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TEDs and The Endangered Species Act of 1973

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At this moment a dramatic and desperate struggle is occurring between the U.S. shrimping industry and the environmental community. The controversy is over regulations requiring shrimpers to use turtle excluder devices (TEDs) which are purported to be necessary to save endangered sea turtles.

A thorough examination of this dispute would involve a discussion of both philosophical and legal issues. The philosophical questions are, however, beyond the scope of this discussion. The focus here will be on the legal mechanism with which environmentalists are attempting to promote their philosophies. This legal mechanism is the Endangered Species Act of 1973 (1973 Act) based in part on the esthetic value of other forms of life. In their endeavor to effectuate the policies of the 1973 Act, the environmentalists have come squarely against the interests of the commercial shrimping industry and have met surprisingly strong and determined resistance.

HISTORY OF THE CONTROVERSY OVER TURTLE EXCLUDER DEVICES

Six species of sea turtles inhabit the Gulf of Mexico, the Atlantic Coast, and the Caribbean. Regulations issued under the 1973 Act list four species: green, leatherback, hawksbill, and Kemp's ridley, as endangered in U.S. waters and two: loggerhead and olive ridley, as threatened.¹

Kemp's ridley is the species of sea turtle in greatest danger of extinction² and has been listed as endangered since 1970.³ From an estimated 47,000 nesting females in 1947, the number has dropped to an average of 624 nesting females since 1978, a 98% decrease.⁴

Scientists have attributed the decline of the Kemp's ridley and the other sea turtles to several factors. The major factors in the Kemp's ridleys' initial decline were heavy predation on eggs and nesting females and intense fishing in the 1950's and 60's.⁵ Kemp's ridley nests almost exclusively on a 17 kilometer stretch of beach on the Mexican Gulf Coast known as "Rancho Nuevo". That fact greatly facilitated the exploitation which decimated the population. Since 1966, the Mexican government has protected the Kemp's ridleys nesting grounds with continuous armed guards during nesting season. In addition, since 1978, the U.S. Fish and Wildlife Service (USFWS) has assisted the Mexicans with volunteer beach patrols during nesting season. Further, the Mexican government has also proposed establishing the nesting site as a nature preserve to prevent future destruction from development.⁶ Presumably, with such protection, this pressure has essentially been alleviated.

While the Kemp's ridleys' nesting grounds appear to be secure, the population of nesting females has decreased 3% per year since 1978. Scientists attribute this decline to other factors both natural and man-made such as pollution from industrial and domestic sources, activities

of the petroleum industry, disposal of trash and garbage at sea, destruction by dredge and fill of coastal and estuarine feeding habitats, injuries from power boats, predation and disease, cold stunning at higher latitudes as winter sets in, and incidental catch or "by catch" in various types of fishing nets including shrimp nets.

This last source of mortality, the incidental catch of the Kemp's ridley by shrimp nets, has given rise to the present controversy. The National Marine Fisheries Service (NMFS) has estimated that more than 13,811 sea turtles are captured incidentally in shrimp trawls in the Gulf of Mexico each year and of those, 4,005 drown.¹⁰ Of those 4,005, NMFS estimates that an average of 158 Kemp's ridleys drown in shrimp nets in the northern Gulf of Mexico (Louisiana to the Florida panhandle),¹¹ including a few off the Louisiana coast.¹²

The two federal regulatory agencies involved, NMFS and USFWS, have concluded that the incidental catch of sea turtles in shrimp trawls is a significant threat to the survival of the species. While realizing that the shrimping industry was not the cause of the initial decline of the population, the federal agencies are of the opinion that the number of Kemp's ridleys is at such a dangerously low level that the drowning of even a few turtles will be very detrimental to the species' chances of survival.¹³ The natural history of the Kemp's ridley increases its chances of being caught in shrimp nets since it often feeds in areas which are also rich shrimping grounds.¹⁴

