

Endangered Species Management & Policy

Managing Endangered Species

- Goals of management
 - to prevent the population from becoming too small
 - to increase the population as quickly as possible
- Ultimate cause vs. proximate cause
 - Managers must address ultimate cause.
 - Speedy recovery requires treatment of proximate cause
 - Increase reproduction
 - increase survival above natural levels
- Avoid Genetic Problems

What does endangered mean?

- International Union for Conservation of Nature and Natural Resources (IUCN) Red Data Book
 - **Extinct** - extinct in the wild.
 - **Endangered** - in danger of going extinct.
 - **Vulnerable** - species that may be endangered in the near future.
 - **Rare** - species with small total number of individuals.
 - **Insufficiently known** - probably one of the above.

Endangered Species Legislation

- Endangered Species Preservation Act, 1966
 - Sec. of Interior decided what wildlife species are endangered
 - provided funding for research on endangered species
- Endangered Species Conservation Act, 1969
 - expanded to all vertebrates & some inverts.
 - Led to formation of CITES
- Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES)
 - restricts trade in endangered species
 - APPENDIX I - endangered by trade
 - APPENDIX II - are or may be come threatened by trade
 - APPENDIX III - Should be regulated within a nation

The Endangered Species Act, 1973

- Covers animals & plants except insect pests
- All federal agencies must consult w/ Dept. of Interior for activities that could affect endangered species
 - Exception for EPA in approving pesticides: July 2004
- Anyone could nominate a species for listing
- Added concept of **critical habitat**
- **species** - any subspecies of fish or wildlife or plants, and any distinct population segment of any species of vertebrate.
- **Endangered** - in danger of extinction through all or a significant part of its range.
- **Threatened** - could become endangered

The Endangered Species Act, 1973

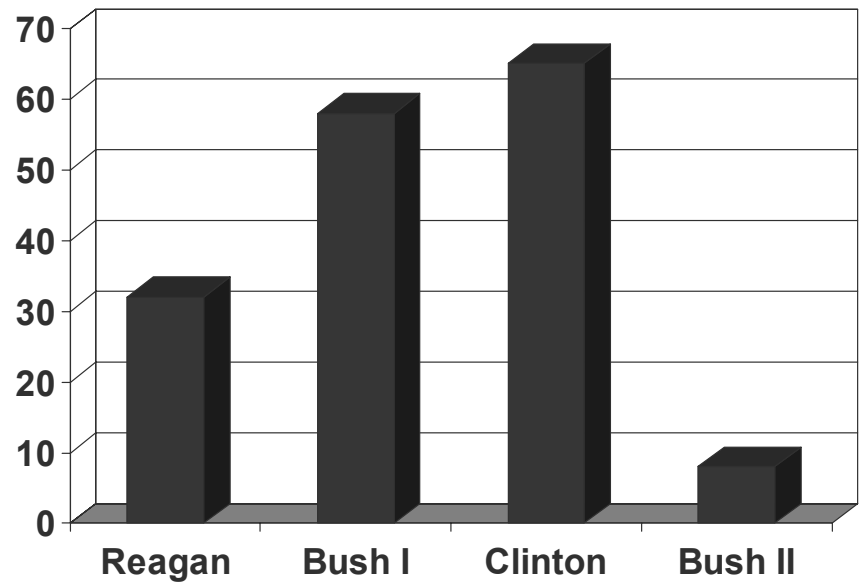
Listing

- Criteria for listing:
 - Habitat destruction
 - Overexploitation
 - Likelihood of eradication by disease or predators
 - Inadequate regulations for protection
- Decision to “list” a species as threatened or endangered can only be made on the basis of biological data
 - economic factors not considered

The Endangered Species Act, 1973

Average # species per year listed as Endangered or Threatened

- Reagan: 32
- Bush I: 58
- Clinton: 65
- Bush II: 8
 - (all under court order)



USFWS “Critical Habitat Q&A” Release -- 2003

- USFWS was sued frequently in 1990’s for listing species without designating critical habitat
- “Because of all the court-ordered deadlines, Fish and Wildlife no longer has the funding to act outside of those deadlines. However, prior to this situation arising late in 2000 the Service was regularly listing species on its own initiative...At current budget levels for the listing program, all of its funds will be required to be used for court-ordered actions through 2008.”

