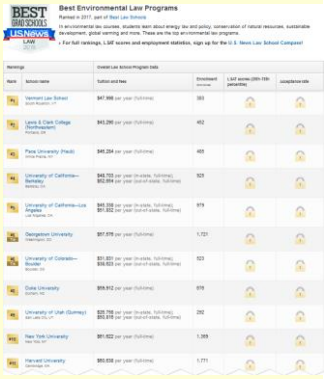
Environmental Law

"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



Why do many ecologists avoid the law?

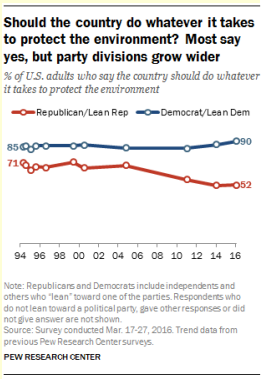
- It's messy
- It's complicated
- It's time-consuming
- It's not our job
- There may be an appearance of bias

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)

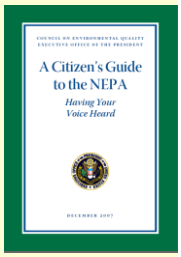
Some thoughts on the last slide…

- Notice the dates of the laws' passages
- 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]

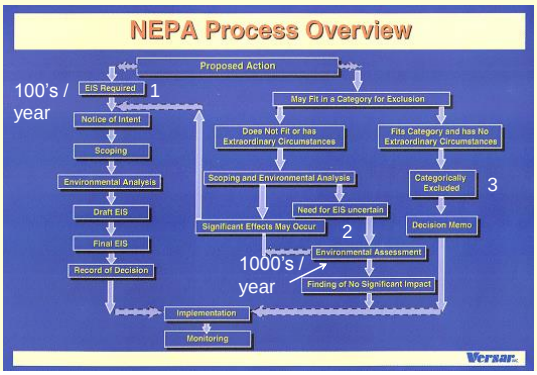
NEPA

- 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
- Alternate actions (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



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)

ESA

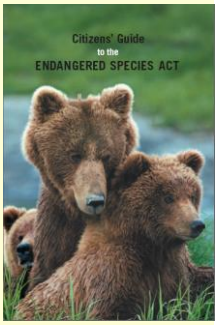
- Central goal:
  - Prevent extinction of species
- Primary mechanism:
  - Once a species is 'listed', it and its 'critical habitat' are protected
- Established preservation of biodiversity as a national priority
- Non-humans have intrinsic value

Northern spotted owl

Snail darter

Who's in charge?

- US Fish and Wildlife Service of the Department of Interior
- 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

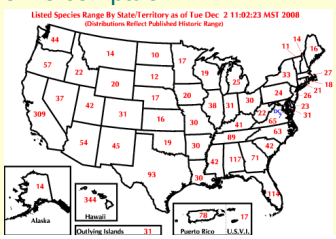


Who's protected?

- Plants and animals can be listed (but, no bacteria, Archaea, and viruses)
- U.S. species listed as of 2020: 1,661 spp.
  - Plants: 943 spp.
  - Vertebrates: 441 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?

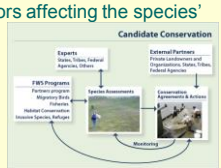
- Species listed as of 2020: 35 spp.:
  - Plants: 22 spp.
  - Animals: 13 spp.
- How do we compare?



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."

12.1 y (Puckett et al. 2016)



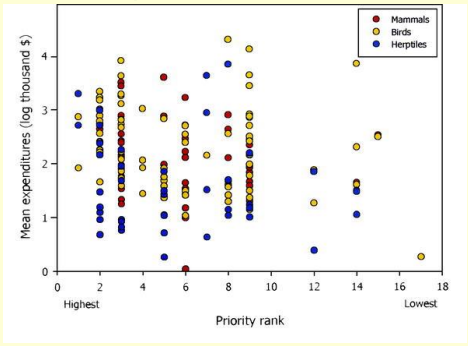
How does a species get listed and resources for recovery?

- US Fish and Wildlife Service ranking system (2016)

Magnitude	Immediacy	Taxonomy	Priority
High	Imminent	Monotypic genus	1
		Species	2
		Subspecies/population	3
	Non-imminent	Monotypic genus	4
		Species	5
		Subspecies/population	6
Moderate to Low	Imminent	Monotypic genus	7
		Species	8
		Subspecies/population	9
	Non-imminent	Monotypic genus	10
		Species	11
		Subspecies/population	12

http://ecos.fws.gov/ecp/report/table/candidate-species.html

Does priority rank matter?



