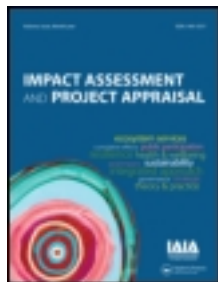


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Applying strategic environmental assessment to land-use and resource-management plans in Scotland and New Zealand: a comparison

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SEA comparative analysis

Applying strategic environmental assessment to land-use and resource-management plans in Scotland and New Zealand: a comparison

Tony Jackson and Jennifer Dixon

Case studies are used to compare the use of strategic environmental assessment (SEA) Scotland and New Zealand by applying the Glasson-Gosling typology of SEA practice. The results suggest SEA's effectiveness in promoting sustainability is determined by its capacity to shape the decision-making processes governing all aspects of spatial development. New Zealand's Resource Management Act confines SEA to evaluating environmental aspects of territorial land-use and resource-management plans. Without efforts to integrate SEA into new community planning powers under the 2002 Local Government Act, this will limit its use in supporting broader sustainability objectives. Scotland's recent Environmental Assessment Act embraces all public-sector policies, plans and programmes, offering SEA more scope for influencing policy formulation and the delivery of sustainable development.

Keywords: strategic environmental assessment, New Zealand Resource Management Act 1991, EU SEA Directive, sustainable development, Environmental Assessment (Scotland) Act 2005

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A SERIES OF INITIATIVES since the start of the 1990s has attempted to reshape land-use and resource-management systems in New Zealand and Scotland into tools for promoting sustainable development. Yet measurable progress in implementing appropriate policies remains slow. A survey undertaken by New Zealand's Parliamentary Commissioner for the Environment of his country's efforts to implement Agenda 21 since the 1992 Rio Earth Summit observed that the country's innovative 1991 Resource Management Act (RMA) had played a "dominant role ... in shaping New Zealand thinking about sustainability (i.e. it is an environmental matter)", and that this "appears to have slowed the adoption of sustainability principles into economic and social policies" (PCE, 2002: 4).

In a similar vein, three years after the establishment of a devolved assembly, an environmental group commissioned a report from a retired senior Scottish civil servant (Birley, 2001) to review the Scottish Executive's progress on implementing a sustainable development strategy. This concluded that the Executive was confusing actions with coherent policies. In publicising these findings, the commissioning group asserted "the bits don't hang together ... There's no strategy, and no analysis on which to base one ... It's like a string of beads without the string" (WWF-Scotland, 2001: 1).

Strategic environmental assessment (SEA) is regarded as a key element of a new range of instruments that are intended to promote greater coherence in the delivery of sustainability. Théritel *et al* (1992: 19–20) define it as a:

formalised, systematic and comprehensive process of evaluating the environmental impacts of a policy, plan or programme (PPP) and its alternatives, including the preparation of a written report on the findings of that evaluation, and using the findings in publicly accountable decision-making.

New Zealand and Scotland have both legislated to give environmental assessment (EA) a central role in promoting sustainable resource management and development. A comparison of the use they make of SEA to this end provides an insight into its effectiveness as a tool of environmental governance (Jordan *et al.*, 2003).

New Zealand applies SEA techniques through legislation that gives land-use planning a central role in protecting the environment and delivering sustainable resource management. Under the RMA, statutory planning is mandated to manage the use, development and protection of natural and physical resources so as to enable (RMA, 1991: section 5):

people and communities to provide for their social, economic and cultural well-being and for their health and safety [, while] sustaining the potential of natural and physical resources [,] safeguarding the life-supporting capacity [of the biosphere, and] avoiding, remedying, or mitigating any adverse effects of activities on the environment.”

In Scotland, the 2001 European Union (EU) Directive “on the assessment of the effects of certain plans and programmes on the environment” (CEC, 2001) has been operative since July 2004. Commonly termed the SEA Directive, it requires member states (CEC, 2001: article 1)

to provide for a high level of protection of the environment and to contribute to the integration of environmental considerations into the preparation and adoption of plans and programmes with a view to promoting sustainable development, by ensuring that ... an environmental assessment is carried out on certain plans and programmes which are likely to have significant effects on the environment.

Since late 2005, the Directive has been augmented by primary legislation that extends the remit of SEA beyond statutory planning and resource management, embedding it into all forms of Scottish policy formulation (Jackson and Illsley, 2006).

Following a review of the current role of SEA in Scotland and New Zealand, a typology is proposed for classifying their SEA practices. Typological descriptors are then applied to brief case studies of the current application of SEA to the development process within each jurisdiction. This serves as the basis for our analysis of SEA’s role in supporting a more

Since 1999, land-use planning and environmental protection have been devolved to a Scottish Executive answerable to the Scottish Parliament: current guidance requires land-use policies to address the economic, social and environmental issues of sustainable development

coherent approach to sustainable development within two jurisdictions that are pioneering innovative forms of environmental governance.

Scottish statutory planning and SEA

Since 1999, the functions of land-use planning and environmental protection have been devolved to a Scottish Executive answerable to a directly-elected Scottish Parliament. Current Scottish Executive guidance requires land-use policies to address the economic, social and environmental issues of sustainable development. Statutory planning is tasked with guiding “the future development and use of land in cities, towns and rural areas in the long term public interest ... to ensure that development and changes in land use occur in suitable locations and are sustainable” (SEDD, 2002: paragraph 4). The delivery of these objectives requires “co-ordinated action to combine economic competitiveness and social justice with environmental quality and justice”, with planning “providing a means of integrating policies and decision making through its influence over the location of development and other changes in the way land is used” (SEDD, 2002: paragraphs 6–7).

