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# **Comparing Legislative Mechanisms for SEA Screening and Decision-making: Austrian and Australian Experiences**

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Austrian and Australian approaches to strategic environmental assessment (SEA) are compared with particular emphasis upon the legal basis for the initial phase of agreement/screening and the final stage of SEA decision-making and implementation. In Austrian SEA, screening is compulsory and the outcome leads only to recommendations, meaning that the SEA results have to be considered, but are not binding for the approval decision. In Australia engagement in SEA is voluntary but the process results in legally binding conditions of approval that can be applied to relevant actions arising from an assessed policy, plan or program; the incentive for proponents to participate voluntarily is that subsequent project level activities may be exempt from further assessment processes. Examples of SEAs are provided to demonstrate the operation of the respective stages in the two countries. In Austria compulsory screening results in a lot of energy being spent avoiding triggering a full SEA. Although Australian proponents have been somewhat cautious in volunteering for SEA of their activities, there are signs that this is changing. We argue that the regulatory framework characteristics are a key determinant of the behaviour of proponents and the competent authority in practice and subsequently of SEA potential and outcomes. Consideration of the construct of the regulatory framework for SEA screening and decision-making provides a useful point of reflection for practitioners attempting to understand the effectiveness of SEA processes in a given jurisdiction.

*Keywords:* Strategic Environmental Assessment, Screening, decision making, environmental protection, Austria, Australia

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<sup>1</sup> This article presents the views of the authors and does not necessarily represent the views or policies of their respective organisations.

## **1. Introduction**

Academic debate about SEA has covered many aspects of theory and practice such as the question of the scope, the integration of SEA in planning processes (e.g. Dalkmann, 2005; Finke, 2005; Fischer et al. 2002; Jacoby, 2001; Scholles, 2001) or aspects of planning theory (e.g. Fischer, 2003; Lawrence, 2000; Richardson, 2005). SEA regulatory frameworks and experience in different countries have been compiled and documented (Dalal-Clayton and Sadler, 2005), potential benefits and pitfalls as well as effectiveness of SEA discussed (e.g. Bina, 2007; Jha-Thakur et al., 2009; Partidario, 2000; Stoeglehner et al., 2009) and numerous case studies of SEA in practice provided (e.g. van Buuren and Noteboom, 2009; Retief et al. 2007; Retief, 2007; Stoeglehner, 2004; Stratmann et al., 2006).

Our particular interest in SEA relates to the question of how legal frameworks for SEA influence the behaviour of proponents and/or competent authorities and thereby affect SEA potential and outcomes. This arose from a simple comparison of the Austrian and Australian approaches to SEA during an academic exchange program between our countries. While both countries shared much in common with respect to the general processes and steps employed during SEA, we were struck by significant differences in the legal basis for the beginning (screening or triggering SEA) and end (decision-making and implementation) of the SEA processes. This led us to wonder how these differences might affect subsequent practice. Thus the aim of this paper is to compare Austrian and Australian legal frameworks for SEA screening and decision-making and relate these to recent practice in our respective countries. Understanding the links between regulation and the behaviour of SEA stakeholders is of relevance to academics and practitioners worldwide. We suggest that the nature of the regulatory framework itself will be a key factor in determining the likely outcomes of SEA in a given jurisdiction.

## **2. Comparative analysis of Austrian and Australian SEA practice**

SEA is well established in both Austria and Australia. Austria has implemented SEA according to the EU-Directive “2001/42/EG of the European Parliament and of the Council of 27 June 2001 on the assessment of the effects of certain plans and programs on the environment” and, therefore, gives an example how the SEA-Directive can be implemented in a national context. To implement the SEA-Directive in national law, a number of different approaches could be taken, such as adopting a separate SEA act or implementing SEA via the relevant planning acts. Austria chose the latter approach. In the process of preparing for the legal implementation of SEA in Austria, all planning acts were surveyed by Weber and Stöglehner (2001) in light of the provisions of the SEA-Directive to determine whether plans and programs with SEA-relevance could be found and, therefore, if a SEA section would have to be introduced into the respective planning act. This approach was chosen to fully comply with the idea of SEA-integration in existing planning processes and was subsequently endorsed by expert panels (ÖROK, 2004).

As Austria has a federal system with the national state and the nine provinces as legislative bodies, the legal system is very complex, especially given that the provinces are competent for many planning issues, like spatial planning, or share the competence with the national state as is the case with transport planning or waste management. At both the provincial and national level, SEA has been introduced for plans and programs in the fields of agriculture, air pollution prevention, hunting and fishing, nature protection, noise prevention, regional development, spatial planning, transport, waste management and water management (Lebensministerium, 2008). So far, little experience in SEA application is available in all fields except spatial planning. For instance, in the transport sector fewer than 10 SEAs have

been carried out so far, while in the province of Lower Austria alone (which contains about 20% of the around 2,400 Austrian municipalities) more than 400 SEAs were carried out on the level of local spatial planning in 2007 alone. Therefore, we focus on spatial planning. Table 1 provides a summary account of the SEA system applied at the national level for spatial planning. During the elaboration of spatial plans or programs environmental, economic, social and cultural issues have to be considered. Many aspects of the SEA-Directive were already covered in the planning system (Stoeglehner and Wegerer, 2006, Stoeglehner, 2004), so that the preconditions for the SEA-implementation were good. Despite that fact, SEA has proven to be quite unpopular amongst many competent authorities, government officials and planning practitioners at least in the beginning (Arbter and Platzer-Schneider, 2005).

