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An analysis of the theoretical rationale for using strategic environmental assessment to deliver environmental justice in the light of the Scottish Environmental Assessment Act

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Abstract

The different ways in which its territorial jurisdictions have chosen to apply the European Union's (EU's) Directive on strategic environmental assessment (SEA) to their public sector policies, plans and programmes (PPPs) suggest that the United Kingdom (UK) continues to be uncertain about the theoretical rationale for this technique. In order to evaluate the analytical significance of these alternative interpretations, their methodological foundations need to be examined. Baseline-led approaches to SEA which are intended to operationalise sustainability can be shown to place unrealistic expectations on instrumental rationality. Objectives-led policy appraisal makes SEA contingent on whatever particular social construction of sustainable development holds sway. These expert-driven approaches contrast with a reflexive interpretation of environmental governance, in which SEA helps to expose the conflictual nature of public actions claiming to deliver sustainability, and offers stakeholders increased opportunities to challenge these. The approach adopted in Scotland, in which SEA forms part of an agenda for environmental justice, is evaluated in the light of this critique. The Scottish Executive's eclectic legislation, which covers all its public sector PPPs, may offer a way of mediating between these competing interpretations of SEA.

Keywords: Strategic Environmental Assessment; Environmental Assessment (Scotland) Act 2005; Environmental justice; European Union SEA directive

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1. Introduction: The methodological issues behind UK SEA practice

In their standard introduction to the subject, Thérivel et al. (1992, pp.19–20) describe SEA as a "formalised, systematic and comprehensive process of evaluating the environmental impacts of a PPP [policy, plan or programme] 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". The EU Directive 2001/42/EC on the Assessment of the Effects of Certain Plans and Programmes on the Environment (CEC, 2001), commonly termed the SEA Directive, sets out what Member States are required to do to give this process legal effect. It stipulates the screening requirements for determining whether SEA is required; scoping arrangements to identify the most significant effects of proposals that do require SEA; and the submission of an environmental report that must be subjected to public scrutiny before the adoption of any plan or programme requiring SEA.

The justification for imposing such a statutory obligation across the EU is that SEA offers a systematic framework for considering the environmental effects of public sector plans and programmes, and will "provide for a high level of protection of the environment and…contribute to the integration of environmental considerations into the preparation and adoption of plans and programmes with a view to promoting sustainable development" (CEC, 2001, Article 1). Despite this avowed belief in its efficacy, the Directive's fifteen articles and two annexes are not tied into an explicit delivery mechanism. It has been left to individual Member States to devise their own SEA methodology for realising these objectives. Their task has been complicated by an ongoing debate on the purpose of such forms of assessment, which is reflected in the emergence of a number of competing methodologies.

The UK's implementation of the Directive demonstrates the unresolved nature of this debate. Legislative devolution in the 1990s established territorial jurisdictions for Scotland and Wales and revived existing arrangements for Northern Ireland, leaving the UK legislature to pass Acts and approve regulations for activities covering the UK as a whole and for England. This has resulted in four different versions of the SEA Regulations, together with additional primary legislation incorporating SEA requirements that varies substantially between the territorial jurisdictions. The associated official guidance published on how to meet these SEA requirements demonstrates differing interpretations of its role in the formulation and implementation of public sector PPPs (Jackson and Illsley, 2006).

Analysis of these variations reveals the influence of three distinct SEA methodologies. The first is founded on a baseline-led approach, derived from environmental impact assessment (EIA), which seeks to predict changes in the current state of the environment attributable to the adoption of a PPP. The EU Directive appears to have been drafted around this methodology. The second uses objectives-led criteria derived from official sustainable development frameworks to proof a PPP for conformity with a set of desired outcomes. This provides an integrated approach covering socio-economic as well as environmental effects, which is favoured by policy-makers in the UK government. Both these expert-driven methodologies confine the use of SEA to a prescribed set of statutory plans and programmes that set the framework for future development consent. This denies the technique any role in assessing the environmental implications of higher-level official policies that establish the parameters for such PPPs. By contrast, the third approach, initiated by Scottish policy-makers, gives SEA a more significant role in environmental governance. Under the Environmental Assessment (Scotland) Act 2005, all Scottish public sector PPPs, whether statutorily required or simply voluntary in nature, must be screened for their environmental effects. Those deemed to have significant environmental implications require an SEA before they

can be adopted, applying an eclectic methodology intended to inform a normative agenda based on environmental justice (SEEG, 2005c).

Much of the relevant UK literature prior to the implementation of the SEA Directive focused on procedural rather than substantive issues, exploring ways of melding the EU and UK expert-driven approaches into an operative system of assessment (see, for example, Smith and Sheate, 2001a). Over the previous decade, UK planning authorities had pioneered an objectives-led methodology to assess their development plans. Originally termed environmental appraisal, it was subsequently widened to proof the economic strategies and spatial plans of the newly-formed English regional bodies against an official sustainable development framework which included socio-economic considerations. This led to the adoption of the term sustainability appraisal (SA) to describe the integrated form of this methodology. SA is officially defined as "a systematic and iterative process during the preparation of a plan or a strategy which identifies and reports on the extent to which the implementation of the plan or strategy would achieve the environmental, economic and social objectives by which sustainable development can be defined in order that the performance of the strategy and policies is improved" (DETR, 2000, para.2.1).

