

Drought: Impacts on vegetation

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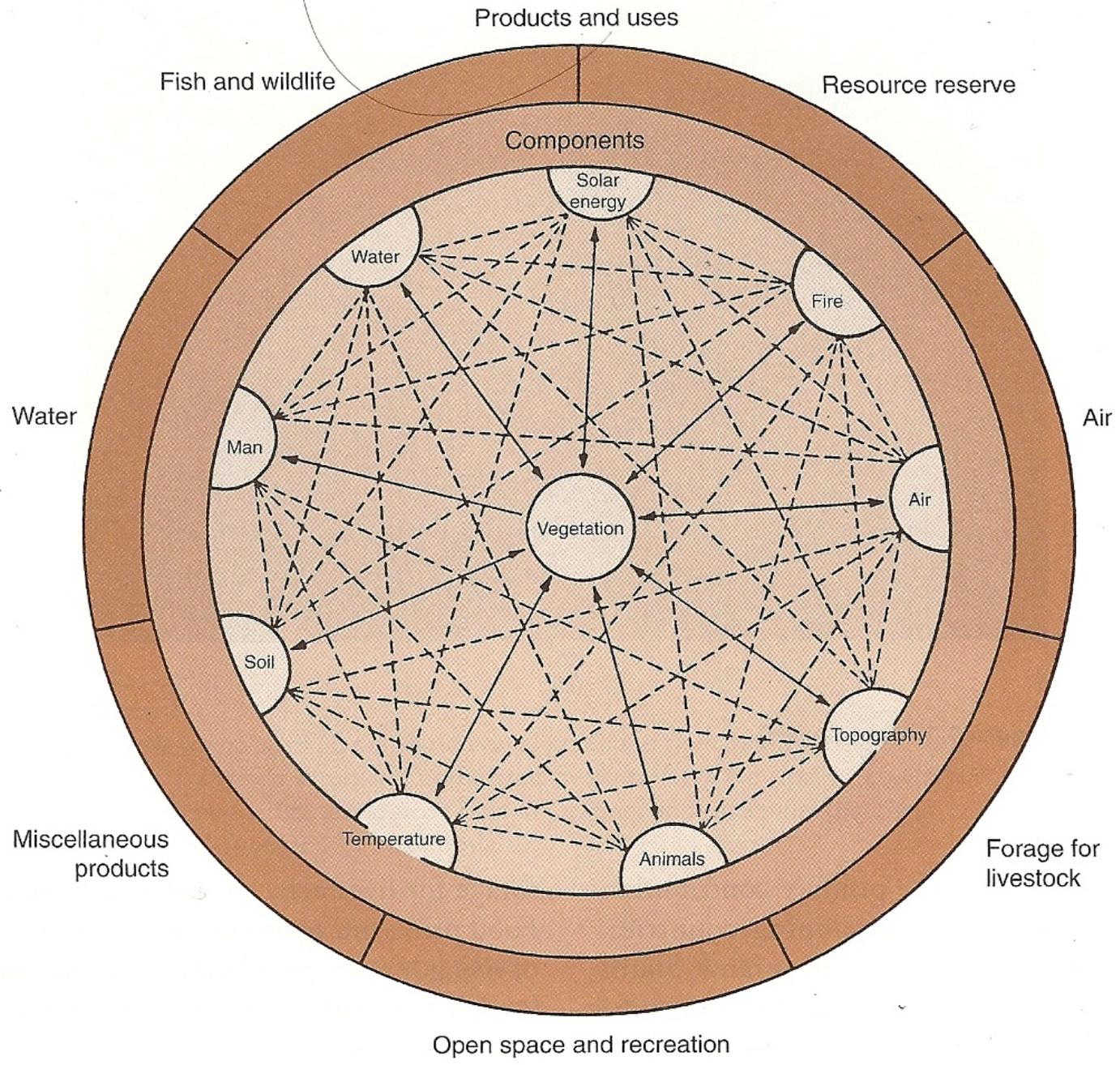
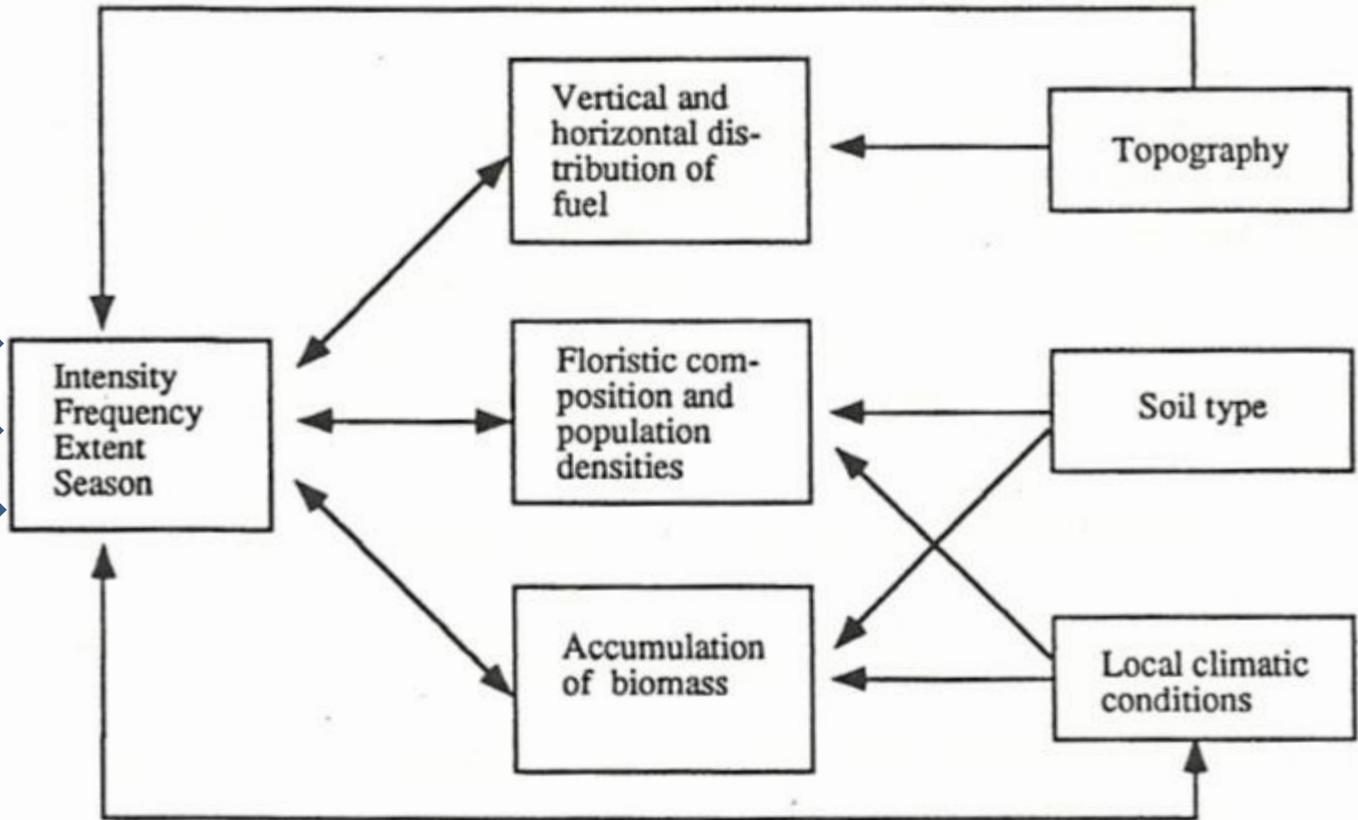


