Some Key Laws and Agreements related to Biological Conservation

- ESA
- CITES
- GATT/WTO and Free Trade

Before the Endangered Species Act

1900  Lacey Act
- Regulated interstate transfer of wildlife
1966  Endangered Species Preservation Act
- Authorized listing of 77 species, mostly vertebrates
- Authorized land acquisition
1969  Endangered Species Conservation Act
- Expanded list (worldwide species and invertebrates)
- Required measures to enlist international agreement

U.S. Endangered Species Act of 1973 (ESA)

- The most far-reaching wildlife statute ever adopted by any nation
- Recognizes that species are of "aesthetic, ecological, educational, historical, recreational and scientific value to the nation and its people."
- Purpose is to bring about the recovery of endangered and threatened species, whatever the cost

The ESA (as amended in reauthorizations) requires:

- Secretary of the Interior (via U.S.F.W.S. or National Marine Fisheries Service for marine species) to identify and publish lists of species that are:
  - endangered (in imminent danger of going extinct) or
  - threatened (likely to become endangered in the foreseeable future).

The Endangered Species Act

Section 2: Findings and Purposes
Section 3: Definitions
Section 4: Listing, Critical Habitat Designation, Recovery, Monitoring
Section 5: Land Acquisition
Section 6: Financial Assistance to States and Territories
Section 7: The Role of Federal Agencies
Section 8: International Cooperation
Section 8A: Convention Implementation
Section 9: Unlawful Activities
Section 10: Exceptions, including Permits
Section 11: Penalties and Enforcement

Findings and Purposes: Section 2

Findings
- Some species of fish, wildlife and plants are now extinct "as a consequence of economic growth and development untempered by adequate concern and conservation."
- Other species are in danger of extinction.
- Species have aesthetic, ecological, educational, historical, recreational, and scientific value.

Purposes
- "... to conserve endangered and threatened species and the ecosystems on which they depend."
Endangered Any species in danger of extinction throughout all or a significant portion of its range

Threatened Any species likely to become endangered in the foreseeable future

Critical Habitat Specific geographic areas with physical and biological features essential to the conservation of a listed species

**Key Definitions Section 3**

**Listing Section 4**

Identifying species for possible designation as “endangered” or “threatened”

- Citizen may “petition” the Fish and Wildlife Service, or
- Fish and Wildlife Service may identify species through internal studies and discussion with States, academia, and other experts in the scientific community

**Candidate Species Section 4**

Species that warrant listing but are precluded by higher workload priorities are placed on a candidate species list.

**The Listing Process**

- Comes with petitions to list, delist, or reclassify a species
- FWS evaluates petition for substantive data and, within 90 days, must publish the petition in the Federal Register.
- Statute mandates rapid consideration for petitions
- **Congress has intentionally hobbled FWS by not providing funding for the listing process.**
- FWS must make a determination on the petition within 12 months from the date it was received.
Listed Species by State

Puerto Rico: 75
U.S. Virgin Islands: 13
81

Other Pacific Islands: 15

Region 1
Region 2
Region 3
Region 4
Region 5
Region 6
Region 7

March 2004

Critical Habitat Section 4
- Use best scientific data to identify areas essential to the conservation of a species and may require special management consideration or protection
- Economic impact analysis required, and areas may be excluded from protection based on analysis
- Publish Federal Register notice and seek public comment on proposal to designate critical habitat
- Designation does *not* create a park or preserve

Recovery Section 4
Goals
- Reduce or eliminate threats to listed animals and plants
- Restore self-sustaining wild populations
- Remove species from the list

Recovery Section 4
Recovery Plans
- Develop with stakeholders
- Identify recovery strategy
- Identify tasks and partners
- Establish delisting/downlisting criteria
- Provide timetable and cost estimate
- May address multiple species

Delisting Section 4
- Delisting criteria identified in the species’ recovery plan
- Federal Register notice published and public comment sought on proposal to delist
- Recovered species monitored for five years

Cooperation with the States Section 6
- Recognizes States’ key role in conserving wildlife and plants
- Provides funding to States with which the Fish and Wildlife Service has cooperative agreements