Continued official promotion of the use of SA at a UK government level has stimulated a search for ways of combining the relative merits of objectives-and baseline-led methodologies in applying the SEA Directive. The search has presumed that SEA can be adequately accommodated within an integrated appraisal process that includes socio-economic as well as environmental objectives. The Planning and Compulsory Purchase Act 2004 makes this approach mandatory in evaluating the land use development plans of planning authorities in England and Wales. Official guidance on meeting this requirement observes that although the "requirements to carry out a Sustainability Appraisal and a Strategic Environmental Assessment are distinct…it is possible to satisfy both through a single appraisal process" (ODPM, 2004, para.1.1.4).

This assertion that one technique can fulfil a number of requirements demonstrates a contestable belief that SEA does not confront 'wicked' problems (Rittel and Webber, 1973) that are "difficult to define, multi-faceted and infinitely malleable" (Campbell and Marshall, 2006, p.246), but addresses issues that present "delimitable, decomposable problems that can be managed in a linear way" (Voss et al., 2006, p.4). In its report on environmental planning, the UK's Royal Commission on Environmental Pollution drew on a number of submissions to observe that SA "has been criticised for its lack of quantification and for the 'poor science' involved in its environmental analyses" (RCEP, 2002, para.7.46). The Commission added its own concerns about the legitimacy of such an all-embracing approach, arguing that "where the driver or imperative for a PPP is an economic one, as it often is, appraising the effects of the PPP in terms of economic criteria and subsequently justifying it on that basis renders the appraisal meaningless" (ibid., para.7.47). After concluding that SA "can in fact marginalise the very environmental and social appraisals that it is supposed to bolster as a counterpoint to dominant financial and economic assessments" (ibid.), the Commission recommended strengthening the environmental component of current assessment processes (ibid., Recommendations).

The Scottish version of SEA accepts the Royal Commission's conclusions about SA. It makes "no statutory provision for the inclusion of social and economic factors in environmental reports", on the grounds that this "risks obscuring the environmental considerations that we are setting out to identify" (SEEG, 2005a, paras. 3.41–2). SEA is seen as a tool for encouraging policy-makers to mainstream environmental considerations. All Scottish "public sector strategies, programmes and plans likely to have significant environmental effects, regardless of whether they are required by legislative, regulatory or administrative means or of whether they set a framework for future development consents" (SEEG, 2003, para. 1.8) now qualify for SEA.

The Scottish Executive has chosen to link its version of SEA to an explicitly normative environmental agenda, in which the environmental effects of the development process are expected to conform to the principles of procedural and substantive fairness. Procedural fairness is focused on the adequacy of "information and opportunities necessary for people to participate in decisions about their environment"; its substantive component seeks to address "the distribution of the factors affecting environmental quality (both good and bad)" (SEEG, 2005c, p.2). Providing stakeholders with statutory rights to be consulted during the preparation of Scottish public sector PPPs is seen as a key stage in formulating a 'just' version of sustainability (Agyeman and Evans, 2004). A supervisory facility (the SEA Gateway) has been established, which allows the Scottish Executive to monitor the extent to which Scottish public sector PPPs meet these aims.

The role identified by the Scottish Executive for SEA can be interpreted as part of a reflexive approach to environmental governance. Public scrutiny of SEA reports facilitated by the Gateway should help to promote a broader dialogue about the distributional consequences of public sector decision-making processes (Connelly and Richardson, 2005). This interpretation of reflexivity goes beyond Beck's (2006) critique of the 'risk society', which focuses on governmental self-confrontation with unintended side effects of modernity. It forms part of a 'second-order' reflexivity, in which the pursuit of sustainability requires evaluation of the contradictory claims made by alternative development pathways. Voss et al. (2006, p.437) contend that this evaluative role is central to the realisation of truly sustainable development, providing "cognitive reflection and corresponding adaptation of problem-handling practices…that cope with side-effects by incorporating uncertainty, ambiguity and distributed control".

The ongoing debate on the merit of these alternative SEA methodologies draws attention to the need to re-examine the purpose of environmental assessment. Is this simply the instrumentally-rational task of 'operationalising' sustainability, which Owens and Cowell (2002, p.49) define as "translating a concept that is presumed to be agreed in principle into something workable on the ground"? Much current official UK guidance appears to take this view, for example emphasising the value of SA because it "promotes precision through the use of objectives and targets to define sustainable development benchmarks, against which the emerging…strategy can be iteratively appraised" (DETR, 2000, para. 2.6). Critics of this stance view the alternative SEA methodologies being deployed as "weapons" in an "analytical arms race", with their various claims of instrumental rationality used to mask "power struggles in which conceptions of what is sustainable are actively constructed and negotiated" (Owens and Cowell, 2002, p.50).