<<Table 1 near here>>

Like Austria, Australia is a federation, made up of the national government plus six states and two self-governing territories. While most environmental assessment activity in Australia, including SEA, takes place at the State or Territory level of government, the national system is becoming increasingly utilised. Marsden and Dovers (2002) and Early (2008) have provided accounts of the SEA process under the *Environment Protection Biodiversity Conservation Act* 1999 (EPBC Act)<sup>2</sup>. Amendments to the Act that occurred late in 2006 are particularly relevant to SEA which we address in detail later on. All forms of environmental assessment (i.e. from project to SEA applications) are covered in the EPBC Act and it is necessary to understand the general environmental assessment provisions as well as those specifically directed to SEA; Table 2 provides a summary account of each and this includes both mandatory and voluntary SEA approaches.

<<Table 2 near here>>

In comparing the two national SEA systems, we can distinguish two completely different approaches to screening and decision making. In Austria (and the EU), screening is compulsory and if certain conditions apply, an SEA has to be carried out. In the subsequent approval decision it is only necessary to *consider* the SEA results. If the SEA results are 'outvoted' or not included in the final decision, this is in line with the EU-Directive as long as this is reasonably argued and explained.

In Australia it is the other way round. Apart from the special case of fisheries management, SEA is entered into on a voluntary basis, but once decision-making is undertaken by the Environment Minister, the resulting conditions for the approval decision become legally binding. The results of the mandatory fisheries SEAs are also legally binding. We now investigate in detail, the implications these different approaches have on the behaviour of proponents and/or competent authorities using examples from recent SEA practice in both countries.

## **2.1 Mandatory vs Voluntary SEA Screening**

In Austria, screening is undertaken mostly as a case-by-case examination to determine if the plan or program has significant environmental impacts (Stoeglehner, 2007), although most of the spatial plans would have qualified to make the SEA-application obligatory by law (Weber

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<sup>2</sup> The Department of the Environment, Water, Heritage and the Arts have a website devoted to the EPBC Act; see: <http://www.environment.gov.au/epbc/index.html> (accessed 25 November 2008)

and Stöglehner, 2001). On the local level, only three out of nine provinces made SEA compulsory for the Community Development Plan, which is the top of the hierarchy of municipal spatial plans, all others rely on case-by-case screenings. The screening is carried out by the planning authority, e.g. on the local level the municipal council, under consultation with the environmental authorities, in that case the Provincial government. If the criteria of Annex II of the SEA-Directive are met, a full SEA has to be carried out. If not, the SEA ends with a statement that the plan or program has no foreseeable significant negative impacts.

These case-by-case screenings typically consist of three to four steps which already comprise many elements that would feature in a full SEA so that any saving of expenses is minimal compared to a full SEA. Case-by-case screenings in general might likely cause planning expenses almost as high as a full SEA which concludes that the plan or program has no significant environmental impacts (Jacoby, 2005, Jiricka and Proebstl, 2009, Stöglehner, 2007). If, during screening, probable significant environmental impacts are evident, the SEA continues to the next steps in the process (scoping, appraisal of alternatives, public consultation etc).

In Austria the legal requirement for all plans to be subject to screening in order to determine the need for SEA appears to have lead to the situation that much energy is spent in seeking to avoid doing a full SEA (Stoeglehner, 2007). Depending on the screening methods and underlying regulations, two possible ways of behavioural change can be expected, one way supporting environmental protection, the other way might even harm it.

According to the screening-regulations (e.g. for the Province of Lower Austria), environmental aspects as well as issues related to the proposed planning alternatives have to be considered and the provincial government as environmental authority has to be consulted during the screening step in accordance with the EU-Directive. If a full SEA is to be avoided under this legal regime, it has to be guaranteed that the draft plans will have no significant environmental impacts. Hence during informal consultations with the environmental authority – which has to approve the municipal plans according to the provincial laws independent from the EU-Directive – it can be determined which alternatives might significantly harm the environment, and these alternatives can be excluded from the planning process so that in screening it can be reasonably argued why an SEA is not necessary. The major pitfall in this screening-approach, is that while it might exclude alternatives posing certain significant environmental effects, it does not support the search for the most environmentally sustainable alternative.

Other Provinces, e.g. the Province of Upper Austria, state in a directive derived from the spatial planning law, that land use plans can only have significant environmental effects if industrial areas or areas for facilities handling toxic substances are zoned. In other words, all other land use plans (e.g. for commercial or housing areas) are declared *not* to have significant environmental impacts by this regulation – independent from the local environmental conditions. In the Province of Vorarlberg a similar regulation states that zoning for building land can only have significant negative impacts if the development area is bigger than two hectares. These regulations can not reasonably be supported from an environmental protection perspective, as they are hardly taking environmental characteristics in screening into account.