Figure 1.2

Assessing Drought

Grazing? 
Fire? 
Drought? 



Assessing Drought

- Intensity
 - Precipitation, wind, temperature?
- Frequency
 - When was the last drought?
- Extent
 - How long since it began?
 - Local, Statewide, Regional, National?
- Season
 - Growing season/ Dormant season?

Impacts of Drought on Rangelands (Depends?)

Forage-

- **Grazing, Precipitation, Temperature, Fire, Wind**

- Intensity, Frequency, Extent, Season
(before, during, and after)

- **Soil**

- Texture

- Water capacity

- Depth

Impacts of Drought on Rangelands (Depends)

- **Forage-**
 - Use before, during, and after
 - Climatic conditions
 - Plant diversity
 - Length of drought

Impacts of Drought on Rangelands

- **Forage-**
 - Increased natural die-off of plant roots
 - Decreased production
 - Late green up
 - Early senescence
 - Mortality
 - Soil
 - Decreased soil moisture
 - Erosion

Impacts of Drought on Rangelands

Decreased production

- Severe reduction in forage production(6-7 fold fluctuation).
- **1916-1918- Southern New Mexico**
 - 40-45% reduction on ungrazed range
 - 62-70% reduction on heavy grazed range
- **1934 – Southern New Mexico**
 - 50-60% reduction on protected areas
- High mortality to range grasses whether grazed or not (50% mortality not uncommon).
- Loss of species diversity
 - Some species 99%



Questions?

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