Restani & Marzluff (2002); uses a similar, older ranking system

TABLE 2. SPECIES RANKED IN DESCENDING ORDER OF TOTAL FY 2016 REPORTED EXPENDITURES, NOT INCLUDING LAND ACQUISITION COSTS

Rank	Species (50 CFR Part 17)	Status	Species Total	Cumulatative Total
1	Steelhead (Oncorhynchus (=Salmo) mykiss) - Middle Columbia River DPS	T	$64,365,536	$64,365,536
2	Salmon, Chinook (Oncorhynchus (=Salmo) tshawytscha) - Snake River spring/summer-run ESU	T	$61,231,560	$125,597,096
3	Steelhead (Oncorhynchus (=Salmo) mykiss) - Snake River Basin DPS	T	$60,270,758	$185,867,854
4	Salmon, Chinook (Oncorhynchus (=Salmo) tshawytscha) - Upper Columbia spring-run ESU	E	$44,865,295	$230,733,149
5	Sturgeon, pallid (Scaphirhynchus albus) - Wherever found	E	$43,237,405	$273,970,554
6	Trout, bull (Salvelinus confluentus) - U.S.A., conterminous, lower 48 states	T	$40,233,890	$314,204,444
7	Salmon, Chinook (Oncorhynchus (=Salmo) tshawytscha) - Snake River fall-run ESU	T	$39,689,609	$353,894,053
8	Salmon, Chinook (Oncorhynchus (=Salmo) tshawytscha) - Lower Columbia River ESU	T	$33,557,518	$387,451,571
9	Salmon, Chinook (Oncorhynchus (=Salmo) tshawytscha) - Puget Sound ESU	T	$29,187,297	$416,638,868
10	Steelhead (Oncorhynchus (=Salmo) mykiss) - Upper Columbia River DPS	T	$28,642,935	$445,281,803
11	Salmon, sockeye (Oncorhynchus (=Salmo) nerka) - Snake River ESU	E	$28,114,109	$473,395,912
12	Woodpecker, red-cockaded (Picoides borealis) - Wherever found	E	$25,032,102	$498,428,014
13	Sea lion, Steller (Eumetopias jubatus) - Western DPS	E	$22,127,195	$520,555,209
14	Salmon, coho (Oncorhynchus (=Salmo) kisutch) - Lower Columbia River ESU	T	$19,639,995	$540,195,204
15	Tortoise, desert (Gopherus agassizii) - Wherever found, except AZ south and east of Colorado R., and Mexico	T	$18,554,604	$558,749,808
16	Salmon, coho (Oncorhynchus (=Salmo) kisutch) - Southern Oregon - Northern California Coast ESU	T	$18,498,254	$577,248,062
17	Salmon, Chinook (Oncorhynchus (=Salmo) tshawytscha) - Upper Willamette River ESU	T	$18,271,433	$595,519,495
18	Steelhead (Oncorhynchus (=Salmo) mykiss) - Lower Columbia River DPS	T	$18,186,684	$613,706,179
19	Sturgeon, white (Acipenser transmontanus) - U.S.A. (ID, MT), Canada (B.C.), Kootenai R. system	E	$16,013,924	$629,720,103
20	Owl, northern spotted (Strix occidentalis caurina) - Wherever found	T	$15,624,955	$645,345,058

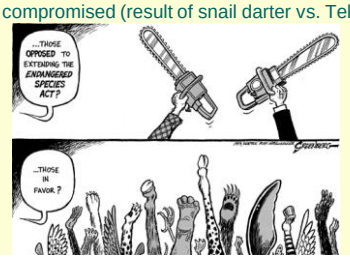
https://www.fws.gov/endangered/esa-library/index.html#expenditure

Some key components

- Species focus
- Action needs to occur
- A **recovery plan** is to be developed for each species
  - 1,168 of 1,661 spp. (= 70%)
- **Critical habitat** is to be designated for each species
  - 851 of 1,661 spp. (= 51%)

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)

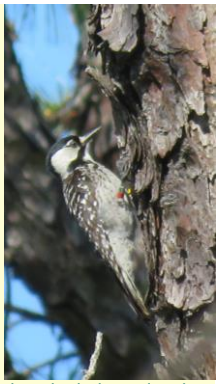


A major change (1)

- **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)

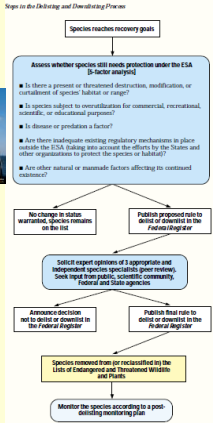
- "**Incidental take**" permits are given **if** a HCP is prepared and approved
- Contentious issue, but private landowners must be included across a landscape if all species are to be protected



Red-cockaded woodpecker at Lewis Ocean Bay HP

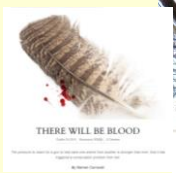
ESA "success"

- 90 species have been delisted
  - 59 due to recovery
  - **11 due to extinction**
  - 7 due to taxonomic changes
  - 17 due to errors at the time of listing and new information
- 41 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 J. ROHLF
Natural Resources Law Institute
Lewis and Clark Law School
10015 S.W. Terwilliger Boulevard
Portland, OR 97219, U.S.A.

- 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)
- 183 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 and needs a permit from exporting country for trade, but not all countries vote on including these species like in I and II; Ex. *Odobenus rosmarus*

CITES oddities

- Instead of complete protection and prohibition from trading, sometimes it's argued that a little trading is ok
- Why?
  - Removes black market
  - Price drops
  - Profit goes to species conservation
- Nevertheless, issues remain…

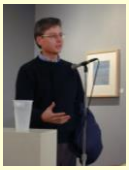
Legal ivory trade in a corrupt world and its impact on African elephant populations

2014

Elizabeth L. Bennett
Wildlife Conservation Society, 2300 Southern Boulevard, Bronx, NY 10460, U.S.A., email ebennett@wcs.org

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