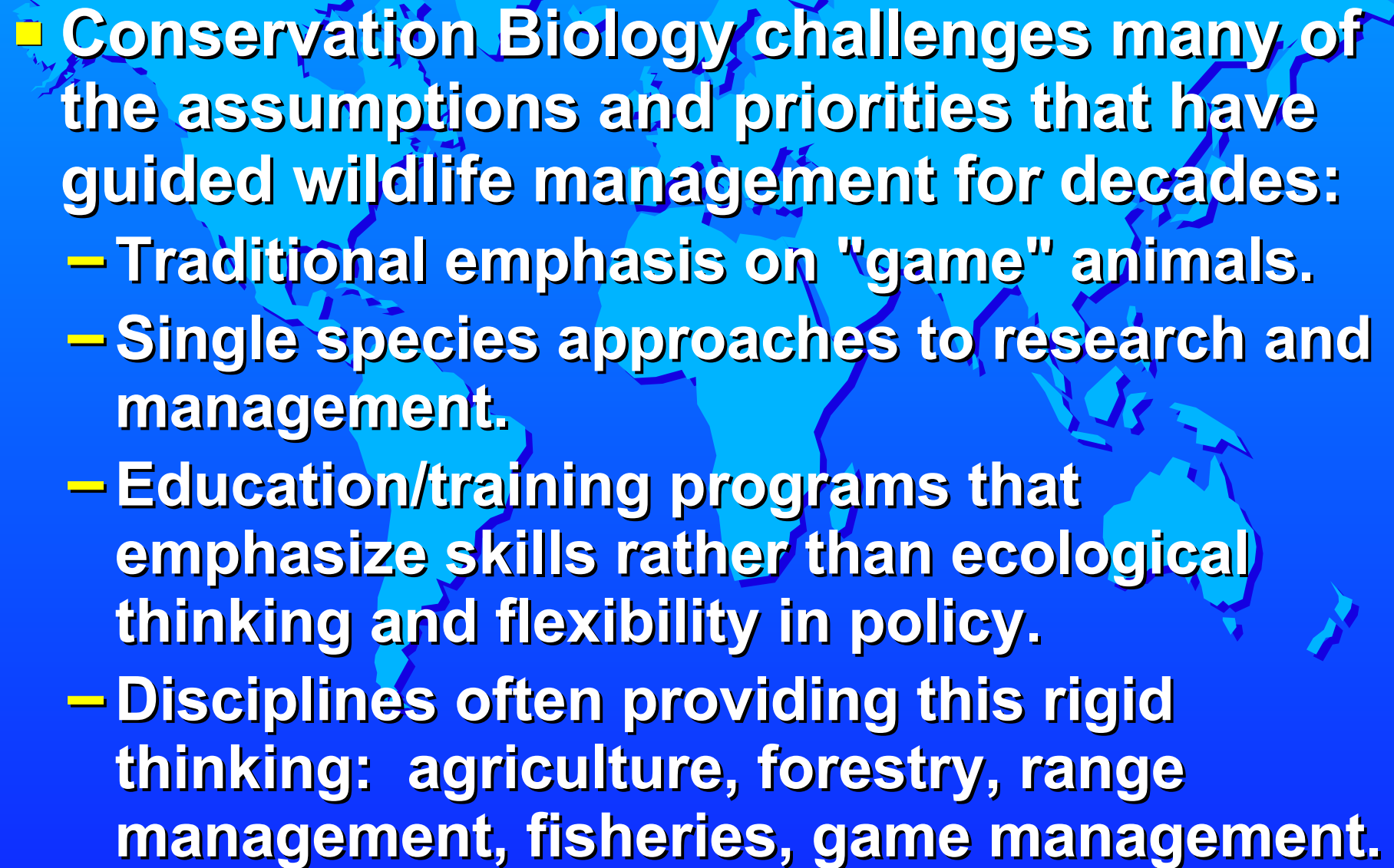


XI: Conservation Management Principles

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- **Conservation Biology challenges many of the assumptions and priorities that have guided wildlife management for decades:**
 - **Traditional emphasis on "game" animals.**
 - **Single species approaches to research and management.**
 - **Education/training programs that emphasize skills rather than ecological thinking and flexibility in policy.**
 - **Disciplines often providing this rigid thinking: agriculture, forestry, range management, fisheries, game management.**



■ **Conservation Management is truly an interdisciplinary science and uses:**

– **Biology**

- **Ecology**
- **Genetics**
- **Biogeography**
- **Natural History**

– **Economics**

- **Ecological Economics**
- **Budgeting**
- **Resource Economics**
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Conservation Management continued-

- Humanities
 - Philosophy
 - Sociology
 - Anthropology
 - History
 - Political Science
 - Communications
- Why do we need direct "management" of landscapes?
 - Protected areas are too small to preserve species diversity.