Recovery Section 4
Whaoping crane, a recovering species
USFWS photo

Recovery Section 4
American peregrine falcon, delisted in 1999.
Corel Corp. photo

Cooperation with the States Section 6
Six states have received funding to monitor and manage reintroduced black-footed ferrets.
Photos by Fort Belknap Fish and Wildlife Department
Consultations Section 7

Requires Federal agencies to:
• conduct programs to conserve endangered and threatened species
• ensure that actions they authorize, fund, or carry out are not likely to jeopardize the continued existence of listed species or adversely modify critical habitat

If agency action may affect a listed species or critical habitat, the agency must initiate consultation with the Fish and Wildlife Service.

Consultations Section 7

Informal Consultations
• Optional process to assist agencies in evaluating potential effects on species and habitat
• Fish and Wildlife Service recommends modifications necessary to avoid adverse effects
• If necessary modifications are made, no further consultation required

Formal Consultations
If adverse effects are unavoidable, the Federal agency initiates formal consultation:
• Relies on more detailed descriptions and other relevant studies, proposal reports, etc.
• Up to 90 days of consultation, followed by 45 days to produce a “biological opinion”

Formal consultation concludes with Fish and Wildlife Service issuing a “biological opinion” evaluating the action and providing options, where necessary.
Two possible outcomes:
• Federal action not likely to jeopardize species or adversely modify critical habitat
• Federal action likely to jeopardize species or adversely modify critical habitat

If action is not likely to jeopardize, biological opinion includes:
• Incidental take statement estimating amount of take that may occur incidental to the action
• Reasonable and prudent measures to minimize take

If action likely to jeopardize, opinion includes reasonable and prudent alternatives that avoid jeopardy or adverse modifications and are:
• consistent with intended purpose of action
• within authority of Federal agency
• technologically and economically feasible

Compliance with reasonable and prudent alternatives allow project to continue
In rare instances, such alternatives are not available
Consultations Section 7

More than 70,000 Federal actions are reviewed annually.

Of 1200 formal consultations per year, on average six percent result in a jeopardy or adverse modification finding.

Prohibited Acts Section 9

Take = harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect or to attempt to engage in these activities.

Harm includes habitat destruction that kills or injures listed species.

The take prohibition for wildlife applies to any person including a Federal agency.

Private Landowner Agreements Section 10

<table>
<thead>
<tr>
<th>Type of Agreement</th>
<th>Landowner agrees to...</th>
<th>Fish and Wildlife Service assures...</th>
</tr>
</thead>
<tbody>
<tr>
<td>Safe Harbor Agreement</td>
<td>take actions to benefit listed species on their land</td>
<td>no additional restrictions will be imposed as species populations improve</td>
</tr>
<tr>
<td>Candidate Conservation Agreements with Assurances</td>
<td>take actions to benefit candidate or other non-listed species on their land</td>
<td>no additional restrictions will be imposed if species is later listed</td>
</tr>
</tbody>
</table>

Tools and Incentives Safe Harbor Agreements

Voluntary agreements for recovering listed species
- Open to states, businesses, individuals—any non-Federal landowner
- Encourages landowners to improve conditions for listed species on their land by removing fear of subsequent restrictions on land use
- Can create long-term benefits for species extending beyond period of agreement

Tools and Incentives

Exceptions Section 10

- Experimental populations are treated as threatened
- Designating an experimental population as “nonessential” provides management flexibility

Exceptions Section 10

- Experimental Populations, Section 10(j)
  - Experimental populations are treated as threatened
  - Designating an experimental population as “nonessential” provides management flexibility

The Fish and Wildlife Service and the National Park Service reintroduced gray wolves into Yellowstone National Park as a nonessential, experimental population.
### Penalties and Enforcement *Section 11*

Provides for civil or criminal penalties for ESA violations:
- Civil penalties up to $25,000 per violation
- Criminal penalties up to $50,000 and/or a year in prison per violation

Provides for citizens’ lawsuits to compel the Secretary of the Interior to enforce the ESA.

