Characterising the landscape of state environmental review policies and procedures in the United States: a national assessment

Zhao Ma a*, Dennis R. Becker b and Michael A. Kilgore b

aDepartment of Environment and Society, Utah State University, 5215 Old Main Hill, Logan, UT 84322-3215, USA; bDepartment of Forest Resources, University of Minnesota, 1530 Cleveland Avenue North, St. Paul, MN 55108-6112, USA

(Received 20 August 2008; final version received 11 April 2009)

Following the intent of the National Environmental Policy Act of 1969, many states have adopted policies and procedures directing state agencies and local government units to evaluate the potential environmental impacts of development projects prior to their undertaking. In contrast to a rich literature on federal requirements, current understanding of state environmental review is narrowly focused and outdated. This paper seeks to provide information on the landscape of state environmental review policy frameworks. The paper identifies 37 states with formal environmental review requirements through a document review of state statutes, administrative rules and agency-prepared materials, and confirms this finding through a survey of state administrators. A two-tier classification is used to distinguish states based on the approach taken to address environmental review needs and the scope and depth of relevant policies and procedures implemented. This paper also provides a discussion of policy and programme attributes that may contribute to effective practice, and of the potential for adopting relevant legislation in states where environmental review is currently lacking.

Keywords: environmental impact assessment; state environmental policy act; environmental planning and decision making

1. Introduction

Environmental review is the process of identifying, predicting, evaluating and mitigating the environmental, social and other relevant impacts of proposed development projects with a specific focus on the environmental impacts (IAIA 1999). Environmental review has been institutionalised in the United States over the past four decades with the passage of relevant legislation at both federal and state levels. The National Environmental Policy Act provides a framework for federal agencies to assess environmental impacts of proposed federal actions prior to their undertaking. In addition, and unrelated to the federal requirements, is an array of state legislation adopted for evaluating activities proposed, permitted or funded by state or local units of government. These state policies and procedures are the focus of this study. A list of state statutes, administrative rules and executive orders considered in this study can be found in Ma et al. (2009).
Past studies have appraised the value of environmental review from the perspective of existing federal regulations, but less is known about relevant requirements and practice at the state level. As much of the pressure for development occurs as a result of non-federal actions on state, local and private lands (Troppe et al. 2005), understanding how the various state policies and procedures guide environmental planning and decision making is important for promoting sustainable development. Through a document review of state statutes, administrative rules and agency-prepared materials and a national survey of state environmental review programme administrators, the paper describes and characterises the landscape of environmental review policies and procedures at the state level. It also identifies specific policy and programme attributes that may need improvement based on state experiences. The results of this study may contribute to an informed understanding of the scope and depth of existing state requirements, highlight key challenges facing state practitioners and policy makers, and establish a baseline for further analyses regarding effective environmental review.

2. Background

Prior to 1970, few federal or state agencies considered the environmental consequences of human activities, and environmental matters were generally not part of any decision-making process (South 1986). An increasingly affluent and well-educated society, new emphasis on quality of life, and concerns for the environment led to the passing of several important environmental laws, including the National Environmental Policy Act (NEPA) (Kraft and Vig 2006). NEPA was the cornerstone of a new era of environmental protection. It was the first such statute to mandate an assessment of major federal projects and legislative proposals having the potential to cause significant environmental impacts (Caldwell 1998a). The initial response of federal agencies to NEPA requirements was one of indifference, but judicial interpretations and court orders led to the recognition of NEPA as a legitimate policy worthy of implementation (South 1986).

Although NEPA has provided an effective mechanism for assessing federal actions and informing federal environmental planning and decision making, it has had limited application to non-federal activities. To assist state and local level decision making concerning whether or not to issue permits or grant funding to non-federal projects, a number of states have adopted individualised environmental review processes. More than a decade ago Caldwell (1998b) identified 28 states as having some form of environmental review requirements, of which approximately half adopted a state environmental policy act (SEPA) modelled after NEPA. In the early 1970s, Yost (1973) examined SEPA states regarding their environmental impact considerations, public involvement processes, and how they consulted and co-ordinated with experts when preparing review documents. Robinson (1982) later compared the policy objectives and procedural details of the New York SEPA to those adopted by Massachusetts, California and Washington. In a similar study, the Minnesota Center for Environmental Advocacy (1993) compared the legal requirements and administrative procedures of 15 SEPAs. In the late 1990s, Olshansky (1996a, 1996b) evaluated the California SEPA process in terms of success at meeting explicit and implicit policy goals and use in local planning and decision making. Pendall (1998) examined the procedures for local environmental assessments in SEPAs adopted by California, New York, Washington, Minnesota and
Hawaii. Finally, Mandelker (1999) identified and discussed several major issues that had arisen under SEPA regarding the types of projects subject to review, threshold determination of environmental significance, scope and adequacy of review documents, and procedures and standards for judicial review.

