(sustainability assessment institutions dovers)

DRAFT FOR COMMENT

Policy assessment for sustainability: institutional issues and options

Dr Stephen Dovers

Centre for Resource and Environmental Studies
The Australian National University.

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1. Rationale

The idea of regularized procedures for assessing policy proposals to enhance sustainability – termed sustainability assessment (SA) – flows from sustainability principles widely stated in international and domestic policy and law, and from the nature of policy problems in sustainability. The key principles are:

- Intergenerational equity: that the long term nature of sustainability issues require the embedding of long term considerations in policy processes.
- Policy integration: the incorporation of environmental concerns in decision making processes in non-environmental policy sectors, and more broadly the integration of environment, social and economic policy.
- Precautionary principle: favouring proactive policy responses in the face of uncertain but potentially serious or irreversible environmental impacts.

These principles are responses to the fundamental attributes of policy problems in sustainability, including cumulative rather than discrete causes, pervasive uncertainty, extended spatial scales, lack of methods for policy and analysis and prescription, and poorly defined policy rights and responsibilities. In particular, the causes of unsustainability are *systemic*, located deep in patterns of production and consumption, settlement and governance. These patterns are determined by institutional settings that evolved in the past in response to other imperatives and knowledge, and it is now accepted that policy and institutional systems are themselves causes of sustainability problems and barriers to addressing these problems. These systems are resilient, powerful and often resistant to change.

In the past, when major institutional patterns were set, policy decisions were made without much regard to environmental or sustainability concerns. More recently, environmental concerns have been addressed ‘at the margins’, largely in a reactive fashion, mostly via policy processes and institutional measures located in specific environment agencies that are relatively small and junior in the hierarchy of public policy. Now that sustainability is increasingly accepted as a higher-order social goal, and one that influences and is influenced by a multitude of policy sectors, portfolios and disciplines and professional domains, we see the need to spread environment and sustainability concerns more widely and influentially in policy systems. One way of doing this is

to enforce consideration of sustainability rigorously and transparently into a wide range of policy processes and decisions – sustainability assessment (SA).

The art and craft of sustainability assessment (and analogous procedures) are scarcely developed as yet. This brief commentary explores the idea of policy assessment for sustainability, how and by whom it might be undertaken, the institutional settings for it, and the prospects for its evolution. The most evolved and widely adopted analogy of sustainability assessment – strategic environmental assessment (SEA) – is used as a vehicle to explore these issues.

2. The nature of the challenge

A hallmark of the modern idea of sustainability is that few areas of human life, knowledge systems or policy sectors can argue they are irrelevant to sustainability or need not take on this increasingly important social goal in making decisions within their own domains. This means often significant changes in the sort of information and processes used in decision making, and changes to policy processes and the institutional settings through which decisions are made. In the words of the World Commission on Environment and Development:

> The real world of interlocked economic and ecological systems will not change; the policies and institutions concerned must (WCED 1987: 9).

So far, policy and institutional responses to sustainability have entailed reform and change at the margins, not deeper institutional change. Non-binding framework policies on sustainable development, non-binding sectoral policy (eg. oceans, biodiversity, greenhouse, etc), some organizational change (eg. catchment management, merged government departments), many information-based initiatives (eg. resource accounting, state of environment reports), community-based resource and environmental management programs, and wide but vague expression of sustainability principles in policy and law. More recently, inclusive forums such as national councils for sustainable development and sustainability roundtables have emerged, along with whole-of-government mechanisms such as offices of sustainability in first ministers' departments.

Framework and sectoral policies and inclusive roundtables and whole-of-government mechanisms address to some degree the need to embed consideration of sustainability across all policy sectors. However, they suffer from a number of weaknesses – being one-off or sporadic as well as discretionary, having limited mandate and resources, and overall a lack of status and influence in policy and institutional systems. They are nonetheless positive moves. Many planning regimes allow for overarching and more binding policies for particular environmental concerns, but these are at the discretion of government and do not embed modern sustainability thinking across the landscape of public policy.

