Sustainability
in Words and Pictures

West Island Woodlands Advisory Group
Port Alberni, January 10, 2001

Tom Niemann

Ministry of Forests


SFM THIS WAY

In a few words

- **Sustainable development meets the needs of the present generation without compromising the ability of future generations to meet their own needs.**

  - UN World Commission on Environment and Development

- **Manage and conserve the province's forest and range resources in a manner that balances economic, ecological and social benefits for all British Columbians.**

  - Mission in MOF Business Plan 2000/2001

More words

- Our goal is to maintain and enhance the long-term health of our forest ecosystems, for the benefit of all living things both nationally and globally, while providing environmental, economic, social and cultural opportunities for the benefit of present and future generations.

  - CCFM National Forest Strategy 1998-2003

Many words

- **WHEREAS British Columbians desire sustainable use of the forests they hold in trust for future generations;**
  AND WHEREAS sustainable use includes
  (a) managing forests to meet present needs without compromising the needs of future generations,
  (b) providing stewardship of forests based on an ethic of respect for the land,
  (c) balancing economic, productive, spiritual, ecological and recreational values of forests to meet the economic, social and cultural needs of peoples and communities, including First Nations,
  (d) conserving biological diversity, soil, water, fish, wildlife, scenic diversity and other forest resources, and
  (e) restoring damaged ecologies;

  - Preamble to *Forest Practices Code of British Columbia Act*

Many pages

- CCFM C&I
  - 6 criteria, 83 indicators, 22 pages
- Montreal Process C&I
  - 7 criteria, 67 indicators, 18 pages

Defining sustainability

- Semantics
- Concepts
- Challenges

Concepts

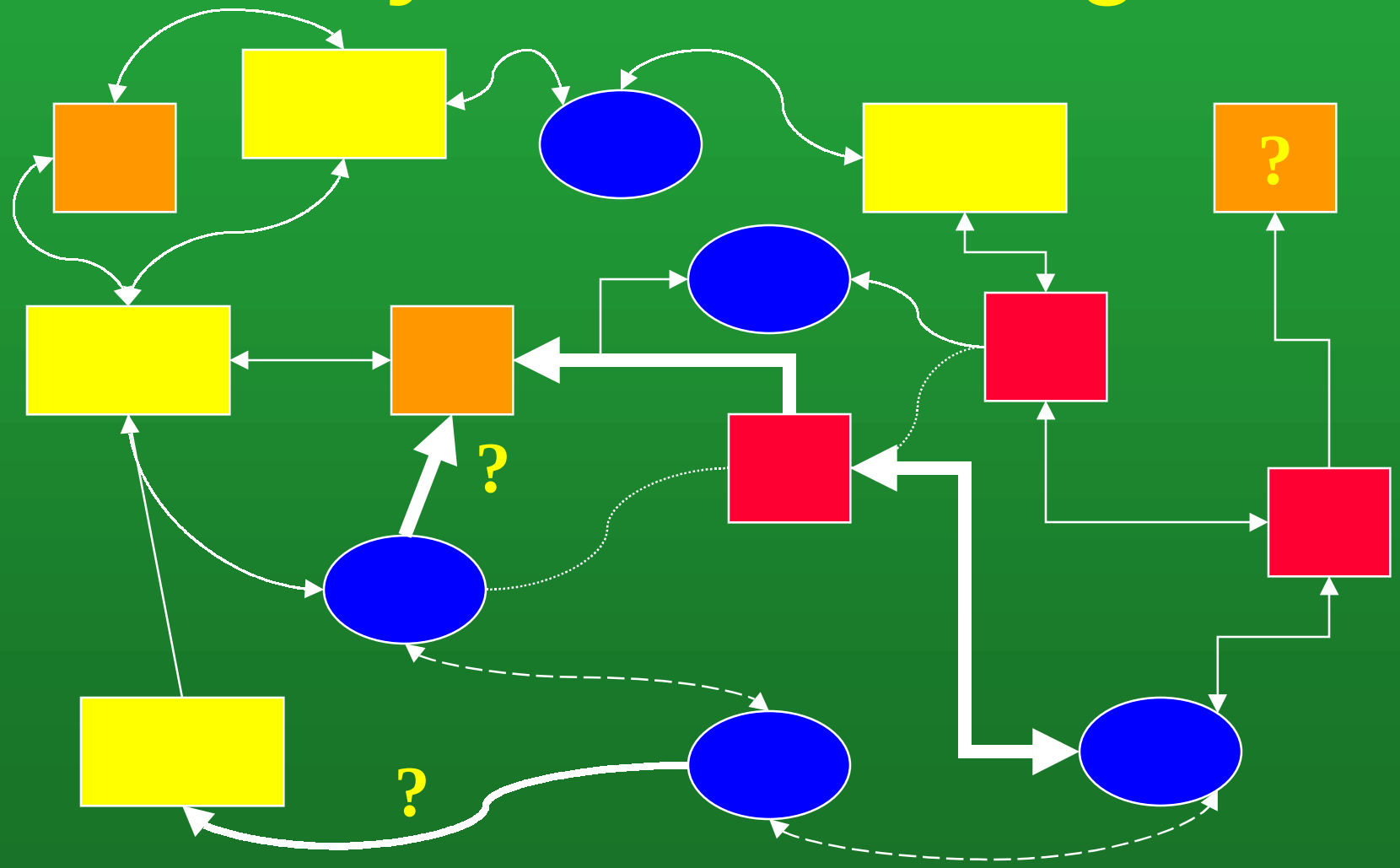
- Systems thinking (holistic)
- Philosophical perspective
- Environmental, Social, Economic and Institutional
- Scale: spatial and temporal
- Top-down and bottom-up
- Uncertainty and risk
- Management cycle
- Participation