In contrast to the rich body of literature on SEPA, very few studies have been conducted to examine environmental review in states having non-SEPA policies. Cowart (1986), for example, examined the Vermont Environmental Conservation Act, which required environmental review as part of the state’s permitting process, and evaluated its effectiveness in promoting environmental planning and decision making in Vermont. South (1986) briefly examined nine states having non-SEPA requirements and discussed the variations in intent and applicability of these requirements. The narrow focus of the literature on SEPA and outdated state of knowledge on non-SEPA approaches suggest that additional research is needed to provide an up-to-date assessment of various policy frameworks under which state environmental review is conducted.

Regardless of the policy framework adopted by a state, the existing literature suggests three distinct factors critical to effective practice. First, communicating the significance of environmental impacts arising from proposed projects to a range of stakeholders is a fundamental goal of environmental review (Wood 2008). To maintain credibility and legitimacy of the process, key considerations include determining the scope of review, measuring the magnitude of predicted impacts, and selecting appropriate criteria for determining the significance of such impacts (Canter and Canty 1993). In particular, adopting significance criteria has been identified as one of the most critical elements contributing to effective review (Duinker and Beanlands 1986, Sadler 1996). However, it remains a poorly understood component in both theory and practice (Gibson 2001).

An additional goal of environmental review is to provide a practical framework that encourages responsible government agencies to acknowledge potential environmental impacts to the public and other relevant regulatory bodies, thus opening up the decision-making process related to specific proposals (Canter and Clark 1997, Palerm 2000). Culhane et al. (1987) summarised the state of environmental review theory and suggested that the formulation and implementation of relevant policies could be a result of external pressures. Because government agency decision making is unlikely to become attuned to environmental imperatives without the imposition of outside pressures (Bailey 1997), it is important to provide public involvement opportunities to parties affected by or having an interest in the proposed projects (El-Fadl and El-Fadel 2004). Adopting relevant provisions for public involvement has been recognised as a key strategy for strengthening environmental review at both federal and state levels (Forrester 1999, CITET 2003).

Finally, past studies have suggested that judicial review is an important element of environmental review policy. Judicial review is a court’s power to review environmental review procedures and decisions, and allows the public to formally challenge an agency decision in a court of law. As suggested by the external reform model, environmental review can be viewed as a form of administrative reform whereby government agencies are forced to become accountable for the environmental impacts of proposed projects (Kennedy 1988, Andrews 1990). In practice, environmental review has been drawing its primary effectiveness from the threat of public embarrassment and court challenges (Andrews 1990). Judicial review leads to
moving an agency from non-compliance to compliance with at least the procedural requirements (Wichelman 1976, Ortolano 1993, Bailey 1997). It also allows for courts to refine the interpretation of state regulations and guide relevant practice through case law (MCEA 1993, Weston 2002).

In summary, the existing literature suggests that the current knowledge regarding the status of state environmental review is incomplete and outdated. There is a great need for a better understanding of both SEPA and non-SEPA policy frameworks and the scope and depth of relevant requirements. In particular, it is important to understand how states determine environmental significance, involve the public, and engage in judicial review. Therefore, the following five attributes guide data collection and analysis in this study: (1) legal and administrative arrangements for undertaking review; (2) types of actions that are subject to review; (3) types of required review and criteria for determining environmental significance; (4) procedures for public involvement; and (5) mechanisms for judicial review.

3. Data collection
The data for this study were obtained from three sources. First, published literature regarding environmental review conducted in the United States and beyond was collected to inform the identification of specific policy and programme attributes to be examined. Second, an exhaustive review of state environmental review documents was conducted in 2007 to identify existing state statutes, pertinent administrative rules and agency-prepared materials describing specific procedures and protocols. Agency-prepared materials included programme directives, guidelines, handbooks, manuals, factsheets and online documents gathered through web search and conversations with environmental practitioners across states. Through the review, a total of 37 states were identified as having statutes or administrative rules requiring environmental review. In these 37 states, 48 active programmes were identified across a variety of agencies with some states having only one programme and others having multiple programmes each responsible for its own review.

