HS 200: Environmental Studies

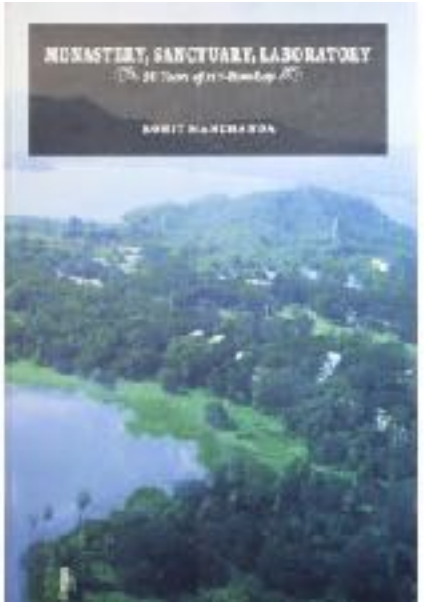
Socio-cultural and Political Issues

D.Parthasarathy

Humanities and Social Sciences

Economic Perspectives on Environmental issues: Prof.K. Narayanan

Philosophical Perspectives on Environmental issues: Prof.P.R.Bhat



What is **nature**?
How do we think of nature? How can we think of human-nature relationships? In what ways have human beings changed, evolved, and adapted because of the need to cope with nature?

Is nature socially constructed? Are nature and society separate entities? How do we define, categorize, classify, or understand natural objects?

Nature: Physical or cultural?

Social, cultural, economic, or political context of our understanding or perception

Evolution of human attitudes to Nature:

- Sacred
- Wild and disordered, uncivilized, should be controlled and dominated, tamed, cultivated, civilized
- Humans as part of nature, live with nature; nature for or beyond humans?

Utilitarian or instrumental vs non-utilitarian or intrinsic views

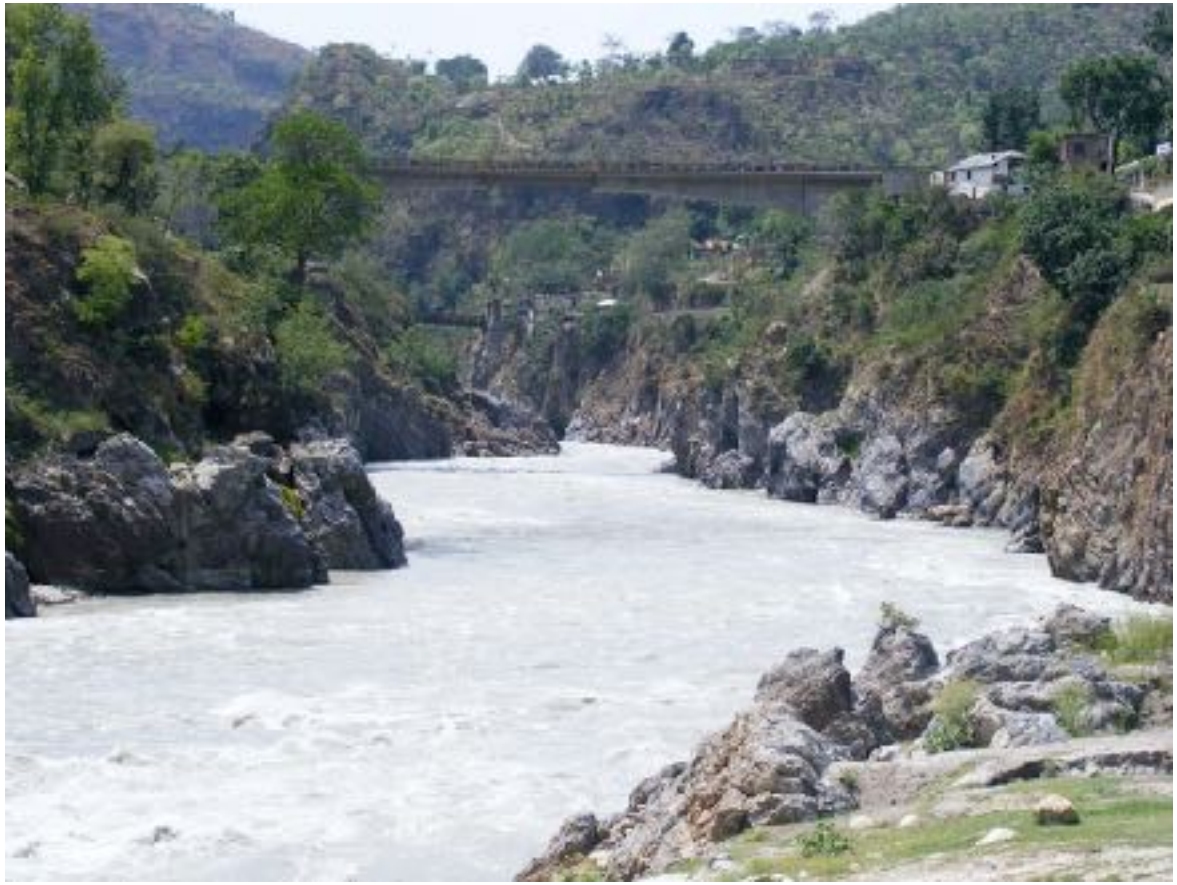
- Changing ideas and perceptions of nature and the environment
- Thinking sociologically about nature and the environment
  - How have understandings of 'nature' and the 'environment' changed over time?
  - What social transformations have led to these shifts in perception?