Systems thinking

- Complex
- Interconnected

  - BIG PICTURE
  - Consider many aspects (indicators) together, not individually

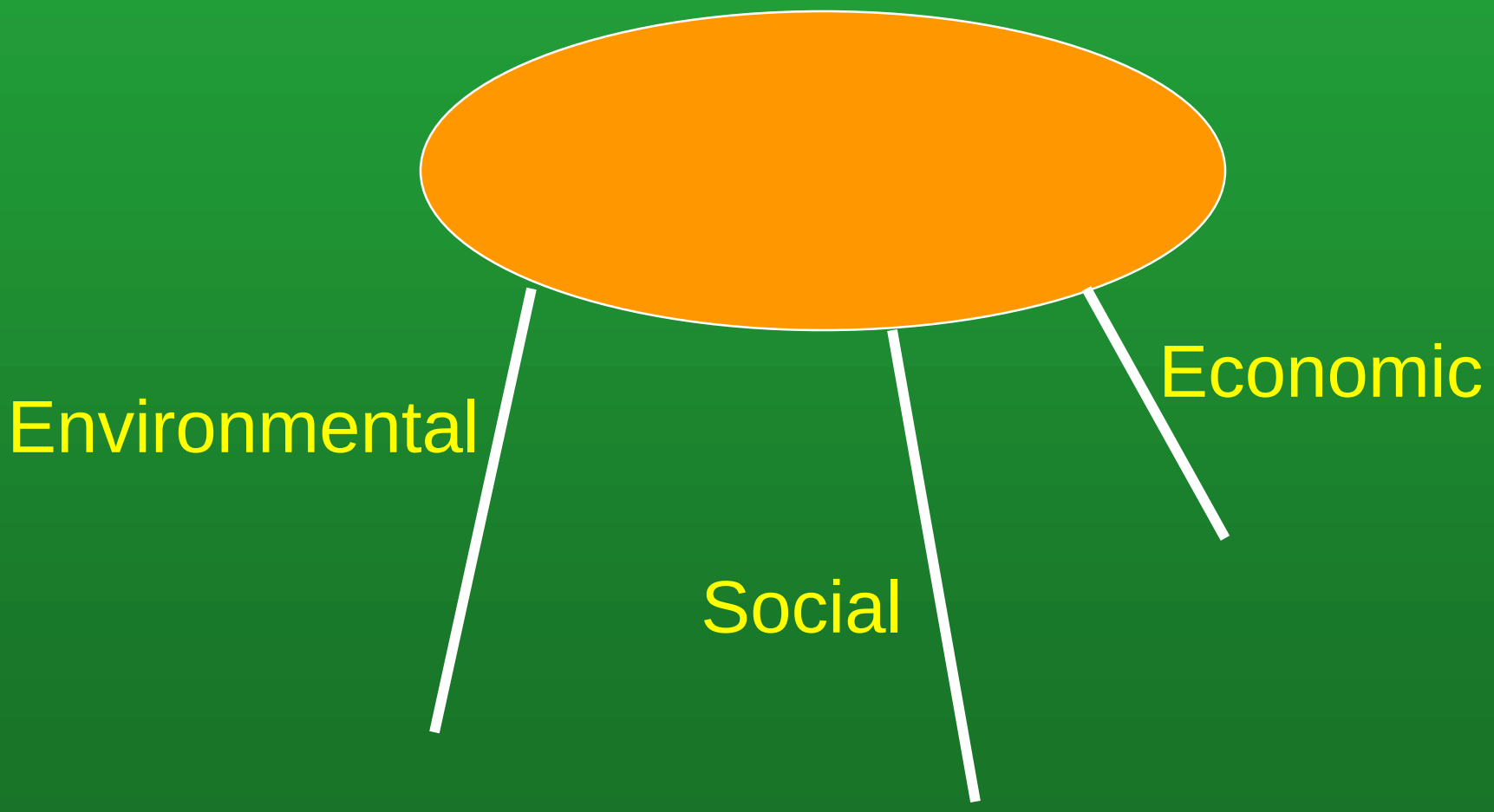
Systems thinking



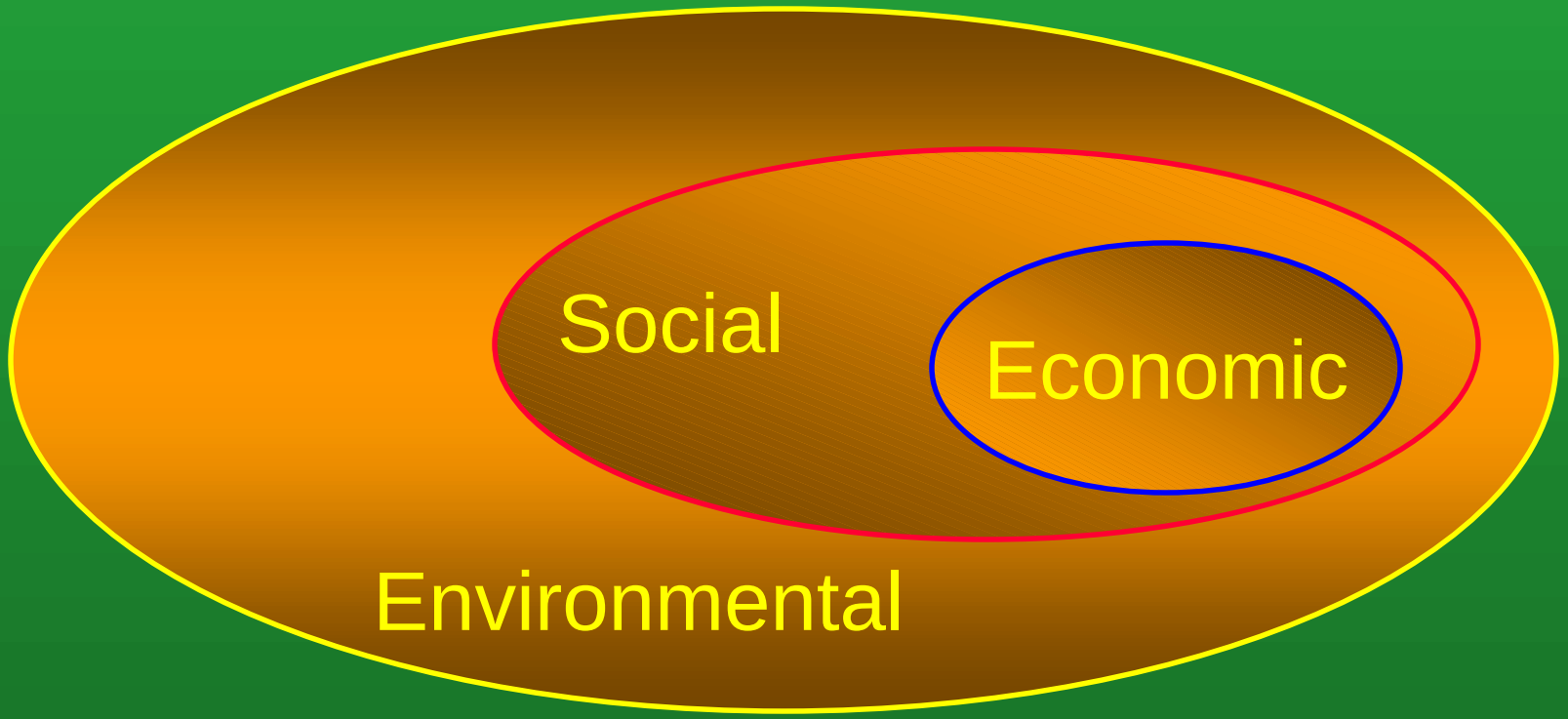
Philosophical Perspective

- anthropocentric
  - utilitarian "maximize output"
  - mechanistic "predictable"
  - stewardship
  - land ethic
  - wise use
- biocentric
  - precautionary "minimize impact"
  - organic "surprises"
  - stewardship
  - land ethic
  - ecosystem management