A third source of data is responses to a national survey of state environmental review programme administrators to verify state requirements and obtain information on specific procedures overlooked in the review. Administrators of the 48 active programmes were surveyed in the fall of 2007 using a mail-back questionnaire following Dillman (2000). Data were collected with regard to the statutes or administrative rules mandating environmental review, the types of required reviews, and the conditions that may trigger a review. The survey was developed and piloted in conjunction with environmental review co-ordinators in Minnesota, which was then sent to the administrators or their designated representatives for each state. Follow-up correspondence by phone and email was made with each study participant. A total of 38 completed questionnaires were returned giving a response rate of 79%.

A profile was developed for each state based on the results of the review and survey, which allowed for development of an analytical framework for characterising state policies and procedures. State profiles were also used for comparison of state policies and procedures relative to the five key attributes identified, including legal and administrative arrangements, actions subject to review, environmental significance criteria, public involvement procedures and judicial review mechanisms.
4. Results

4.1. Landscape of state policies and procedures

A total of 37 states have adopted formal environmental review requirements, although great variation exists among them regarding the scope of their policies and procedures. Some require an evaluation of projects as long as they are not exempt by state law. Others have requirements only applicable to certain types of activities, natural resources or geographic areas. Some require review for both state and local activities while in others only state-sponsored activities are subject to review. In a selected number of states, activities proposed, permitted or funded by government agencies are subject to review while in others only government-proposed activities are covered.

The depth of state policies and procedures also varies greatly. In some states, a systematic evaluation of potential impacts is required while others only examine the impacts on specific environmental features or natural resources. Depending on the likelihood of significant impacts, some require preparation of different types of review documents to either briefly or thoroughly evaluate proposed projects; while others use one type of review documents for all types of projects regardless of their potential significance. States also differ by the level of detailed implementation guidelines, the specificity of public involvement requirements, and the availability of judicial review procedures. The following analysis illustrates a framework for characterising states based on the approach taken to address environmental review needs and the scope and depth of relevant policies and procedures adopted.

4.2. A framework for characterising state policies and procedures

Among the 37 states with formal environmental review requirements, two distinct tiers of states can be identified (Figure 1). Tier-one includes 16 states that have taken a SEPA approach, which requires three broad steps. A responsible agency must first determine whether a proposed action is subject to review. If so, then determine whether the action will result in significant impacts. If significant impacts are expected, a detailed review is required to discuss anticipated impacts, mitigation measures, and alternatives to the action. Environmental review in tier-one states is generally applicable to all projects within a state’s boundary regardless of the type or nature of the project. In addition, a single state entity such as a department or agency is generally designated with responsibility for overseeing and co-ordinating environmental review statewide.

In contrast, 21 tier-two states have taken a non-SEPA approach to environmental review (Figure 1). Corresponding policies and procedures are not applicable statewide; instead, the applicability varies greatly regarding the types of development activities covered (e.g. power plant construction, housing development), natural resource sectors involved (e.g. forestry, mining), or geographic areas concerned (e.g. lake shores, coastal zones). For example, in Mississippi only activities affecting coastal wetlands are subject to review. In Nevada, environmental review is only applicable in the Lake Tahoe region. In addition, tier-two states generally do not have a designated state entity responsible for overseeing and co-ordinating environmental review efforts. Instead, multiple programmes may exist across a range of environmental or natural resource agencies with each responsible for adopting and implementing its own requirements. The majority of tier-two states also do not specify the content or format of applicable review documents.

Based on this two-tier classification, a list of state environmental review statutes and administrative rules considered in this study can be found in Ma et al. (2009).
The following analysis assesses relevant policies and procedures in each tier with a focus on the aforementioned attributes: (1) legal and administrative arrangements; (2) actions subject to review; (3) types of required review and environmental significance criteria; (4) procedures for public involvement; and (5) mechanisms for judicial review. Tables 1 and 2 provide a summary of the full analysis for states in each of the two tiers.

4.3. Description and assessment of state policies and procedures

4.3.1. Tier-one states

4.3.1.1. Legal and administrative arrangements. Among the 16 tier-one states, 15 have adopted a SEPA through applicable state statute (Figure 1). The remaining...
state, New Jersey, adopted a SEPA-like policy, but through an executive order issued by the Governor in 1989. South Dakota is unique among tier-one states in that it does not mandate review; instead, it is up to the responsible government agency to decide whether or not to conduct a review for a proposed project. Once a decision is made to undertake a review, the responsible agency must then follow procedures provided in the SEPA.