How can the social sciences and humanities help us to better understand environmental issues? Beyond economics

Social construction of FISH
● foods ● pets ● commodities ● ornaments ● resources ● creatures
Fishing:
● Livelihood, ● commercial / industrial activity, ● recreation
•Ecological significance

Lightning: (From Wikipedia) **Lightning** is a massive electrostatic discharge caused by unbalanced electric charge in the atmosphere, either inside clouds, cloud to cloud or cloud to ground, accompanied by the loud sound of thunder.

- Religious / spiritual
- Source of electricity / energy
- Weather phenomemon



Environment Quiz

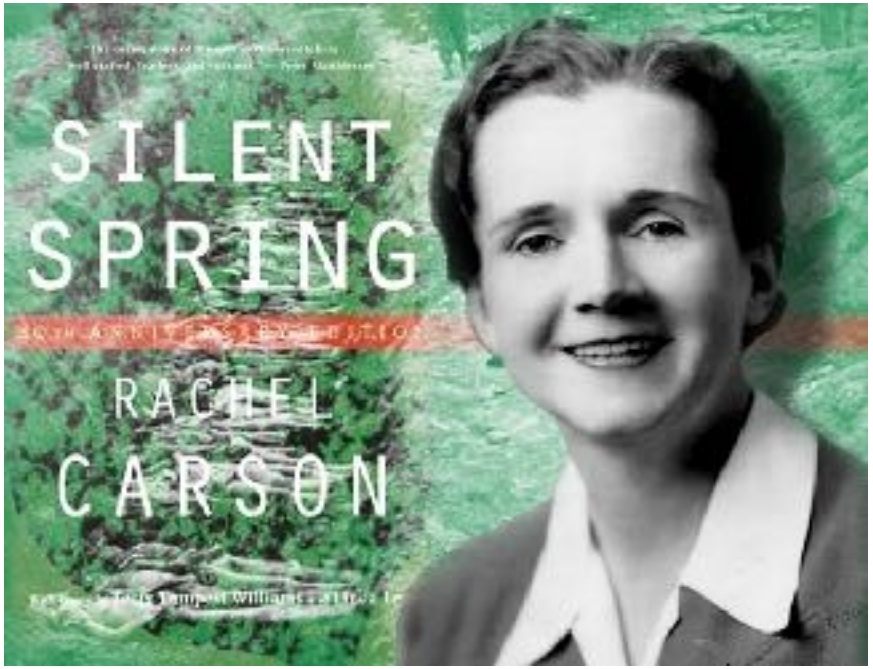
Wangari Maathai

2004: First African woman to receive the Nobel Peace Prize for "her contribution to sustainable development, democracy and peace."

Minamata

Large scale effects of industrial pollution: mercury poisoning

Rachel Carson – Silent Spring



Environmental and health consequences of chemical intensive agriculture

Endosulfan

Harish Hande

2011: awarded Ramon Magsaysay award for “his pragmatic efforts to put solar power technology in the hands of the poor, through his social enterprise SELCO India”

So why are nature and the environment sociological issues?