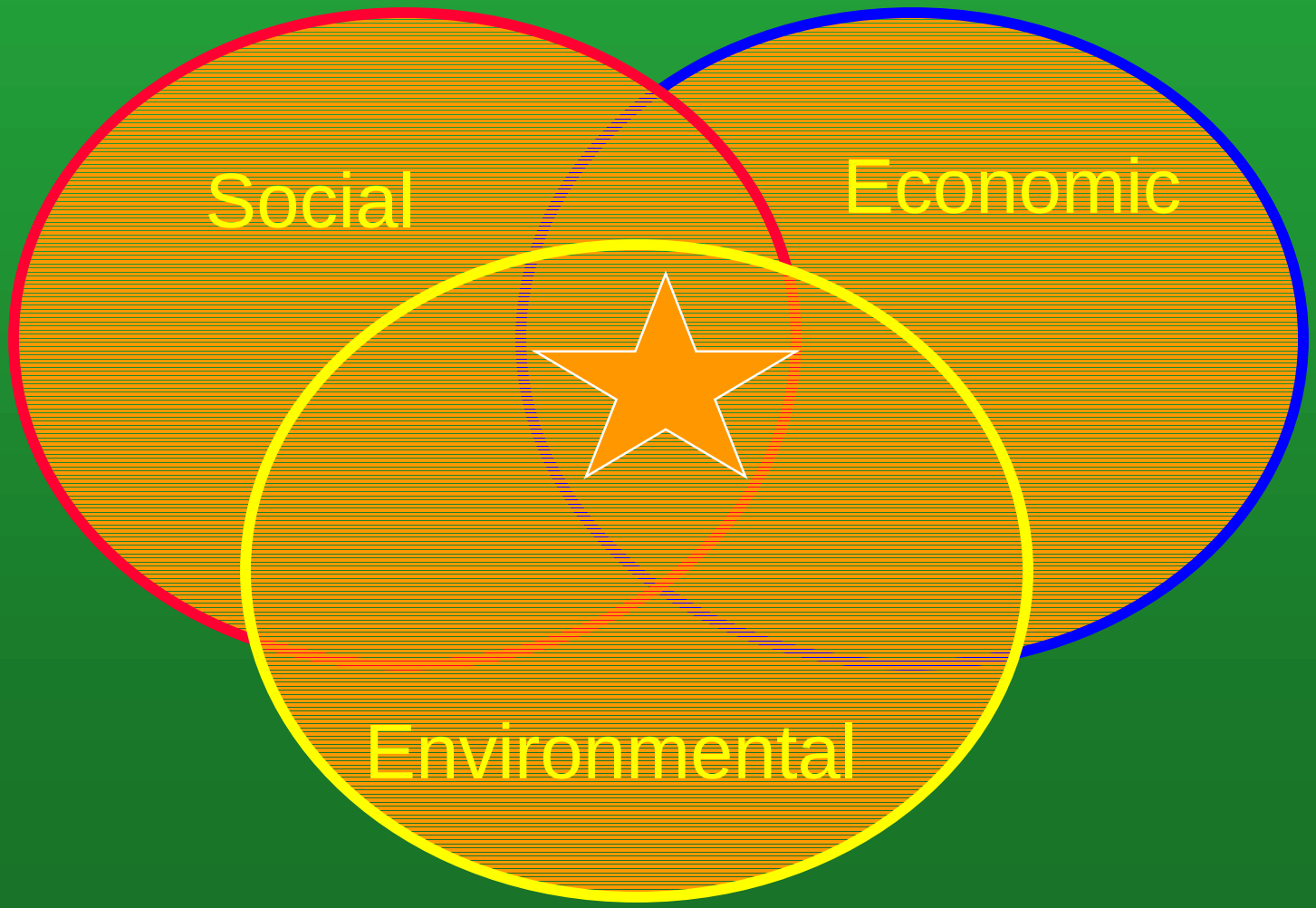
Environmental, Social, Economic



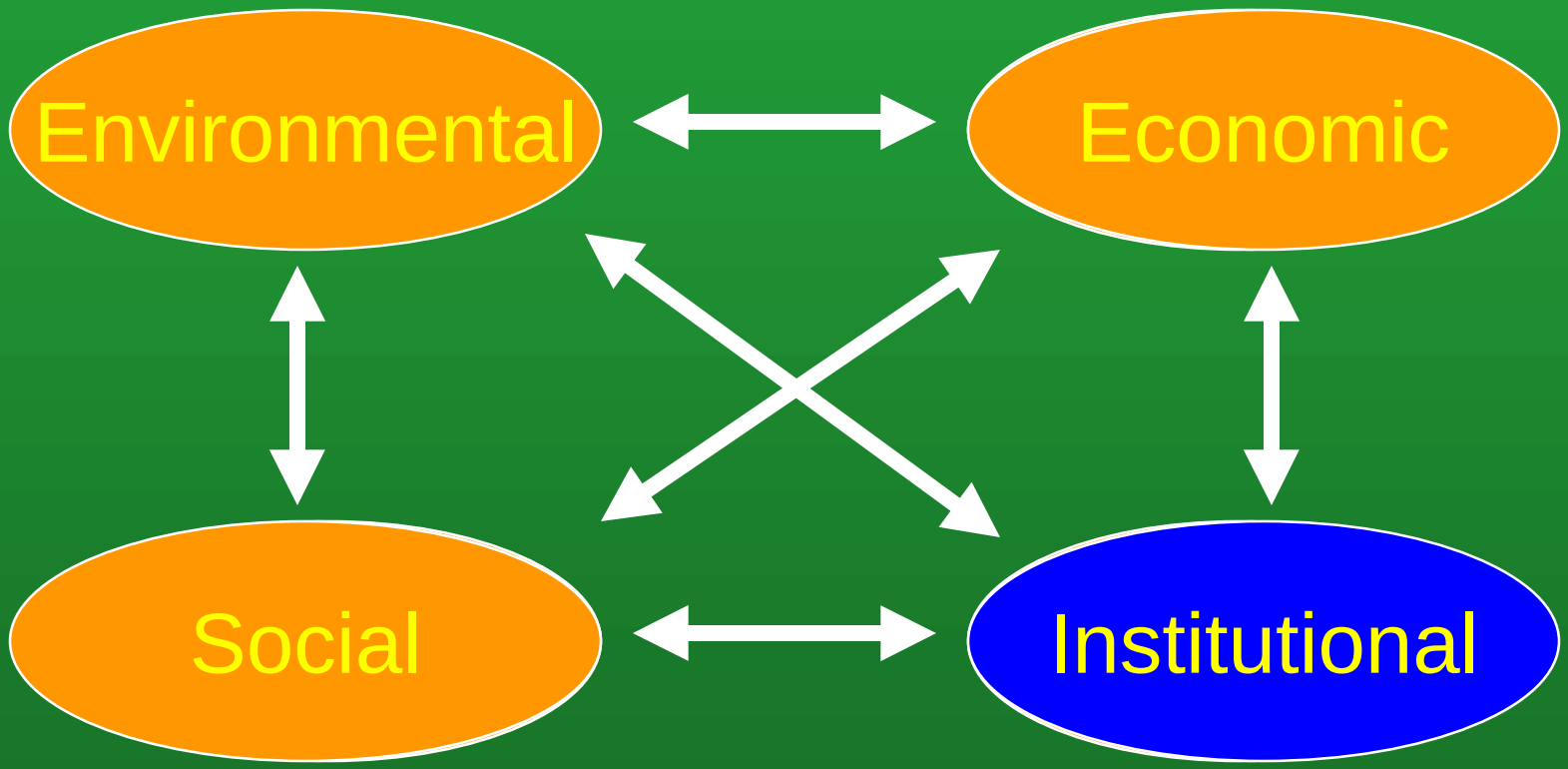
Environmental, Social, Economic



Environmental, Social, Economic



Environmental, Social, Economic and Institutional

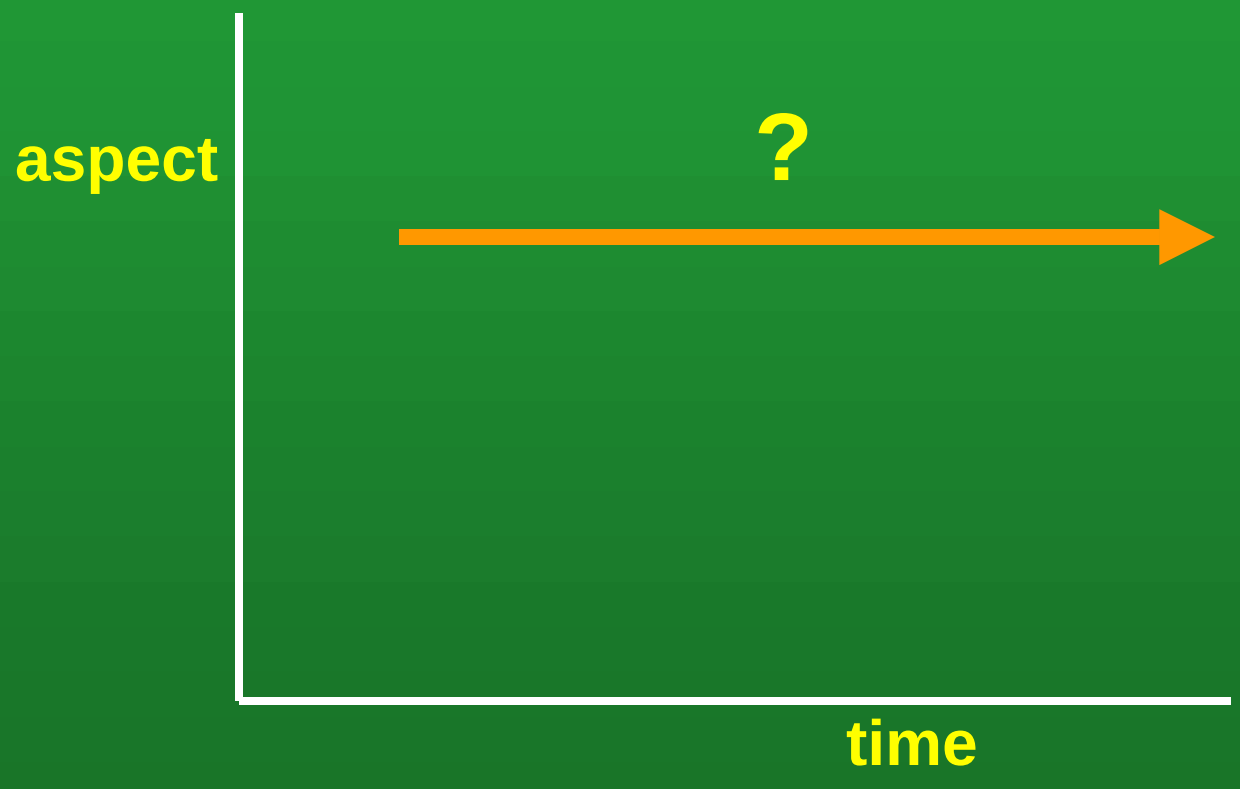


Scale: spatial

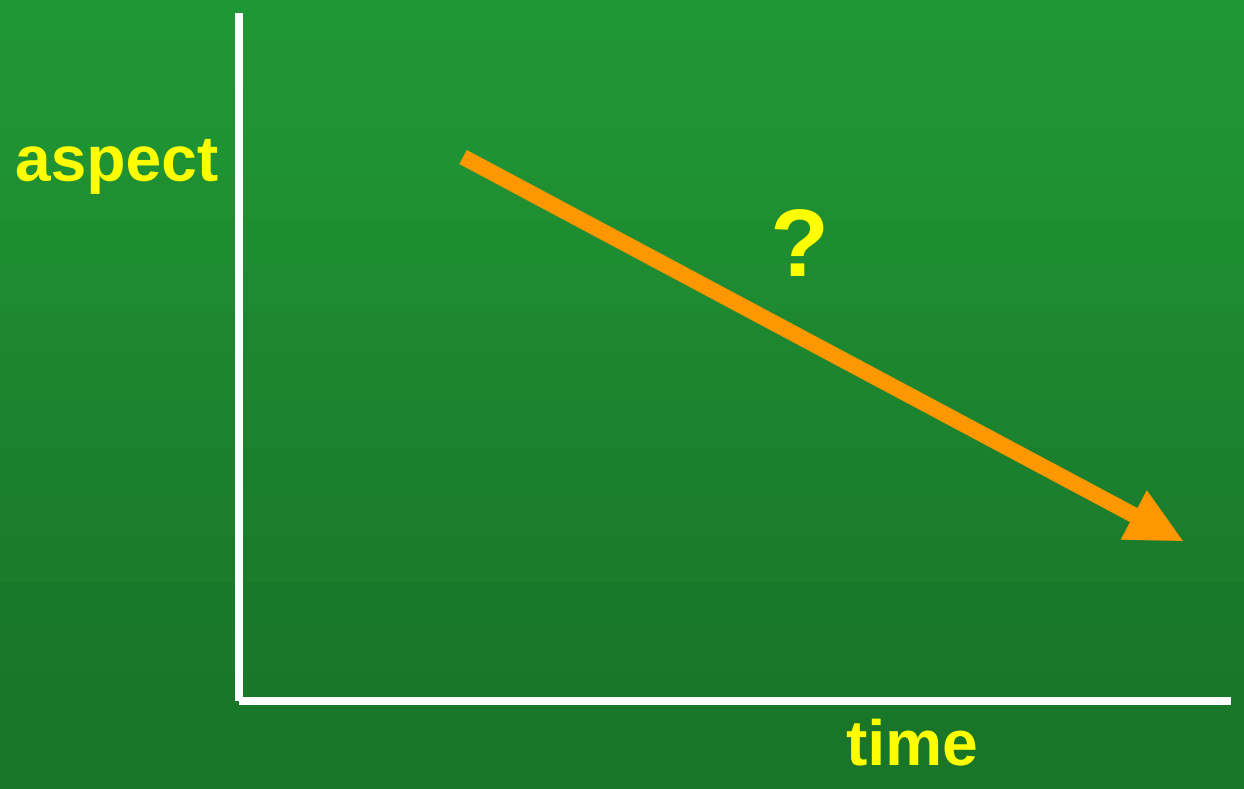