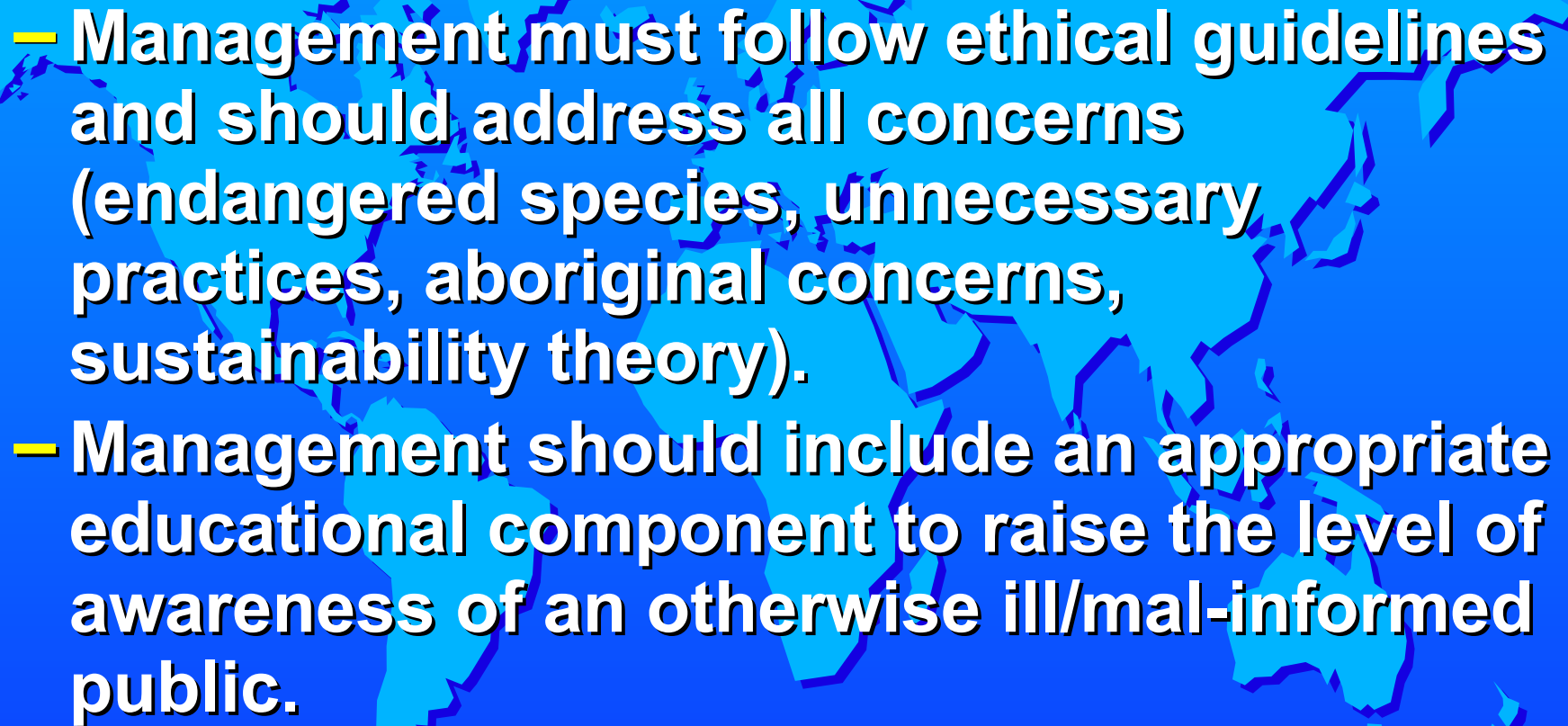
Why continued --

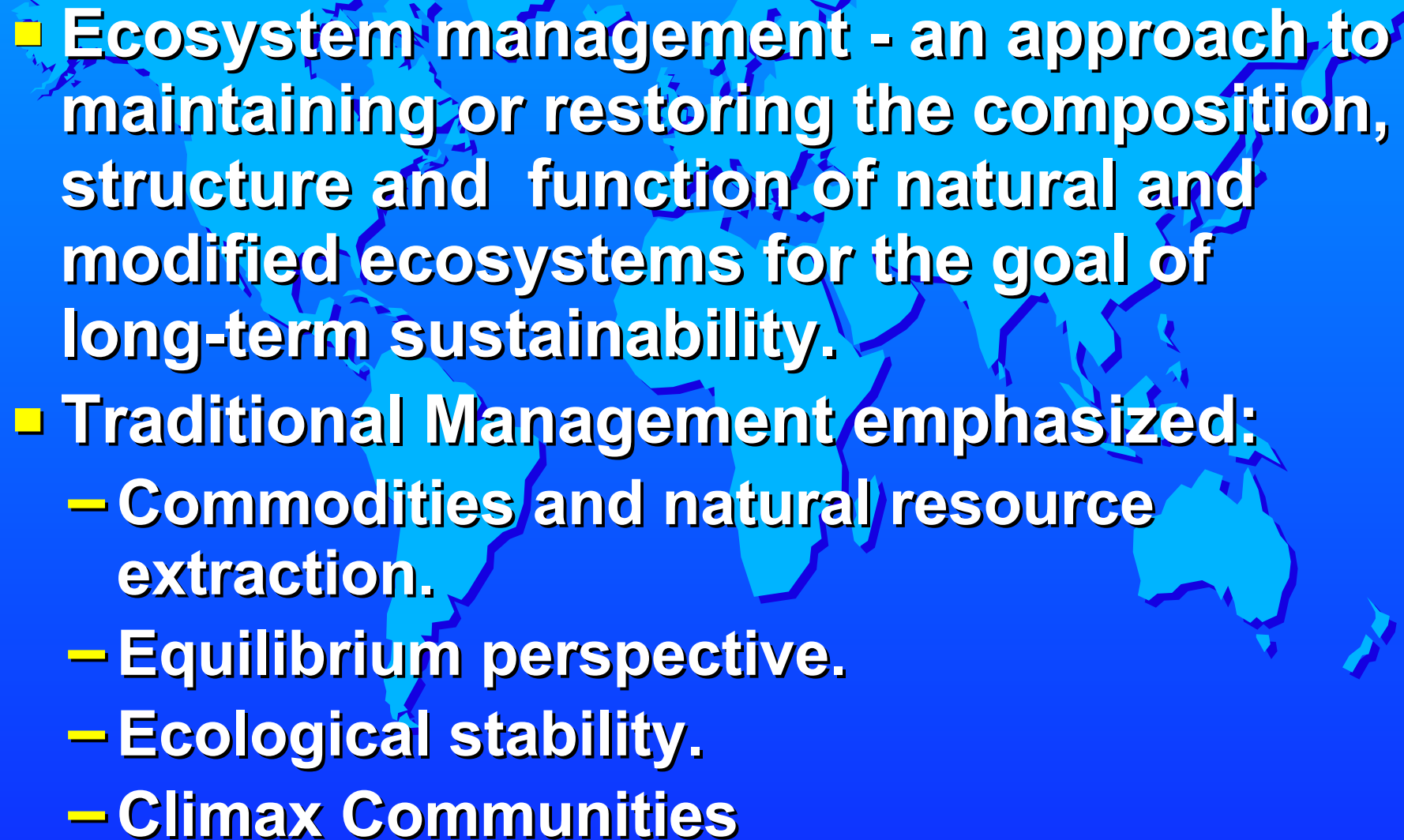
- Protected areas may be too small to generate important patterns of disturbance.**
- Protected areas may be very fragmented and isolated requiring translocations of animals to maintain populations and diversity.**
- Protected areas are typically surrounded by hostile anthropogenic landscapes that harbor a variety of problems requiring intervention: invasive species, degrading processes (siltation, pollution, etc).**