Furthermore, the behaviour of the local competent authority in the approval decision can be influenced: if in screening it is stated that no significant environmental impacts can be expected because of the kind or size of the planning proposal, the local competent authority might understand that environmental considerations are no further issue in the planning process. Alternatively it can be argued that environmental considerations are an integral part of the spatial planning regime with or without SEA, and hence implying that SEA itself is

therefore not necessary. We suggest that the Austrian approach to screening might actually influence decision making processes against environmental protection especially in weighing up environmental and other values as the screening-message so often appears to be “there will be no significant impacts”.

Australia has no real screening in its SEAs. All Australian SEAs commence with an agreement between the Environment Minister and the person or authority responsible for a policy, plan or program. In the case of fisheries, the agreement is mandatory and, in other cases, the proponent or competent authority obviously considers the SEA to be worthwhile if it voluntarily enters into an agreement. In the case of fisheries, the agreement phase simply involves identifying the nature and scope of the particular fishery in question.

Early (2008) provides several examples of fisheries that have been subject to the mandatory SEA process. He concludes that the SEA process is catalysing a change in management practices across Australia's commercial fisheries. More specifically he states that fisheries management agencies are demonstrating an increased commitment to ecologically sustainable fisheries management practices, such as spatial management, enhanced research and data collection processes, cross-jurisdictional management approaches, harvest strategies for target and by-product species, mitigation and monitoring of protected species interactions, the development of enhanced reference points and performance measures for both target and non-target species, and enhancements to compliance systems and measures to better enforce management arrangements and address illegal harvesting.

External endorsement for the mandatory SEA process comes from WWF-Australia (2008) who believe that the fisheries SEA process required under the EPBC Act 'has improved the integrity of data relating to target and by-catch species and has provided a useful mechanism to move Commonwealth fisheries towards greater awareness of environmental impacts, and towards investigating ways to move towards more ecologically sustainable development'. WWF-Australia (2008) advocate expansion of this approach to SEA to include land based strategic activities such as terrestrial regional catchment management plans, state environment plans, water sharing plans and infrastructure development plans.

With respect to other SEA, proponents and competent authorities are encouraged to engage in a strategic process on a voluntary basis and the agreement phase is more important. From an environmental perspective, the incentive is to enable better assessment of cumulative or regional impacts and to encourage early consideration of environmental issues whilst development proposals are at an early stage of planning or conception. For proponents and competent authorities, the incentive is the capacity for establishing up-front certainty as to the required environmental conditions and avoiding or streamlining any subsequent project level approvals.

The agreement phase is therefore important both for the Minister as well as proponents and competent authorities to ensure the full scope of all their likely impacts and issues is covered in the proposed SEA. The amended SEA procedures under the EPBC Act that came into effect in 2007, of course, are relatively new and rigorous evaluation of their effectiveness will need to await the completion of the first few SEAs. Early indications, however, are that the new approach will be effective in encouraging proponents and competent authorities to factor environmental considerations into their strategic activities at an early stage. The downside of having a voluntary approach to SEA is nevertheless that it may only be used occasionally until its benefits are abundantly clear. Until then, it may be that only particularly enlightened proponents and competent authorities will participate. In the interim the full measure of benefits available both for proponents and for the environment will not be available.

## *2.2 Legally Binding Conditions vs Recommendations Arising from SEA*

SEA processes affect decision-making in various ways which have been well documented in the literature. Some examples include statements that better information automatically leads to better decisions (Vanderhaegen and Muro, 2005), that SEA increases the planning quality by promoting self-responsibility and self-control of competent authority and planners (Stoeglehner and Wegerer 2004), and that SEA might give an incentive to planners to provide for environmentally friendly alternatives (Bina 2007). Here our particular interest concerns the legal status of the SEA decision outcome.

In Austrian SEA practice, following consultation with the public, environmental authorities and significantly effected EU-Member-States regarding the draft plan or program and the environmental report a decision has to be made by the planning authority taking the results of the SEA into account, which comprise the environmental report and the statements collected during the consultations. In other words, the results of the SEA are not binding to the decision making body, it is only a requirement that the SEA results be considered in the decision and to report on the environmental considerations in the explanatory statement. If a decision does not comply with environmental protection this does not conflict with the EU-Directive as long as the reasons are described in a mandatory explanatory statement for the decision. The adopted plan and the explanatory statement have to be made public. Finally, the mitigation and compensation measures decided upon as well as the monitoring are required to be carried out during the plan or program implementation according to the provisions made in the decision (Stoeglehner, 2004).

Therefore, – and as the processes and contents of the environmental issues dealt with in spatial planning were to a great extent in accordance with the SEA-Directive even before its implementation (Stoeglehner 2004) – SEA does not appear to have a lot of influence on decision making. Maxian (2007) concluded that Austrian SEA so far has not improved the environmental performance of the adopted plans substantially, which is also partly due to an already high planning level and the nature of political decision making processes about the adoption of plans and programmes. Pistotnig (2007) states that when a full SEA is carried out environmental concerns are often outvoted against economic or social issues. As the additional value-adding of SEA compared to the relatively high environmental standards in decision making of spatial planning in pre-SEA-times is almost invisible, SEA has been perceived as a symbol of inefficiency in planning (Weber, 2007). A further point of critique in this context addresses the fact that a relatively complex procedure does not lead to binding or enforceable results.