To make sense of these analytical power struggles, it is first necessary to inspect the methodological foundations on which they rest. Our paper draws on the variations in UK SEA methodology to explore its theoretical rationale. This is followed by an evaluation of the approach being introduced in Scotland. It is suggested that the Scottish model offers a way of mediating between competing interpretations of SEA.

2. A critique of expert-driven SEA methodologies

Expert-driven SEA methodologies are founded in a belief that instrumental rationality has the capacity to distil the environmental effects and sustainability implications of PPPs into "discrete dimensions of complex reality" (Voss et al., 2006, p.5). This section considers whether SEA is capable of realising such expectations. Two expert-driven SEA methodologies are reviewed: baseline-led and objectives-led forms of assessment. Both accord the assessor a technical role in evaluating PPPs, and limit the use of deliberative dialogue. Each replicates some elements of UK

practice. The analysis reviews the theoretical rationale and methodological rigour of these models, and their practical value as effective decision-making tools.

2.1. Baseline-led assessment

Baseline-led SEA methodology draws on a context-independent epistemology derived from the ecological sciences, applying techniques originally formulated for the EIA of specific projects. To meet the epistemic demands of the baseline-led model, the evidence gathered must be capable of independent testing and exposure to the rigours of scientific scrutiny. Gaps and uncertainties will always remain, but "scientific understanding is, and must remain, the essential basis for environmental standards" (RCEP, 1998, p.11). The land use policies and proposals contained in a spatial development plan can be shown to have a direct impact on the land, air or water quality of the area under consideration, allowing standard ecological assessment procedures to track the environmental pathways involved and to generate reasonably robust environmental predictions based on an area's state-of-the-environment review.

Assuming the physical pattern of development in an area is shaped by the adoption of a land use plan, the predicted localised environmental effects of subsequent changes in land use can thus be linked with some degree of confidence to the application of its policies and proposals. Any overall assessment of the environmental effects of such a plan must still address the difficult problems of non-localised cumulative and synergistic impacts on the environment attributable, for example, to road traffic, non-point forms of water pollution and carbon emissions. Since non-localised environmental effects form a sub-set of the overall assessment process, the particular methodological limitations involved in their estimation can be flagged. Nonetheless, the presence of these elements limits the extent to which the measurement of environmental impacts can achieve epistemic standards expected of scientific enquiry (RCEP, 1998).

Applying the same test, the socio-economic assessment techniques available are not sufficiently robust to offer plausible transmission mechanisms for linking the adoption of a PPP to changes in the relevant socio-economic baseline. The fungible nature of the modern market economy and the role of PPPs as intermediate inputs within this system present the greatest difficulties in this respect. Fungibility ensures that the impact of socio-economic effects is widely transmitted. The product and labour markets of an open economy disperse the socio-economic effects produced by changes in local activities far beyond the notional spatial or sectoral confines of any PPP. Local economies are reliant on their ability to sell the output of their principal economic drivers to non-local consumers. Since this is a two-way phenomenon, the economy of a locality or region is also host to a myriad of competing non-local influences.

Economists have formulated a variety of project appraisal techniques designed to capture the non-localised socio-economic impacts of new investments. These require the identification and measurement of deliverable final outputs, whether marketed or not, in order to estimate a project's direct, indirect and induced socio-economic effects (Jackson, 2002). The difficulty in extending such techniques to an integrated baseline model of assessment is that the contents of a standard PPP (such as the statements of principles and norms for guiding land and property development contained within a conventional UK development plan) are not blueprints for delivering final outcomes but aspirational intermediate inputs, the ultimate realisation of which depends on the actions of others.

This poses fundamental problems of attribution for this approach. Although some of the environmental effects stemming from the implementation of a PPP may be readily identifiable, integrated baseline-led methodology also seeks to attribute socio-economic changes to its adoption. The intermediate status of PPPs in a fungible market economy makes such attempts impracticable.

The European Commission's guidance on integrating environmental considerations into its Structural Funds' regional programmes of assistance acknowledges these difficulties. It notes that an area-based development programme is only one of a number of major influences operating over the same ground, and concludes that it is infeasible to attribute specific effects with any degree of certainty to the adoption of individual PPPs (ECOTEC, 1999, p.24).

Official guidance can still be found that completely discounts such problems. New Zealand's 1991 Resource Management Act, for example, combines environmental protection measures with land use planning controls in a resource consents system intended to facilitate the sustainable management of its bio-physical resources. The Act includes a requirement, Section 32, that has been widely interpreted as necessitating the SEA of relevant resource plans (Jackson and Dixon, 2006). The New Zealand Ministry for the Environment advises local councils when comparing alternative plan strategies under the Act to quantify all the variables in monetary terms, and then to apply a simple decision-making rule to select the most eco-efficient. This rule consists of calculating "the extent to which the purpose of the Act is achieved … 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, p.11).