The range of policy instruments available to Scottish planners to fulfil this remit has expanded since the start of the 1990s. Project-based environmental impact assessment (EIA) is now firmly embedded within the statutory planning system, following implementation of the 1985 EU EIA Directive and its 1997 revision, which tightened various requirements in the light of operational experience (SEDD, 1999a; 1999b). Strategic assessment of Scottish development plans evolved from a Whitehall emphasis on desk-based in-house environmental policy appraisal (DoE, 1991). This was followed by good practice guides for planning authorities (DoE, 1993; DTA, 1995) that still focused primarily on environmental considerations.

At the end of the decade, Scottish planning authorities began to use an assessment technique termed sustainability appraisal, which was initially

developed for the new English regional bodies (Baker Associates, 1999; DETR, 2000b). This offers an objectives-led methodology that embraces all effects, socio-economic as well as environmental, to test development plans for their compliance with local, regional or national sustainability frameworks.

This voluntary application of SEA techniques predated the mandatory requirements of the Directive. Interim Scottish planning guidance (DTA, 2003) acknowledged that existing assessment practices would not suffice to meet the requirements of the regulations transposing the Directive. Greater emphasis needs to be given to:

- collecting and presenting baseline environmental information;
- predicting the significant environmental effects of the plan and addressing them during its preparation;
- identifying strategic alternatives and their effects;
- consulting the public and environmental authorities as part of the assessment process;
- monitoring the actual effects of the plan during implementation.

Although the Directive is intended to increase the effectiveness of SEA by giving it mandatory status across the European Union, agreement on its content was only reached by confining its application to a limited range of plans and programmes. These essentially cover activities already subject to the EIA Directives. Member states are obliged to apply SEA to public-sector statutory plans and programmes that set the framework for future development consent for projects, or that cover sites included within the Habitats Directive, or otherwise provide the basis for future development consent. All PPPs that fall out-with these provisions, including all non-statutory government policies, are exempted.

This restricted coverage of PPPs proved unacceptable to the Scottish coalition government formed in 2003 with a remit to create “a Scotland that delivers sustainable development; that puts environmental concerns at the heart of public policy and secures environmental justice for all of Scotland’s communities” (SE, 2003: 5). The same Partnership Agreement promised additional primary SEA legislation “to ensure that the full environmental impacts of all new strategies, programmes and plans developed by the public sector are properly considered” (SE, 2003: 47). The realisation of this commitment, the Environmental Assessment (Scotland) Act 2005, now extends SEA to all public-sector PPPs under Scottish jurisdiction.

Scottish Ministers have invested considerable political capital in this extension of the role of SEA. Seen as the flagship of Scotland’s commitment to sustainable development, the new Act has been described as “a major advance in public policy” (SEEG, 2005: paragraph 2.6) that will put “Scotland ahead of Europe in the protection we afford to the

environment” (SEIS, 2005). Our Scottish case study reviews a pre-Directive example of the application of SEA to a local planning authority structure plan, and considers the changes that will be required under this new legislation.

New Zealand effects-based planning and SEA

The radical overhaul of New Zealand’s approach to environmental governance reflects the country’s ideological switch in development strategies since the mid-1980s. A market-driven emphasis on deregulation, down-sizing of the public sector, and the opening up of domestic markets to international competition has replaced previous heavy reliance on State corporatism to promote commodity exports within a highly protected domestic market. The RMA is the result of applying this philosophy to the development process, prompting one commentator to describe the Act as “an attempt to establish two potentially conflicting ideologies — economic liberalism and sustainability — for planning” (Gleeson, 2000: 116).

The Act is a major piece of consolidating legislation that has fundamentally refocused the thrust of land-use planning and resource management in New Zealand. It supersedes more than 50 planning, conservation and environmental protection statutes, previously enforced with little attempt at co-ordination by individual ministries, agencies and authorities. It offers a co-operative and devolved mandate for integrating the planning and environmental management of land and resources (Berke *et al*, 1999). This is delivered largely through a set of local government policy statements and plans, which establish policy frameworks and rules for managing development within districts and regions.

In terms of planning practice, the RMA facilitated a shift from prescriptive zoning of activities to an effects-based planning regime that places primary emphasis on the biophysical environment, with limited consideration of social and economic effects. In practice, it has taken time to put this switch in emphasis into effect, and the first generation of RMA policy statements and plans have adopted a mixed approach (Ericksen *et al*, 2004).

Developments that are not permitted or are prohibited in the relevant plan must submit an “assessment of environmental effects” as part of the process of obtaining resource consents (RMA, 1991: schedule 4). This places EIA-type procedures at the heart of development control. Applicants need to show that they can meet requisite performance standards and “avoid, remedy or mitigate” potential environmental externalities (RMA, 1991: section 5).