- Global
- National
- Provincial
- Local
- Stand

Sustainable at what level?

Scale: temporal



Scale: temporal



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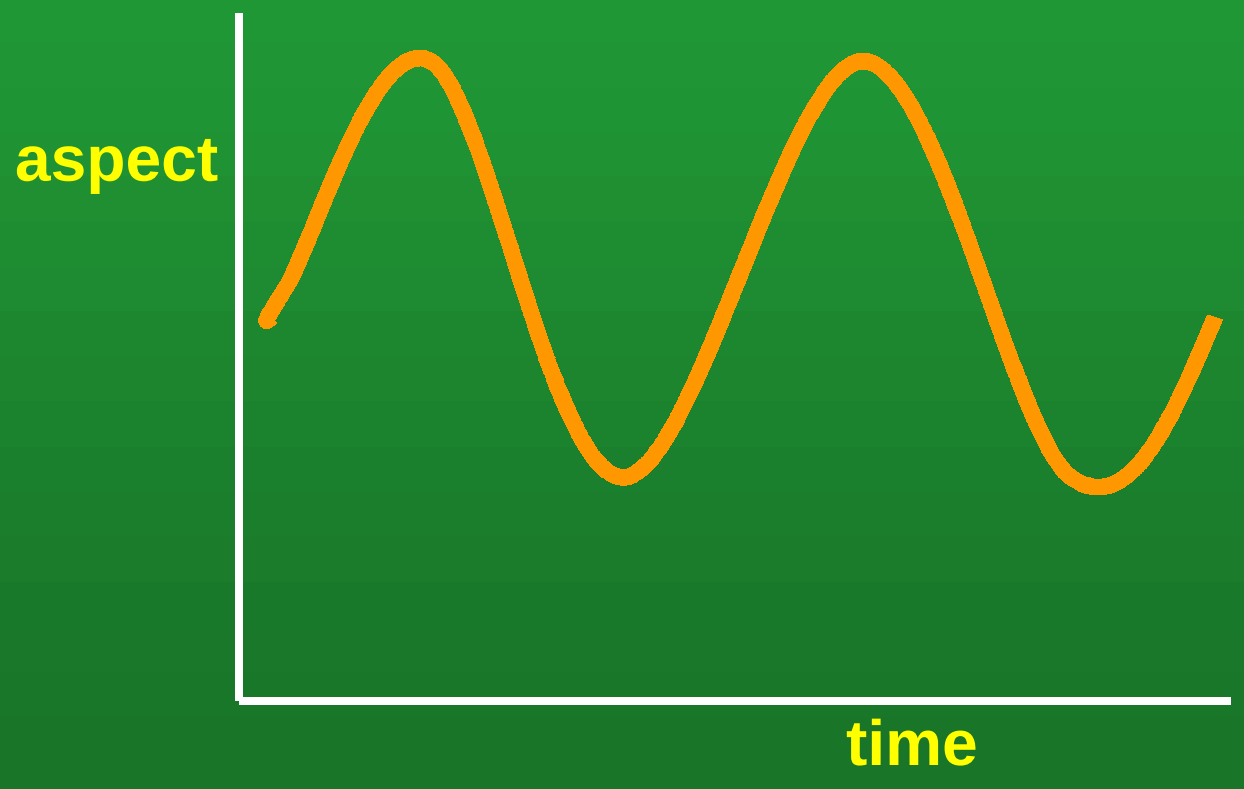

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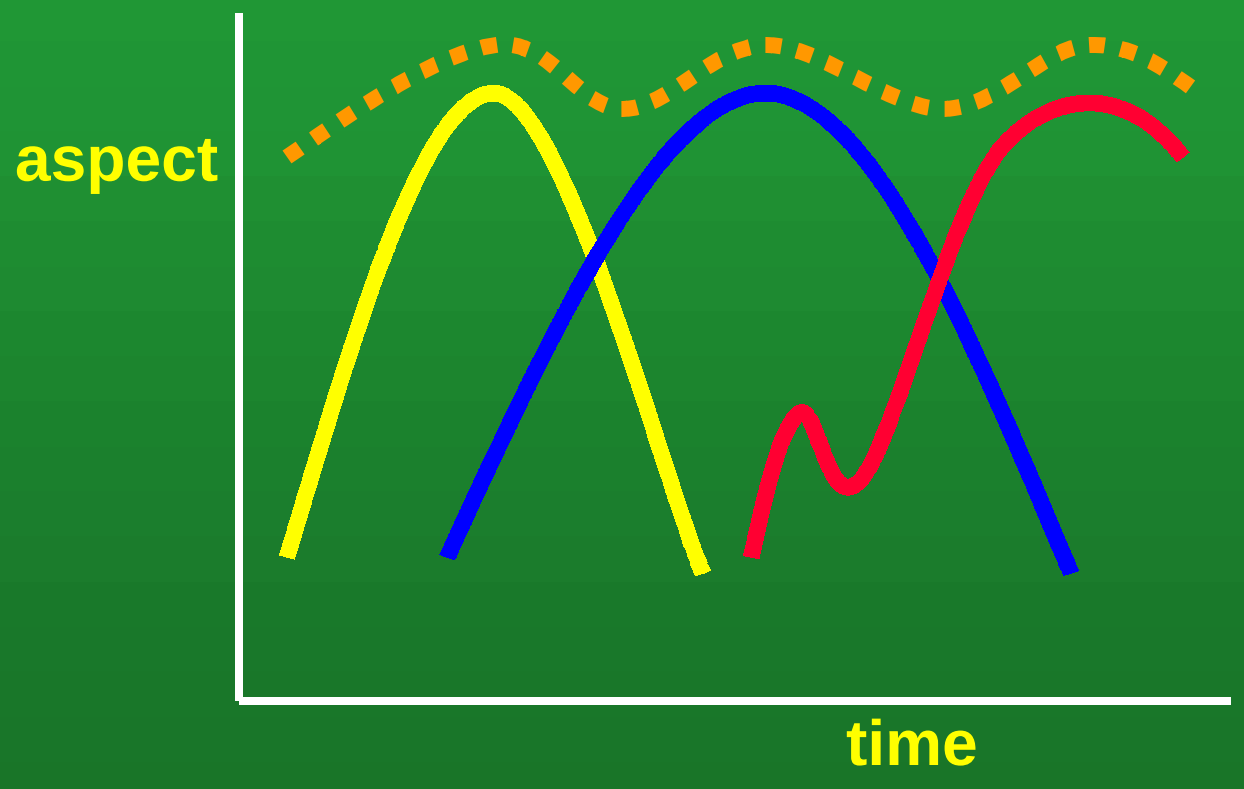