Researchers such as Weston (2000) and Owens et al. (2004) conclude that decision-makers have never actually applied environmental assessment processes in this way. They go on to argue that decision-makers would be highly unlikely to adopt such an approach even if they were miraculously given access to a black box algorithm that could make all effects commensurate and attributable, and capable of delivering an unambiguous answer. When drafting a PPP, public bodies do not wait until all possible strategic options for development have been carefully assessed for their likely impacts, before proceeding on the basis of technical findings. Prior to applying any form of SEA, for example, the policy-making process has already pre-determined many of the issues through its screening and scoping procedures, applying a decision-frame that is itself imbued with value-judgements.

Much of the so-called post-modern critique of rational forms of planning and appraisal focuses on a failure to acknowledge the extent to which value-judgements pervade the selection of policies and constrain the options that are actually assessed (Fischer, 2003; Richardson, 2005). Owens et al. (2004, p.1946) contend that when appraisal processes are audited they often amount to little more than "post-demonstration of preconceived judgements", with "ethical and political choices masquerading as technical judgements, reinforcing prevailing norms and existing structures of power". A study of the Danish planning system prompts Flyvberg (1998, p.2) to observe that "rationality is context-dependent", that "the context of rationality is power", and that "[r]ationalisation presented as rationality is shown to be a principal strategy in the exercise of power". Stirling (2006, p. 230) argues that a reflexive pursuit of sustainable development requires "explicit recognition that policy appraisals are contingent and constructed, in part by commitments to the interventions that they ostensibly inform".

All these considerations amount to a formidable critique of any technical-rationalist justification for an expert-driven integrated baseline-led form of SEA. Rather than responding by acknowledging these limitations, the present methodological hybrid adopted for the assessment of spatial strategies and development framework documents in England and Wales is the product of an uneasy compromise by policy-makers. It seeks to retain the substantive benefits of proofing PPPs for compliance with official sustainability frameworks, whilst acknowledging the need for baseline impact studies to meet the procedural requirements of the SEA Directive. The guidance shifts uncertainly between attesting to the capacity of planning authorities to undertake baseline-led

integrated assessments, and advising that these cannot offer the quality of baseline data required in a technical-rational model of assessment: "in a Sustainability Appraisal it is not appropriate, and is often impracticable, to predict the effects of an individual proposal to the degree of detail that would normally be required for an Environmental Impact Assessment" (ODPM, 2005, para.1.12).

2.2. Objectives-led assessment

Sustainability appraisal (SA), the UK's objectives-led methodology, tests PPPs for their consistency with the objectives set out in official sustainable development frameworks. These frameworks (see, for example, DETR, 1999a) include no quantifiable targets or limits. As a result, the epistemic demands on such models are modest, and largely confined to tracking subsequent outcomes, which entails selecting suitable criteria from an official list of sustainable development indicators (for example, DETR, 1999b). As demonstrated by the case study reported in Esson et al. (2004), this approach converts SEA into a means of proofing PPPs for their conformity with the current official conceptualisation of sustainability.

To undertake this proofing, the criteria drawn from the official sustainable development framework and related policy documents articulating this are used to build a matrix against which the range of policies and proposals contained in the PPP can be evaluated. Construction of these matrices relies on professional judgement rather than any technical expertise: no methodological template has been developed for this purpose. The criteria are broadly aspirational (such as the need to reduce car dependency and to promote more renewable forms of energy). Since it does not incorporate baseline data, the use of a matrix only enables a qualitative judgement to be passed on a PPP's policies and proposals. Without quantifiable values, the overall SA process cannot be made commensurable. The results are usually tabulated as a chart indicating which elements of the PPP are moving in which direction with respect to sustainability.

Although provision is made for subsequent monitoring, this is problematic since even official guidance on SA acknowledges that "effects predictions are generally broad-brush and qualitative" (ODPM, 2004, p.125). The findings of UK researchers who have audited pre-Directive SA reports (see, for example, Carter et al., 2003; Counsell and Houghton, 2002; Curran et al., 1998; Short et al., 2003; Smith and Sheate, 2001b) highlight inadequate levels of consultation with the public and environmental agencies, a lack of monitoring, and a tendency to use objectives-led assessment only at the final stages of PPP preparation. Stapling a full SA onto a finalised version of a PPP without undertaken even a prior scoping stage frustrates attempts to use SA iteratively to make informed choices about the relative sustainability of the options available in the early stages of preparation (Glasson and Gosling, 2001). The absence of formal arrangements for consultation with outside bodies and failure to monitor subsequent implementation has reduced many pre-Directive SAs to little more than self-administered 'stamps of approval'.

Imprecision is not necessarily an insurmountable obstacle to the use of this model. The fuzzy logic of the objectives-led approach reflects the imprecise state of methodology available to evaluate many of these effects, and a realistic recognition of the limited potential for subsequent monitoring and rectification of the unanticipated adverse effects. Set against these epistemic shortcomings, the comprehensive coverage of socio-economic as well as environmental impacts offered by the methodology is central to the task of testing PPPs against the official sustainable development framework. This explains Whitehall's desire to retain SA as its preferred means of complying with the EU SEA Directive. Simple adherence to the baseline requirements of the SEA Directive would confine assessment to the environmental effects of PPPs and frustrate this aim.