The Act’s neo-liberal roots attempt to confine public intervention in the development process to the environmental externalities that market forces cannot address, whilst its environmentalist ethos strives to ensure effective assessment and internalisation of

Slow emergence of official guidance on national policies and environmental standards, together with the absence of any specific mandate for the technique in the Resource Management Act, meant that SEA was initially applied in New Zealand without a coherent methodology

these externalities (Jackson and Dixon, in press). The result is a system that aims to make the 'developer-as-potential-polluter' pay for avoidance, remediation or mitigation of those environmental costs of development that would otherwise be borne by the community as a whole.

Sections 24 and 36 of the RMA promote the use of economic instruments, allowing planning authorities to pass on the costs of administering the resource consent system, including any modifications to plans, in the form of charges to applicants. Since the plans required under the Act must specify the criteria for determining resource consents in terms of their environmental effects, their drafting of necessity embodies at least an implicit form of SEA.

The slow emergence of official guidance on national policies and environmental standards, together with the absence of any specific mandate for the technique in the RMA, meant that SEA was initially applied in New Zealand without a coherent methodology, as our case study makes clear. However, recent pieces of government legislation amending the RMA and broadening the Local Government Act 2002 to incorporate a stronger strategic planning role have gone some way to rectifying the situation. This Act obliges local government to prepare long-term council community plans (LTCCPs) that promote sustainable development objectives. Major amendments to the RMA passed in 2005 strengthen the integration of planning documents at the district and regional level and facilitate the preparation of more national policy statements and national environmental standards (Benson-Pope, 2004).

Classifying the role of SEA in planning

The following typology for SEA (adapted from Glasson and Gosling, 2001: 92) identifies the various ways in which this technique may be incorporated into the preparation of PPPs:

- the incremental model, or 'EA as plan-making'. This envisages the extension of project-based assessment techniques to policy formulation. SEA

is seen as an integral part of the assessment of individual projects for their sustainability implications. At a strategic level, assessment is applied on a seamless, rolling basis both to monitor the aggregate impact of specific developments, and to update or modify the implementation of the current PPPs that set the parameters for such developments.

- the stapled model, or an 'EA of plans'. SEA is a distinct exercise, undertaken at a specific stage of the plan-making process. It acts as a quality assurance process, normally proofing the final stage of plan preparation, in which all PPP options have already been determined. The subsequent EIA of projects is intended to dovetail with the strategic guidelines established in the assessed development plan.
- the concurrent model, or 'EA in plan-making'. SEA is a distinct exercise undertaken at various stages of the plan-making process in an iterative fashion. The assessment process runs in parallel to the preparation of a PPP, appraising each stage: strategy, options, specific policies and proposals, and allowing revisions to be incorporated on an ongoing basis. As in the stapled version, the assessed plan sets the parameters for subsequent EIA of projects.
- the holistic model, or 'plan-making as EA'. EA becomes the tenet of the plan-making process to the extent that its presence as a separate aspect of policy formulation disappears. Assessment techniques form an integral part of the preparation of all PPPs, which implicitly incorporate SEA. The EIA of projects is the end-product of a strategic overview of policy formulation that embraces sustainability.

Applying this typology to our two planning regimes allows us to identify the distinctive features of their use of SEA, which reflect different conceptualisations of its role in promoting sustainability.

Scottish approach: concurrent or stapled?

The SEA Directive places primary emphasis on the establishment of an environmental baseline and the changes predicted in this, consequent on adoption of the plan. This approach to SEA has been characterised as incremental ('EA as plan-making'), 'bottom-up' (Marsden, 2002) or 'baseline-led' (Smith and Sheate, 2001).

By contrast, as we noted above, the preferred methodology for applying SEA to statutory land-use development plans prior to the transposition of the Directive, sustainability appraisal, applies a set of sustainability criteria derived from a government sustainable development framework to assess a PPP against official sustainability objectives. Official advocates of this technique claim that objectives-led SEA promotes "precision through the use of objectives and targets to define sustainable development benchmarks, against which the emerging ... strategy

can be iteratively appraised" (DETR, 2000b: paragraph 2.6).

A number of evaluations of the application of objectives-led SEA to UK development plans have been undertaken (see, for example, Carter *et al.*, 2003; Counsell and Houghton, 2002; Curran *et al.*, 1998; Short *et al.*, 2003; Smith and Sheate, 2001). Surveying its use purely for the environmental elements of a plan, Curran *et al.* (1998: 429) conclude that:

the utility of an environmental appraisal depends on the *stage at which it takes place during the plan-preparation process* and the *degree to which the findings of the appraisal are integrated into the decision-making stage.* [original emphasis]

In a subsequent review of the effectiveness of this approach following its extension to the socio-economic elements of plans, Thérivel and Minas (2002) confirmed the importance of early and iterative assessment of strategic options, and identified the need for an independent element of appraisal to introduce fresh thinking and add authority to the process.

Both these post-audit evaluations offered strong support for the concurrent model of SEA, regarding this as an integral part of the overall plan preparation process: 'EA in plan-making'. Yet surveys of Scottish local planning authorities undertaken prior to the implementation of the EU Directive (Walsh and Brand, 1998) found little evidence that SEA was being applied in this iterative fashion, initiating the process at an early stage in development plan preparation and running it in parallel with the overall drafting and consultation exercise. As well as being deemed too demanding in terms of staff resources, evolving 'best practice' in England worked against this approach.