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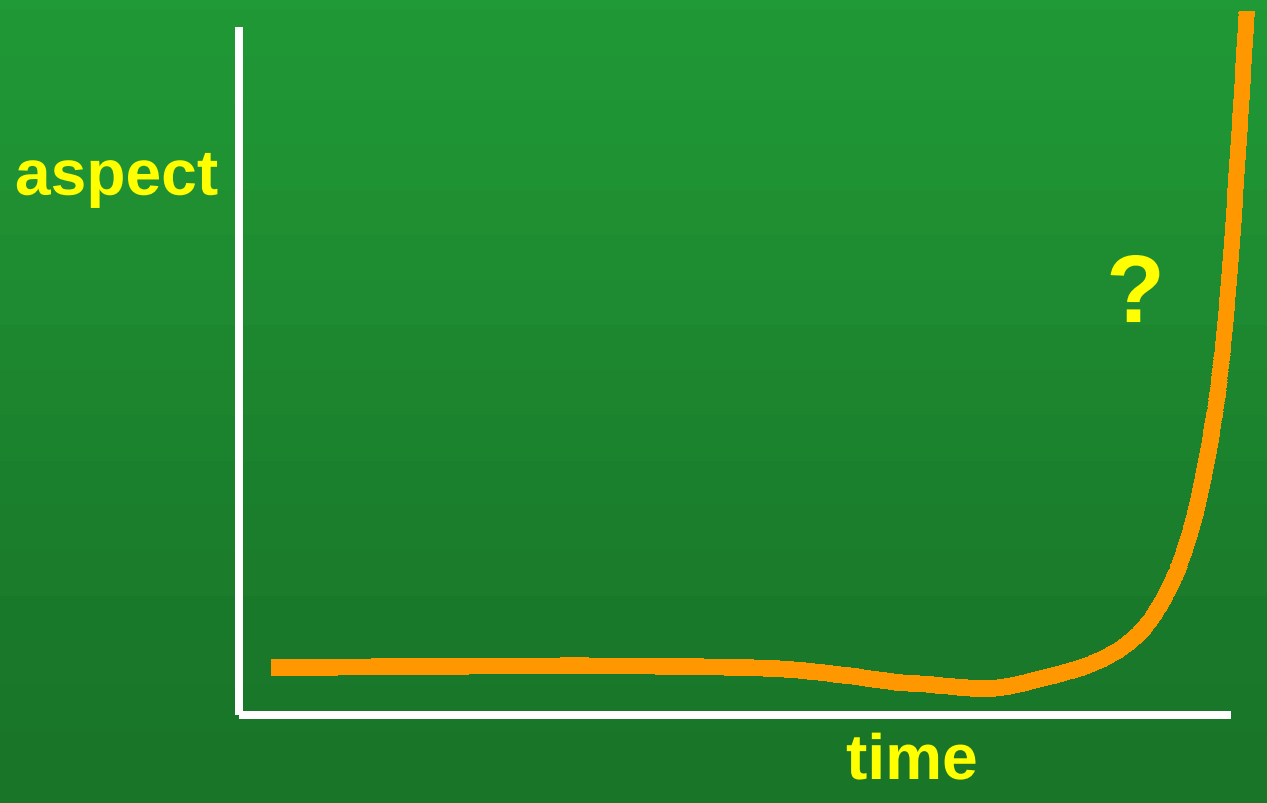

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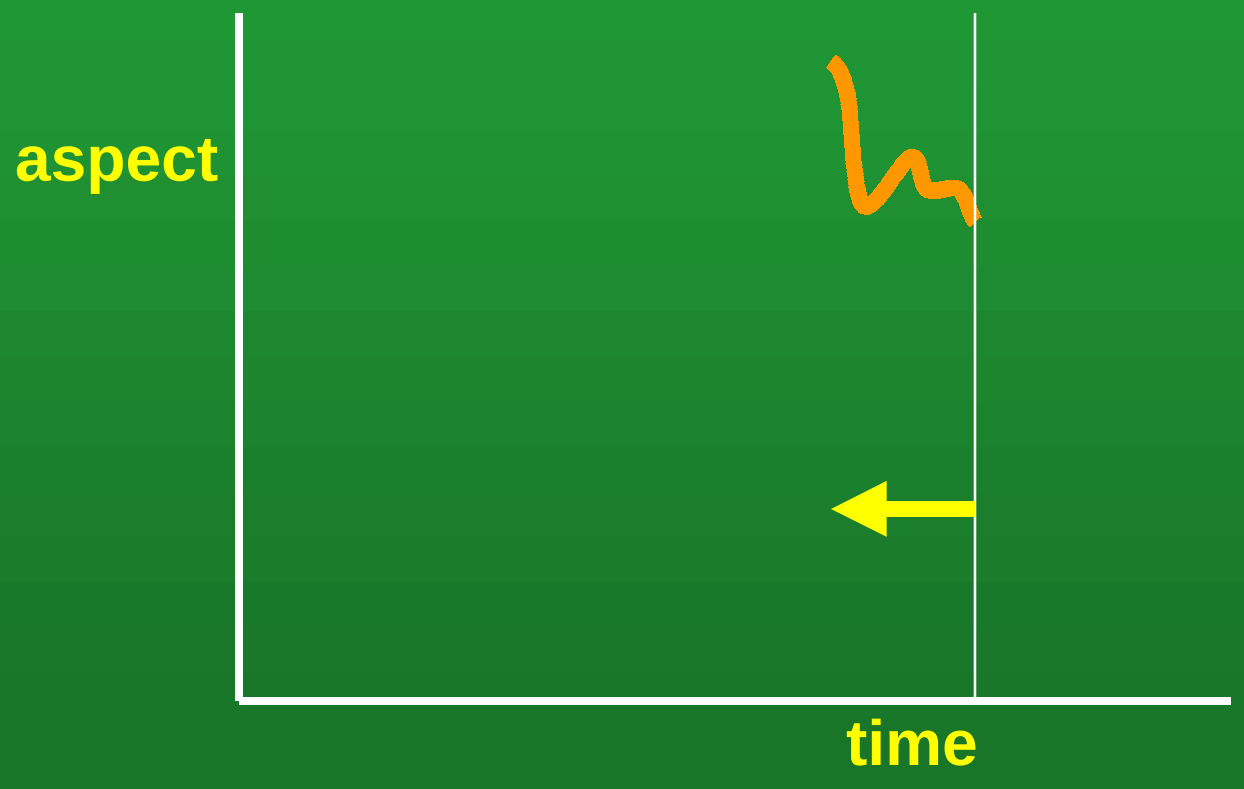

