in New Zealand. A shift in focus to producing positive outcomes is a laudable goal, and this shift is perhaps not surprising given the failure of the effects-based approach to achieve desirable environmental and urban development outcomes. But in the NBEA's focus on positive outcomes there is a risk of conflicting views over what outcomes are considered to be beneficial, and of difficulties in managing the trade-offs between different outcomes. While there are some encouraging attempts in the NBEA to lower transaction costs, the NBEA could better seek to internalise externalities by improving the use of price signals and strengthening the application of cost–benefit analysis.

On balance, the NBEA's approach seems likely to make it even more difficult for externalities to be internalised. If

implemented properly, an approach that internalises externalities recognises the trade-offs inherent in human activities that affect the environment, which can lead to outcomes that are net beneficial to people's overall wellbeing. Unfortunately, if we move away from seeking to internalise externalities, we are likely to also move away from using, maintaining, protecting and enhancing our environment in a way that best maximises the overall wellbeing of all New Zealanders.

1 I refer to 'people' here and throughout this article, but it has a generic meaning, including individuals, businesses, households, communities, etc.
2 There are some nuances to this, in that externalities arise because of the conflicting use of resources, and in some cases it can be more efficient for the costs to be internalised with the third parties. I explore this in more detail in Counsell, 2018. For ease of exposition throughout this article, I refer to the costs being internalised with the party that generates the externality.
3 At the time of writing (late 2022) the bill had been introduced to Parliament and was before a select committee.
4 An example of this situation is the 'Oriental Bay fence case' of *Aitchison v Walmsley* from 2015. I consider this case in more detail in Counsell, 2018.
5 An example of this situation is the Basin Bridge proposal to develop the roading network around Wellington's Basin Reserve: see Board of Inquiry, 2014.
6 *Federated Farmers of New Zealand (Inc) Mackenzie Branch v Mackenzie District Council* [2017] NZEnvC 53 at [456].
7 *Meridian Energy Ltd v Central Otago District Council and Ors* HC Dun CIV-2009-412-000980, 16 August 2010, at [95]–[116].
8 *Bunnings Limited v Queenstown Lakes District Council* [2019] NZEnvC 59 at [181].

Acknowledgements

The author acknowledges the helpful comments of Geoffrey Palmer, Lewis Evans and an anonymous reviewer.

References

Board of Inquiry (2014) *Final Report and Decision of the Board of Inquiry into the Basin Bridge Proposal*, August

Counsell, K. (2018) 'Privacy versus views: a law and economics approach to balancing conflicting urban values', *New Zealand Journal of Environmental Law*, 22, pp.147–67

Keohane, N.O. and S.M. Olmstead (2016) *Markets and the Environment*, 2nd edn, Washington: Island Press

Palmer, G. and R. Clarke (2022) 'A new Natural Environment Act is needed – now', *Policy Quarterly*, 18 (2), pp.3–9

Parker, D. (2022) 'Faster, cheaper, better resource management law given first reading', media release, 22 November, https://www.beehive.govt.nz/release/faster-cheaper-better-resource-management-law-given-first-reading

Resource Management Review Panel (2019) 'Transforming the resource management system: opportunities for change', issues and options paper, November, Wellington: Resource Management Review Panel

Resource Management Review Panel (2020) *New Directions for Resource Management in New Zealand*, report of the Resource Management Review Panel, June, Wellington: Resource Management Review Panel

Upton, S. (1995) 'The Stace Hammond Grace Lecture: purpose and principle in the Resource Management Act', *Waikato Law Review*, 3, pp.17–55