

Definitions

Fire Effects Information Systems Glossary ;
<http://www.fs.fed.us/database/fis/glossary.html>

Fire History

Mean fire return interval (MFRI) - (or “mean fire free interval” or just “mean fire interval”) – arithmetic average of all fire intervals determined in a designated area during a designated time period; the size of the area and the time period must be specified (units = years).

Fire frequency – the number of fires per unit time in some designated area (which may be as small as a single point or represent an entire watershed); the size of the area must be specified (units = number/time period/area).

Fire interval - (or “fire free interval” or “fire return interval”) – the number of years between two successive fires documented in a designated area (i.e., the length of time between two successive fire occurrences); the size of the area must be clearly specified (units = years).

Fire occurrence - (or “fire incidence”) – one fire event taking place within a designated area during a designated time (no units; either yes a fire occurs, or no a fire does not occur).

Fire Regime - refers to the nature of fire occurring over long periods and the prominent immediate effects of fire that generally characterize an ecosystem; a generalized description of the pattern of repeated fire on a landscape,

Fire Rotation – the length of time necessary for an area, equal to the entire area of interest, to burn; area of interest must be clearly defined (units - years/area).

Fire Severity

Fire severity – the affects of fire on ecological processes, soil, flora, and fauna; degree to which a site has been altered or disrupted by fire.

Fire intensity - a general term relating to the heat energy released in a fire; the amount and rate of surface fuel consumption;

High-Severity Fire Regimes- typically infrequent fires (>100 yr MFRI) - high intensity, stand-replacing fires. Dominant vegetation structure, composition and function are all markedly changed by the incident.

Moderate-Severity Fire Regimes typically infrequent fires (25-100 MFRI); partial stand-replacing fires including burned areas ranging from low to high severity.

Low-Severity Fire Regimes- typically frequent fires (1-25 yr MFRI) with few overstory effects (low mortality of dominant vegetation) due to low intensity.

Community Ecology

Alliance – a physiognomically uniform group of plant associations sharing one or more dominant or diagnostic species that, as a rule, are found in the uppermost stratum of the vegetation; typically designated by a diagnostic overstory species

Biome - A large, relatively distinct terrestrial region, encompassing many interacting ecosystems, and characterized by similar climate, soil, plants, and animals. A biome is commonly named for its plant cover.

Climax – self-perpetuating community controlled by climate and site (land) that culminates succession (Clements 1936); when vegetation is in equilibrium with all environmental factors.

Cover Type - a classification system based the dominant (or co-dominant overstory species) that predominate in a particular area. The type classification is named for that species.

Disclimax – human (Eurasian) caused disturbance(s) that degrade communities (e.g., grazing, alterations to natural fire regimes, land development, recreation and logging)

Disturbance - any relatively discrete event in time that disrupts ecosystem, community, or population structure and changes resources, substrate availability, or the physical environment. (White and Pickett 1985, p 7).

Ecological Province – A subdivision of a region having a distinctive combination of geographical features and ecological sites.

Ecological Site - a kind of land with specific physical characteristics that differs from other kinds of land in its ability to produce distinctive kinds and amounts of vegetation and its response to management. Synonymous with ecological type used by USDA Forest Service; and Rangeland Ecological Site

Facultative - having the capacity to regenerate with more than one strategy (e.g. seed and vegetatively) as opposed to a seed obligate (regenerating from seed only).

Function – purpose, the action for which a thing is specially fitted or used for (e.g. function of plant cover – protect soil from raindrop impacts, provide nesting or hiding habitat, etc.).

Habitat Type – see plant association

Landscape – an expanse of land characterized by such attributes as topography, geology, soils, microclimate, and the spatial arrangement of vegetation patches, which change in both time and space giving each landscape a unique pattern. Landscapes are composed of a multitude of ecosystems at varying scales that are all connected.

“A landscape is a mosaic of patches of different spatial arrangement giving each landscape a unique pattern”. Urban et al. 1987

Major Land Resource Areas/MLRAs -geographically associated land resource units, usually encompassing several thousand acres. They are characterized by particular patterns of soils, geology, climate, water resources, and land use. A unit may be one continuous area or several separate nearby areas.

Obligate – essential or necessary

Community phase –a plant community within a state that is hypothesize to replace other communities along traditional succession-retrogression pathways; succession from one community to the next is readily reversible over short time periods (years to decades) without management intervention because they are not separated by thresholds. However, an at-risk-community phase may not progress directly to the most resilient community phase without passing through an intermediate phase.

Plant Association – (or “habitat type”) a reoccurring plant community with a definite floristic composition, specific diagnostic species, uniform habitat conditions, and uniform physiognomy; typically designated by a diagnostic overstory and understory species (e.g., ponderosa pine/Idaho fescue, mountain big sagebrush/bluebunch wheatgrass). *“relatively stable, fully developed (mature) communities” Tansley, A.G. 1920*

Plant Community – a relatively homogeneous assemblage of species growing at a particular point in time and space (synonymous with phase); often defined by the dominant species. *“Uniformity, area, boundary, and duration are the essential components of a plant community”; Gleason H.A. 1939*

Reference state – historic or potential plant community

Reference site – a location (stand or watershed) that demonstrates a reference state.

Resilience – the capacity to absorb and respond to change or disruption that is required to transform a system from being maintained by one set of mutually reinforcing processes and structures to a different set of processes and structures.

Resistance – the capacity to remain unaffected by change or disruption...

Special habitats - native biological communities or ecosystems that are rare, unique, or highly productive elements of regional landscapes (Salwasser 1990).

Stand – a homogenous group of plants growing together on a contiguous area forming a subset of a plant community. Stands are the unit area measured to estimate current vegetation composition and structure for a designated plant community or ecological site.

State – a suite of plant community successional phases occurring on similar soils that interact with the environment to produce resistant functional and structural attributes with a characteristic range of variability maintained through autogenic repair mechanisms.

Subclimax – where natural disturbance (e.g., fire) maintains vegetation different from the climatic climax conditions.

Succession – a continuous process of change in vegetation which can be separated into series or phases (Tansley 1935). A predictable, directional, and stepwise progression of plant assemblages that culminates with climax (Clements 1936).

Threshold – conditions in which ecosystem resilience has been altered; conditions in which ecosystem resilience has been exceeded to alter ecological structure and function beyond the capacity for autogenic repair, resulting in alternative states. Ecological structure and function must be actively restored before ecosystem resilience of previous states can recover or alternative states will persist.

Triggers – biotic or abiotic variables or events, acting independently or in combination, that initiate threshold-related processes by contributing to the immediate loss of ecosystem resilience.

Wildlife Guilds

Avian

Nesting – ground, shrub, tree (mid-, upper canopy), cavity

Feeding – seed, buds, bark probers, drillers, insects, nectarivores

Mammals

Movement (scale)

Cover (hiding, nesting, dens, etc)

Functional group feeders: granivores, grazers, browsers, carnivores, omnivores, frugivores, insectivores, nectarivores

Foraging

Ground, understory, mid canopy, upper canopy