The critical need that SA addresses is for regularized, rigorous and transparent scrutiny of all significant policy processes and decisions to ensure that sustainability impacts are taken into account and are where necessary amended so as to either promote or not impair progress toward sustainability. This need is part of a long trend in thinking, beginning with early expressions of environmental concern in planning and development policy and law. Since the late 1960s, environmental impact assessment (EIA) of development projects has become a basic component of environmental policy. The logic is familiar – to scrutinize developments to identify the environmental impacts and recommend ways in which these can be avoided or minimized. Over time, it has become increasingly apparent that project-level EIA, although important, has critical weaknesses. Most relevant is the failure to address either (i) cumulative impacts across many developments in space or time, or (ii) higher levels of policy and decision making that determine development pathways more generally.

These failures led to arguments for a more strategic and higher level form of assessment, generally termed strategic environmental assessment (SEA), dealing not with individual projects but with policies, plans and programs (Marsden and Dovers 2002; Fischer 2002). In fact, the idea of SEA is not new, and for example was catered for in environmental law in the USA from 1969 and in Australia from 1974. However, it is only in recent years that is has been implemented in any real fashion (and not in either of the two countries just mentioned). The rise of interest in sustainability since the early 1990s, and the long time that significant policy change takes, has seen a resurgence of interest in SEA. Especially significant have been the recent creation of an SEA directive in the European Union, and the adding of an SEA protocol to the Espoo Convention on Transboundary EIA. In Australia, the *Environment Protection and Biodiversity Conservation Act* 1999 creates an SEA process for Commonwealth fisheries, and a discretionary provision for SEA for other issues. In Western Australia, proposals for a strengthened SEA regime have been translated in current proposals for sustainability assessment.

SEA seeks to move environmental considerations 'upstream' in the policy system. Traditionally, though, SEA has focused on *direct causes* of environmental degradation, at a higher level in the hierarchy of decision making than EIA (transport plans, classes of development, etc). That is a critically important move, but not enough to genuinely embed considerations of environment and sustainability throughout the multiple relevant locations of decision making in complex policy systems. Recently, the scope for SEA to address *indirect causes* of environmental degradation has become apparent: that is, the broader arena of policy and institutional settings that influence patterns of production and consumption, settlement and governance, such as economic and tax policy, trade, regional development, and so on. The former version can be termed 'shallow' SEA, the latter 'deep' SEA and it is deep SEA that brings SEA closer to the intent and potential of a more integrated SA system.

So there are two reasons to use SEA as a focus through which to explore the prospects for SA. First, it is reasonably well-described as a policy practice, and exists in policy and legal provision in many countries, and thus is a real as opposed to advocated option, and thus more likely to be further implemented. Second, and conversely, although long catered for in a number of jurisdictions, implementation has been weak and patchy and the reasons for this may be instructive when entertaining the prospect of a stronger SA regime. If it has been hard to get SEA implemented, what are the prospects for SA. Thus, both the opportunities for and barriers confronting SEA make is a useful analogy for thinking about SA.

The next two sections briefly survey the targets for SEA (and thus SA), triggers for undertaking a policy assessment, methods to support SEA, institutional options, burdens of proof, and the possible outcomes of policy assessment for sustainability.

Before proceeding, a reflection on a relevant issue regarding SEA. The evolution of SEA, which elevates environmental considerations into social and especially economic policy deliberations, into a more integrated SA which seeks to integrate the three, has been argued for SEA since the modern sustainability agenda emerged in the early 1990s. While this is logical, a counter argument is that should this occur, environmental considerations would likely be reduced in priority and diluted in impact when brought into close proximity in policy formulation with social and (again especially) economic imperatives. Thus, some argue that the full implementation of SEA as an *environmental* policy is preferable.

3. Targets, triggers, methods and institutional options

The targets of SEA or SA are proposed or actual policies, laws and/or institutional changes that would significantly alter patterns of production and consumption, settlement and

governance and thus potentially influence prospects for sustainability. In proposing a stronger role for SEA, Goodland (1998) and Buckley (1998) proposed the following targets:

- international agreements on trade, finance or defence;
- development assistance programs;
- privatization/corporatisation of public agencies/functions;
- interstate agreements in a federal system;
- foreign ownership approval processes;
- government budgets;
- sectoral policies, plans and programs (eg. energy, water, transport);
- structural adjustment programs; and
- tax systems.