All tier-one states have clearly defined environmental review policy goals, which generally include encouraging harmony between human beings and their environment, enriching the understanding of ecological systems, and utilising a systematic and interdisciplinary approach in planning and decision making regarding a project that may or will damage environmental quality. To help achieve these goals, 11 states have adopted administrative rules interpreting their SEPA and providing guidance for practice. Thirteen states, including 10 of the aforementioned 11, have also published an assortment of factsheets, manuals, handbooks and guidelines further directing responsible government agencies and private parties in the preparation of necessary review documents (Table 1).

Fourteen tier-one states have designated a single state entity with responsibility for overseeing and co-ordinating environmental review efforts statewide (Table 1). Common responsibilities of oversight entities include writing rules, issuing guidelines, co-ordinating review efforts involving multiple government agencies, and assisting state and local agencies in their practice. Generally speaking, entities with responsibilities concerning the substance of a review process, such as writing rules and issuing guidelines, tend to play a greater role in shaping their state’s practice than do entities with only advisory responsibilities. For example, in Minnesota the oversight entity is the Environmental Quality Board, which is part of the executive branch of state government. The Board has a significant role in shaping Minnesota’s practice by writing rules. It also has the authority to order a discretionary environmental assessment worksheet based upon consideration of a project’s potential impacts. In contrast, Montana’s oversight entity, the Environmental Quality Council, has relatively little influence on the state’s practice as it only has legislative advisory authority to assist state agencies in developing relevant rules and guidelines. Neither Georgia nor Wisconsin has a designated oversight entity. In Georgia’s case, the SEPA has not been implemented since its adoption in 1991 and so there is no oversight entity. In Wisconsin, various state agencies are responsible for their own review activities without being co-ordinated by a single entity. However, each agency is subject to the same overarching SEPA law and has adopted similar administrative rules and procedural guidelines for implementation.

4.3.1.2. Actions subject to review. All tier-one states require environmental review of applicable government actions, but the definition of government actions differs considerably. In six states (Georgia, Indiana, Maryland, North Carolina, New Jersey, Virginia), government actions include only those proposed or financially supported by a government agency while in the other 10 they may also include private projects requiring government permits or approvals. In eight states, government actions include only state actions while in the other eight they may include both state and local actions. The meaning of state or local actions also varies across states. For example, in California state actions refer to both physical actions (e.g. housing development, highway construction) and non-physical actions (e.g.
Table 1. Key attributes of environmental review policies and procedures in tier-one states, 2007.

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Table 2. Key attributes of environmental review policies and procedures in tier-two states, 2007.