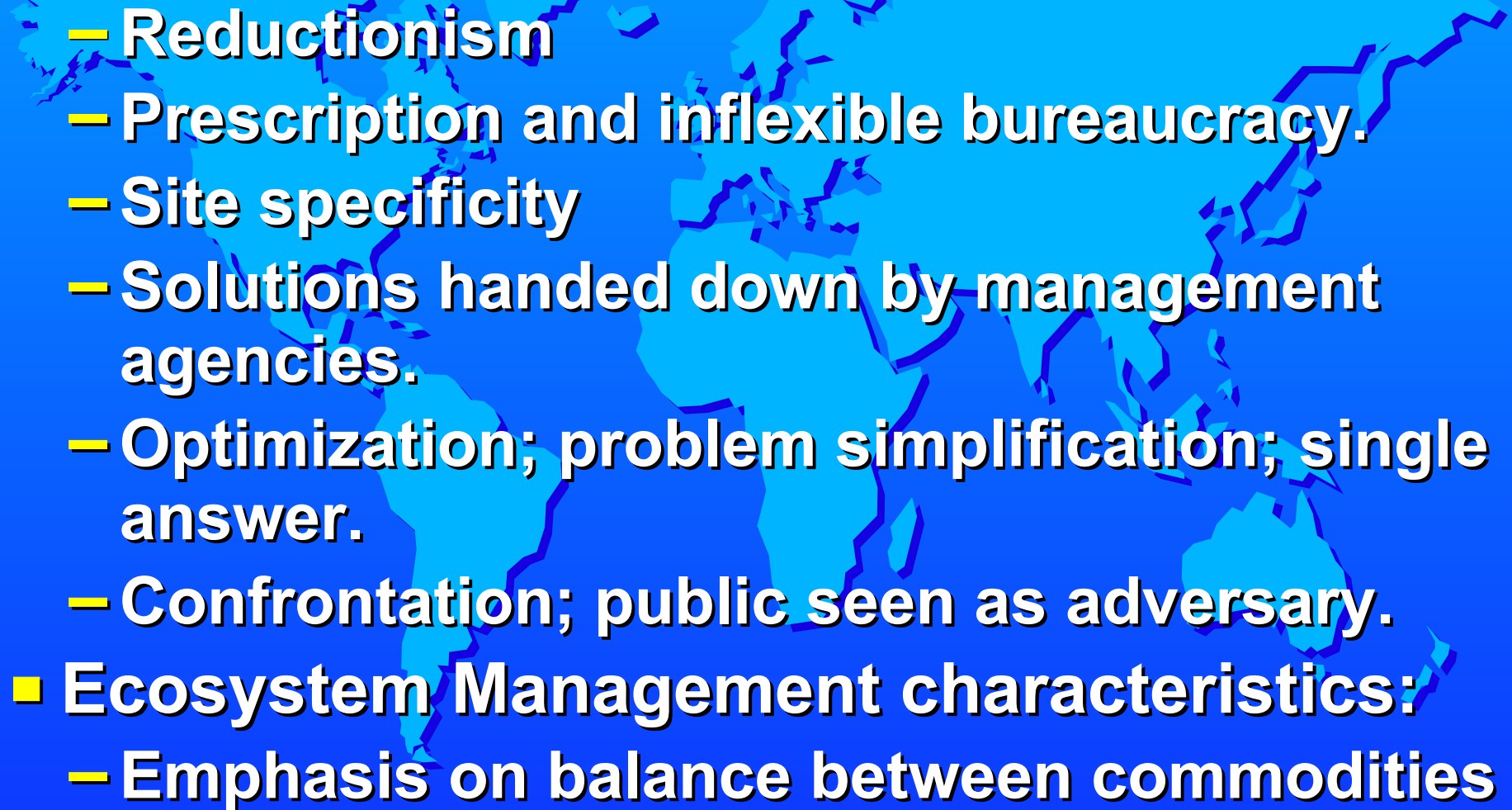


■ **Four Principles of Good Conservation Management:**

- **Critical ecological processes and biodiversity must be maintained.**
- **External threats must be minimized and external benefits maximized.**
- **Evolutionary processes must be preserved.**
- **Management must be adaptive and minimally intrusive.**

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- Management must follow ethical guidelines and should address all concerns (endangered species, unnecessary practices, aboriginal concerns, sustainability theory).**
 - Management should include an appropriate educational component to raise the level of awareness of an otherwise ill/mal-informed public.**

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- **Ecosystem management** - an approach to maintaining or restoring the composition, structure and function of natural and modified ecosystems for the goal of long-term sustainability.
 - **Traditional Management emphasized:**
 - **Commodities and natural resource extraction.**
 - **Equilibrium perspective.**
 - **Ecological stability.**
 - **Climax Communities**

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- **Reductionism**
 - **Prescription and inflexible bureaucracy.**
 - **Site specificity**
 - **Solutions handed down by management agencies.**
 - **Optimization; problem simplification; single answer.**
 - **Confrontation; public seen as adversary.**
 - **Ecosystem Management characteristics:**
 - **Emphasis on balance between commodities**

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- and ecological integrity.
 - Nonequilibrium perspective.
 - Dynamics, resilience.
 - Shifting mosaics.
 - Holism
 - Adaptive management, uncertainty and flexibility.
 - Attention to context.
 - Solutions developed through discussions among all stakeholders.
 - Multiple solutions to problems.

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- **Consensus building; multiple issues, public invited as partners.**