- Our perceptions of nature are shaped by society and culture (meanings and beliefs).
- Our responses to environmental problems depend upon social structures and relationships (power and institutions).
- Human societies are ultimately dependent upon natural life-support systems (the global eco-system or 'bio-sphere').
- Our social organisation is shaped by our material interventions into nature (labour and technology).

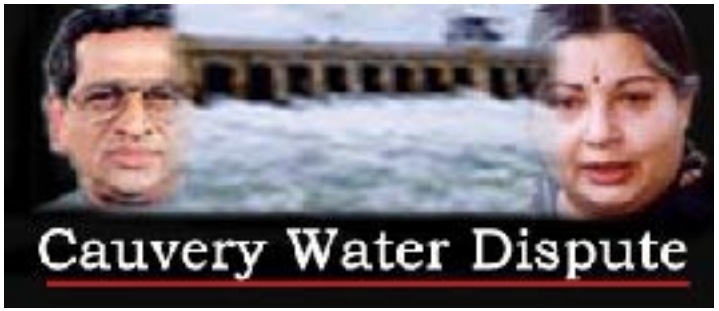
Not Conservation or Protection but social conflicts around natural resources as the central environmental problem

Who owns resources?

Who should own them?

Who should manage resources?

What technologies should be used?



Socio-Ecological interpretations of political, economic and environmental changes

1. Oriental despotism: **Karl Wittfogel**:

- Flood control and water supply for irrigation - basis of Asian hydraulic civilizations and of a powerful, exploitative bureaucracy
- Wherever irrigation required substantial and centralized control, government representatives monopolized political power and dominated the economy, resulting in absolutist managerial state
- Close identification of officials with the dominant religion and an atrophy of other centres of power. Forced labour for irrigation projects directed by bureaucratic network.
- Hydraulic civilizations - ancient Egypt, Mesopotamia, India, China and pre-Columbian Mexico and Peru

2. Decline of the Mayan Civilization:

Major factor - environmental degradation by people: deforestation, soil erosion and water management problems, resulted in less food

Problems exacerbated by droughts, been partly caused by humans through deforestation.

Chronic warfare made matters worse, as more and more people fought over less and less land and resources

Jared Diamond - author of *Guns, Germs and Steel* and *Collapse: How Societies Choose or Fail to Succeed*

http://www.ufppc.org/content/view/1996

3. How Japan survived environmental degradation (Jared Diamond contd.)

Crisis of deforestation, caused by peace and prosperity afterTokugawa shoguns' military triumph that ended 150 years of civil war in 17th C

Japan's population & economic explosion economy - rampant logging for construction of palaces and cities, and for fuel and fertilizer

Shoguns' response: negative and positive measures

- Reduced wood consumption: turn to light-timbered construction
- fuel-efficient stoves and heaters
- coal as a source of energy

Increased wood production by developing and carefully managing plantation forests

Both shoguns and the Japanese farmerstook a long-term view

➢Today: highest human population density of any large developed country -yet Japan is more than 70 percent forested

4. The Case of Cuba: Organic Agriculture

Early 1990s - collapse of socialist bloc and the U.S. embargo - decrease in agricultural inputs and foodstuffs

Cuban response to crisis: redesign their system of food production and distribution

Cuba: attempting world's most ambitious and extensive transition from conventional agriculture to organic farming

Cuba: first country to address food production under the premise that sustainable access to safe, nutritious food is a human right

Self sufficient thods, surplus generated in c

- **Questions about natural resource use, management, ownership, and costs**

  - **Why are there struggles / conflicts around natural resources? Why are we not able to share resources equitably?**
  - **To whom should resources belong? Private, public, common?**
  - **How should resources be governed or managed? Rules and Regulations, customs and traditions**

- **Questions about natural resource use, management, ownership, and costs (contd)**

  - **Why does resource degradation occur?**
  - **Should resources be shared equitably, or be owned / used only by those who can afford to pay?**
  - **Which form of ownership or control is better for preventing resource depletion?**
  - **Should we pay for resources? How much should we pay?**