Unfortunately, the logic that supports an integrated objectives-led approach to SEA also undermines the way in which this model has been applied by UK practitioners to meet the requirements of the EU SEA Directive. If the purpose is to help public sector PPPs to operationalise sustainability, then this methodology must be extended to all relevant PPPs. Confining its use solely to PPPs which qualify under the mandatory requirements of the Directive fatally undermines this aim, allowing higher-level strategies to avoid proofing for sustainability. One environmental assessor publicly acknowledged the futility of his task under these conditions, observing that "we solemnly appraise everything that is under the regions' control… but the big decisions are being taken by central government and the whole sustainable communities plan…has never been under any kind of external appraisal" (Thomas, 2004, p.13).

Another serious limitation in using SEA in this fashion is that that the findings of such an exercise are contingent on whatever particular social construction of sustainable development holds sway. If assessment matrices are adjusted appropriately, PPPs that satisfy one official interpretation of sustainability may fail another. The evolution of UK sustainable development frameworks illustrates the ambiguous nature of the exercise. The initial framework (DETR, 1999a) was founded on an ecological modernisation interpretation of sustainability (Weale, 1992; Hajer, 1995; Young, 2000). Attainment of its four official goals (social progress which recognises the needs of everyone, effective protection of the environment, prudent use of resources, high and stable levels of economic growth and employment) envisaged no trade-offs between these different aspects of sustainability. A contemporary official report observed that "achieving all these objectives at the same time is what sustainable development is about" (DETR, 1998, p.3).

Although ecological modernisation may remain the principal driver of EU environmental policy (CEC, 1992), this paradigm is no more than one, vigorously contested, interpretation of sustainability (Langhelle, 2000). Its adoption as the policy frame for setting sustainability goals favours non-contentious development strategies in which environmental and socio-economic goals are taken to be simultaneously realisable. By contrast, the new UK sustainable development framework adopts a modified ethical stance. The original four goals have been superseded by five principles: living within environmental limits; ensuring a strong, healthy and just society; achieving a sustainable economy; promoting good governance; and using sound science responsibly. The first two principles represent policy goals while the remaining three offer the means to attain these goals. For any policy to be judged sustainable within the new UK-wide framework, it must acknowledge environmental limits and the requirements of a just society, and do so "by means of sustainable economy, good governance, and sound science" (DEFRA, 2005, p.8).

The audited analyses of UK pre-Directive SA reports referred to above indicate that, aside from providing a spurious coating of sustainability, expert-driven assessment processes have made little progress towards redressing the priority accorded to economic goals in the formulation of PPPs. Under the baseline-led model, the assessor assumes the mantle of a technical expert lacking a toolkit capable of delivering authoritative guidance to decision-makers. Applying the objectives-led model, the assessor serves as the local agent in a system designed to provide an official rationalisation of the meaning of sustainability. This eliminates any need to question whether the value frame chosen for this purpose is appropriate (George, 2000) and helps exclude rival processes of knowledge formulation (Richardson, 2005). Greater transparency about the ambiguous, constructed nature of the decision criteria involved in these expert-driven methodologies would do much to enhance the integrity of SEA practice. It would also imbue assessors with the professional credibility necessary to pursue a dialogue with stakeholders on ways of using the technique to reconcile alternative interpretations of sustainability.

3. SEA and reflexive environmental governance

Advocates of second-order forms of reflexive environmental governance, such as Voss et al. (2006), identify a need for better decision mechanisms to address the multi-layered complexities of sustainability. SEA can be envisaged as forming part of this process, providing a heuristic way of 'opening up' the debate on sustainability goals, allowing a shift from purely expert-driven methodologies and towards "more inclusive 'upstream' processes of participatory deliberation" (Stirling, 2006, p.260). Before exploring what procedures and institutional mechanisms might be capable of delivering such a role for SEA, this section considers some of theoretical implications of encouraging participatory forms of environmental assessment.

In the UK, the environmental justice agenda and related normative concepts such as environmental citizenship (Dobson and Bell, 2006) are bound up with advocacy of a 'new localism', intended to facilitate participatory forms of planning, and provide local communities direct influence over the style, content and pace of development (Ellis, 2004; Roberts, 2003). This attempt to augment normal democratic channels can be seen as part of the 'hollowing out' of the centralised state (Rhodes, 1994). It reflects growing doubts over the efficacy of representative national government, when traditional liberal democracies are confronted with the challenges to modernity posed by sustainability (Voss et al., 2006).

Advocates of Habermasian deliberative democracy (Healey, 1997; Hillier, 2002) seek institutional and procedural changes which make power relationships more explicit and open to negotiation. Mediation and consensual systems of decision-making are regarded as counterweights to technocratic planning processes that have previously ignored or over-ridden the range of local community concerns. One recent contribution to this discourse explores the capacity of communities to take possession of their own 'soft' appraisal methodologies, which is seen as encouraging greater public participation in the design, management and evaluation of UK area-based development plans (Baker et al., 2003).