| Requirements adopted through State statutes | AK | AR | DE | FL | IL | KS | KY | LA | ME | MI | MS | MO | NE | NV | NM | OR | PA | RI | TX | UT | VT | Total |
|---------------------------------------------|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|-----|
| Legal and administrative arrangements       | ✓  | ✓  | ✓  | ✓  | ✓  | ✓  | ✓  | ✓  | ✓  | ✓  | ✓  | ✓  | ✓  | ✓  | ✓  | ✓  | ✓  | ✓  | ✓  | ✓  | ✓  | ✓  | 20   |
| Administrative rules                         | ✓  | ✓  | ✓  | ✓  | ✓  | ✓  | ✓  | ✓  | ✓  | ✓  | ✓  | ✓  | ✓  | ✓  | ✓  | ✓  | ✓  | ✓  | ✓  | ✓  | ✓  | ✓  | 12   |
| No. of active programmes                     | 1  | 1  | 1  | 4  | 2  | 1  | 1  | 1  | 1  | 1  | 1  | 1  | 1  | 1  | 1  | 3  | 1  | 2  | 2  | 2  | 1   | 33   |
| Actions subject to review                    | ✓  | ✓  | ✓  | ✓  | ✓  | ✓  | ✓  | ✓  | ✓  | ✓  | ✓  | ✓  | ✓  | ✓  | ✓  | ✓  | ✓  | ✓  | ✓  | ✓  | ✓  | ✓  | 21   |
| State actions                               | ✓  | ✓  | ✓  | ✓  | ✓  | ✓  | ✓  | ✓  | ✓  | ✓  | ✓  | ✓  | ✓  | ✓  | ✓  | ✓  | ✓  | ✓  | ✓  | ✓  | ✓  | ✓  | 0    |
| Local actions that do not involve state permits or funds | ✓  | ✓  | ✓  | ✓  | ✓  | ✓  | ✓  | ✓  | ✓  | ✓  | ✓  | ✓  | ✓  | ✓  | ✓  | ✓  | ✓  | ✓  | ✓  | ✓  | ✓  | ✓  | 21   |
| Types of required review & criteria for determining environmental significance | ✓  | ✓  | ✓  | ✓  | ✓  | ✓  | ✓  | ✓  | ✓  | ✓  | ✓  | ✓  | ✓  | ✓  | ✓  | ✓  | ✓  | ✓  | ✓  | ✓  | ✓  | ✓  | ✓  | 3    |
| Types of required reviews                   | ✓  | ✓  | ✓  | ✓  | ✓  | ✓  | ✓  | ✓  | ✓  | ✓  | ✓  | ✓  | ✓  | ✓  | ✓  | ✓  | ✓  | ✓  | ✓  | ✓  | ✓  | ✓  | ✓  | ✓  | 21   |
| Explicit criteria for determining environmental significance | ✓  | ✓  | ✓  | ✓  | ✓  | ✓  | ✓  | ✓  | ✓  | ✓  | ✓  | ✓  | ✓  | ✓  | ✓  | ✓  | ✓  | ✓  | ✓  | ✓  | ✓  | ✓  | ✓  | ✓  | 2    |
| Procedures for public involvement           | ✓  | ✓  | ✓  | ✓  | ✓  | ✓  | ✓  | ✓  | ✓  | ✓  | ✓  | ✓  | ✓  | ✓  | ✓  | ✓  | ✓  | ✓  | ✓  | ✓  | ✓  | ✓  | ✓  | ✓  | 7    |
| Mechanisms for judicial review              | ✓  | ✓  | ✓  | ✓  | ✓  | ✓  | ✓  | ✓  | ✓  | ✓  | ✓  | ✓  | ✓  | ✓  | ✓  | ✓  | ✓  | ✓  | ✓  | ✓  | ✓  | ✓  | ✓  | ✓  | 2    |
legislative proposal, adoption of regulations); in Virginia, state actions refer to only physical actions with a cost of more than $100,000. With regard to local actions, states such as Washington and New York define them as those proposed or subject to approval by a local government unit such as a county board or township. In North Carolina local actions refer to those proposed by a local government unit but financially supported by the state.

4.3.1.3. Types of required review and environmental significance criteria. Thirteen tier-one states require the preparation of an environmental assessment (EA) or an equivalent document for proposed projects not likely to cause significant environmental consequences (Table 1). An EA presents information about a project’s potential impacts and is prepared to determine whether further analysis is warranted. Among the 13 states, seven have adopted mandatory EA thresholds. If a project exceeds the threshold, an EA is triggered. For example, in Minnesota, projects that will change or diminish the course, current or cross-section of one acre or more of any protected water or wetland are subject to EA analyses. In the remaining states, all projects are subject to an EA unless otherwise exempted by state law.

All tier-one states require the preparation of an environmental impact statement (EIS) or an equivalent document for proposed projects that may significantly affect environmental quality. An EIS is a thorough study of a project’s potential impacts and often includes an evaluation of mitigation measures and alternatives. Six states (California, Connecticut, Massachusetts, Minnesota, New Jersey, Wisconsin) have adopted mandatory EIS thresholds. An example is Minnesota where proposals that will eliminate a protected water or wetland are subject to an EIS. For the remaining states, an EA is generally conducted in lieu of an EIS and if a project has the potential for significant impacts an EIS is subsequently prepared.

In the seemingly straightforward process of identifying potential environmental impacts, determining the significance of predicted impacts is not trivial. Currently, eight states have adopted specific criteria to guide their determination (Table 1). However, the document review and conversations with state environmental review practitioners suggest that much of the existing criteria are vague and not directly measurable. For example, Montana provides general terms for determining significance, including the severity, duration, geographic extent and frequency of occurrence of predicted impacts. However, these terms are not directly measurable and therefore have limited use for helping project proponents and responsible government agencies determine the level of review (EA or EIS) needed for a project.

4.3.1.4. Procedures for public involvement. All tier-one states except New Jersey and Virginia require public involvement in their environmental review processes, regardless of whether an EA or EIS is conducted (Table 1). Responsible government agencies typically publish public notice of projects under review and provide opportunities for the public to comment on draft documents via mail or email. A few states, such as Minnesota and Washington, also provide opportunities for public hearings on applicable projects. In addition, a citizen petition process is available in several states whereby the public may request an EA or EIS in situations that may not automatically trigger a review. For example, in Massachusetts, upon written petition by 10 or more citizens, the Secretary of the Executive Office of Environmental Affairs may order an EA even when a project does not meet the
mandatory thresholds. Specific timeframes have also been adopted in several states to guide public involvement. For example, in Hawaii a 30-day public review and comment period is required for a draft EA and a 45-day period is required for a draft EIS.