These are the same sorts of policy settings and changes that could be assessed for broader sustainability impacts under an SA regime. In recent Australian policy history, three examples of obvious targets for a SEA illustrate the intent, logic and political sensitivity of such policy assessment. It is assumed that the importance of these examples and their fit under the discussion below of triggers for assessment does not require explanation – the National Competition Policy; National Water Initiative; and US-Australia Free Trade Agreement. Note that in the case of NCP, sustainability was one component of a public interest test, but this was arguably not consistently applied. The NWI example reminds us that just because profound institutional change is intended to benefit the environment, this does not mean it automatically will and therefore should be exempt from rigorous and transparent scrutiny (the NWI has not been subject to such scrutiny) (Connell et al 2004). And note that FTAs in the USA undergo an assessment of environmental implications and are subject to public debate in the legislature, neither of which apply in Australia.

Triggers and thresholds

It would be impossible and unneccesary to mount a full assessment of every policy proposal that appears and a threshold test would be required to trigger an assessment. The following thresholds and criteria are general, but indicate the sort of tests that could be applied. Detailed development of specific criteria would be an important part of the development of an assessment regime:

- Policies or laws, proposals for policy or laws, or institutional changes of significant cross-sectoral impact (ie. affecting policy and management across a range of policy sectors, portfolios and substantive issues);
- Policies or proposals of a whole-of-government nature (ie. affecting most or all portfolio areas and agencies);
- Policies or proposals likely to result in significantly altered public expenditure;
- Policies or proposals determining patterns of research and development investment;
- Policies or proposals involving the significant restructuring or changed capacity of relevant public institutions with responsibilities for resources or environment, or with significant relevance to resources and environment (eg. mining, transport, planning land management, statistical agencies);
- Policies or proposals involving significant changes to tenure, property rights or resource rights and allocation regimes;
- Policy, legal or institutional changes likely to substantially affect the rights of communities and stakeholders to participate in environmental decisions, or the ability of the public to gain access to information about the state of the environment or about environmental law, policy and management; and

- (Possibly) a financial trigger, such as public investment or program cost over a defined amount.

These move beyond the usual situation where an SEA is at the Minister or government's discretion, toward a more defined procedure for triggering. It will be by now apparent the focus of strategic, proactive and precautionary assessment is the state or public sector. Private sector proposals are by and large subject to project scale EIA, and in increasing numbers firms are utilizing environmental accounting, environmental management systems, codes of practice and the like. It is governments and their agencies that are responsible for the deeper policy, legal and institutional changes that determine indirect threats to sustainability, and it is governments who may be most cautious about opening their own decision making processes to scrutiny.

Addressing these targets and criteria within a policy assessment process will require the incorporation of social and natural science disciplines and public participation into the policy process in predictable and transparent ways, which will require, first, operational frameworks and techniques for implementation and, second, appropriate institutional settings.

Supporting methods

Policy assessment would require guiding principles and supporting techniques and methods. Sustainability policy provides overarching objectives and guiding principles. Additional support will be needed, utilizing a range of techniques and approaches suited to informing policy decisions under conditions of complexity and uncertainty. These include a wide range of well and lesser known techniques such as extended cost benefit analysis, scenario construction, policy analysis, expert panels, multi-criteria analyses, risk assessment, non-market valuation, expert opinion and inquiry processes, and discursive approaches such as consensus conferences and citizens' juries. No single or superior assessment methodology exists, with policy assessment – whether SEA or SA – always drawing on a diverse toolkit and the precise mix depending on the particular context, issues and information.

Institutional settings

A comprehensive policy assessment regime will require a suitable institutional setting capable of embedding sustainability considerations across all areas of public policy in a forceful manner, and of negotiating the engagement of science and other information sources. Various institutional models for policy assessment exist. Responsibility could be located within an existing agency, such an environment department, in a separate organization, in the private sector under contract, or in a combination of these. Some assessment tasks may be undertaken within proponent agencies, but at the very least a competent overview capacity and institutional provision would be needed to ensure quality, consistency and transparency.