The Endangered Species Act, 1973

Critical Habitat

- Critical habitat: “area essential to the conservation of the species”
 - Currently occupied habitat, plus...
 - Unoccupied habitat necessary for recovery
 - Originally, critical habitat had to be designated when a species was listed
 - Now, critical habitat designation is part of **recovery plan**
- Designation of critical habitat **can** include economic considerations
- Federal agencies modifying critical habitat must consult with Dept. of Interior
- However, agencies modifying habitat that could affect endangered/threatened species must consult ***whether or not critical habitat is designated***

Implications of the Endangered Species Act.

- **FEDERAL**
 - ESA Section 7: federal agencies “cannot jeopardize” a listed species or its critical habitat.
 - If impact is unavoidable, must consult with
 - US FISH AND WILDLIFE SERVICE or
 - NATIONAL MARINE FISHERIES SERVICE
 - **RECOVERY PLANS** set plan for management and targets for delisting.
- **STATE**
 - Feds can enter into cooperation with States
- **PRIVATE SECTOR**
 - prohibits “taking” of listed animals
 - can apply for permit to “take” species.

Endangered Species Act: Snail Darter vs. TVA

- 1960's: Tennessee Valley Authority begins construction of Tellico Dam on Little Tennessee River
- 1973: Endangered snail darter found in the river
 - only known population in the world
 - Requires flowing clear water
 - Listed as endangered in 1978
- Challenged in court, ultimately to Supreme Court
 - 1978: Supreme Court ruled that TVA was in violation of ESA
 - TVA had already sunk \$100 million in project
 - Irreconcilable conflict → “Passed the buck” to Congress
- 1979: Congress weakened wording of Section 7, and created “Endangered Species Committee” to decide whether to exempt TVA from ESA
 - “God Squad”

Endangered Species Act: Snail Darter vs. TVA

- Endangered Species Committee **denied** exemption to TVA
 - Project not economically viable, poorly conceived
- 1979: Tennessee congressmen attached an amendment to an Appropriations Bill
 - Exempted TVA from ESA, overrode Supreme Court decision, ordered dam completion
 - Largely overlooked
- TVA flooded the dam that year, eradicating population
- However, some snail darters were translocated, and other natural populations were found.

Endangered Species Act and Private Property

- “Taking” is interpreted broadly as any activity that causes (or could cause) harm
 - “harassing, harming, pursuing, hunting, shooting, wounding, trapping, killing, capturing, or collecting”
 - habitat modification included
- If an endangered species moves onto your land, your activities may be severely limited
- This creates a **Perverse Incentive**: encourages private landowners to eliminate potential habitat for endangered species before one moves in or gets discovered

“Safe Harbor” Policy (1999) and Private Property

- Removes perverse incentive
- landowner is only responsible for the original population (“baseline”)
- “Taking” only occurs if the population is forced below the baseline level
- Used successfully in management of red-cockaded woodpeckers
 - prefers large, old pine trees
 - timber companies previously would cut trees when young to prevent woodpeckers from moving in
 - removes penalty for allowing trees to mature

Endangered Species Act and Private Property

- There is another meaning of “Taking”: the government cannot **take** private property without fair compensation (Fifth Amendment to U.S. Constitution)
 - listing a species as endangered may reduce potential economic development of private property (reducing its value)
 - does this constitute “taking” the value of the property?
 - if an endangered wolf protected by the government kills a cow, has the government “taken” the cow?
 - “potential value” is slippery
 - ludicrous example: eagle shooting preserve

“Experimental Nonessential” Populations

- Term applied to reintroductions of endangered species to parts of their historic range
 - experimental: not sure it’s going to work
 - nonessential: failure of reintroduction will not cause extinction
- Relaxes prohibitions on “taking”
- Increases public acceptance

“Experimental Nonessential” Populations

- Example: whooping cranes
 - established migratory population (nest in WI, winter in FL)
 - intentional take (shooting, destroying nests) is illegal
 - take that is unintentional or incidental (to lawful activities) is OK
- Gray Wolves in Yellowstone, ID, AZ, New Mexico
 - Yellowstone introduction ruled illegal in 1997 because ranchers couldn't distinguish “experimental” wolves (OK to kill if attacking livestock) from wolves that moved in on their own (illegal to kill).
 - overturned by higher court in 2000

Things to Remember

- IUCN Red List
- Endangered Species Legislation
 - CITES
 - ESA 1973 and its predecessors
 - ESA terms: endangered/threatened, taking, species, critical habitat
- Snail darter case study – establishment of “God Squad”
- “Safe Harbor” policy
 - what is it?
 - why is it used?
- “Experimental Nonessential” designation
 - what is it?
 - when is it used?