British Columbia (BC) offers a classic demonstration of the participatory application of a 'harder' appraisal technique, SEA, to defuse political impasses that had frozen all forms of rural resource development on its Crown Lands. During the 1990s stakeholder tables were established to draft new consensual strategic land use plans across the province, which incorporated zoning based on a transparent environmental assessment process. This process has seen the area zoned for full environmental protection increase from 6 to 13% of the total provincial land base. A further 16% of the land base has been zoned for enhanced protection. Other areas have been uncontentiously designated for intensive development (Jackson and Curry, 2004a). Despite such identified successes, as Campbell and Marshall (2006) observe, the record of participatory methods of assessment that draw predominantly on Habermasian negotiation principles is as mixed as those reliant on expert-driven models. Connelly and Richardson (2005) attribute this to the absence of an explicit set of civic and ethical values (such as the concept of 'just' sustainability) that can mediate between conflicting positions by attaching normative weightings to alternative outcomes.

Consensual and collaborative forms of planning and appraisal have also been criticised on Foucauldian grounds for placing unfair obligations on participants. In this analysis, groups are seen as exercising moral suasion which compels individuals to conform with the received wisdom of the majority. Describing this process as 'symbolic violence', Bourdieu (1991, p.127) applies the concept to cover "gentle, invisible violence, unrecognised as such, chosen as much as undergone, that of trust, obligation, personal loyalty, hospitality, gifts, debts, piety, in a word, of all the virtues honoured by the ethic of honour". It is claimed that the use of such pressure explains

why communities continue to participate in, rather than to challenge, their own domination by the prevailing value norms. Gunder and Mouat (2002) identify the presence of symbolic violence in New Zealand's Resource Management Act, a piece of legislation which is intended to deliver a co-operative planning mandate, freeing local communities from technocratic determination of development and resource consents (Berke et al., 1999).

Woolford (2005) reviews the difficulties in applying the BC model of consensual stakeholder tables to the province's treaty negotiations with its First Nations over the settlement of outstanding land claims. Without a shared agenda founded in normative perceptions of equity, negotiators have struggled to identify the common ground between First Nations seeking reparation for past injustices and government and businesses interests searching for future certainty in land zoning and development (Jackson and Curry, 2004b). The current impasse is founded in disagreements amongst participants as to what constitutes a just settlement. It demonstrates the challenges facing Habermasian techniques when attempting to bridge gaps created by fundamentally different world views. According to Woolford (2005, p.176), treaty "negotiations represent less a communicative discourse through which equal partners co-operatively define their common interests and more a display of symbolic violence directed towards spreading the rationality of neo-liberalism into heretofore resistant Aboriginal lifeworlds".

The experience of BC's First Nations treaty negotiations highlights the fundamental procedural differences between the participatory processes appropriate to the assessment of specific projects (EIA), and those required for the assessment of public sector PPPs that set the parameters of the overall development process (SEA). Lawrence (2000) and Wilkins (2003) have examined the potential of EIA as a tool for exploring different value frames. They envisage the public arena being used by the developer and the community to debate the environmental merits of the development proposal, with the official decision-making body playing the role of the ringmaster.

SEA can be used to supplement these EIA participatory processes since it gives communities an opportunity to influence the gestation of the policy framework prior to the emergence of specific development projects. However, this role involves a step-change in the type of reflexivity demanded of environmental governance. Instead of being the ringmasters for the public examination of a project, government officials are themselves the proponents of new PPPs. Effective community engagement in SEA requires examination of the bona fides of the sponsoring department, using a value-frame that permits effective arbitration between fundamentally divergent stakeholder views. When viewed from this perspective, SEA's capacity to introduce an element of direct public involvement in the processes of government policy formulation and implementation may prove to be its most significant role in promoting sustainable development.

Delivering such a role for SEA requires an institutional framework that supports a reflexive approach to policy formulation and implementation. As well as using SEA to promote greater community engagement in the preparation of public sector PPPs, the databases generated by this technique should also offer the opportunity to evaluate the distributional impact of their delivery. Linking these two stages of assessment more closely would create a normative feedback loop capable of informing second-order reflexive governance. The following section considers the Scottish arrangements for SEA in the light of these reflexive aims.

4. The Scottish Environmental Assessment Act: a reflexive model of environmental assessment?

With the exception of Scotland, the territorial jurisdictions of the UK have not attempted to establish an institutional framework capable of using SEA in a reflexive role. The EU SEA Directive

has been implemented through a minimalist set of regulations, which confine its application to statutory plans and programmes that provide the framework for future development consent. There is no system in place to supervise the application of SEA even for this restricted coverage (Jackson and Illsley, 2006). In England and Wales, the SEA regulations permit individual public sector authorities to make a final determination on whether an SEA is required for any of their potentially qualifying plans or programmes, allowing them to disregard the advice of statutory consultees. The relevant government ministers can in theory call-in any questionable determinations. However, the ability of ministers to exercise supervision over the way individual authorities are screening their activities to identify plans and programmes qualifying for SEA is compromised, because "there is no formal mechanism for statutory consultees or other parties to draw disputes to their attention, nor routine access to the explanatory statement which authorities must prepare after deciding that a plan or programme does not warrant assessment" (Ross, 2004, p.108).