Sustainability appraisal first became a statutory requirement under the 1999 legislation establishing new English regional development bodies. Whitehall issued guidance to these bodies (DETR, 2000b) recommending the use of external consultants to ensure the independence of the appraisal process. Although well-intentioned, this advice and the ensuing consultancy reports on English regional planning and economic strategies encouraged local authorities across the UK to apply a stapled form of SEA to their plans.

Independent consultants were commissioned to undertake SEAs and produced environmental reports, without any prior engagement with the plan preparation process, as a one-off proofing exercise. This resulted in an 'EA of plans', applied at a late stage in the process, after preferred options had already been identified. Our Scottish case study offers an alternative, concurrent, example of the use of SEA.

New Zealand approach: incremental or holistic?

Attempts by New Zealand legislators to identify best practice in delivering effects-based planning in the

late 1980s pre-dated subsequent advances in the strategic aspects of environmental assessment methodology. As a result, although EIA lies at the heart of the Act, and there are a number of clauses that allude to SEA processes (for example, as discussed below, the requirement to undertake a section 32 analysis to test the underlying rationale of any plan), the RMA does not provide a specific mandate for SEA of plans and programmes.

There is no mention of the term SEA or any variant of it in the Act. There is no statutory requirement to prepare an SEA report. Furthermore, there is no provision for an independent review of an SEA process. It is only recently, as a result of amendments to the Act, that the provisions for policy analysis and monitoring have been strengthened. For example, councils must now prepare a report under section 32 and publicly notify five-yearly reviews of the results of monitoring planning policies.

Whilst decisions of the councils can be contested in the Environment Court, the criteria used by the Court are determined by the Act, rather than what might constitute good SEA practice. There has, however, been a discernible shift away from a somewhat narrow legalistic interpretation of section 5 of the Act in favour of adopting a wider view of sustainable development.

This was noted by Skelton and Memon (2002), who reviewed a number of recent Environment Court decisions. They observed that a broad judgmental approach as to overall intent (as opposed to one that might single out a particular element of the meaning of sustainable development) was now generally applied by the Court. Despite such recent amendments and reinterpretations, the mandate for SEA within the RMA remains partial at best and is more appropriately characterised as providing for a form of environmental policy appraisal.

This means that the role of SEA in New Zealand has to be construed with reference to the RMA's broader institutional context (Dixon, 2005). Councils are required to take account of other management plans and strategies when developing plans under the RMA. At a policy level, horizontal and vertical linkages are formally required with other policy instruments such as *iwi* (Maori tribal) management plans, and conservation management strategies prepared by the Department of Conservation.

Beyond the statutory requirements, other documents can also be influential. These include an increasing raft of documents, including growth strategies, strategic and structure plans, which have significant environmental implications but are prepared by councils under other mandates. For example, the new LTCCPs under the Local Government Act 2002 will become the key strategic planning document and set the overall strategic directions for councils. These will need to be aligned with statutory planning policies in regional policy statements and regional and district plans, along with other council plans. Central government has also recently

committed itself to an action programme for promoting sustainable development with a focus on sustainable cities (DPMC, 2003).

These parallel policy developments suggest that the appraisal processes for plans and policy statements drafted under the RMA's provisions do not in themselves provide the means for full assessment of their overall impact on sustainability, either defined purely in terms of environmental effects, or more broadly to include socio-economic considerations (Dixon, 2002).

This leaves open the question of whether the Act's appraisal processes, however imperfect, demonstrate elements of an incremental or holistic approach to SEA. Do they merely seek to extend the assessment of environmental effects required of non-compliant development proposals to plans and policy statements, to produce 'EA as plan-making'? Alternatively, is the overall plan-making process to establish the environmental performance criteria under which resource consents will be granted so imbued with the precepts of environmental assessment that SEA as a separate exercise simply disappears, resulting in 'plan-making as EA'? Our New Zealand case study attempts to shed further light on this.

Case studies of land-use plans

Scotland: Perth and Kinross Structure Plan

The current structure plan for Perth and Kinross, a planning authority that straddles the divide between the urbanised central lowlands and the sparsely populated highlands of Scotland, was completed in 2002 (PKC, 2002b). It sets out the key strategic land-use policies into which new local development plans for the area must fit. Instead of employing external consultants, the local authority contracted another of its departments, Environment Services, to undertake an independent iterative appraisal of the sustainability of the structure plan policies drafted by its Planning and Development Services staff. The brief covered four elements:

- identification of sustainability criteria or indicators appropriate to Perth and Kinross;
- assessment of the draft Structure Plan and its strategy, policies and proposals against identified criteria;
- identification of key performance indicators to allow ongoing assessment, monitoring and appropriate review of the Structure Plan throughout its lifetime; and
- re-assessment of the Finalized Structure Plan strategy, policies and proposals against the identified sustainability criteria, prior to its submission to the Scottish Ministers (PKC, 2002a).

Table 1 summarises the iterative five-stage objective-led appraisal methodology set out in UK government guidance prior to the EU SEA Directive, which is designed to run concurrently alongside the seven-stage preparation of a development plan. The key to this approach is the selection of appropriate sustainability criteria, indicators and targets. Their use allows the process of assessment to be broken down into individual elements each capable of being evaluated for validity and consistency during the initial plan appraisal, with the same criteria subsequently being used in monitoring and evaluating plan performance. Esson *et al* (2004) review in detail how the various stages of this methodology were applied to the Perth and Kinross Structure Plan.