There is no evidence in Austria of radical changes to decisions about the adoption of spatial plans resulting from carrying out a full SEA. Yet, if we assume that the whole planning process is part of the decision, we have to consider screening as well so that in version one of screening, an impact of the SEA regulation on the planning process and the environmental performance of the plan or program can be identified that cannot be revealed by studying environmental reports. Some authors state *that the existence of an SEA system might act as a “stick” to promote more environmentally friendly proposals than otherwise would be the case (Cashmore et al., 2004; Runhaar and Driessen, 2007). An example is where more environmentally friendly alternatives were proposed in order to mitigate SEA as mentioned above. Therefore, SEA screening might have an influence on the proposed plan alternatives.* Yet, SEA incentives like the achievement of positive environmental effects or the search for the most environmentally friendly alternatives are likely not achieved. The main aim is to stay under the significance criterion in order to avoid SEA. If “threshold-screening” as in version two is performed, the SEA-implementation does not have any significant impact on the environmental performance of spatial planning except that attempts may be made to keep

planning proposals under the thresholds. But similar to project level assessment, once a formal planning process involving the public is started, many planning expenses are incurred and activity design-based decisions made such that a radical shift of the planning process is hardly to be expected.

In Australia, approval of an SEA by the Environment Minister results in legally binding conditions of approval. In the case of fisheries, there is plenty of evidence of changes, including radical ones, as a result of SEAs. With respect to other SEAs, conditions will be able to be applied to future actions (e.g. project developments) that implement some aspect of the assessed policy, plan or program. On the one hand having legally binding conditions serves to provide accountability for implementation of the SEA. On the other, it also provides certainty for proponents of future actions – in other words, it 'fixes the goal posts' upon which the environmental performance will be judged. Proponents that demonstrate that their activities will be consistent with the approved SEA will be exempt from further assessment.

As noted in Table 2, SEAs in Australia may assess all the impacts of the particular policy, program or plan including all aspects of the environment, not just matters of national environmental significance, as well as economic and social impacts. In deciding whether or not to approve actions or classes of actions in accordance with an endorsed SEA, and in attaching conditions to any such approval, the Environment Minister must consider only the impacts on matters of national environmental significance and economic and social matters, taking into account the principles of ecologically sustainable development.

Prior to the recent amendment of the discretionary SEA process under the EPBC Act in Australia (Table 2), the outcomes of such an SEA could effectively only be taken into account in deciding the appropriate assessment approach for a particular action. For example, if the relevant environmental impacts had been assessed during the SEA, the Minister could decide upon a lower level of assessment for an individual action taken in accordance with an endorsed policy, program or plan (Early, 2008). In other words, a formal 'project level' assessment would still be required so that appropriate approval conditions could be served on the relevant proponent of the action (except where a legally enforceable management plan served to implement the SEA outcome sufficiently to avoid this step).

Perhaps not surprisingly, proponents were reluctant to enter into the SEA process, knowing that they would likely have to go through two assessment processes. For example, agreement was reached early on in the life of the EPBC Act for a SEA of offshore petroleum exploration and appraisal activities. Draft terms of reference (ToR) were published in 2001, were finalised in 2002, a draft SEA was released in 2005 but the SEA has not advanced since. Similarly an SEA of major military exercises was agreed in 2005 and draft ToR were released but nothing has eventuated since. It would appear that even when substantial effort has been expended on the SEA process (as in the offshore petroleum case), industry has seen no particular benefit in finalising it. Similarly the commitment of local communities tended to wane as they achieved what they wanted from the process in terms of better processes and more understanding of the national system.

In recognition of this, the (now) Department of the Environment, Water, Heritage and the Arts initiated a new strategic approach in 2005, involving more informal regional risk assessments. These were aimed at supporting and assisting decision-making under the EPBC Act in regions around Australia where high levels of action referrals and other activity indicated particular pressures on the environment (Early, 2008). This new strategic approach was conducted in association with State and Local Government planning authorities and local communities with the aim of identifying the key matters of national environmental significance in the region and



dealing with them in a pro-active way. The advantages of this approach ranged from enabling matters of national environmental significance to be addressed and incorporated into State and Local government planning mechanisms (which in the case of statutory planning tools would provide them with legal enforcement capability) through to simply making information available so that proponents of subsequent actions could engage with the EPBC Act early in their processes.

These strategic approaches were not formal SEAs as such, not being conducted in accordance with the legislative requirements of the EPBC Act nor fitting the model for the SEA process. However, they were successful in demonstrating the usefulness of a more strategic approach and, as noted below, led to important changes to the SEA regime in the EPBC Act.

