

Cattle Producer's Handbook

Range and Pasture Section

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Range Condition and Trend Paradigms

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The Society for Range Management (1989) defined range condition as the present state of vegetation of a range site in relation to the climax (natural potential) plant community for that site. It is an expression of the relative degree to which the kinds, proportions, and amounts of plants in a plant community resemble that of the climax community for the site.

The Range Succession Model in use in the U.S. was developed primarily from the writings and concepts of Frederick Clements. Sampson, a supporter of Clements' ideas, proposed that, by measuring changes in plant species composition, the successional concept could be used to determine whether livestock grazing had had a deleterious effect on range land.

Dyksterhuis proposed a formal procedure developed in the North American prairie that was quickly adopted by the Soil Conservation Service (SCS) [Natural Resource Conservation Service (NRCS)] and other land management agencies and the range profession as a whole. It enabled managers to quantify range condition and led to the development of the range site classification and what we now refer to as the Range Succession Model.

At that time (1949) the range condition methodology proposed by Dyksterhuis was innovative and definitely a progressive step based on the climatic climax of Clements. However, until recently, the range profession has never questioned the validity or application of this climax/succession model.

The descriptive adjectives, of the "climax" model—excellent, good, fair, and poor (Fig. 1)—lead to perception problems. "Excellent" was often the ultimate objective of management by the agencies for livestock, wildlife, or any other purpose. The perception of others (environmental groups) is that the only goal of management should be to move all rangelands to "excellent"

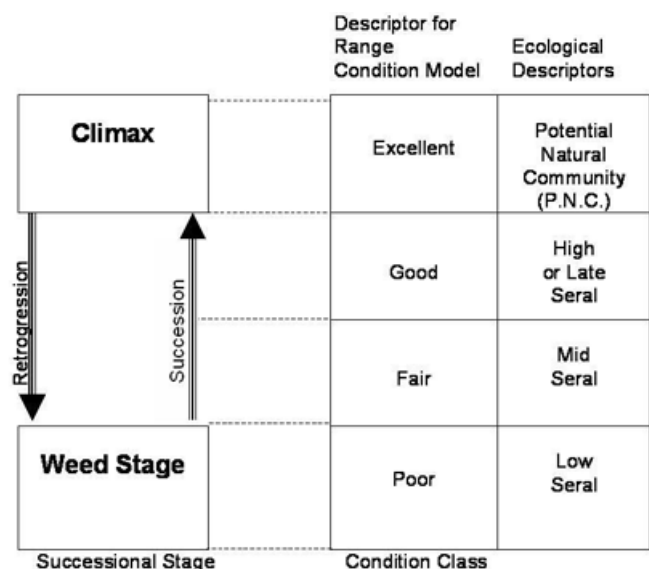


Fig. 1. Relationships between range condition and degree of retrogression and succession from climax condition.

condition. This idea is rampant in the environmental and conservation biology literature, and the range profession has been ultimately responsible.

The U.S. Forest Service (USFS) and Bureau of Land Management (BLM) changed the descriptions into ecological terms of potential natural (PNC), late or high seral, mid seral, and early or low seral (Fig. 1), but it did not alter this perception.

Emphasis on climax led to another perception that a pristine landscape existed in the western U.S. before European man's influence and that all management should be aimed at returning to that condition.

Implicit in the Range Succession Model is that the climax, or PNC, is the only stable state and is "best" in terms of stability, diversity, productivity, and sustain-