The first stage was to draw on Scottish and UK sustainable development frameworks (DETR, 2000a; SEEG, 2002) to construct an appropriate suite of sustainability criteria, incorporating all current Scottish sustainability policies. As Table 2 indicates, in contrast to the bio-physical approach inherent in the RMA, this methodology immediately introduces socio-economic as well as environmental considerations into the assessment process. For example, the six components making up the travel criterion under "effective protection of the environment" were taken from the Scottish Integrated Transport White Paper (SO, 1998), which identified a need for:

Table 1. Integration of sustainability appraisal and plan preparation

Preparation of plan	Stages in sustainability appraisal
1. Baseline studies	a. Establish appraisal criteria by taking sustainability objectives, targets and indicators from UK strategy and regional sustainability framework, comparing these with draft plan objectives, targets and indicators
2. Setting of strategic objectives	b. Sustainability scoping to determine internal consistency and coverage of plan strategy and policies with sustainability objectives
3. Option development and selection	c. Appraisal of spatial options against sustainability objectives
4. Policy development and preparation of draft plan	d. Iterative appraisal of policies using a matrix to score each plan policy against each sustainability objective
5. Policy evaluation and modifications	
6. Implement plan and monitor	e. Confirm indicators and targets to be applied in monitoring and evaluation of plan performance
7. Review plan and evaluate	

Source: Baker Associates (1999)

In the Scottish case study, the first stage was to construct a suite of sustainability criteria, incorporating all current Scottish sustainability policies: this methodology immediately introduces socio-economic and environmental considerations into the assessment process

- better integrated planning of transport infrastructure;
- better use of existing transport systems;
- reduced car dependence, especially in towns;
- a switch in emphasis from roads to other transport modes;
- tackling poor air quality caused by excessive traffic;
- a reduction in road freight impacts.

The second stage in this methodology applied a simple checklist to cross-reference the sustainability themes identified in the draft Structure Plan and listed in Table 2 against this suite of sustainability criteria. This served as a basic scoping test to indicate whether the strategy drafted for the new structure plan

adequately embraced all aspects of Scottish sustainable development policies. A similar process was applied at the third stage to appraise the plan's spatial options and to help determine the preferred approach.

Planning policies and proposals could be then drafted to implement the chosen spatial option, permitting the fourth stage of the appraisal process. This consisted of the application of a matrix to score each of the draft plan's 53 planning policies and three further proposals against each of the 20 sustainability criteria listed in Table 2. The matrix used a subjective grading system employing pluses and minuses to indicate whether, in what direction, and to what extent, each specific policy had any impact on any of the criteria.

Armed with matrix assessments under each of these 20 criteria, the overall results for each policy were then converted into a grading scale indicating the sustainability of the policy as a whole. This applied a 'traffic lights' test: green, indicating go with the policy; amber, indicating modify policy; red, indicating review policy. These colour scales for each policy were then summarised for the whole plan in a 56-column by 20-row colour-coded matrix.

Fourteen policies (25%) were given a 'red' grading, indicating need for significant review, and 22 (39%) an 'amber' grading, indicating a need for more minor modification, leaving 20 (36%) judged to be sustainable without amendment. The extent to which this appraisal of the draft plan resulted in subsequent changes can be gauged by inspecting the revisions to the policies included in the finalised plan (PKC, 2002b).

Table 2. Scoping the Perth and Kinross Structure Plan themes and strategy against sustainability criteria

Plan themes and strategy	Sustainability criteria
1. Building sustainable communities: <ul style="list-style-type: none"> - travel and accessibility - healthy and safe environment - provision of housing - access to employment 	a. Social progress that recognises the needs of everyone: <ul style="list-style-type: none"> - housing - access - training - participation - safety
2. Creating a sustainable economy: <ul style="list-style-type: none"> - generation of sustainable growth - creation of job opportunities - support of indigenous business - attraction of inward investment - meeting local needs locally 	b. Effective protection of the environment: <ul style="list-style-type: none"> - travel - pollution prevention - protection and enhancement of open space, landscape and biodiversity - built environment - cultural heritage
3. Managing the environment: <ul style="list-style-type: none"> - care of natural environment - urban environmental quality - resource management 	c. Prudent use of natural resources: <ul style="list-style-type: none"> - waste - water - energy - land and soil - air
	d. Maintenance of high and stable levels of economic growth and employment: <ul style="list-style-type: none"> - diversification - employment - vitality - investment - entrepreneurship

Source: PKC (2000a)

The final stage of the appraisal process identified key quantifiable performance indicators for the plan themes and strategy, to allow ongoing assessment, monitoring and review of the plan throughout its lifetime (Esson *et al.*, 2004). This element of the exercise represents an embryonic acknowledgement of the more demanding SEA Directive baseline requirements now in force. These require a 'responsible authority' to include in its environmental report an assessment of the current state of the environment of the area covered by the plan, a prediction and evaluation of any significant environmental changes stemming from plan implementation, and proposals to monitor actual outcomes against predictions.