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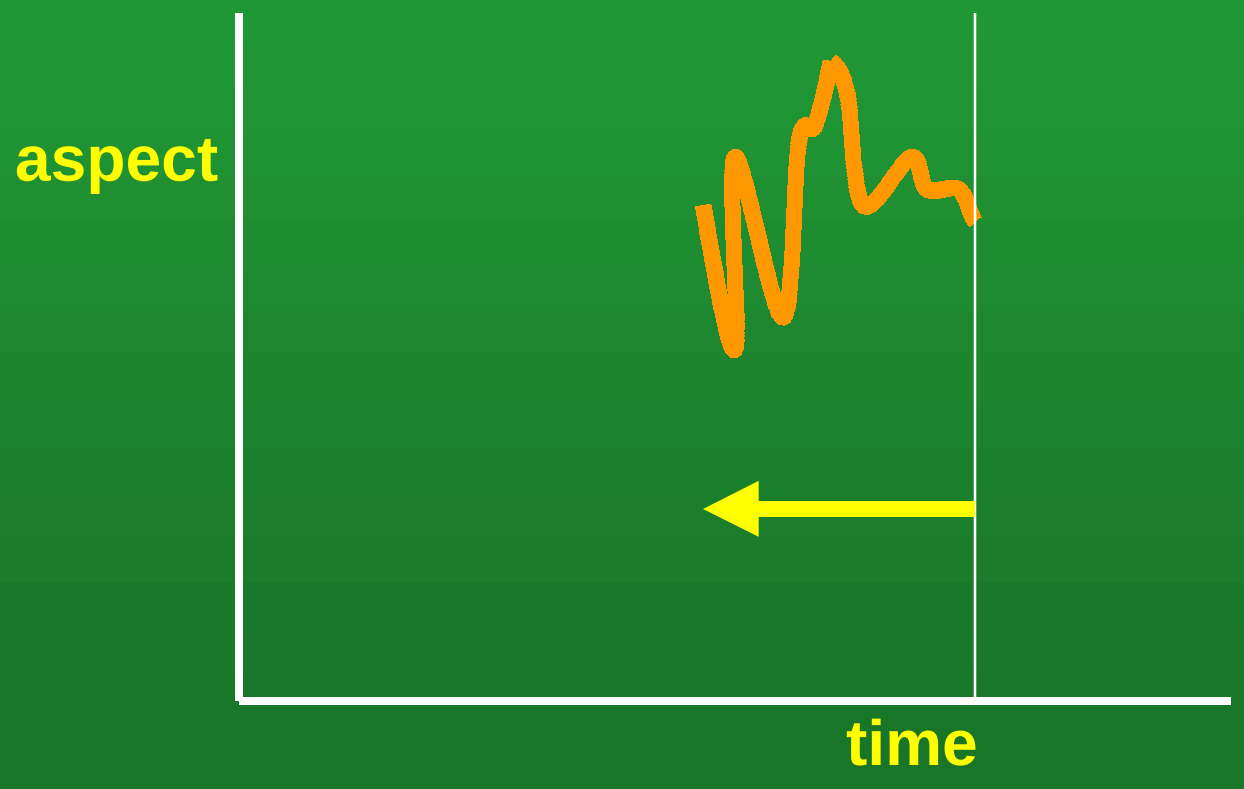

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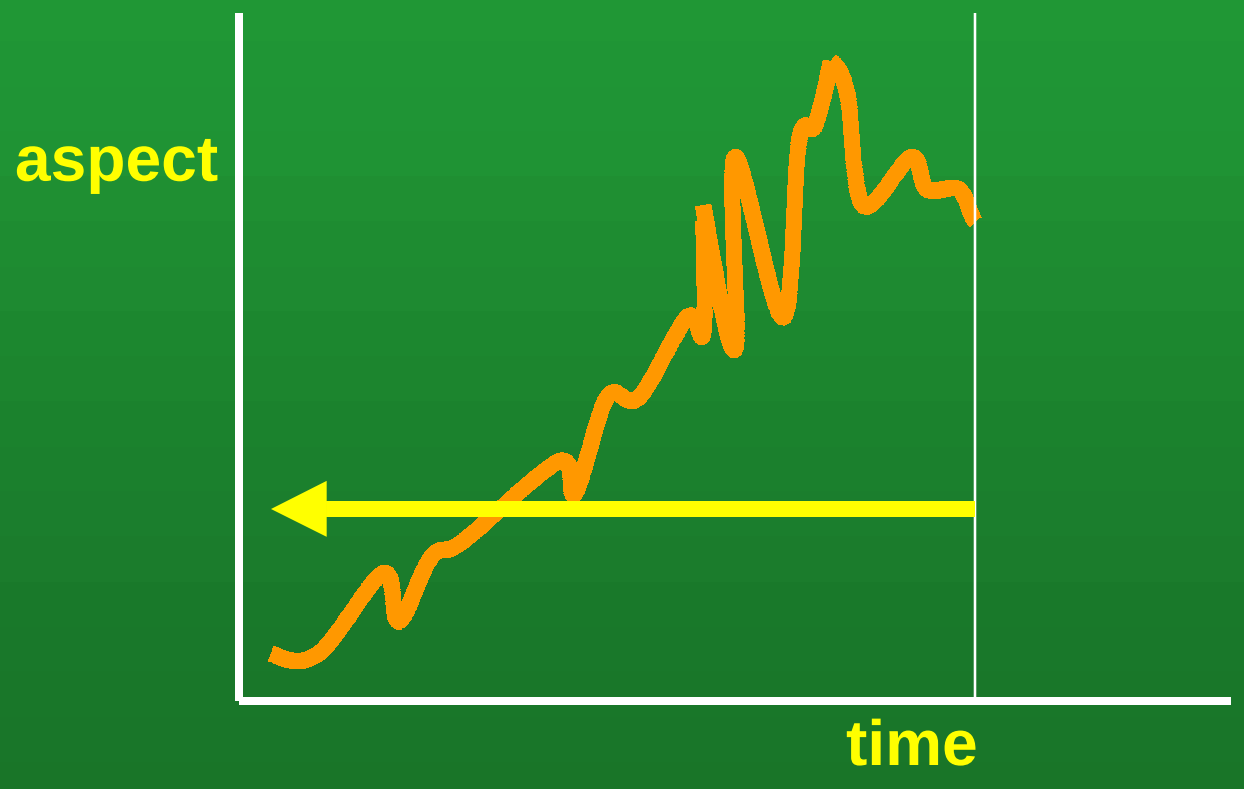

