



SYSTEM DIMENSIONS	CHEMICAL AND PHYSICAL	BIOLOGICAL COMPONENTS	HUMAN USES
Extent Pattern	Nutrients, Carbon, Oxygen Contaminants Physical	Plants and Animals Communities Ecological Productivity	Food, Fiber, and Water Recreation and Other Services

⊖ Area and Size of Grassland and Shrubland Patches

What Is This Indicator, and Why Is It Important?

This indicator will describe the fraction of grassland area and shrubland area that is in patches of different sizes. Patches of grassland or shrubland are identified separately, and the total area occupied by patches of a certain size will be reported as a percentage of the total area of either grasslands or shrublands.

Patches of grasslands and shrublands are often naturally intermingled with each other and with forest or woodland. Each part of the country has a characteristic mix of small and large patches, and these intermingled patches provide the diversity of habitat types needed by the animals native to a region. (These patches are not static; they may shift over time, so that any single location may switch, for example, from grassland to shrubland, or from shrubland to forest, while maintaining the region’s characteristic mix of land cover.) Activities such as fire suppression, grazing, agriculture, and residential, commercial, and industrial development can change this typical pattern, resulting in more or less of an area’s grasslands or shrublands being found in large or small patches.

These alterations can create conditions that favor wildfires and affect wildlife populations. For example, fire suppression allows ponderosa pine to invade grasslands. The grassland plants are shaded out, and the grassland animals in the area are restricted to the smaller acreage of grasslands that remains. Non-native cheatgrass can expand into sagebrush (shrubland) following fire, thereby altering future susceptibility to fire and fire frequency patterns and reducing habitat for shrubland species (see the fire frequency indicator, p. 171)

Why Can’t This Indicator Be Reported at This Time? The same satellite data used to report on the total acreage of grass and shrublands (see Area of Grasslands and Shrublands, p. 161) can be used to determine the size of patches and thus the total area found in patches of different sizes. However, these data have not been used for this purpose, in part because the methods required for such analyses are not fully developed.

The technical note for this indicator is on page 258.