The use of an objectives-led SEA methodology prior to the transposition of the Directive diverted Scottish planning authorities from efforts to measure and monitor environmental baselines. However, as our case study indicates, it is perfectly feasible for planning authorities to develop the capacity to meet these requirements in-house, tapping into the growing environmental databases being made available. Extension of the performance indicator element of the Perth and Kinross exercise would offer a concurrent SEA model for local authority development plans that integrated baseline and objectives-led methodologies. The same approach can also be used to monitor and evaluate post-assessment delivery and to take corrective action where required.

New Zealand: Waitakere City Council Plan

Under the RMA, territorial authorities (districts and city councils) have primary responsibility for the effects of land use and are required to produce spatial plans. Regions, which have responsibility for water use, the marine environment and the control of discharges to the environment, are required to produce plans for coastal areas, permitted to do so for their other functions, and obliged to produce policy statements.

As the latest official guidance (Willis, 2003) observes, the RMA is prescriptive about the formulation of policy statements and plans. The Act indicates: how policy statements and plans must be developed, by setting out the requisite processes; what context the plans must include, by establishing the provisions; and how they must be appraised, by laying down the tests to be applied.

Sections 62, 67, and 75 of the RMA list the contents of regional policy statements, regional plans and district plans, which all have the following common provisions:

- issues to be addressed;
- objectives to be achieved;
- policies regarding the issues and objectives;
- methods (including rules) to implement the policies;
- environmental results anticipated.

To make plans more streamlined and accessible, a recent amendment to the Act enables councils, if they wish, to include only objectives, policies and rules in regional and district plans. Nevertheless, if councils take up this opportunity, it is most likely that the non-mandatory provisions for issues, methods and environmental results will be produced in separate documentation. Taken together, these provisions form a loose relationship with what is generally recognised as SEA. The requirement to specify the "environmental results anticipated" can be interpreted as demanding that such plans and policy statements should be drafted to incorporate an SEA of their significant effects.

Such an interpretation sits uncomfortably alongside section 32 of the Act, however, which obliges regions and districts not merely to appraise but to justify the plans and policy statements used for delivering the functions of the RMA. In its original form, section 32 imposed an obligation on local authorities to consider alternatives and evaluate benefits and costs so that:

they be satisfied that the proposed objective, policy, rule, or other method is necessary in achieving the purpose of the Act, and is the most appropriate means of exercising the function, having regard to its efficiency and effectiveness relative to other means. (Fisher, 1992: A4-12)

This section has since been amended, but the new version remains essentially a neo-liberal 'new public management' regulatory test of the need for any form of intervention, as the relevant extracts listed in Table 3 indicate.

Official guidance does little to promote the belief that the evaluation report under section 32(5) in Table 3 should cover the issues included in the report generated by an SEA. Typically the environmental report elsewhere is intended to aid decision-makers in identifying the environmental implications of adopting a plan, predicting changes consequent on its adoption, and offering a check on the conformity of the plan with current environmental policy frameworks.

Typically, the environmental report is intended to aid decision-makers to identify the environmental implications of adopting a plan, predicting changes consequent on its adoption, and offering a check on the conformity of the plan with current environmental policy frameworks

Table 3. Section 32 of the New Zealand Resource Management Act

32. Consideration of alternatives, benefits and costs

- (1) In achieving the purpose of this Act, before a proposed plan, proposed policy statement, change, or variation is publicly notified, a national policy statement or New Zealand coastal policy statement is notified under section 48, or a regulation is made, an evaluation must be carried out ...
- (3) An evaluation must examine
 - a. the extent to which each objective is the most appropriate way to achieve the purpose of this Act; and whether, having regard to their efficiency and effectiveness, the policies, rules, or other methods are the most appropriate
 - b. for achieving the objectives.
- (4) For the purposes of this examination, an evaluation must take into account
 - a. the benefits and costs of policies, rules, or other methods; and
 - b. the risks of acting or not acting if there is uncertain or insufficient information about the subject matter of the policies, rules, or other methods;
- (5) The person required to carry out an evaluation... must prepare a report summarizing the evaluation and giving reasons for that evaluation.
- (6) The report must be available for public inspection at the same time as the document to which the report relates is publicly notified or the regulation is made.

By contrast, the Ministry for the Environment's specific advice on section 32 states that a "council has to determine whether any plan provision is necessary to achieve the purpose of the RMA" and that this must be judged on the criteria of effectiveness and efficiency, the latter to be measured by "the ratio of benefits to costs (the higher the ratio, the greater the efficiency)" (MfE, 2000: 10). It goes on to assert that the:

"efficiency of a policy or method is best assessed by comparing the extent to which it achieves an objective ... against how much is foregone as a result of using that policy or method. The extent to which the purpose of the Act is achieved is calculated by subtracting environmental costs from environmental benefits. How much is foregone is worked out by subtracting social and economic benefits from social and economic costs. Efficiency is then determined by comparing the first value with the second. (MfE, 2000: 11)

This advice amounts to a form of regulatory impact assessment commonly applied by finance ministries when appraising any new policies. As such, to the extent that the costs and benefits generated by plans drafted under the RMA can be adequately identified and assigned commensurate values (which is arguable), section 32 fulfils a function that appears to be quite distinct from the purposes of SEA.

