

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

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## Case Study: **Prioritization Matrix in the Northern High Plains**

*From: WWF (2002) Ecoregion Conservation: Securing Living Landscapes through science-based planning and action. A users guide for Ecoregion Conservation through examples from the field. Washington, DC.*

### **Purpose and region of analysis**

All priority areas in the portfolio are considered highly important toward conserving biodiversity in the ecoregion. Some areas face greater current or imminent threats, making conservation there more urgent while some areas have a disproportionate number of conservation targets located within their boundaries, making conservation more efficient. With so many priority areas requiring action, the Northern High Plains Ecoregional Team developed a means of prioritizing where to act first to better conserve biodiversity. They created an index based on:

- biodiversity value of portfolio conservation areas, and
- urgency of threats to the biodiversity of these areas.

### **Criteria/Methods**

#### *The Prioritization Matrix*

The prioritization of conservation areas was determined through a matrix that combined biodiversity value and threat urgency with equal weighting. Biodiversity Value was assigned by the team for each site based on current level of biodiversity knowledge in the ecoregion. The value was weighted based on the number of target occurrences and the irreplaceability of a conservation area for targets (e.g., the sole or best site for an ecoregional endemic). All targets endemic or largely restricted to the ecoregion were assessed to ensure that at least one of the conservation areas in which it occurred was highly ranked. Sites in Alberta had been previously assigned a biodiversity value of internationally, nationally, or provincially significant, which generally correlated to ranks of very high, high, and low for use in this planning effort.

<b>Threat Urgency</b>	<b>High</b>	M	H	VH	VH
	<b>Medium</b>	L	M	H	VH
	<b>Low</b>	L	L	M	H
		<b>Low</b>	<b>Medium</b>	<b>High</b>	<b>Very High</b>

**Biodiversity Significance**

Figure 1. The prioritization matrix considers the biodiversity significance and the urgency of threat to priority areas.

*Threat Urgency Value*

Conservation areas were placed into one of three categories based on the perceived urgency required to abate threats:

- High (targets would be seriously degraded if no action occurred within 10 years),
- Medium (within 15 years), and
- Low (after 15 years).

**Products/Outcomes**

After all sites were assessed for biodiversity value and urgency of threats, they were plotted within the matrix to tentatively set priorities for conservation action, with the following priority levels:

- Very High: 17 priority areas (sites)
- High: 26 priority areas (sites)
- Moderate: 36 priority areas (sites)
- Low: 37 priority areas (sites)

<b>Threat Urgency</b>	<b>High</b>	2	6	4	2
	<b>Medium</b>	11	22	17	11
	<b>Low</b>	20	7	12	3
		<b>Low</b>	<b>Medium</b>	<b>High</b>	<b>Very High</b>

**Biodiversity Significance**

Figure 2. Final rankings in matrix format

Several trends stood out:

- most sites ranked as very high biologically are large landscapes (100,000+ acres) that support numerous conservation targets.
- conversely, many of the low rated sites support few conservation targets (often 1) and are relatively small.
- in the United States, most of the higher ranked landscape scale sites encompass extensive acreages of multiple-use public lands (i.e. BLM, USFS), which maintain landscape integrity by preventing conversion to other land-uses