4.3.1.5. Mechanisms for judicial review. Nine states have passed provisions for judicial review, providing opportunities for the public to formally challenge an agency decision in a court of law (Table 1). They allow the public to challenge an EA or an EIS decision with respect to whether or not the agency followed appropriate procedures when preparing review documents. Among these states, eight also provide the public with opportunities to challenge the substantive decisions of an agency. For example, in California the public may challenge an agency’s decision regarding whether a project is subject to review, the need for an EIS and the adequacy of an EIS. Several states have also adopted specific timeframes for judicial review. For example, a 120-day judicial appeal period is granted in Hawaii to challenge the lack of assessment after an agency determines that a project is not subject to review. For an EA process, there is a 30-day period to challenge the determination of no significant impact and a 60-day period to challenge the determination of no need for an EIS. The aggrieved party also has 60 days during which they may challenge the acceptability of a final EIS.

In summary, 16 states have adopted a SEPA-approach for requiring environmental review of proposed projects undertaken, permitted, or funded by state agencies or local units of government. Despite having similar policy goals, great variation exists among these tier-one states with respect to their level of legal and administrative arrangements, project coverage, types of required review and criteria provided for determining environmental significance. They have also adopted different interpretations of the public and courts’ roles in an environmental review process.

4.3.2. Tier-two states

4.3.2.1. Legal and administrative arrangements. Like tier-one states, the 21 tier-two states have adopted formal environmental review requirements through various statutes or administrative rules (Table 2). These states can be differentiated from tier-one states in that: (1) their environmental review frameworks generally do not follow the SEPA model; (2) their policies and procedures are only applicable to certain types of development activities, for certain natural resource sectors or in certain geographic areas; and (3) they generally do not have a designated entity responsible for overseeing and co-ordinating state environmental review efforts. A tier-two state may have multiple environmental review programmes; each has adopted relevant requirements and is responsible for taking measures to implement such requirements. Across the 21 tier-two states, 33 such active programmes were identified with as many as four in a single state (Table 2). These programmes require environmental review to be conducted when state agencies propose to undertake certain activities or are responsible for granting permits or funds to private activities. Having more programmes in a state does not necessarily indicate more effective mechanisms for assessing environmental impacts. For example, Rhode Island has two programmes, one for waste management activities and another for water management projects. However, neither programme provides
guidance for when to conduct a review or specifications about the content of applicable review document. Alternatively, Nevada has only one such programme for proposed projects located in the Lake Tahoe region, yet the scope and depth of the programme is comparable to the level of programmes in most states having a SEPA.

4.3.2.2. Actions subject to review. State involvement is the basis for proposed projects to be subject to review in all tier-two states (Table 2). A review is required if a state agency is the project proponent or responsible for issuing permits or providing funds. Unlike in tier-one states, review of local actions that do not involve state permits or funds is generally not required in tier-two states. In addition, tier-two states do not have consistent requirements across a wide range of development activities or natural resource types. In fact, only certain types of projects are subject to review based on a state’s economic interests or its environmental and natural resource conditions. For example, Florida is the only coastal state where artificial reef construction projects are subject to review. Another example is Michigan where environmental analysis is required for projects located in critical sand dune areas. The only types of projects exhibiting overlap are waste management activities, mining operations and activities affecting wetlands, rivers, lakes and coastal areas. Besides these, no pattern is observed regarding the types of actions subject to review across the tier.

4.3.2.3. Types of required review and environmental significance criteria. Great variation exists with respect to the types of required review in tier-two states. Out of the 33 active programmes three require either an EA or EIS to be conducted based on the likelihood of significant impacts (Table 2). The remaining programmes simply require an environmental analysis to be included as part of an application for state permits or funds regardless of the likelihood of significant impacts. A number of programmes provide guidance on the content and format of required analyses while many provide no such direction. Some go so far as to require analyses tailored to address particular environmental aspects as opposed to providing a full assessment of potential environmental consequences. For example, programmes in Alaska, Florida, Michigan, New Mexico, Utah and Oregon require the preparation of a cumulative impact assessment within the context of other past, present and prospective projects in an area of interest. In another example, the Illinois Department of Natural Resources requires analyses to specifically focus on impacts to endangered species and their habitat.