Assigning private sector consultants responsibility for policy assessment has inherent dangers; of continuity of method, non-accumulation of knowledge, and of private providers being wary of producing harsh assessments that impair the chances of future contracts. Making policy assessment the task of a line department under direct control of a Minister or Secretary may be unwise given the highly political nature of the task and the fact that environment agencies are relatively junior within the hierarchy of portfolios, and more senior, central agencies are unlikely to be impressed by their overview. This would suggest a specific independent agency, with variable use of proponent agencies and external private contractors, as the logical model. This in turn suggests a statutory authority or a statutory office of parliament. The need for specialist skills to undertake effective assessments for sustainability argues against giving responsibility to a generic review agency such as an auditor-general, at least in the absence of a specific mandate and human resources. Before examining specific institutional forms, it is useful to think of the characteristics such an agency would need to display:

- Independence from the day-to-day pressures of executive government, if the favored policies of the day are to be objectively scrutinised (in terms of both when to undertake an assessment, and how that assessment is carried out);
- Clear mandate and defined functions through statutory provision;
- Adequate resources to undertake assigned roles (human, financial and informational);
- A mandate for flexibility and experimentation in methods and approaches, including access to the expertise of multiple disciplines given pervasive uncertainty and a lack of uncontested methodological approaches; and
- Inclusiveness of the public and interest groups, and transparency of function. This might include provision for targets of assessment to be nominated by the community and private sectors.

This suggests no small task of institutional design. We can look to institutional models that have and/or still do undertake other functions (such as policy development or advice, state of environment reporting, cross-portfolio review of achievement of sustainability policy, sectoral or regional inquiry, etc.), including:

- Commissioners for the environment (eg. in Australia in the Australian Capital Territory and Victoria, and in New Zealand), or a central office of sustainability in a first minister's department (eg. in Western Australia);
- A statutorily independent environmental protection authority (eg. USA);
- An inclusive, independent national council or commission for ESD (eg. Belgium, Ireland, UK). Over seventy countries have created some form of national council for sustainable development in accordance with the idea developed at Rio in 1992 and reconfirmed at Johannesburg in 2002, but generally they are advisory and unsuitable for the purpose without significant reform;
- A specific statutory authority sharing some of the attributes of impressive organizations such as Australia's now-defunct Resource Assessment Commission (RAC), Victoria's now-emasculated Land Conservation Council, and the world's most striking and effective assessment model, the now-defunct US Office of Technology Assessment. (Readers are invited to detect the irony here.)

While none of these is perfect and all would require institutional and legal change to undertake cross-sectoral policy assessments for sustainability, their existence indicates it would clearly be possible to create a suitable institutional arrangement. They also offer specific ideas that might be drawn upon, such as the RAC's requirement for inquiries to include commissioners with both ecological and economic expertise. The design of a specific arrangement would need to be undertaken carefully, reflecting the realities of the jurisdiction, specific roles envisaged and targets for assessment. The specific institutional form chosen is arguably less crucial than the provision of a proper mandate and adequate resourcing and the maintenance of whatever is used.

4. Burdens of proof, and the outcomes of policy assessment

Handling uncertainty, novel situations and pervasive uncertainty in policy assessment raises the issue of the *predictability* of indirect or systemic causes of unsustainability. Environmental degradation is often caused by policy decisions outside the environmental arena, and recognition of this instructs that we must consider such indirect impacts in the future. But can we predict the impact of current and proposed policy directions with sufficient clarify to make a

difference, or can we only be wise with hindsight? Indirect impacts will rarely predictable quantitatively but may be in a qualitative manner. This invites questions as to the role of different knowledge systems, scientific disciplines, modes of inquiry and burdens of proof.

Discussions of risk, the precautionary principle and decision making in the face of uncertainty suggest we cannot rely solely on the resolving power of reductionist, quantitative science. This issue is even more important for assessment of broad policy approaches. The most detailed policy assessment will produce uncertain findings. The nature of the questions asked will require a range of inputs into the assessment; these include natural science, social science, community opinion, and traditional knowledge. It will be necessary to apply what Funtowicz and Ravetz (1991) refer to as 'post-normal science', to be utilised under conditions of high uncertainty but potentially significant impacts, requiring engagement of 'extended peer communities' to frame questions and interpret the significance of the findings. Moreover, values and political judgment will always play a major role in final decisions, along with scientific assessments.