### International Dimensions

- Foreign species included on list to prevent the importation to U.S. from contributing to the extinction of species outside our borders

### The “God Squad” of 1978

- Secretaries of Agriculture, Interior, and the Army, the Chairman of the Council of Economic Advisors, the heads of the Environmental Protection Agency and the National Oceanic and Atmospheric Administration, and a representative from the affected state.

“God squad” can be convened to:

- Grant exceptions to the ESA when no “reasonable and prudent alternative” exists
- When the project is of national and regional significance,
- And when the benefits “clearly outweigh” those of alternative actions.

Thus, *the committee has the power to condemn species to extinction.*

### What exactly can be protected?

- Originally only named species and subspecies.
- Some species exist as multiple reproductively isolated “distinct population segments”
- Represent enough evolutionarily significant genetic diversity to make all of the segments worth preserving.
- E.g., anadromous fish populations, each associated with a specific river to which they return to spawn:
  - Since 1994, 26 populations of West Coast salmon and steelhead listed as endangered or threatened.

### ESU’s

- NMFS embraces the concept of *evolutionarily significant unit* (ESU) of the biological species.
- Defined as:
  - A population that is substantially reproductively isolated from other populations of the same species
  - Represents an important component of the “evolutionary legacy” of the species, meaning that it might provide the genetic raw material for future evolutionary changes
Role of ESA in Habitat Protection

- Federal agencies, through their own actions or actions funded or permitted by them, must not jeopardize the continued existence of an endangered species or its habitat.
- Required to consult with U.S. Fish and Wildlife or NMFS over ways to avoid jeopardizing endangered species affected
- Of > 1,989 proposed federal projects affecting endangered species in 1987-91
  - 23 rejected
  - 350 cases modified
  - Most incorporated changes to mitigate effects on listed species or their habitats

Private Lands

- In 1978, Congress required that listing be accompanied by the designation of critical habitat, which may not be destroyed.
- Even private property can be designated critical habitat.
- Economic factors may be considered when designating critical habitat.

Examples of Critical Habitat Designations

- California gnatcatcher - coastal sage scrub in southern California.
- Louisiana black bear - hardwood forests in Louisiana.
- Red-cockaded woodpecker - eastern pine forests.
- Mount Graham red squirrel - mountaintop forest islands in Arizona.
- Northern spotted owl - old-growth forests in the Pacific Northwest.

Problems with ESA: Narrow Focus

- The number of endangered species is too large for them to be successfully dealt with one at a time.
- So far about $4 million per species for complete recovery.
- Would need $4.6 billion over ten years to provide for recovery of all listed and candidate species
  - this = 8x the amount that USFWS has in its entire budget

Problems with ESA: Timing

- An "emergency room" approach.
- Species are not given protection until they are already on their way to extinction.
- Number of individuals left at the time of listing has been about 1000 for animals and about 100 for plants.
- At these levels recovery is very difficult, not guaranteed, and very expensive.
Successes- Although flawed, probably the best such law on earth!

- bald eagle (increased from 417 to 9,250 pairs between 1963 and 2006)
- whooping crane (increased from 54 to 436 birds between 1967 and 2003)
- Kirtland’s warbler (increased from 210 to 1,415 pairs between 1971 and 2006)
- peregrine falcon (increased from 324 to 1,700 pairs between 1975 and 2000)
- gray wolf (populations increased dramatically in the Northern Rockies, Southwest, and Great Lakes)
- gray whale (increased from 13,095 to 26,635 whales between 1968 and 1998)
- grizzly bear (increased from about 271 to over 580 bears in the Yellowstone area between 1975 and 2006).

CITES

Convention on International Trade in Endangered Species of Wild Fauna and Flora

In 1975 the U.S. along with nine other countries, signed the CITES treaty

Objective of CITES, which now involves 146 countries, is to ensure that trade will not cause the extinction of plant or animal species.