Scotland is the only UK jurisdiction to have created a central clearing house for the exchange of information on SEA screening, scoping, the period of consultation and publicity for the draft report, and the submission and circulation of the final report (Jackson and Illsley, 2006). The SEA Gateway supervises all stages of SEA undertaken within Scotland, permitting monitoring of the way in which legal obligations to consult with and inform statutory consultees and members of the public at appropriate points are being fulfilled by responsible authorities. The official Scottish Executive guidance on SEA includes a series of templates designed to harmonise the operation of the various stages of the assessment process across its jurisdiction (NSSE, 2006, Vol.2). These arrangements create the institutional capacity to deliver a consistent SEA methodology. As part of its efforts to promote high standards in the use of SEA, the Scottish Executive has initiated a rolling demonstration programme involving external consultants, termed the Pathfinder Project (SEEG, 2005b). The Gateway is envisaged as a way of feeding into the Scottish SEA network an audited selection of representative final reports covering a range of sectors and levels of Scottish public sector policy formulation.

If these initiatives are able to ensure a satisfactory overall standard of performance, the final SEA reports submitted to the Gateway will form a growing database of tiered assessments that can be used to provide a spatial and sectoral mapping of the environmental effects to be expected from new Scottish PPPs. Such a database offers a realistic prospect of applying SEA not just to predict the environmental effects of PPPs, but also to monitor and evaluate their actual outcomes. The use of SEA for post-implementation auditing (as distinct from influencing the preparation of new PPPs) has attracted relatively little attention, but without such a tracking capacity it would be difficult to convert SEA into a normative tool for modifying the distribution of environmental outcomes stemming from public sector activity.

The Scottish decision to give SEA this enhanced role forms part of political commitment to link assessment techniques to normative goals. The 2003 Scottish Parliamentary elections produced a coalition partnership which promised "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, p.5). The partnership agreement (ibid., p.47) also committed the administration to legislate the extension of SEA to all the public sector PPPs under Scottish jurisdiction. The Environmental Assessment (Scotland) Act 2005 gave effect to this promise.

Scottish Ministers lauded the Act as offering Scotland the opportunity "to be a world leader in Strategic Environmental Assessment" (SEEG, 2004, p.1), claiming that it is "a major advance in public policy" (SEEG, 2005a, para.2.6). The Scottish Environment Minister stated that the Act would put "Scotland ahead of Europe in the protection we afford to the environment" (SEIS,

2005). Since the legislation only came into effect at the start of 2006, these claims can only be evaluated at present by exploring the Act's potential rather than its actual delivery. The rest of this section examines the extent to which this SEA framework can serve as a tool of reflexive environmental governance, capable of contributing to an agenda derived from the precepts of environmental justice.

The 2005 Act identifies three aims for SEA (SEEG, 2004, Section 1.3):

- 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.

Whether these aims amount to a reflexive role for Scottish SEA is open to question. They undoubtedly provide SEA with a role that is distinctive in the UK context. This is evident in the official guidance on methodology, which recommends an eclectic approach that stresses the value of baseline-led analysis for 'lower level' PPPs and objectives-led analysis for 'higher level' ones (NSSE, 2006, Section 1.9.6, para.1). The guidance makes no reference to socio-economic objectives. Environmental objectives are not regarded as a way of proofing PPPs for their conformity with the current Scottish sustainable development framework (SE, 2005), but recommended as a "methodological yardstick against which the environmental effects of a plan can be tested" (NSSE, 2006, Section 1.10.2, para. 4). The advice stresses that any objectives should be derived, not from a single official concept of sustainability, but from "environmental protection limit values or targets identified in other plans in a direct or indirect relation to the plan in question", adding that a "review of baseline information and environmental problems may also generate SEA objectives", and that the statutory environmental consultees "may also have suggestions" (ibid., Section 1.10.2, para. 6).

In evaluating the Act's normative role, these Scottish arrangements for SEA must be judged against the requirements of environmental justice. Maschewsky (2005) identifies four distinct elements in delivering any agenda based on the principles of environmental justice:

- *equity of exposure*, which requires the presence of a level playing field to allow groups an equal chance of being targeted for significant environmental change;
- *equity of impact*, in which groups should experience a proportionate share of the costs and benefits of such change after it occurs;
- *equity of procedure*, which should ensure fair treatment of stakeholders affected by significant environmental change;
- *equity of change*, which requires the application of the precautionary principle to prevent any group, whether defined spatially, social or over time (i.e. a specific generation), from assuming an unfair and unnecessary burden of environmental change.