For example, in an exhaustive investigation into mining adjacent to Kakadu National Park, Australia's Resource Assessment Commission reported to the Australian government on economic, ecological and socio-cultural impacts. To the disappointment of those who wanted a yes/no recommendation the RAC made it clear that, in the absence of a common denominator, balancing of these must be a political decision. The then Prime Minister drove a decision disallowing the mine largely on the basis of Indigenous cultural issues, which he deemed to outweigh other considerations, the mining lobby and other political figures were outraged and the RAC was disestablished shortly thereafter (for a critical history of the RAC, see Hamilton 2003). It is important to recognise this reality and not entertain expectations of 'rational', clear outcomes, when the combination of different forms of knowledge, information and values must always involve political (that is, value-based) decisions.

In the face of uncertainty, appropriate allocation of *burdens of proof* is core to practical policy assessment. There are two aspects to this: the burden of proof required to trigger an assessment; and that required to justify policy change or ameliorative measures in the event that an assessment identifies significant issues. For example, scientific burdens of proof (95 or 98% confidence) are different from legal burdens of proof (balance of probabilities, beyond reasonable doubt). The principle of precaution would instruct that legal traditions of proof, avoiding Type II errors (false negatives), should be equally favoured as scientific traditions of proof, which are more wary of Type I errors (false positives) (Cranor 1999). In complex, qualitative assessments subject to multiple inputs of information and judgment, there are other relevant burdens of proof. These include the perception of risk in different parts of the community, which in a democratic system or inclusive process must be given weight, even when 'expert' opinion does not confirm the risks as understood by the community. Often, on the basis of defendable data and methods, different experts will arrive at varying conclusions as to risks. With sustainability problems, and especially with systemic causes of these, it is not only the quantitative natural sciences that will be involved in informing policy assessments but also the more qualitative judgments of political science and public administration, the predictions arising from neoclassical economic models and the burdens of proof operating in political and media debates.

What might be the result of a strategic, proactive and precautionary policy assessment for sustainability; that is, what recommendations would flow from the identification of indirect causes of environmental degradation or threats to sustainability are identified? Mostly, the recommended actions would be adjustments to the policy such as: counter-acting policy provisions; more attention to the design of statutory frameworks; placement and resourcing of environmental functions following organisational change; enablement of provisions for public participation; or the increase, maintenance or refocused monitoring of environmental change or policy implementation. It may be that a policy proposal could be withdrawn or radically altered in

light of assessment of its sustainability implications, however this would be rare. Extending the burden of proof discussion, the cost and significance of the proposed ameliorative strategies would be a factor in determining the appropriate burden of proof: relatively low cost measures such as refocused monitoring would invite a lower burden of proof and vice versa. To make recommendations that would have an impact on policy direction, policy assessment would need an institutional form with sufficient mandate and status.

5. Conclusion: prospects for institutional change

This brief survey indicates that sustainability assessment, at least in the form of a strong SEA regime, is a logical practical expression of the sustainability agenda, and that it is not an outlandish proposal in terms of methods, procedures and institutional provision. However, experience to date with SEA and any reading of the current political climate would suggest that implementing a system of rigorous policy assessment for sustainability across influential policy sectors (treasury, defence, trade, etc) are not bright. Nonetheless, recent developments with SEA are encouraging, and provide especially in Europe a proving ground for the idea of policy assessment and ways in which it can be carried out. More modestly, the fisheries SEA provisions in the Australian EPBC Act will allow some familiarity with the idea to develop, and the proposed WA regime for SA even more so.

Sustainability is a higher order social goal only recently articulated on policy agendas. Its natural partners are other goals such as democracy, justice and the rule of law, and a moment's thought tells us that such goals are at least generational challenges in terms of their incorporation across the policy and institutional landscape (Connor and Dovers 2004). What some might view as timid and belated moves such as with SEA can alternatively be viewed as necessary small steps toward incorporating a new and challenging idea (sustainability) into a historically defined institutional system, as process that will take both time and continued effort in developing options, advancing these, testing them wherever practical, and learning more. That portrayal of the prospects for institutional change may be discouraging, but it may also be realistic.

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(As well as other sources cited above, the following identifies works where the issues and options covered in this paper are explored in further detail.)

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