Understanding Environment-Society Interactions and their consequences

Chipko

Silent Valley

Water conflicts

Plachimada

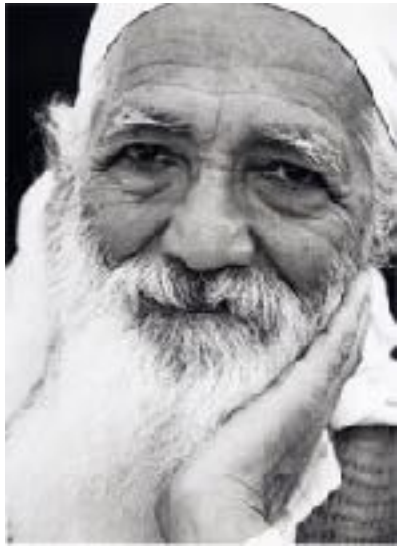
Dams and mutli-purpose projects

Bhopal

Green revolution

Chipko Movement

Chipko: Government, Paper Mills / Loggers, People



Sunderlal Bahuguna

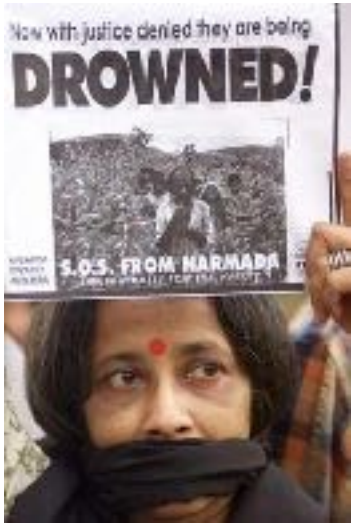
Chandi Prasad Bhatt

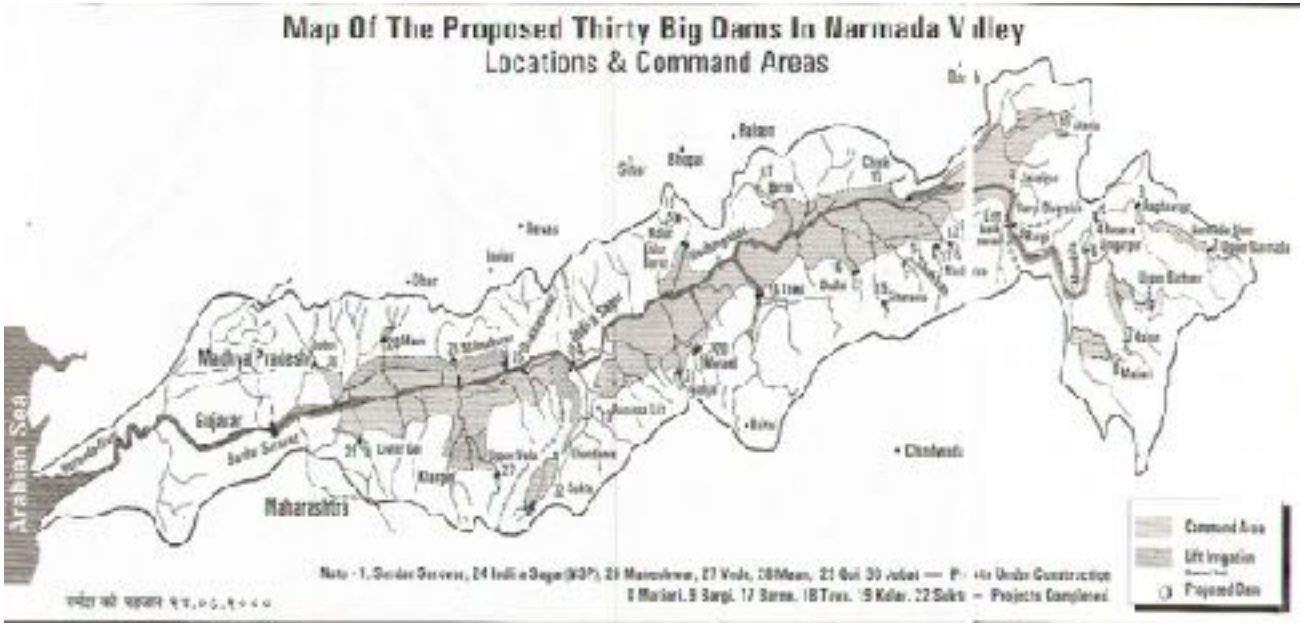
Forest Rights Act: Government, Forest based communities