For example, the Department worked with Queensland State authorities and the Townsville City Council (including seconding a staff member to Council) to develop better ways of protecting the World Heritage values of Magnetic Island within the Great Barrier Reef in North Queensland. Although no formal SEA itself was developed, the outcome contributed to the Council's planning processes being more closely aligned with EPBC Act requirements and to the development of a Departmental Policy Statement as guidance for proponents on how the Island's values could be best protected under the EPBC Act. Similar strategic planning exercises were conducted for the Southern Swan Coastal Plain region of Western Australia and the Mission Beach area of North Queensland.

Amendments to the EPBC Act in late 2006 built on this strategic risk approach by providing the ability for the Minister to approve actions, either with or without conditions, undertaken in accordance with an SEA, instead of undertaking a further separate project-specific assessment (Early, 2008). We are not aware of any other country that has similar provisions. However, this practice with respect to the relationship between project and strategic assessments is also employed in State based environmental assessment processes such as in Western Australia (EPA, 2008). Colloquially, at least in Western Australia, the type of assessment that provides the ability to move directly to issue of an approval (with legally binding conditions) based upon the information contained in the referral of an action is known as a 'quick yes'. Thus the major incentive for a proponent to voluntarily engage in SEA in Australia is to effectively avoid (or at least significantly speed up) subsequent project level approvals down the line.

Since the amendments came into effect early in 2007, five SEAs have been initiated under the EPBC Act, but none completed to date. One SEA has a major industrial development focus while each of the others concerns peri-urban development around some of Australia's most major cities – Sydney, Melbourne, Perth and Canberra. The industrial SEA is an agreement reached in February 2008 between the national Environment Minister and the Western Australian Ministers for State Development and Environment and Climate Change in relation to the Kimberley region of Western Australia. The SEA relates to the impacts of actions under a plan to establish a common user liquefied natural gas hub precinct to accommodate multiple proponents extracting and processing petroleum products from the Browse Basin, a gas field off the Kimberley coast of Western Australia<sup>3</sup>. By taking a region wide approach the intention is to choose a single site for this industrial activity and thereby avoid piecemeal project level assessments as well as the cumulative impacts arising from multiple development by individual proponents along the coast as has been the experience in other regions of Australia in the past.

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<sup>3</sup> see <http://www.environment.gov.au/epbc/notices/assessments/kimberley.html> (accessed 25 November 2008)

Other examples revolve largely around urban development. The Melbourne SEA, for example will deliver the most significant land use and transport changes that Melbourne has experienced in a generation. It will provide the blueprint for almost an additional 300,000 new homes to be built over the next 20 years. Under the SEA, legally binding arrangements will ensure environmental protection for matters of national environmental significance in protected areas as well as land set aside for community and public infrastructure (including road and transport links), areas of open space and employment that residents and businesses expect.<sup>4</sup>

Similarly the purpose of the Canberra SEA is to provide certainty for the development of new housing for some 55,000 Canberrans while ensuring the sustainable development of an area of environmental sensitivity including habitat for several nationally listed threatened species as well as significant grassland and woodland ecological communities.<sup>5</sup>

These three SEAs are the most advanced but their success to date has prompted other proposals in Sydney and Perth. The more strategic approach to urban matters, in particular, is gaining momentum in Australia. The Council of Australian Governments (COAG), the peak intergovernmental forum in Australia, comprising the Prime Minister and all State and Territory Premiers and Chief Ministers, has recently agreed to reforms to ensure Australia's capital cities are well placed to meet the challenges of the future and called for, among other things, future-oriented and publicly available long-term strategic plans<sup>6</sup>. A recent independent review of the EPBC Act has also called for more effective use and greater reliance on strategic assessments<sup>7</sup>.

### **3. Lessons learned for the design of legal screening and decision-making mechanisms**

We have derived two key lessons from this comparison of SEA processes for the design of legal mechanisms that we believe are relevant to practitioners internationally: lesson 1 concerns avoiding SEA avoidance and lesson 2 relates to the importance of legally binding results.

#### **3.1 Avoiding SEA-avoidance**

In the case of Austria we suggest that avoiding SEA through screening: (i) consumes a lot of resources that could be more beneficially used for carrying out a full SEA, (ii) likely is not in favour of environmental protection, (iii) undermines the conscious deliberation of environmental objectives – which could be one of the main features and benefits of SEA (Partidario, 1996; Dalkmann et al., 2004) – and (iv) does not support the search for the most environmentally optimal alternatives.

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<sup>4</sup> See <http://www.environment.gov.au/epbc/notices/assessments/melbourne.html> (accessed 24 December 2009).

<sup>5</sup> See <http://www.environment.gov.au/epbc/notices/assessments/molonglo-north-weston.html> (accessed 25 November 2008)

<sup>6</sup> See [http://www.coag.gov.au/coag\\_meeting\\_outcomes/2009-12-07/index.cfm#cap\\_city\\_strat](http://www.coag.gov.au/coag_meeting_outcomes/2009-12-07/index.cfm#cap_city_strat) (accessed 24 December 2009).

<sup>7</sup> Commonwealth of Australia (2009), *The Australian Environment Act – Report of the Independent Review of the Environment Protection and Biodiversity Conservation Act 1999 – Final Report*, October 2009.

