

❖ Standard 12: Set overall priorities for conservation action within the ecoregional portfolio/biodiversity vision and define institutional roles and priorities.

Case Study: Sequencing Conservation Actions in the Southern Rocky Mountains Ecoregion, Rocky Mountain Division, USA

by Betsy Neely, The Nature Conservancy

[see also figures, and appendices]

Purpose and region of analysis

Every conservation area in the Southern Rocky Mountains portfolio is important for conserving the full suite of biodiversity in the ecoregion. However, because time and resources are limited, it is important to identify priorities for conservation action. These priorities inform the relative investment in time and energy needed in the next 10 years for each conservation area. This information will help land managers and conservation practitioners make decisions regarding the types of actions needed at particular areas and the timing of those activities. Conservation of biodiversity in the ecoregion requires some level of effort at every conservation area, using both multi-site and local-level strategies, to ensure the long-term persistence of species, communities and ecological systems. Level and type of conservation activity over the next 10 years will differ at each area depending on the conservation value and the urgency of threats. Conservation of the entire portfolio is the goal; therefore, some conservation activity and/or monitoring should be taken at all areas to ensure long-term survival of targets. The priority setting assessment serves primarily to indicate how much effort should be devoted to an area relative to others and may be used to infer which areas require significant attention sooner as opposed to later.

Criteria/Methods

The team determined priority level by ranking conservation areas (with a high, medium and low) using two primary factors: conservation value and threat, based on information gathered from natural heritage programs, experts workshops, and team member expertise. These factors are defined below.

- *Conservation value* consists of a combination of the uniqueness of the conservation area (number of globally imperiled targets at the site) and the landscape integrity (rough estimate of viability of targets using a modified suitability index). Uniqueness was given twice the weight of landscape integrity to emphasize the need to work on irreplaceable areas, areas that have targets that might be lost forever if threats are not abated. Priority was given to areas with multiple imperiled targets with high landscape integrity. Lower priority was given to areas with no imperiled targets and low landscape integrity.
- *Threat* refers to both the urgency and severity of threat to the targets at a conservation area. Urgency of threat was weighted twice as high as severity to help inform the timing of specific conservation action needed. Priority was given to areas with a high threat rank for

urgency. Conservation areas ranked high for threats may need more immediate and/or intensive amount of conservation action.

Each conservation area was assigned a priority level indicating the amount of conservation effort needed in the short-term to abate threats and to ensure the long-term persistence of targets. This is based on the assumption that areas with high conservation value and high threat need a higher level of activity to prevent loss of targets than do areas ranked low. Many of these areas likely need more intensive action over a shorter time period. Definitions of the priority levels are below.

- *Priority Level 1:* Areas ranking high for conservation value and/or threats. These areas need effective conservation results within the next 10 years. They may need a higher level of effort, time, and resources within the next 10 years, relative to other areas, given current level and trend in threats.
- *Priority Level 2:* Areas ranking moderate for conservation value and/or threats. These areas need monitoring of the threats and status of conservation targets. These areas need a moderate level of effort, time, and resources within the next 10 years, relative to other areas, given current level and trend in threats.
- *Priority Level 3:* Areas ranking low for conservation value and/or threats. These areas need monitoring of the threats and status of conservation targets, but a lower level of effort, time, and resources within the next 10 years, relative to other areas, given current level and trend in threats.

Products/Outcomes

Of the 188 total portfolio conservation areas in the Southern Rocky Mountains:

- 47 (25%) areas ranked Priority Level 1
- 101 (54%) areas ranked Priority Level 2
- 40 (21%) areas ranked Priority Level 3

Please note that these ranks may change as new information becomes available; this analysis will be updated periodically to reflect new information.

Strengths and weaknesses

The planning team had confidence in this prioritization approach and believed it was a sound process of prioritizing sites. This approach balanced the relative value of urgency and severity of threats with biodiversity value, including both uniqueness and landscape integrity. Values for conservation and threat are provided in an appendix for each conservation area, providing background and rationale for priority levels. The results were also combined with field verification to indicate confidence level to further guide conservation activity.

The threat analysis used three categories (high, medium and low) and may not have sorted out threats very well. This approach does not set priorities for restoration.

Suggestions for others

- The planning team adopted the term “activity level” for the priority assessment to incorporate the level of conservation activity needed to conserve the targets at each area. We have found that this term has not been very transparent to practitioners and thus we suggest that the term priority level is a more appropriate and useful term.
- Different state representatives on an ecoregional planning team should conduct threats analyses in a consistent manner.
- The threats analysis that went into the priority assessment could be improved by focusing on threats to targets at each site (in revision by the planning team). Ranking threats into one of three categories may not have sorted out threats very well. We recommend using four categories (very high, high, medium and low) to make more consistent with site level planning (measures of success/enhanced 5 S workbook). We also suggest teams assign confidence levels to threats analyses.
- Teams should include some expert review of results to make sure they reflect reality.

References

Neely, B., P. Comer, C. Moritz, M. Lammert, R. Rondeau, C. Pague, G. Bell, H. Copeland, J. Humke, S. Spackman, T. Schulz, D. Theobald, and L. Valutis. 2001. *Southern Rocky Mountains: An Ecoregional Assessment and Conservation Blueprint*. Prepared by the Nature Conservancy with support from the U.S. Forest Service, Rocky Mountain Region, Colorado Division of Wildlife, and Bureau of Land Management.