Three important appendices that are periodically revised:

Appendix I

- All species that are threatened with extinction.
- All commercial trade is banned
- Noncommercial trade allowed if it does not jeopardize the species’ survival in the wild.
- Permits are required for the exportation and importation of Appendix I species.
- Examples: ...great apes, great whales, African elephant, all rhinoceros species, all tiger subspecies, large cats, many parrots, all sea turtles, most crocodilians, several orchids, cacti and cycads

Appendix II

- A longer list of species, not now threatened with extinction, but for which uncontrolled commercial trade would be detrimental.
- Trade strictly regulated through the use of export permits.
- All of the following not on Appendix I:
  - Primates (apes, monkeys, lemurs), Cats, Parrots, Crocodilians, Cacti, Orchids. Plus: Black bear, various snakes and lizards, Poison-arrow frogs, some butterflies, some corals
### Appendix III
- Includes species where there is some question as to the potential negative impact of commercial trade.
- Permits are used to **monitor** trade in these species.
- Any listing of a species in either Appendix I or II requires approval by two-thirds of the CITES party countries, but any Convention member may place a native species on Appendix III.

### CITES 2002
- SANTIAGO, Chile, November 2002
- 1,200 participants
- From 141 governments
- Numerous observer organizations.
- Some landmark decisions …

### Mahogany
- Big-leaf mahogany listed on Appendix II
- Includes logs, sawn wood and veneer sheets.
- The listing only applies to Central and South America, where big-leafed mahogany is native.
- Does not apply to Indonesia, Malaysia and other countries that grow introduced mahogany trees.

### Marine Species
- Reversed earlier decisions and voted to list whale and basking sharks on Appendix II -- first sharks to be listed by CITES.
- Clear historical evidence that populations have declined as a result of fishing to supply international trade.
- A single fin reported to have sold for $15,000 in 1999
- Defeated Japanese proposals to resume trade of minke and Bryde’s whales
Sea Horses

- Listed all 32 species of seahorses on Appendix II.
- Some 24 million seahorses harvested each year, sold for aquariums or for use in Asian as medicines.
- Live in tropical and sub-tropical waters, are also often caught as by-catch and killed by pollution and coastal development.
- Trade is estimated to be growing by eight to 10 percent per year.

Ivory Trade

- Decision to allow three African countries to engage in a one-time sale of ivory stockpiles
- Namibia, Botswana, and South Africa to make one-time sales of ivory of 10, 20 and 30 tons, respectively.
- Stocks collected from elephants that died of natural causes or as a result of government regulated control of problem animals.

Implications?

- Could this be a significant advance in how elephant populations are managed sustainably?
- Or could one-time legal trades still provide cover for illegal poaching and smuggling of ivory?
- Help elephants in these countries or put elephants at risk wherever they occur?

Problems in Controlling International Trade -- Enforcement

- International treaties do not have enforcement powers; they are implemented when a signatory nation passes laws making it a criminal act to violate them.
- In U.S. the ESA allows the Secretary of the Interior, through the U.S.F.W.S to exercise control over trade in wildlife.
- May or may not be punitive enough
Recent examples (2003 CITES/USFWS report)

Inspectors at Los Angeles International Airport stopped a man who was smuggling 16 live CITES-protected birds from Vietnam worth more than $3,500. The birds, which were taped up and concealed in socks and badminton birdie tubes in the man’s suitcase, were en route to a pet shop in Los Angeles’ Chinatown.

When inspectors in Blaine, Washington, looked at a shipment of live black bears coming in from Canada for use in the film industry, they discovered 166 pounds of marijuana and $178,000 in U.S. currency concealed in a hidden compartment in one of the cages. The USFWS notified Customs officers, who seized the bears, drugs, and cash.

More examples…

- USFWS officers in Houston helped the Centers for Disease Control trace three shipments of Gambian rats identified as the source of the first ever monkeypox outbreak in the United States.
- USFWS staff in El Paso alerted Mexican authorities about an illegal shipment of 2,000 caiman skins. The shipment, worth an estimated $114,000, was seized in Mexico.
- Inspectors in Atlanta intercepted four unlawful shipments of bushmeat arriving from Africa. Seized contraband included smoked primate carcasses and maggot-infested smoked wild rats.

Last example

- A rancher in Alaska, who unlawfully imported 21 wood bison from Canada for use in a commercial sport hunting operation, was fined $10,000 and donated the wildlife to a public wildlife educational exhibition facility in Portage, Alaska.