Therefore, we argue that the most efficient way to support environmental protection by SEA is to completely do without screening and simply agree that a full SEA must be carried out starting with scoping within any planning process. SEA as an environmental impact appraisal and writing up of an environmental report that is included in the public participation could then become a usual feature of any planning process; for example, like accounting in the operation of companies. In our opinion, the mandatory status of SEA should be supported by incentives to make SEA attractive to competent authorities or other proponents. These incentives could be, for example, an educational role, the improvement of the knowledge base in the decision, a clear division of tasks and better communication between different administrations (Stoeglehner and Wegerer, 2006).

The experience with compulsory SEA for Australian fisheries has proved to be highly successful. Being a specific sector with clearly identified competent authorities responsible for strategic level fisheries management and individual fishers within a given fishery it has been relatively easy to adopt a mandatory approach. This result should be transferrable to any administrative framework structured in a similar way, as, for instance, spatial planning in Austria.

Administrative challenges may arise if a compulsory approach to SEA were adopted for matters where the identity of competent authorities and proponents of related project based developments may not be obvious in the case of resource and bioregional planning. Nevertheless, through SEA, implementation could define division of tasks between the competent authorities and levels of government, and maybe also provide clarification of the planning processes and contents.

### ***3.2 Legally binding results of the SEA***

The second lesson, which can be derived from Austrian arguments against an extensive SEA application and the success of Australian cases is the necessity to produce legally binding results arising from the SEA. In order to answer the question which kind of SEA results can be legally binding, we explore the problem of uncertainty in SEA in more detail. Arguably, the reason for engaging in any environmental assessment process is because a level of uncertainty exists; for example, based around the likelihood of significant environmental effects occurring if a given activity is implemented (Morrison-Saunders, 2008). The uncertainty problem has at least two dimensions: (i) uncertainty about the ranking of alternatives, which relates to uncertainty about the occurrence and significance of environmental effects; and (ii) uncertainty in condition setting to mitigate environmental pressures, e.g. uncertainty as to whether certain species will accept newly created biotopes as compensation for their destroyed original habitats.

We suggest that the extent to which an approval decision of a plan or programme can be legally bound to the results of an SEA is highly dependent on the level of uncertainty and the knowledge base present in a planning and SEA process. If the environmental appraisal has the character of a legal compliance test with environmental thresholds, e.g. like air pollution prevention or noise protection, the uncertainty can be low given a sufficient knowledge base. In choosing different planning alternatives, only the ones that will not increase emissions above established thresholds would be advanced. For other environmental aspects, e.g. biodiversity conservation and management, such thresholds are normally not available and a decision has to be made by weighing different environmental issues as well as environmental and socioeconomic aspects with each other. As long as habitats are not directly destroyed the uncertainty about the significance of environmental impacts is higher, and the margin of discretion bigger.

In short, environmental assessment occurs across a strategic spectrum of opportunity (Morrison-Saunders and Therivel, 2006) or what Hacking and Guthrie (2008) refer to as 'strategicness'. Uncertainty increases the further the move away from project level assessments towards strategic planning or policy activities. What this means in practical terms is that it will be harder to give legally binding advice of approval concerning the selection of alternatives the higher up the strategic spectrum that a SEA takes place. We suggest that especially in strategic activities at least compensation or mitigation measures for significant negative environmental impacts should be legally enforced.

Therefore, to achieve a legally binding SEA outcome, uncertainty has to be reduced as much as possible; this can only be achieved through having a good knowledge base pertaining to the decision problem. In other words, a sound environmental survey and appraisal that promotes environmental protection and enables the environmental and competent authorities to give legally binding advice and/or set legally binding conditions. From an environmental point of view, this is yet another argument for avoiding SEA avoidance, as discussed previously, as SEA itself may be an important mechanism for developing understanding of and capacity for environmental management.

#### **4. Conclusions**

This paper has demonstrated that the legal framework for SEA, particularly for screening and decision-making, can differ considerably between jurisdictions and that its construct might significantly determine the behaviour of proponents and competent authorities. We have highlighted that some of these behavioural changes might undermine the intended purposes and objectives of SEA. Despite good intentions either SEA might become an assessment exercise that does not have visible effects on decision making or different aspects of SEA regulation might actually backfire against environmental protection via unforeseen and unintended behavioural changes that aim at the mitigation of SEA expenses throughout the planning process.

We acknowledge that the legal requirements are only one part of SEA practice and not the only determinant of outcomes. However, SEA works best when it provides an unambiguous result that will be implemented and followed up. Perhaps the easiest way of achieving that is to at least make the process mandatory. If stakeholders in planning processes do not spend energy avoiding a full SEA in screening, more resources could be allocated to sound environmental considerations in planning processes as can be demonstrated on the Austrian example. By making the process mandatory, "ownership" (Stoeglehner et al., 2009) of the SEA can evolve: key stakeholders like planners might be forced to look more deeply into the values and concepts, techniques and processes of SEA so that they can also appreciate the outcomes of each SEA step and integrate them in all steps of the planning process.