Tier-two states generally lack explicit criteria for determining the significance of environmental impacts. This is in part due to the fact that programmes in tier-two states typically require a single analysis for all proposed projects regardless of their potential impacts. Therefore, no determination of environmental significance is needed for making decisions about whether to conduct an EA or EIS. However, due to the lack of significance criteria, there may be a challenge in accurately measuring and evaluating a project’s impacts, which may lead to insufficient mitigations.

4.3.2.4. Procedures for public involvement. Unlike in most tier-one states, public involvement is generally not required for conducting environmental review in tier-two states. Only programmes in Delaware, Illinois, Maine, Nevada, Oregon, Rhode
Island and Texas have explicit procedures or protocols for incorporating public comments into their review processes (Table 2). In the remaining 14 states, public involvement is not mandatory as part of a review process. However, programmes in these states generally require public involvement for issuing permits or granting funds, whereas permitting or funding decision making is most often informed by the environmental review processes of proposed projects.

4.3.2.5. Mechanisms for judicial review. Environmental review policies in tier-two states generally do not include provisions for judicial review, except in Nevada and Vermont (Table 2). The public has either limited or no standing to challenge whether a proposed project is subject to review, whether the review is conducted following appropriate procedures, and whether the analyses are adequate and conclusions of the review are reasonable.

In summary, tier-two states generally lack consistent environmental review requirements that are applicable statewide. The diversity of the policies and procedures found in tier-two states may be a reflection of how various environmental, social, economic and political considerations together determine the way states prioritise the types of development activities subject to review and the extent to which relevant requirements are adopted. The tier-two analysis also suggests a need for adopting environmental significance criteria, public involvement procedures, and provisions for judicial review.

5. Discussion

This study addresses an important topic in environmental planning and decision making for which scant information exists. It establishes a two-tier classification system for describing the scope and depth of state environmental review policies. The two tiers are classified based on the general policy framework adopted by states for environmental review. Beyond that, profiles of each state were developed from legal and technical documents and survey responses of state environmental review programme administrators, which allowed for a comparison of relevant requirements and procedures.

The two-tier classification raises an important question. Which tier provides more effective measures for facilitating environmental review? The analysis suggests that the policies and procedures in tier-one states are comparable to NEPA and generally consistent statewide across a wide range of development activities and natural resource types. In contrast, the policies and procedures in tier-two states are generally inconsistent among states and even among programmes within a particular state. The scope and depth of relevant requirements in tier-two states largely depends on the responsible agency’s interpretation of need, the types of projects commonly proposed, the types of natural resources present, the geographic areas involved, and the proximity to unique natural features. In addition, tier-two states are less inclusive than tier-one states with regards to identified thresholds for triggering mandatory reviews, established procedures for preparing relevant review documents, and adopted provisions for public involvement and judicial review. These results suggest that tier-one states have more comprehensive policies than tier-two states in terms of the range of environmental impacts considered and the extent of procedural requirements specified. The results also suggest that tier-one states have more consistent policies than tier-two states in
terms of the applicability of relevant requirements and the content and format of mandatory reviews. Yet, great variation may exist among states in both tiers regarding the level of implementation and the types of challenges faced. Hence, the two-tier classification is informative for distinguishing states based upon their approaches to address environmental review needs, but inadequate for determining the merit of individual state programmes.

Depending on the issues in play or the natural resources involved, tier-two programmes may be in fact better at targeting environmental impacts unique to particular areas of concern than tier-one programmes that are more general or standardised across a range of circumstances. For example, Michigan is a tier-two state and has four distinct environmental review programmes covering hazardous waste management, coal mining, wetland and water management, and sand dune mining projects, which allows these programmes to specialise and focus on impacts within those areas of concern. In contrast, Virginia is a tier-one state that only requires environmental review for major state projects having a cost of $100,000 or more, which may lead to the neglect of significant impacts caused by low-cost projects.

Independent from whether a state belongs to tier-one or tier-two, three particular policy and programme attributes were identified as in need of improvement. First, adopting explicit and practical criteria for determining environmental significance is important for effective review. Such criteria, provided within administrative rules and agency-prepared manuals and handbooks, may help address the challenge of clearly and defensibly defining ‘significance’ in a review process (Gibson 2001). The analysis in this study indicates that less than one-third of states have adopted specific significance criteria and even fewer have directly measurable criteria. Although difficult to quantify significance, there is a need to establish pre-set benchmarks to assist project proponents and responsible government agencies in determining the scope of necessary reviews (Canter and Canty 1993, Gibson 2001).