Experiments in Resource Governance to promote equitable access and environmental sustainability

1. Forest Rights Act: **Gajab Kahani - Struggle for Forest Rights:** http://www.youtube.com/watch?v=EES2KtIdI3k
2. Natural Resource Management in Rural India: **How Anna Hazare greened Ralegan: http://www.youtube.com/watch?v=aBfjsdICGT0**

Sardar Sarovar Project (Narmada): Irrigation, Drinking Water, Hydro-electric power, Flood control





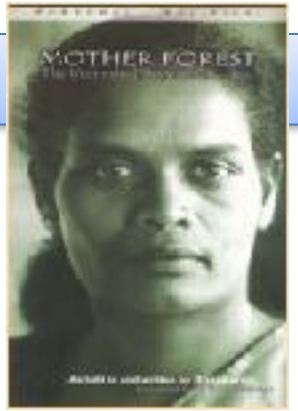
Small scale water solutions?

Belachiwadi Check Dam
Gudwan Check Dam
http://www.cse.iitb.ac.in/~ctara/dam/

Bilgaon

Plachimada: Private ownership vs public access to water (Coca Cola)

To whom does ground water belong?



Adivasi Samkrashana Sangham (Adivasi Protection Front)

Class and the use and abuse of natural resources (Guha and Gadgil)

- Omnivores: industrialists, rich farmers, urban middle classes
- Ecosystem people: Rural, those who rely on natural resources (small and marginal farmers, landless labour, pastoralists)
- Ecological refugees: Displaced, evicted, resettled, migrants

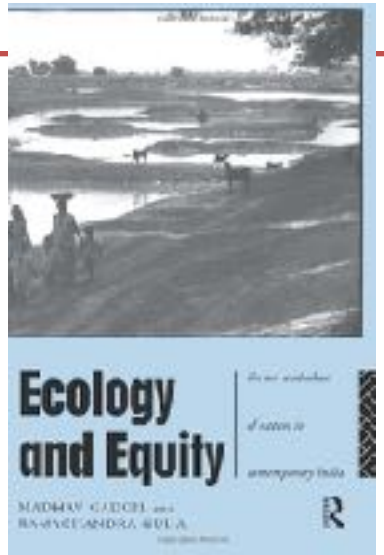


Table 1: The Omnivore-Ecosystem People Binary

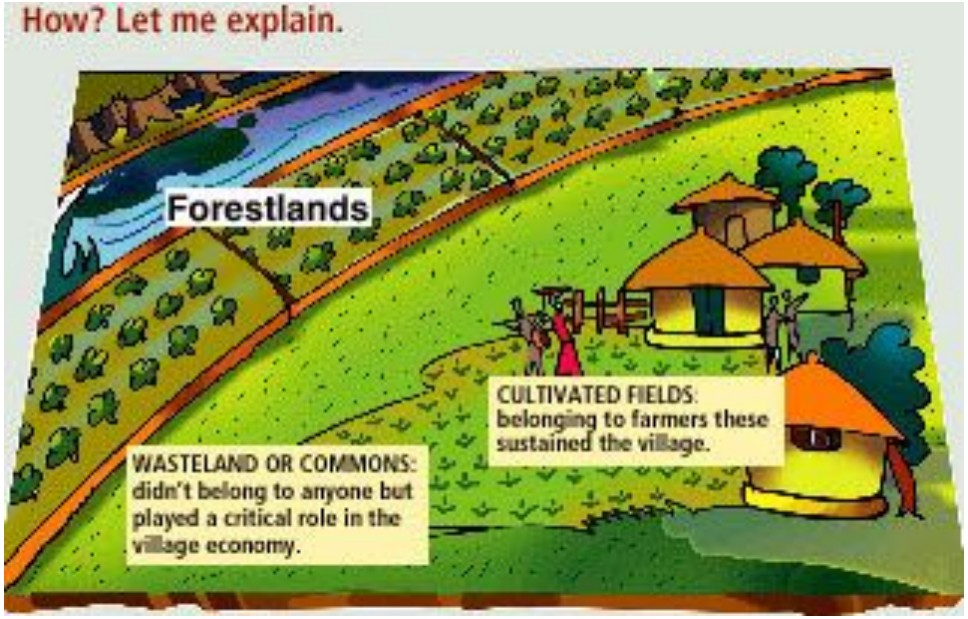
Omnivores	Ecosystem People
Global, National, Local Reach	Local Reach
Surplus Economy	Subsistence Economy
Urban/Cosmopolitan	Rural/Rooted
Sees itself as Modern/Scientific	Is seen as Traditional/Authentic
Upper & Middle Classes	Peasants, Dalits, Adivasis
Separate from Resource Base	Close Relationship with Resource Base