International Conventions

5. World Heritage Convention (1972)

Convention on Biological Diversity

The objectives of the Convention on Biological Diversity (CBD) are the conservation of biological diversity, the sustainable use of its components, and the fair and equitable sharing of the benefits arising from commercial and other utilization of genetic resources. The agreement covers all ecosystems, species, and genetic resources.
**Convention on Conservation of Migratory Species**

- The Convention on the Conservation of Migratory Species of Wild Animals (the Bonn Convention) aims to conserve terrestrial, marine and avian migratory species throughout their range.
- Conserve migratory species and their habitats
- Providing strict protection for the most endangered migratory species
- Regional multilateral agreements for the conservation and management of specific species or categories of species
- Undertaking co-operative research and conservation activities.

**Several Agreements have been concluded to date under the auspices of CMS. They aim to conserve:**

- Populations of European Bats
- Cetaceans of the Mediterranean Sea, Black Sea and Contiguous Atlantic Area
- Small Cetaceans of the Baltic and North Seas
- Seals in the Wadden Sea
- African-Eurasian Migratory Waterbirds
- Albatrosses and Petrels

**Ramsar Convention on Wetlands**

The Convention on Wetlands (Ramsar Convention) provides the framework for national action and international cooperation for the conservation and wise use of wetlands and their resources.

The convention covers all aspects of wetland conservation and wise use, recognizing wetlands as ecosystems that are extremely important for biodiversity conservation in general and for the well-being of human communities.

More than 1,600 wetlands, covering more than 145 million hectares, have been included in the Ramsar List.

**World Heritage Convention**

The primary mission of the World Heritage Convention (WHC) is to identify and conserve the world's cultural and natural heritage, by drawing up a list of sites whose outstanding values should be preserved for all humanity and to ensure their protection through a closer co-operation among nations.
Issues with Globalization

For many years global free trade issues were negotiated through the General Agreement on Tariffs and Trade (GATT).

Formation in 1995 of a more formal and powerful body called the World Trade Organization.

Its major goal is to establish “a system of rules dedicated to open, fair and undistorted competition.”

- a country should not discriminate between its own and foreign products
- trade barriers should be removed through negotiation

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How “Free Trade” can work in favor of conservation

- Elimination of perverse subsidies
- Perverse subsidies are adverse in the long run to both the economy and the environment
- Two major areas of perverse subsidy are agriculture and fisheries.

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GATT

- $325 billion/year in subsidies
  - Subsidies increase the use of variable production inputs, such as fertilizer, irrigation water, pesticides and herbicides
  - Maintain many areas in cultivation that are not profitable
  - Pay outright for extremely damaging practices – wetland destruction

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Fisheries Subsidies

- Some 75% of world’s major fisheries overexploited, fully exploited, or recovering
- Causes? Fisheries remain poorly managed or ineffectively policed, because of the pervasive problem of open-access, common-pool fisheries.
- The marketplace fails to reward responsible fishing practices.
- The world’s fishing fleets are vastly oversized
- Many continue to receive massive government subsidies that encourage excess capacity and overfishing
How Free Trade can work against conservation

Limits pressure exerted on trade

- Free Trade is restricting the ability of individual countries to use their trading power to protect natural resources.
- Some countries (e.g. the U.S.) have enforced trade embargoes against other countries that fail to protect natural resources.
- The WTO has ruled against this practice on several occasions

U.S. embargoes invalidated by GATT / WTO

- Import of non-dolphin-safe tuna
- Import of non-turtle-safe shrimp
- Import of harp-seal fur coats (required by US under its own Marine Mammal Protection Act)

Dolphin/Tuna

- Under U.S. Marine Mammal Protection Act, the US government must embargo all tuna imports from any country exporting tuna to the U.S. does not meet U.S. dolphin protection standards
- Exports of tuna from Mexico to the U.S. banned
- Mexico complained (1991) to GATT
- GATT panel concluded U.S. can not embargo imports of tuna products from Mexico
WTO contends that environmental issues should be dealt with explicitly through multilateral agreements (e.g. CITES), not through trade manipulation.

- Contends that a country cannot take trade action for the purpose of attempting to enforce its own domestic laws in another country.
- *This includes protecting animal health or exhaustible natural resources.*