The second attribute relates to establishing public involvement procedures, providing interested stakeholders with opportunities to contribute to the assessment of proposed projects and help ensure consistent and accurate implementation of relevant policies (Bailey 1997, Canter and Clark 1997). The analysis indicates that public involvement has been required in most tier-one states. Several administrators also indicated that although such requirement increased the amount of time necessary to conduct a review, it was a worthy investment in enhanced project planning and decision making. In contrast, the analysis indicates that public involvement is generally lacking among tier-two states, which may reflect a need for improvement.

Finally, judicial review is considered a key attribute to effective review by providing important supervision and objectivity to policy implementation (MCEA 1993). It also allows for the interpretation of ambiguous statutory requirements and provides guidance through case law (Bailey 1997, Weston 2002). The analysis indicates a lack of provisions for judicial review in about half tier-one states and all tier-two states. If a state determines that it is feasible to allow citizens to challenge the procedural correctness of or substantive decisions regarding an environmental review process, then establishing succinct protocols for judicial review will greatly contribute to the effectiveness of relevant policies and procedures.
One of the outcomes of judicial review is case law, which is of great importance in shaping environmental review practice (Robinson 1982). A significant volume of case law has been developed in several tier-one states. For example, in Wisconsin and New York the decision to require an EIS was challenged in the cases of Wisconsin’s Environmental Decade, Inc v. Public Service Commission and Town of Henrietta v. New York State Department of Environmental Conservation. Both courts reached the conclusion that a rule of reasonableness should govern the review of such determination. Other examples include the Norway Hill Preservation and Protection Association v. Washington King County Council in which the definition of environmental significance was debated. The case of County of Inyo v. Los Angeles addressed the need for consideration of alternatives to proposed activities. These cases represent a variety of issues relevant to environmental review but are only a snapshot. Further research is necessary to provide a comprehensive review of existing environmental review case law to better understand the range of issues litigated and the court’s interpretations of state policy.

The findings of this study may be useful for enhancing environmental review practice in the 37 states having relevant processes, and may also be of use for states considering the adoption of similar requirements. A total of 13 states were identified as not having formal environmental review policies. Adopting a SEPA in these states is perhaps unrealistic because it would require dramatic reform of the states’ environmental planning and decision-making process, involve multiple government agencies and affect business practices statewide. Georgia was the last state to enact a SEPA more than 16 years ago.

In contrast, the tier-two approach may be more appealing for its incremental and individualised nature while also allowing states to target specific areas of concern. By adopting the tier-two approach, state agencies may incorporate relevant requirements into their existing permitting or funding processes so that important environmental impacts can be taken into account, even if the procedures are not applicable to all types of projects, natural resources or geographic areas. Further study of these 13 states is needed to better understand why environmental review requirements have not been adopted, how environmental concerns related to proposed development activities are being addressed, and to what extend these states are interested in adopting environmental review procedures.

Additional areas of study are also warranted based on the results of this study. The first area is examining the institutional factors affecting the implementation of state environmental review policy. In particular, how do factors such as staffing, technical expertise and programme administration affect the efficacy of state programmes? Second, it is important to understand the social and economic contexts within which state policy is adopted and to identify factors that contribute to effective regulations and practice. For example, how does industry aggregation or the level of urbanisation affect the types of projects subject to review and how does the level of average income or education influence the adoption of relevant procedures? Finally, research is necessary to examine the relationship between existing state environmental review policy and other types of environmental planning legislation, such as local and regional growth management planning regulations. Such efforts may help streamline environmental planning and decision-making processes for state and local governments and provide alternative policy frameworks for states having an interest in pursuing environmental review.
6. Conclusion

Environmental review policies and procedures in the United States have provided significant opportunities for encouraging government agencies and private parties to take into account environmental factors when planning for future development (Beattie 1995). Many scholars have examined and evaluated environmental review efforts across the country, most notably at the federal level, focusing on the NEPA process. This study attempts to fill the knowledge void at the state level by providing an up-to-date assessment of state environmental review frameworks. The study results establish a baseline of relevant state requirements and practice, highlight several key challenges facing state programmes, and may inform efforts to build on individual states’ strengths to address identified challenges. In particular, administrators may improve their programmes’ effectiveness by adopting practical criteria for determining environmental significance. They may also seek to establish protocols for public involvement or judicial review. Finally, the study results may prove useful for informing development of legislation in states currently having no environmental review requirements, if they are so interested.

References


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