Environment, Governance, and the state

How do humans interact with ecosystems to maintain long-term sustainable resource yields?

What form of ownership and governance is best for sustainability? For preventing resource degradation or depletion?

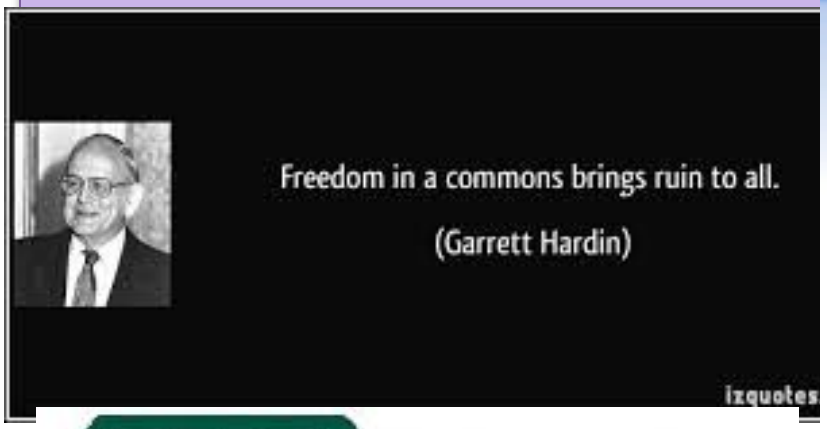
- Regulation
- Ownership



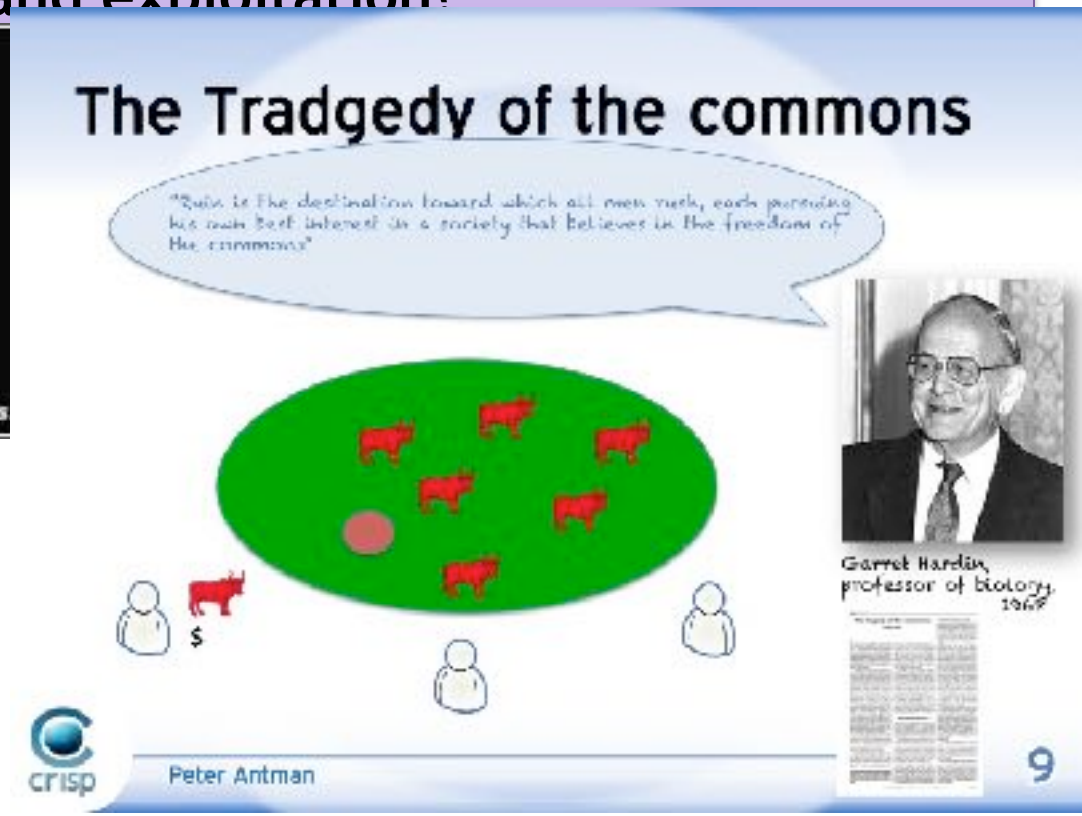
Government, private, or common for efficient resource management?

