Environmental Law

“I fought the law and the law won.”

Bobby Fuller, 1965

Why study environmental law?
- Laws represent codified values
- The development of conservation ecology and environmental law are closely linked
- Environmental laws are one of the most effective ways to conserve biodiversity
- Jobs

Some major US environmental laws
- Wilderness Act (1964)
- National Environmental Policy Act (NEPA; 1969)
- Clean Air Act (1970)
- Clean Water Act (1972)
- Marine Protection, Research, and Sanctuaries Act (1972)
- Endangered Species Act (ESA; 1973)
- National Forest Management Act (1974)
- Comprehensive Environmental Response, Conservation, and Liability Act (CERCLA; Superfund; 1980)

Why do many ecologists avoid the law?
- It’s messy
- It’s complicated
- It’s time-consuming
- It’s not our job
- There may be an appearance of bias
  - Advocacy = bias???

Some thoughts…
- Notice the dates
- Who were some of the presidents?
- What do you think the chances of passing such legislation are today?

Purpose of NEPA
- “The purposes of this Act are:
  - To declare a national policy which will encourage productive and enjoyable harmony between man and his environment;
  - to promote efforts which will prevent or eliminate damage to the environment and biosphere and stimulate the health and welfare of man;
  - to enrich the understanding of the ecological systems and natural resources important to the Nation;
  - and to establish a Council on Environmental Quality.”

Sec. 2 [42 USC § 4321]
NEPA

- Central goal:
  - Ensure that federal actions do not significantly affect the environment
- Primary mechanism:
  - Construct an Environmental Impact Statement (EIS) before the proposed action, which evaluates the impact and allows for public input
- Established environmental quality as a national priority

What's in an EIS?

- Any adverse environmental effects that cannot be avoided
- Alternatives to the proposed action (including no action)
- Relationship between local, short-term uses of the environment and maintenance and enhancement of long-term productivity
- Irreversible or irretrievable commitments of resources that would be involved

NEPA can be complicated

Trail maintenance?

Problems with NEPA

- A single federal agency prepares an EIS despite the need for collaboration and communication with all stakeholders
- Although the public makes comments, the agencies don’t always change their planned actions, which results in lawsuits

Purposes of ESA

- "...to provide a means whereby the ecosystems upon which endangered species and threatened species depend may be conserved."
- "...to provide a program for the conservation of such endangered species and threatened species."

Endangered Species Act (1988)
Central goal:
- Prevent extinction of species

Primary mechanism:
- Once a species is ‘listed’, it and its ‘critical habitat’ are protected
- Established preservation of biodiversity as a national priority
- Non-humans have intrinsic value

Who’s in charge?
- Terrestrial and freshwater: US Fish and Wildlife Service of the Department of Interior
- Marine: National Marine Fisheries Service of the Department of Commerce
- However, there is also much inter-agency and federal-state collaboration
- The public also can participate

Who’s protected?
- Plants and animals can be listed (but, no bacteria, Archaea, and viruses)
- U.S. species listed as of 2016: 1,590 spp.
  - Plants: 897 spp.
  - Vertebrates: 437 spp.
- What’s missing?
  - The “boxscore”
- What’s a species?
  - Includes subspecies and any distinct population segment that interbreeds when mature

Who’s protected in SC?
- Species listed as of 2015: 38 spp.:
  - Plants: 21 spp.
  - Animals: 17 spp.
- How do we compare?

How does a species get listed?
- Candidate Conservation Process (USFWS) examines several factors to be considered for listing:
  - “the present or threatened destruction, modification, or curtailment of the species’ habitat or range;
  - overutilization for commercial, recreational, scientific, or educational purposes;
  - disease or predation;
  - the inadequacy of existing regulatory mechanisms; and, other natural or manmade factors affecting the species’ continued existence.”

How does a species get resources for recovery? (1)
- US Fish and Wildlife Service ranking system (1983)

<table>
<thead>
<tr>
<th>Degree of Threat</th>
<th>Recovery Potential</th>
<th>Taxonomic Distinctness</th>
<th>Priority Rank</th>
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<td>High</td>
<td>Merotopic genus</td>
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<tr>
<td></td>
<td></td>
<td>Subspecies</td>
<td>18</td>
</tr>
</tbody>
</table>

Restani & Marzluff (2002)
How does a species get resources for recovery? (2)

- The real world

Public → States → Congress → FWS → NGOs

Restani & Marzluff (2002)

Does priority rank matter?