The Waitakere plan offers an illustration of the extent to which council practice complies with such guidance. Waitakere City Council notified its district plan in 1995. This later became identified as one of the country's leading examples of an effects-based plan by practitioners, as attested by a number of awards given to the Council and a research programme on plan quality and implementation (Berke, *et al.*, 1999; Ericksen *et al.*, 2004).

As part of its documentation, the Council prepared an analysis under section 32 of the Act to

fulfil its requirements when notifying its plan (WCC, 1995). The record begins with a background that sets out its purpose and contents. As a comparison with Table 3 can confirm, the contents section (and the format for the remainder of the report) follows the requirements of the Act very closely. The 399-page report is divided into 13 parts, based on the 12 policy sections of the plan, with a separate section on financial contributions. Each policy section is reviewed in relation to:

- a. identifying the objective, policies and rules relevant to each of the sections;
- b. listing the relevant documentation used in the development of each policy and method;
- c. an outline of why the objectives/policies/rules are necessary in achieving the purpose of the Act;
- d. consistency with other plans;
- e. a summary of reasons for and against, and costs and benefits of alternative methods (within which there is an explanation of the assessment of factors used in the cost-benefit analysis of alternative methods: effectiveness, implementation costs, and compliance costs).

Section (e) used two formats to present the analysis undertaken. First, the reasons for and against the methods adopted in respect of each policy were summarised using the simple effectiveness matrix illustrated in Table 4. The effectiveness of the regulatory approach proposed for each policy was judged against two possible alternatives:

- take no action: leave the issue to be dealt with by private decision-makers
- non-regulatory methods: use development impact fees to manage the location of future growth (WCC, 1995: 121).

The efficiency of the adopted policy was then evaluated against alternatives, using the cost-benefit matrix illustrated in Table 5. This employed a simple

Table 4. Effectiveness matrix for Waitakere section 32 report used to justify method adopted in respect of each policy in plan

Method	Reasons for	Reasons against
Take no action		
District Plan regulation		
Non-regulatory		

Source: WCC (1995)

scoring system of four categories for benefits or costs: major, moderate, minor through to nil (WCC, 1995: ii). Each section concluded with an explanatory statement justifying the particular method adopted. The record also contains a summary of the process undertaken to develop the plan, along with an archive of all the Council minutes, reports and other material received by the Council between January 1993 and September 1995. There is a detailed statement of the consultation process undertaken by the Council during the development of its plan (which was very extensive by most standards).

The Council's section 32 report demonstrates use of a systematic approach in justifying the adoption of particular policies in the Waitakere plan. The report follows the spirit of the Act very closely, but makes no attempt to adopt the approach subsequently suggested by official guidance (MfE, 2000). It offers a qualitative rather than quantitative assessment, similar to the objectives-led approach reviewed in our Scottish case study. There is no indication in the summary of costs and benefits of any calculation of a cost-benefit ratio to identify the scale of effects. It is doubtful in any event whether an attempt to attribute quantifiable effects of this nature to the adoption of a land-use plan is methodologically feasible (Jackson and Illsley, in press).

Inspection of subsequent section 32 reports indicates that the Waitakere approach set a benchmark for its time. The variation in quality of section 32 reports noted by Fookes (2000) confirms a trend already discernable by the mid-1990s (Dixon and Fookes, 1995).

Recent examples demonstrate less comprehensive approaches that are typical of current practice.

Section 32 reports prepared by Auckland City Council, in respect of contentious plan changes to intensify established residential neighbourhoods, simply document reasons for and against the inclusion of policies, and summarise in words the likely benefits and costs of retaining the *status quo* in respect of proposed objectives, policies, rules or other methods. A list of research and consultation undertaken is included, but no quantification of benefits or costs is attempted (ACC, 2003; 2005).

Such evidence of current SEA practice in New Zealand reveals a disjuncture between the neo-liberal rationale provided by official guidance on section 32 reports (MfE, 2000), and the impracticality of attempting to quantify the costs and benefits of higher-level policies in a system where political and professional capacity and funding has been under considerable pressure (Ericksen *et al*, 2004).

The evidence indicates that any report prepared under section 32 of the RMA by a council is necessarily limited to the provisions of the Act and cannot be seen, by itself, as a reliable form of SEA. Nor can it be claimed to offer an holistic example of SEA. The tests applied by Waitakere in its analysis, which is still an example of best practice, make no explicit reference to sustainability, although the plan itself was significantly driven by that goal.

Given the weak and diffuse nature of the SEA mandate under the RMA, which in practice appears to reflect an incremental form of assessment, reference to other documentation would be required to undertake an adequate appraisal of sustainability of a district or regional plan in any New Zealand council. This would have to include annual Council plans and reports, monitoring reports, the long-term council community plan, policy statements and documents prepared by external agencies that influence council planning policy, and other reviews that may have been undertaken within or outside the council.

Conclusions

The case studies briefly reviewed in this paper, together with our analysis of how SEA has been integrated into what are now very different planning regimes, provide an indication of the potential of this technique as an instrument of environmental

Table 5: Efficiency cost-benefit matrix for Waitakere section 32 report

Assessment factors	Take no action		District Plan regulation		Non-regulatory		High regulation	
	C	B	C	B	C	B	C	B
Effectiveness								
Implementation costs								
Compliance costs								

Source: WCC (1995)

governance in land-use systems as diverse as Scotland and New Zealand. Current SEA practice offers a test of the commitment of both countries to the notion of sustainable development, and also of their belief in the efficacy of SEA as a means of delivering this. Policy-makers in both jurisdictions are beginning to explore the holistic model of SEA, in which environmental assessment becomes the tenet of the plan-making process to the extent that its presence as a separate exercise disappears, and plan-making becomes a form of environmental assessment: 'plan-making as EA'.