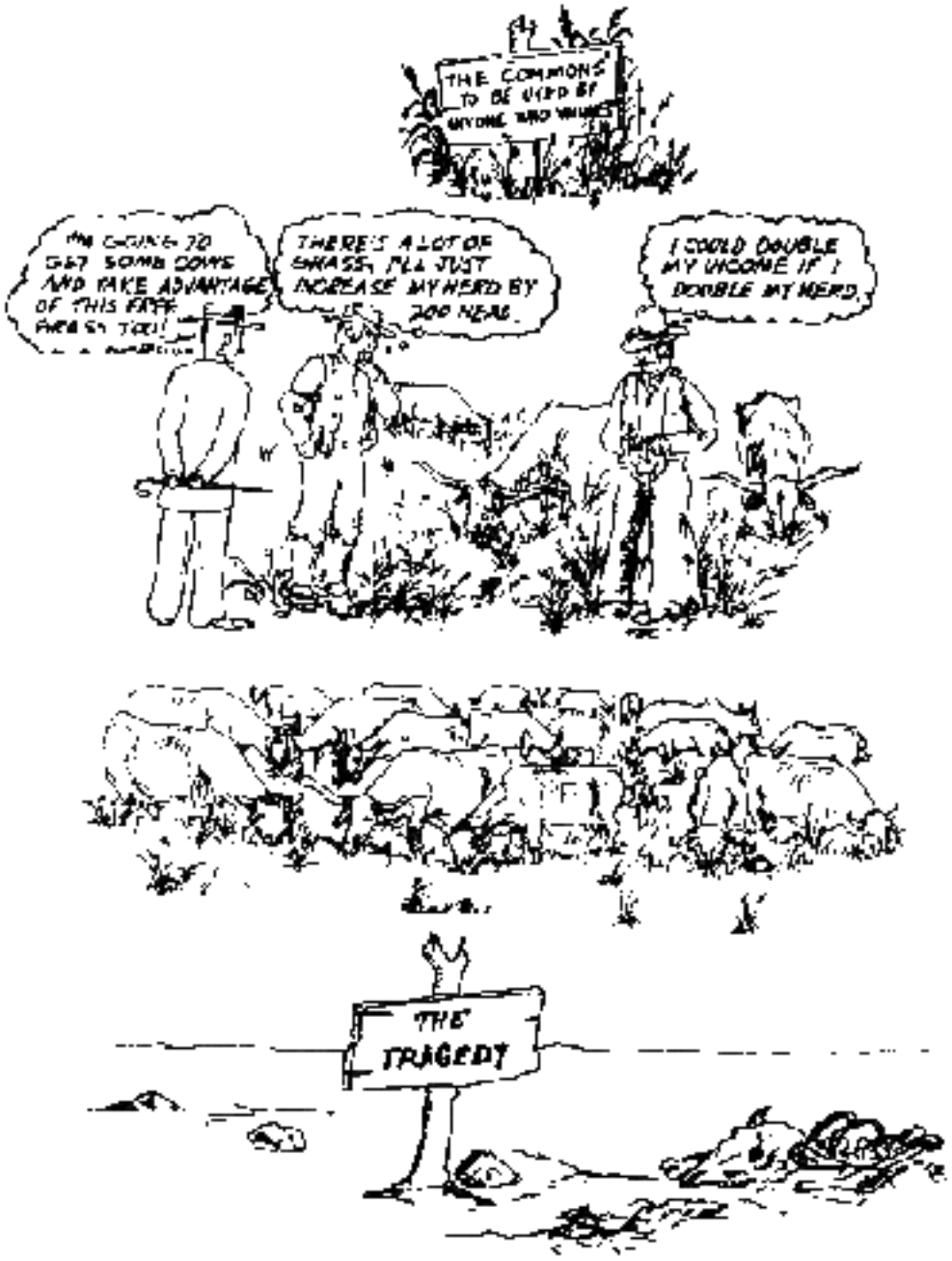
Common Pool Resources: Water, irrigation systems, Pasture / grazing land, forests, fisheries, oil fields, minerals

