RESOURCE NOTE

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Tiered Assessments Focus Plans and Project Investments on High-Priority Issues

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Background

As broad-scale, cumulative effects become increasingly evident across certain landscapes, science points to the need for broader understandings of ecosystem processes, functions, and interrelationships upon which to base our management strategies. The resultant shift from supply–demand-based to ecosystem-based management has led to landscape assessments much larger in geographic scope than traditional planning efforts. These assessments provide broad context for land use plans in relation to the broader region and to each other. They also support establishment of relative priorities for management attention within the region and begin the process of stepping down science findings through finer scaled assessments that inform equivalent levels of planning and decision making. This tiered assessment process is intended to (1) ensure that broad-scale management objectives are applied to appropriate landscapes and (2) influence the design of on-the-ground projects to meet broad-scale—as well as local—goals and objectives (Figure).

Discussion

For purposes of this note, ecosystem assessments are tools for gathering relevant, available scientific and other information and organizing it in a way that establishes (1) meaningful context for subsequent action, and (2) a sound basis for priority setting. Assessments do not make decisions—they do not commit resources or narrow decision space. Instead, assessments inform our planning and decision-making processes.

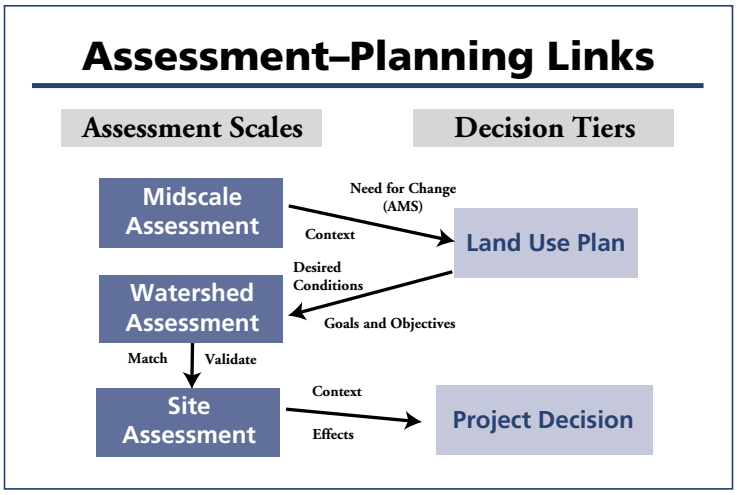

Figure. In this example, midscale assessments support the development of Land Use Plans or provide information warranting a "need for change" to an existing Plan. Watershed-level assessments match Plan objectives to appropriate landscapes and assess the capability of the watershed to meet the objectives. Priorities and recommendations from watershed assessments focus subsequent site assessments that determine project locations and ultimately assist with project design and cumulative effects analysis.

Importance of Scale. Environmental assessments being conducted at the site scale, such as those associated with National Environmental Policy Act compliance, can miss important interrelationships that can only be revealed at broader scales. At the same time, broad-scale perspectives alone would miss important cause–effect relationships that can only be seen at finer scales. A process for looking at several scales would allow broader scale context to focus finer scale actions on highest priorities for maximum effectiveness. For example, field unit personnel recently showcased a watershed restoration "success" story where investments in road repair, replacement, and decommissioning paid off when the 1996 floods destroyed many neighboring watersheds. Upon completing a subsequent landscape-level assessment, they learned that the same investment would have protected higher resource values and a greater proportion of the subbasin had it been applied to other watersheds determined to be more critical to subbasinwide processes and functions.

Process Similarities Among Scales. Although assessments at various scales use different types and resolutions of data, similarities in processes among scales can serve to link multiscaled assessments. For example:

- *Assessments at any scale are stepwise processes of inquiry about patterns and relationships* leading to hypotheses at broader scales, testing of those hypotheses with more highly resolved information at finer scales and, ultimately, designing projects based on broad-scale context that helps us to answer *why we do what we do where and when we do it.*

- *Assessments are collaborative processes* seeking management compatibility out of recognition that across any given landscape, landowners and other stakeholders have physical, jurisdictional, or political influence over the success of each other's management decisions.

- *Assessments are issue-driven processes*, wherein issues focus the scope of the assessment, and the intensity of the analysis is proportional to the complexity of the issues involved.

- *Assessments are characterization processes* designed to document our understanding of ecosystem (biophysical and socioeconomic) components; to tie plan direction to appropriate landscapes; and to set context for subsequent efforts within the assessment area. The common denominators of characterization among scales are

  Status—the condition of the ecosystem in relation to historical or desired conditions,

  Risks—to ecosystem conditions from natural events and management actions, and

  Opportunities—to conserve or restore ecosystem conditions or to produce desired outcomes.

- *Assessments are priority-setting processes* wherein logical subunits are delineated and prioritized for subsequent management attention. Priorities also incorporate partner factors, such as funding and staffing availabilities and legal mandates, to successfully achieve collaborative commitments to take the next steps together.

- *Assessments are iterative processes* that are supplemented as substantive new information accumulates, resource conditions dramatically change, or new issues arise that are not adequately supported by the current assessment.

Assessment Tools. Two assessment tools have been developed to assist with mid- and fine-scale assessments. *Ecosystem Review at the Subbasin Scale* (1999), or Subbasin Review, was designed to assess a subbasin (U.S. Geological Survey's [USGS] 4th-field hydrologic unit code [HUC]) or group of subbasins (totaling about 1–4 million acres) to establish context for and prioritize watershed analysis and other subsequent management attention within the area and support Land Use Plan amendments and revisions. The process takes about 3 to 4 weeks of concentrated staff effort over a 2- to 3-month period. Primary steps include issue identification, characterization, and development of priorities and recommendations. The Subbasin Review guide is on the Web at: *http://www.icbemp.gov/implement/subbas.shtml*.

Ecosystem Analysis at the Watershed Scale (1995), or Watershed Analysis, was developed to assess a watershed (USGS 5th- or 6th-field HUC) or group of watersheds (totaling about 15,000–150,000 acres). Watershed-scale status, risks, and opportunities are assessed to establish context for and prioritize the general locations and types of appropriate management activities to be considered within a watershed, match Land Use Plan objectives to appropriate landscapes, and assess the capability of the watershed to meet Plan objectives. Each analysis takes about 1 to 3 months. The primary steps include general characterization of the watershed, issue identification, detailed characterization of present and reference (or historical) conditions, synthesis and interpretation of the information, and development of priorities and recommendations. The Watershed Analysis guide is on the Web at: *http://www.reo.gov/library/reports/watershd.pdf*.

Conclusion

Broad-scale, cumulative effects and the need for broader understanding of ecosystem processes, functions, and interrelationships to resolve them have highlighted the importance of linking appropriately scaled assessments to corresponding planning or decision tiers. Success in these efforts depends on maintaining focus at the appropriate scale and on issues relevant to that scale and resisting efforts to "retreat" to the site-scale data and approaches specialists are most familiar with. Multiscaled perspectives provide managers and specialists with needed context for investing their limited resources on the highest priorities, meeting local and broad-scale needs, and making better-informed decisions at all levels.

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