Our comparison also shows that at least parts of the SEA findings should become legally enforceable depending on the level of uncertainty involved in the assessment. Therefore, legally binding the adoption of a plan to the ranking of alternatives in the SEA may not be possible or appropriate, where there is high uncertainty at the strategic level and the need to take into consideration other than environmental issues in the approval decision. Other aspects of the SEA such as the setting of specific approval conditions are suitable to be made legally binding as demonstrated in the Australian cases.

We suggest that practitioners and researchers may find it useful to reflect upon the likely consequences of legal frameworks on the intended and unintended behaviours of SEA

stakeholders in their own jurisdiction. The key point for such an appraisal to consider is whether the intended objectives of an SEA system are likely to be achieved in light of the incentives (both desired and undesired) that specific legal provisions induce in key stakeholders. Collecting and comparing the experiences from countries with different SEA systems in order to capture a wide range of possibilities is an adequate means of analyzing these issues as we have attempted here with the Austrian and Australian example.

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**Table 1 SEA Framework for Spatial Planning in Austria**

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***Spatial planning legislation***

As the competent legal bodies for spatial planning are the nine Provinces, the spatial planning system is quite complex. Typically, a planning hierarchy consists of six different types of plans and programs at the provincial, regional and local level. Generally, all plans and programs are elaborated and adopted by the competent authority, which is the municipal council on the local level or the Provincial Government on the regional and state level. Plans on the provincial level or regional plans can be either comprehensive, involving all aspects of spatial development, or sectoral. In both cases, environmental, social and economic issues have to be dealt with in the plan elaboration.

Municipal spatial planning, the main field of SEA application in Austria, normally consists of a hierarchy of three types of plans: the local development plan that typically consists of an open space strategy, a building and development strategy as well as an infrastructure and transport strategy is the most strategic plan on the local level. It covers a mid- to long-term perspective and sets the framework for the land use plan which designates a certain land use to each parcel of land in a municipality. Building schemes are normally adopted for the areas zoned as building land and include urban design provisions.

***SEA legislation***

SEA for spatial plans follows the EU-Directive and covers eight steps (Stoeglehner, 2004). In *screening* (1) it is determined whether an SEA has to be carried out for a plan or programme. Environmental authorities are consulted and the public is informed about the screening result. According to Art. 3 of the EU-Directive, the rationale behind screening is as follows: if a plan or program has significant effects on the environment, an SEA has to be carried out. For certain plans and programs the Directive determines whether they have significant environmental effects, for others the Member States have to apply certain criteria laid out in Annex II EU-Directive to find out if a full SEA is necessary. For instance, approximately 90% of Lower Austrian SEAs for spatial plans end after screening; for only around 10% of the planning cases a full SEA is carried out (Maxian, 2007). In *scoping* (2) the contents, methods, survey areas etc. of the SEA are determined. Environmental authorities are consulted again; the public has no rights in this step.

An *appraisal of alternatives* (3) is carried out according to the provisions of scoping and is documented in an *environmental report* (4). The information to be included in the environmental report is laid out in Annex I of the Directive. Environmental issues relevant for an SEA mainly describe the biophysical environment such as water, soil, air, climate, fauna, flora, biodiversity, landscapes, human health, population etc. The draft plan and the environmental report are subject to *consultations* (5) involving environmental authorities, the public and EU-Member states affected by the plan or programme. The results of the environmental report and of the consultation have to be considered in the *decision* (6) about the adoption of the plan or programme. The results of the SEA are not binding, only the consideration of the results is binding and has to be traceable. It is not even obligatory to introduce compensation and mitigation measures for significant environmental effects. Where compensation measures are introduced, they have to be documented in the environmental report. After the decision, the plan or programme has to be made accessible to the environmental authorities, the public and EU-Member States affected, and in an *explanatory statement* (7) it has to be declared how the environmental considerations have been integrated in the plan or programme. Furthermore, the adopted compensation and mitigation measures and the monitoring measures have to be documented. During the plan or programme implementation *monitoring* (8) has to be carried out. The monitoring shall empower the Member States to take remedial action, inter alia in case of

unforeseen negative environmental impacts. Yet, the Directive does not make remedial action mandatory.

Especially in local spatial planning, the role of the environmental authority is two-fold according to national law. On the one hand, according to the SEA-Directive the environmental authorities can not provide legally binding recommendations and opinions to the planning authority. On the other, in the Austrian system the Provincial Government who acts as environmental authority has to approve all local spatial plans according to criteria laid out in the various Spatial Planning Acts. Therefore, the statements of the environmental authority collected during the SEA-consultation phase carry more weight than the SEA-Directive apparently gives them (Stöglehner and Wegerer, 2004).

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*[END OF TABLE 1]*

**Table 2 SEA Framework In Australia**

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***Legislation and Environmental Assessment Overview***

Provisions for environmental assessment occur in Parts 3-11 of the EPBC Act with Part 10 dedicated to SEA. The Act is administered by the Department of the Environment, Water, Heritage and the Arts and decision-making is the responsibility of the national Environment Minister.

The national legislation is triggered only for matters of 'national environmental significance' and is typically applied in tandem with a State or Territory assessment process; specifically the EPBC Act establishes a mechanism for the accreditation of State and Territory procedures in order to avoid duplication.