Garett Hardin: Tragedy of the Commons?
Free rider - overuse and exploitation?



The International Association for the Study of the Commons





COMMONS: Tragedy or Mutual Benefit?

Understanding the commons: http://www.youtube.com/watch?v=otmrkhEFSZM

Four types of goods

		Subtractability of Use: High	Subtractability of Use: Low
Difficulty of Excluding Potential Beneficiaries	**High**	*Common-pool resources*: groundwater basins, lakes, irrigation systems, fisheries, forests, etc.	*Public goods*: peace and security of a community, national defense, knowledge, fire protection, weather forecasts, etc.
	Low	*Private goods*: food, clothing, automobiles, etc.	*Toll goods*: theaters, private clubs, daycare centers

Source: Adapted from E. Ostrom (2005: 24).

How do humans interact with ecosystems to maintain long-term sustainable resource yields?

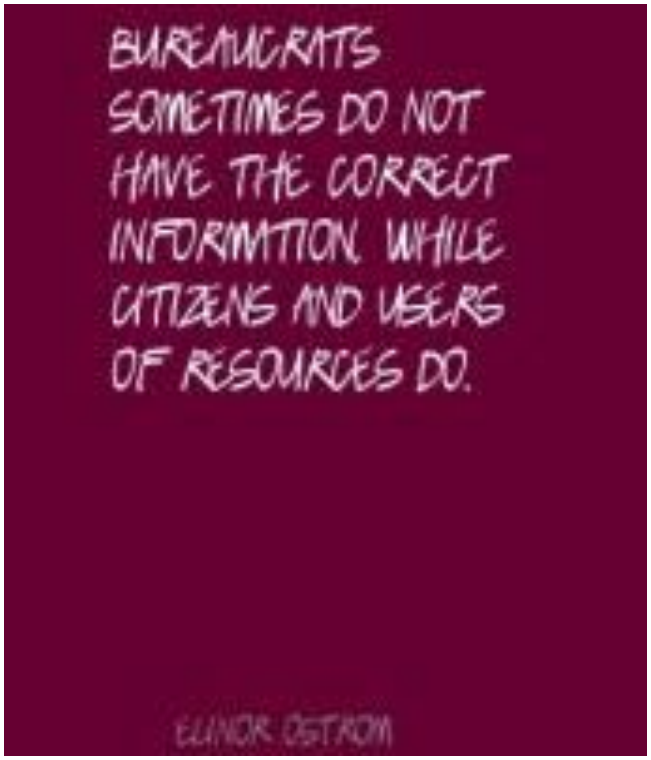
Multiplicity of governance and ownership arrangements

Elinor Ostrom: Governance of the Commons

How societies develop diverse institutional arrangements for managing natural resources and avoiding ecosystem collapse and prevent resource exhaustion?

Elinor Ostrom: Governance of the Commons (contd.)

- Multifaceted nature of human-ecosystem interaction
- Diverse social-ecological system problems
- No singular or unique "panacea" for these problems



"Design Principles" for stable common pool resource management

Improve efficiency, prevent resource exhaustion, and avoid ecosystem collapse

1. Define boundaries clearly (to exclude external un-entitled parties)
2. Adapt rules regarding appropriation & provision of common resources to local conditions
3. Collective-choice arrangements: allow resource appropriators to participate in decision-making process
4. Effective monitoring (by monitors part of or accountable to appropriators)
5. Graduated sanctions for resource appropriators who violate community rules
6. Mechanisms of conflict resolution that are cheap and easy of access
7. Self-determination of community recognized by higher-level authorities
8. For larger common-pool resources: organize through multiple layers of nested enterprises - small local CPRs at base level