The comprehensive application of SEA to virtually all Scottish public sector PPPs, regardless of whether these are statutorily required or simply voluntary, is intended to bring public servants up to speed on the need for environmental proofing of their future proposals, and to mainstream

the environment in Scottish public sector policy formulation. It is estimated that the additional provisions of the Act will increase the number of Scottish public sector PPPs annually subjected to SEA from 144 to 356 (Jackson and Illsley, 2006). Mainstreaming public sector consideration of environmental issues and using SEA to promote a more transparent mode of doing this forms part of the procedural requirements of environmental justice covered by Maschewsky's third element, equity of procedure, allowing individuals greater opportunities to participate in decisions about the environment.

However, apart from offering the capacity to track both predictions and outcomes on a consistent basis across Scotland, it is more difficult to establish at this stage how the Scottish arrangements for implementing SEA will promote substantive changes that take account of "the distributional consequences of the assessment process, with decisions driven by the recognition that certain groups tend to systematically lose out in the distribution of environmental goods and bads" (Connelly and Richardson, 2005, p.393). To deliver the other elements Maschewsky lists (equity of exposure, impact and change) the Scottish Executive would need to direct its new capacity to oversee the environmental impact of the jurisdiction's public sector PPPs towards creating a feedback loop capable of informing reflexive environmental governance. The evidence that Scottish Ministers are prepared to take such a step is lacking (Dunion, 2003).

The actions taken by Scottish Ministers to discharge their commitment to environmental justice have been confined to the production of an annual audit of the distributional environmental impact of Scottish Executive actions (SEEG, 2005c), plus the commissioning of some applied research on the scope for using environmental protection legislation to address this (Poustie, 2004). Most of the initiatives identified in the Scottish Executive's annual environmental justice audit focus on procedural issues. Legislation on community planning has been introduced to improve reticulism across public bodies (Lloyd and Illsley, 1999). The new Scottish Planning Act, although rejecting third party rights of appeal, promises to promote early community engagement in the planning process (U'ren, 2006). Other legislation has widened the public right of access to environmental information, bringing this into line with the Aarhus Convention (UNECE, 1998).

The evidence offered by the participatory forms of SEA developed in British Columbia and New Zealand supports Connelly and Richardson's (2005) contention that an explicit mechanism for reconciling conflicting values is central to making such processes effective. This would take the form of a statement of principles and/or rights that enabled the precepts of equity of exposure, impact and change (Maschewsky, 2005) to be translated into a means of weighting the substantive environmental attributes of PPPs identified through the Scottish SEA network. If SEA methodology is to be used as a means of addressing rather than masking the complexities of sustainable development, it must be framed by a set of normative values which people are able to influence through the political process.

The coalition partnership agreement (SE, 2003) committed the Scottish administration to deliver environmental justice for Scottish communities, acknowledging the need to tie this into issues of social inclusion and regeneration. However, there has been no attempt to put flesh on this commitment by enunciating principles or opening a debate on what environmental rights, if any, should be embodied in efforts to promote a more equitable share of environmental consequences of public sector actions. The Scottish Executive's recently revised sustainable development framework includes only six paragraphs on environmental justice (SE, 2005, paras.8.1–8.6). They offer a list of initiatives targeted at improving the quality of life for those who suffer the worst local environments, which makes no reference to SEA. Mention of any form of value-framed decision-making is confined to "supporting greater public participation, modernising the

planning system, and providing more accessible, useful information on the environment" (*ibid.*, para.8.6)

5. Conclusions: Lessons from the Scottish SEA model

In seeking to make SEA serve as part of a broader agenda for delivering environmental justice, the Scottish Executive has negotiated its way around some of the more intractable methodological problems associated with this technique. Extending the scope of SEA to all Scottish public sector PPPs reinforces its substantive purpose, establishing a co-ordinated system of environmental assessment which embraces all aspects of Scottish policy formulation, including higher-level strategies. Discarding an integrated approach and confining assessment to environmental impacts of PPPs reduces the scope for conflict between the baseline-led and objectives-led methodologies SEA requires to fulfil this role.

The resulting model of environmental assessment mediates competing interpretations of the purposes of SEA, echoing the views of Owens et al. (2004, p.1951) that "technical and deliberative processes need not be mutually exclusive, but the context in which appraisal occurs should be a crucial determinant of which approach, or combination of approaches, to adopt". Confining assessment to environmental effects, but applying this across all levels of policy formulation, obliges Scottish public bodies to mainstream environmental considerations and to accept greater public scrutiny of the value frames they use to conceptualise sustainability. Setting up a central Gateway to administer and co-ordinate arrangements, and funding research on good SEA practice, promises to realise the principle of greater equity of procedure, supporting this aspect of environmental justice.

All this prepares the ground for making use of SEA to deliver a more equitable set of environmental outcomes. However, although the Scottish Executive claims that "Scotland's new strategy for sustainable development is based on the principles of environmental justice" (SEEG, 2005c, p.2), these principles have yet to be adequately articulated. Until this has been done, and a set of environmental rights to which all should have access has been identified and agreed, Scotland will not be able to use its innovative system of SEA to deliver substantive environmental justice.

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