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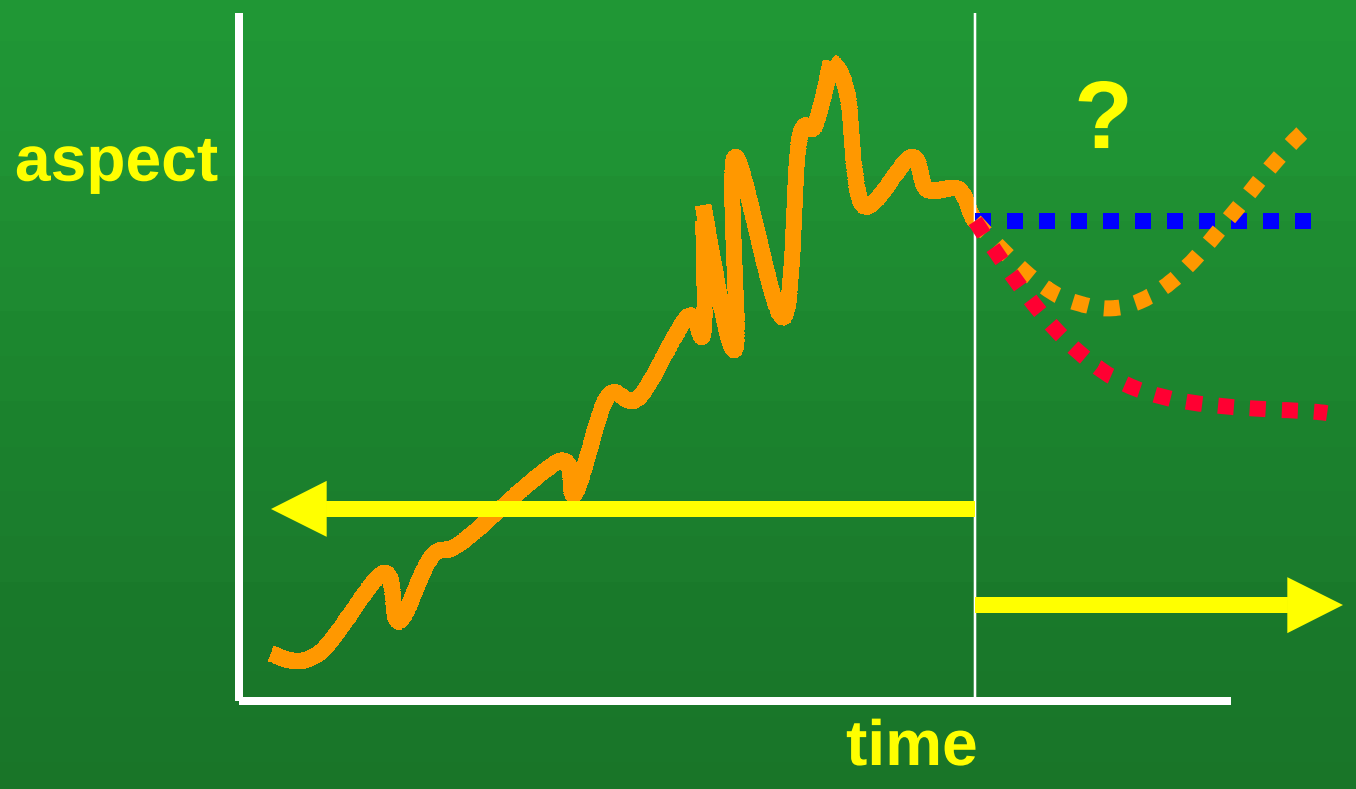
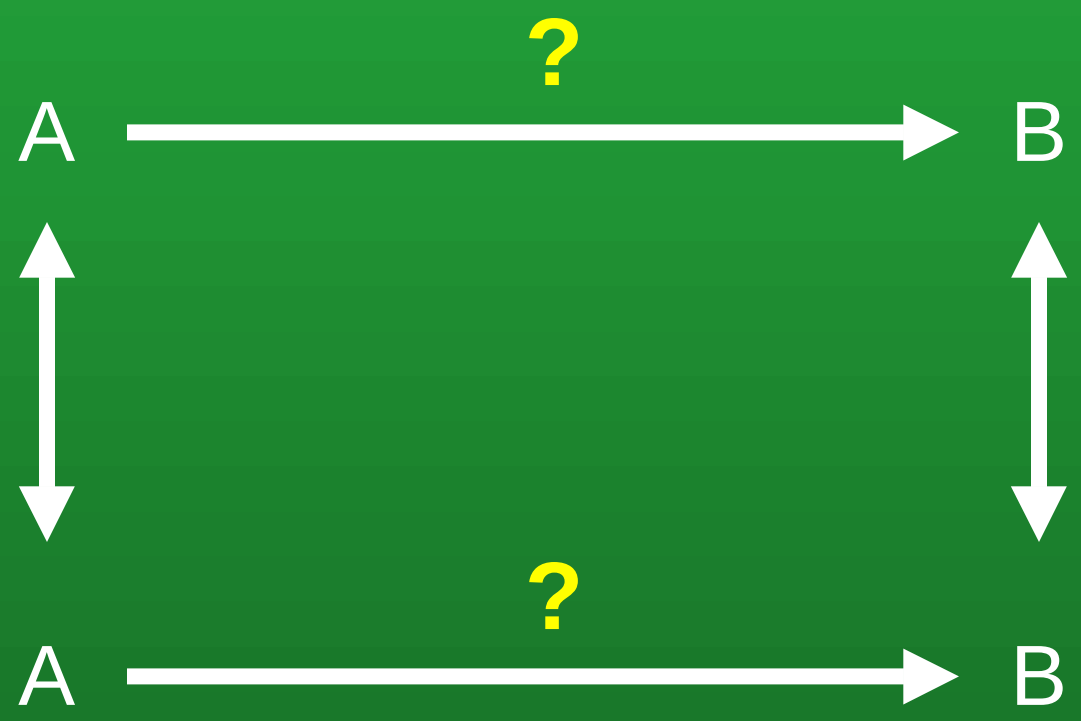


Top-down and bottom-up

Generalities	Sustainable forest management	**Goal**	**Vision**
	Maintain biodiversity	**Principle**	**Wisdom**
	Ecosystem diversity	**Criterion**	**Knowledge**
	Old growth	**Indicator**	**Information**
Specifics	Carmanah Giant	**Observation**	**Data**

Top-down and bottom-up



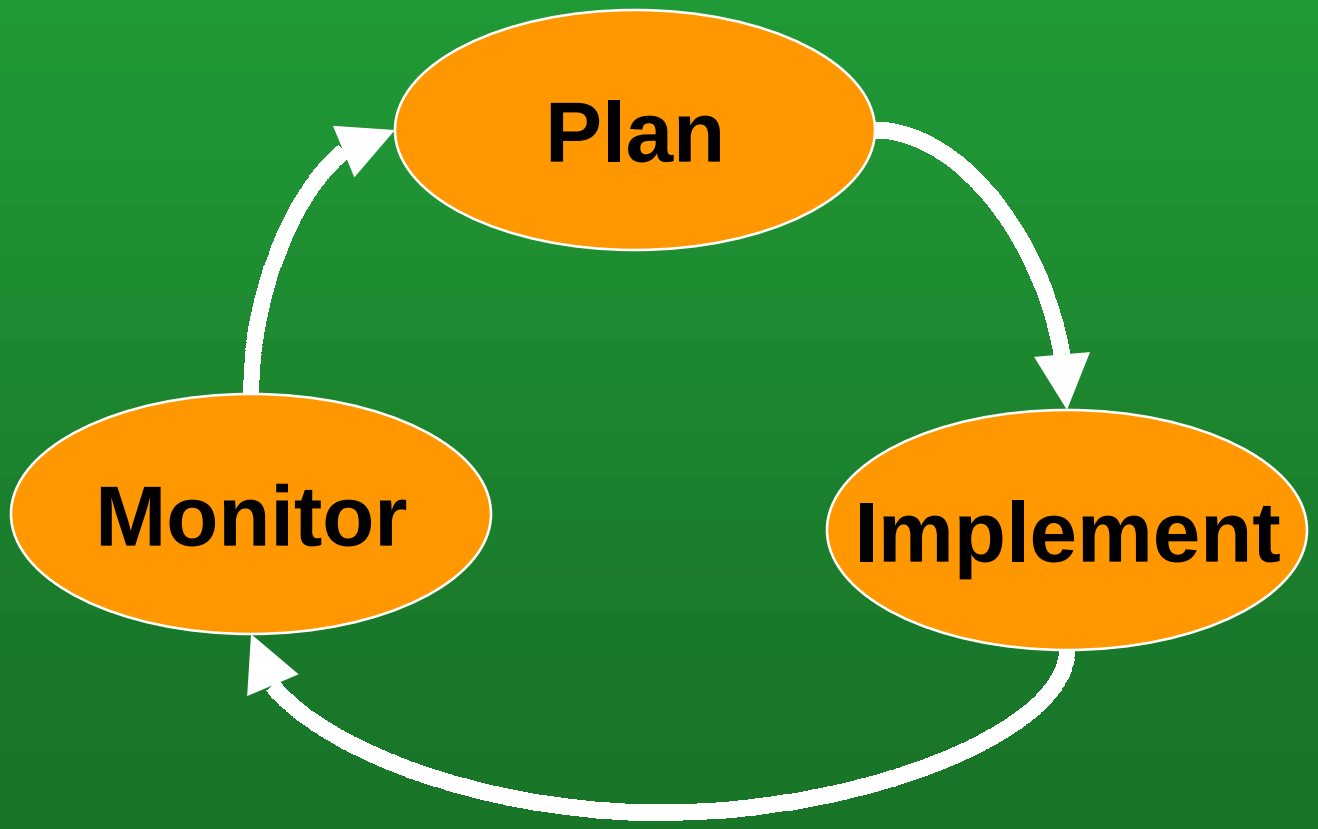
Uncertainty and risk

- Uncertainty
  - "paralysis through analysis"
- Risk
  - "learn from mistakes"
  - large and irreversible consequences?