Restani & Marzluff (2002)

Salmon are a girl’s best friend

<table>
<thead>
<tr>
<th>Rank</th>
<th>Species/Place Name</th>
<th>Recovery Priority</th>
<th>Total Recovery Cost (Million $)</th>
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<tr>
<td>1</td>
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<td>E</td>
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<td>Florida Coho</td>
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<td>Puget Sound Coho</td>
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<td>Atlantic Salmon</td>
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<tr>
<td>5</td>
<td>Pacific Salmon</td>
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<td>594,604.00</td>
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<tr>
<td>6</td>
<td>Chinook Salmon</td>
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<td>585,190.00</td>
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<tr>
<td>7</td>
<td>Coastal Cutthroat</td>
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<td>571,816.00</td>
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<td>8</td>
<td>Columbia River Coho</td>
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<td>564,169.00</td>
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<tr>
<td>9</td>
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<tr>
<td>15</td>
<td>Trinity River Coho</td>
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<td>564,169.00</td>
</tr>
</tbody>
</table>

Some key components

- Species focus
- Action needs to occur
- A recovery plan is to be developed for each species
  - 1,158 of 1,590 spp. (= 73%)
- Critical habitat is to be designated for each species
  - 714 of 1,590 spp. (= 45%)

Some changes over the years

- Initially, effects on economics were not to be considered at all
- Later changed to allow economics to play a role in designating critical habitat
- Also a ‘God Squad’ (=Endangered Species Committee) was created to revoke species protection if economics were severely compromised (result of snail darter vs. Tellico Dam)

A major change (1)

- Habitat Conservation Plan (HCP; 1982)
  - An attempt to smooth the waters with private land owners
    - ‘shoot, shovel, and shut up’
  - Private land owners reach an agreement with the government to conserve and manage the listed species on their land
    - Safe Harbor Agreements
    - “No Surprises” policy (1994)
A major change (2)

- "Incidental take" permits are given if a HCP is prepared and approved
- Contentious issue, but private landowners must be included across a landscape if species are to be protected

Red-cockaded woodpecker

ESA “success”

- 62 species have been delisted
  - 33 due to recovery
  - 10 due to extinction
  - 8 due to taxonomic changes
  - 11 due to errors at the time of listing and new information
- 29 endangered species have been downgraded to threatened status

Some problems of ESA

- Species vs. ecosystem protection
- Listing of declining vs. almost extinct species
- Expensive
- Conflicts between listed species?

And some solutions

Six Biological Reasons Why the Endangered Species Act Doesn’t Work—and What to Do About It
1991
DANIEL R. ROHLF

- Scientists should become knowledgeable about the law
- Scientists should conduct directed research
- Scientists should take advantage of opportunities to participate

One important international law

- Convention on International Trade in Endangered Species (1973)
- 180 member countries

CITES overview

- Regulates commercial trading of globally endangered species or their products
- Three appendices/levels of protection
  - I: Endangered species that are vulnerable to trade (commercial trade prohibited); Ex. Panthera tigris
  - II: Species that could be threatened or species that cannot be distinguished from threatened ones (trade requires a permit from exporting country); Ex. Myrmecophaga tridactyla
  - III: Species protected in at least one country (countries are asked to get a permit from exporting country); Ex. Odobenus rosmarus
CITES oddities

- Instead of complete protection and prohibition from trading, sometimes it’s in the species best interest to allow a little approved trading
- Why?
  - Removes black market
  - Price drops
  - Profit goes to species conservation
- Nevertheless, issues remain...

Legal ivory trade in a corrupt world and its impact on African elephant populations

Elisabeth I. Bennett 2014

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Become an environmental lawyer

- Joe Lovett
  - Appalachian Center for the Economy and the Environment
- Jim Hecker
  - Trial Lawyers for Public Justice

Sierra Club 2009 Awardees