A person must not take any action likely to have a significant impact on a matter of national environmental significance (i.e. a 'controlled action' under s67) except in accordance with an approval from the Environment Minister (Early, 2008). An 'action' is defined in the Act (s523) as including a project, development, undertaking, activity or series of activities. Any person proposing to take an action which they think may require approval under the EPBC Act must refer the proposed action to the Minister (Early, 2008). If the Minister determines a proposed action to be a controlled action, then it must be formally assessed under the Act and cannot proceed unless approved under the Act. (Thus there are strong provisions for project based environmental assessment and this is pertinent to understanding the Australian approach to SEA).

There is a clear distinction between the assessment and approval stages for projects (Morrison-Saunders and Early 2008). Assessment of a proposed action must relate only to the relevant environmental impacts but in making the approval decision, however, the Minister must consider economic and social matters as well as environmental impacts. This reflects the status of ecologically sustainable development as a cornerstone of the legislation (ss3 and 3A) and requires any trade-offs between environmental and socio-economic issues with respect to project based environmental assessments to be made by the Environment Minister after the public assessment process has ended. In contrast, provisions for SEA under the EPBC Act allow for other issues to also be considered from the outset of the process.

***Mandatory SEA***

The EPBC Act controls the international movement of wildlife specimens. One objective is to ensure that any commercial utilization of Australian native wildlife for the purposes of export is managed in an ecologically sustainable way (s303BA). Almost all Australian commercial fisheries have a high export component and mandatory SEAs are used as the means of ensuring their ecological sustainability. The management regimes for each export fishery are required to be subject to an SEA on a five yearly (maximum) period as the basis for any decision to provide export approval for the fishery. Such approvals encourages ongoing continuous improvement in the management of fisheries in an ecologically sustainable way. Since the EPBC Act was introduced in July 2000, SEAs have been completed for all Australian fisheries with an export component including more than 20 Australian Government managed fisheries and about 100 State and Territory fisheries. More than 50 fisheries have been assessed for the second time.

The mandatory fishery SEAs are conducted against the *Guidelines for the Ecologically Sustainable Management of Fisheries* (Department of the Environment and Water Resources, 2007) which outline specific principles and objectives designed to ensure a strategic and transparent way of evaluating the ecological sustainability of fishery management arrangements (Early, 2008). Each fishery is unique, and assessment is based on the merits of the combination of management measures in place and fishery specific issues. The SEA assesses the relevant impacts of actions taken under management plans and policies for the given fishery. These assessments involve a broad range of recommendations that require Australian Government and State and Territory fishery management agencies to

demonstrate improved environmental performance, and actively enhance the ecologically sustainable management of fisheries in the short to medium term. Recommendations and other outcomes of the assessment must be included in the management plan or arrangements for each fishery.

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### ***Discretionary SEA***

Under the EPBC Act (s146) the Minister may agree to conduct a strategic assessment of actions carried out under a proposed policy, program or plan. The aim is to provide for early assessment of the cumulative impacts of relevant actions under that policy, program or plan, and a strategic means for dealing with them. A minor but significant amendment to the Act occurred late in 2006 in relation to this discretionary SEA process. It provided the ability for the Minister to approve actions, either with or without conditions, undertaken in accordance with an SEA, instead of undertaking a further separate project-specific assessment (Early, 2008). Thus the major incentive for a proponent to voluntarily engage in SEA is to effectively avoid (or at least significantly speed up) subsequent project level approvals down the line.

Providing project type actions are consistent with the recommendations or outcomes of an SEA under the EPBC Act, as approved by the Environment Minister, then immediate approval for these actions will be granted when they are formally referred under the Act. Alternatively, no referral may even be necessary if such actions are within a class of actions approved by the Minister as part of the SEA. This approach to SEA makes strategic assessments much more attractive to State and Territory governments as well as proponents and, by ensuring them a legally robust outcome, hopefully ensures their commitment to see through any SEA to the end.

To implement a SEA under s146 of the EPBC Act, the Minister agrees to conduct a strategic assessment of potential actions under a policy, program or plan. These would generally be for a regional-scale development plan or policy or local environmental plans or a large-scale industrial development but could be for a sector (e.g. wind farms) or even activities like the development of a water extraction/use policy.

These arrangements for SEA offer a number of strengths. Firstly, they start with a formal agreement between the national Environment Minister and whoever is responsible for the policy, program or plan (usually a State/Territory Minister but, in some circumstances, a Local Government council or a large corporation). Secondly, the SEA can assess all the impacts of the policy, program or plan including all aspects of the environment, not just matters of national environmental significance, as well as economic and social impacts. Consequently the SEA can encompass all the requirements of a State or local planning process. It can therefore be part of such a process rather than an additional requirement. Thirdly, this approach to SEA also can effectively deal with cumulative and regional impacts. Fourthly, it can specify conditions, time limits and even the persons or bodies who are able to take action in accordance with the SEA.

Since the amendments came into effect early in 2007, a number of SEAs have been initiated under the EPBC Act, but none completed to date.

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*[END OF TABLE 2]*