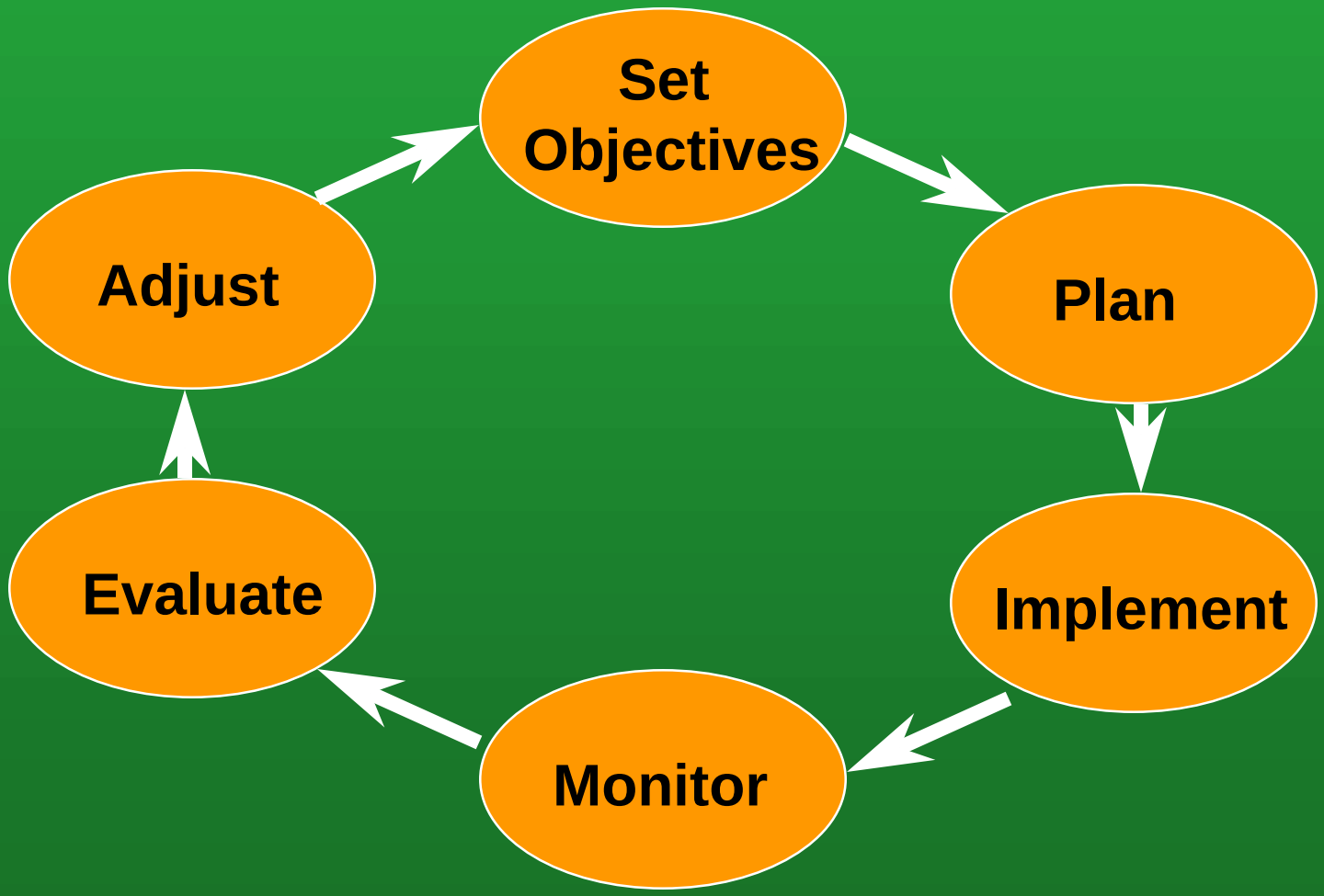
Uncertainty and risk

- Unexpected consequences
- Unintended effects
- Accountability
  - “blame”

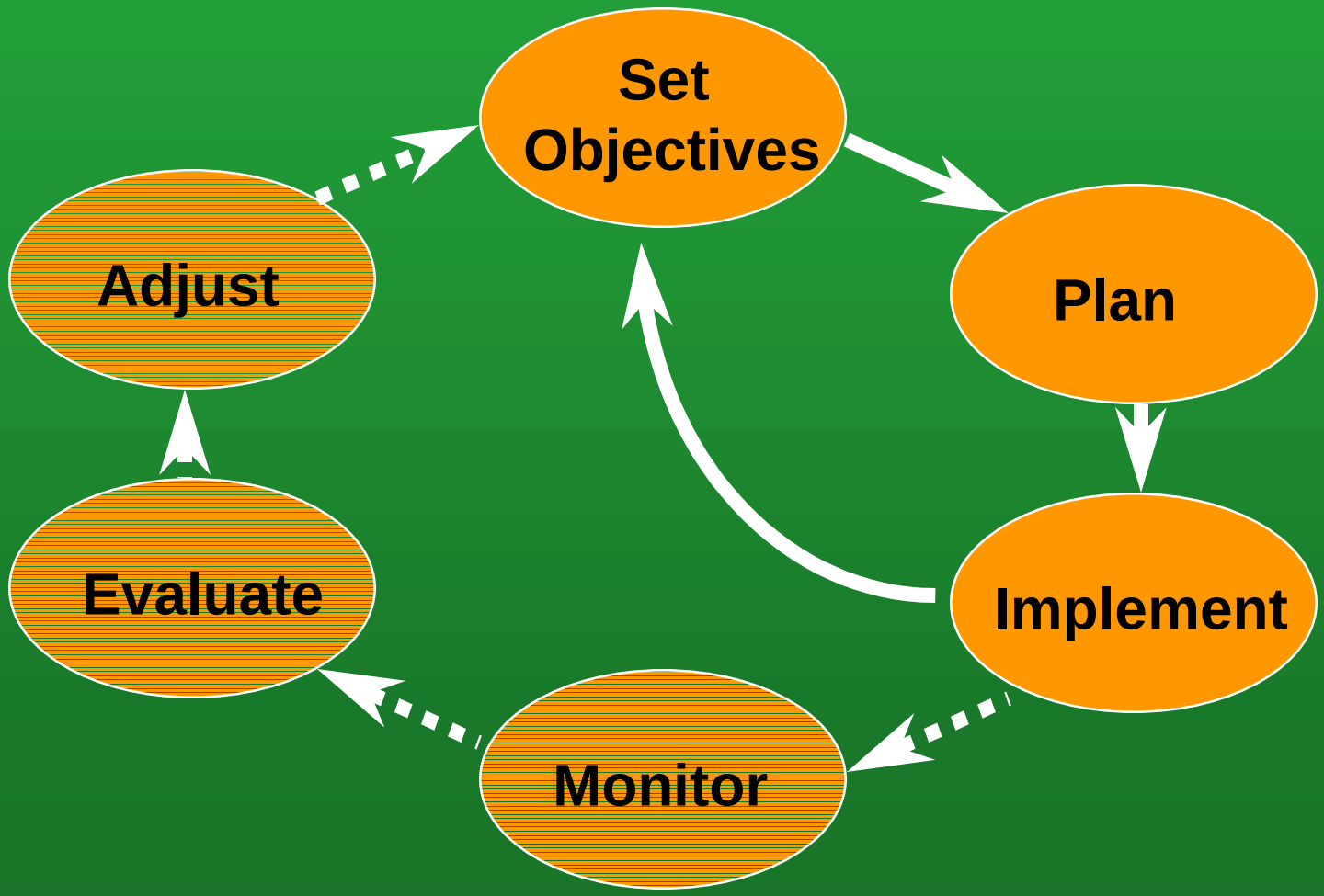
Management Cycle



Management Cycle



Management Cycle



Participation

- Government
  - Criteria and indicators
- Industry
  - Certification
- Communities
  - Sustainable Community Development

  - CONSTRUCTIVE DEBATE

Participation

Us

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Technical Challenges

- understanding
- data sources
- data standards
- data quality
- clear definitions
- sampling designs
- trend detection
- analytical tools
- efficient processes
- consistent reporting
- accessibility of information
- security of proprietary data
- qualitative changes over time
- archiving information

Administrative Challenges

- commitment
- budget reductions
- staff workloads
  - partnerships
  - management cycle

Political Challenges

- commitment
- process
- scope / jurisdiction
- potential for impact

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Sustainable forest management

- Management to maintain and enhance the long-term health of forest ecosystems, while providing ecological, economic, social, and cultural opportunities for the benefit of present and future generations.
  - Canadian Council of Forest Ministers, 1992
  - WIWAG, 2001