This can be seen most clearly in recent Scottish initiatives. The Environmental Assessment (Scotland) Act 2005 allows SEA to be used as a tool for reshaping the delivery of sustainable development objectives. The benefits identified by the Scottish Executive from a uniform application of SEA across Scottish public-sector PPPs have been summarised under three headings:

- contributing to the Executive's aim of improving the Scottish environment and making Scotland more sustainable;
- improving policy-making by ensuring that environmental effects are fully considered at an early stage in policy formulation and that the environmental effects of different options are assessed;
- promoting more open government by allowing the public and interested organisations to comment on environmental reports, and obliging public bodies to explain how they have taken such comments into account (SEEG, 2004: section 1.3).

This is an ambitious agenda for SEA. It has yet to be demonstrated that SEA processes that fulfil the requirements of the European Union Directive provide the flexibility to allow the same methodology to be applied in a uniform manner across the full range of PPPs, including both higher-level strategies and local plans.

The Scottish approach does, however, represent an advance over the piecemeal application of the technique in the rest of the UK. This entails strict compliance with the terms of the Directive, meaning that large areas of policy-, plan- and programme-making that set the parameters of plans and programmes qualifying for SEA will themselves avoid such scrutiny.

Outwith Scotland, there is also no uniformity in SEA methodology (Jackson and Illsley, 2006). Planning authorities in England and Wales now have to deliver SEA as part of a statutory obligation to undertake sustainability appraisal of their development frameworks, whereas no such requirement applies to other responsible authorities subject to the SEA regulations.

Another feature of the Environmental Assessment (Scotland) Act 2005 that has attracted attention is the creation of a gateway unit located within the

Scottish Executive Environment Division to provide "a focal point for advisory, co-ordinating and management information functions" (SPCB, 2005: paragraph 56). The unit will monitor arrangements for screening, scoping and public consultation, supervise the exchange of information between public bodies responsible for undertaking SEAs and the statutory environmental consultees, and co-ordinate standards.

From a methodological perspective, one important benefit of exposing all Scottish public-sector PPPs to SEA is that this will provide a cascade of tiered SEA reports at different levels of decision-making. After the initial cycle, the gateway unit should be able to offer a comprehensive overview of the impact of public-sector PPPs on the Scottish environment. This will enable the effectiveness of the Scottish Executive's sustainable development strategy (SESDD, 2005) to be tested.

New Zealand faces similar challenges in its use of SEA. The RMA is focused specifically on the biophysical elements of sustainable resource management. This constraint has increasingly been found wanting in addressing the wider implications of sustainable development, which require the cumulative effects of specific developments to be assessed in terms of broader sustainability strategies for housing provision, transportation, waste management and energy use.

SEA provides the obvious tool to ensure that local development is dovetailed into a sustainable development framework. Fookes (2000: 91) observes that New Zealand practitioners feel that "there is little in the current planning documents or in section 32 reports that suggests any systematic analysis. It is also questioned whether local body politicians adequately appreciate the questions they should ask when carrying out their duties under section 32".

Some recent initiatives to enhance the strategic powers of local government offer a possible way out of the current impasse. These are most apparent in the Auckland city-region (Fookes, 2002). This contains a third of the country's population and displays many symptoms of unsustainable development in terms of traffic congestion, urban sprawl and increasing social exclusion attributable to escalating property values.

Since 1991, greater Auckland has been administered by seven territorial authorities and a regional council. Efforts to develop strategic spatial initiatives across the region on a collaborative basis were boosted by agreement on a Regional Growth Strategy in 1999 (ARGF, 1999), a Regional Economic Development Strategy in 2002 (ARC, 2002), and a Regional Transport Strategy in 2003 (ARC, 2003).

The 2002 Local Government Act gives local authorities the power to establish Regional Development Partnership programmes as well as obliging them to create LTCCPs. These spatial initiatives have been reinforced by central government's action

programme for promoting sustainable development (DPMC, 2003). It is to these broader spatial strategies that an holistic form of SEA might be applied, to link the environmental management and protection afforded by the RMA at a local level with the broader aims of sustainability.

The lessons of this comparative analysis of the evolution of SEA in the environmental governance of two similarly-sized economies that share a common planning heritage, point to the importance of tailoring assessment techniques to fit the decision-making processes used for delivering sustainable development strategies.

During the decade preceding implementation of the SEA Directive, Scotland gradually acquired experience in applying a coherent objective-led sustainability appraisal of its development-plan strategies, options and policies, designed to test their compatibility with the overall sustainable development framework for the country. This experience is now being used to extend the application of SEA across the Scottish public sector.

New Zealand's RMA, although hailed as a major piece of environmental legislation, was not drafted to provide a form of environmental governance that incorporated all the strategic elements of sustainable development. As a result, the use of SEA to this end has increasingly come to rely on the establishment of complementary spatial strategies.

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