In an effort to minimize the adverse effects of shrimping on sea turtle populations NMFS, in 1977, began to develop a device that would allow turtles to escape from shrimp nets.¹⁵ The idea was based on earlier devices called "jellyball" shooters which had been developed by the shrimping industry to prevent jellyfish from clogging shrimp nets. They were not very efficient at retaining shrimp so NMFS began to refine the device with the aim of maximizing its efficiency in both shrimp retention and turtle exclusion.¹⁶

In 1980, an emergency meeting convened between conservationists, government officials, and shrimping industry representatives to deal with the incidental drowning issue. NMFS suggested the turtle excluder device (TED) that it had been perfecting as a solution to the problem. In their experiments with the TED, NMFS found that 90% of all turtle drownings could be eliminated without the use of TEDs if tow times were limited to a maximum of 90 minutes. The industry representatives assured that tow times would be reduced voluntarily while NMFS maintained that the TED would provide a technological solution. Ultimately NMFS decided to approach the situation by encouraging voluntary use of the TED and issuing regulations mandating its use¹⁷ only if the voluntary use program proved unsuccessful.

By 1984, NMFS reported that it had perfected a version of the TED that reduced incidental capture of sea turtles by 97% without significantly reducing shrimp catch.¹⁸ NMFS was joined in the effort to encourage voluntary use by the Center for Environmental Education (CEE) and other environmental organizations. In 1982, representatives from CEE, Greenpeace, the Fund for Animals, and the Environmental Defense Fund met with representatives of the Texas Shrimp Association and other shrimping industry representatives to further promote the use of TEDs.¹⁹

Despite extensive efforts by government, industry, and environmental groups, by 1985 it became evident that the voluntary approach would not be successful. CEE and the USFWS began requesting that NMFS and the South Atlantic and Gulf Fishery Management councils establish regulations requiring the use of TEDs.²⁰ The councils were established by the Magnuson Fishery Conservation and Management Act and, like NMFS, are regulatory agencies of the Department of Commerce.²¹ The USFWS is a regulatory agency of the Department of the Interior and is also responsible under the 1973 Act for implementing plans for the conservation and survival of endangered and threatened species listed under the Act. USFWS is primarily responsible for programs dealing with the nesting sites and a special "Headstart" program for the Kemp's ridley. NMFS continued to pursue the voluntary approach and in August of 1986 the National Oceanic and Atmospheric Administration (NOAA), the parent agency of NMFS, held a meeting between representatives of the environmental community and the shrimping industry to discuss the sea turtle problem and the TED solution. At this meeting the environmentalists became convinced that the shrimping industry would never use TEDs voluntarily. The next day CEE gave written notice²² to the Secretary of Commerce pursuant to the 1973 Act that an emergency existed with respect to the Kemp's ridley and that the Secretary was violating the 1973 Act by not closing the industry or taking other steps to eliminate the killing of sea turtles in shrimp nets. Such notice is a prerequisite before a citizen suit may be filed to compel the Secretary to apply the prohibitions of the 1973 Act.²³ Those prohibitions include the killing of endangered species.

Faced with the possibility of litigation, NOAA and NMFS sponsored a series of mediation meetings between representatives of the federal agencies involved, the shrimping industry, the environmental community, and a professional mediator in an attempt to resolve the conflict.²⁴ The shrimpers argued that the time wasted in handling the TEDs and the cost of the device itself (one will be required for each net on board at a cost of \$150 to \$400 per TED) is a significant burden on shrimpers, many of whom have a very small profit margin. This is exacerbated by the current depression of the Louisiana economy and the importance of the shrimping industry to the state. Representatives of the Concerned Shrimpers of Louisiana (the major Louisiana group opposing TEDs) suggest that the interests of sea turtles might better be served by levying a tax on shrimp landed and applying the revenues generated to expand other currently existing programs designed to foster the recovery of sea turtles, such as the "Headstart" and nesting site transfer programs for the Kemp's ridley.

While these programs sound promising, USFWS and the environmentalists are quick to point out that they are still only in the experimental phase. No one knows for sure why the turtles invariably return only to Rancho Nuevo and if that pattern can be altered. Other unknown factors for tank reared turtles are the survival rate of the year-old turtles, whether or not they will become "reproducing members" of the population, or how long it takes for turtles to reach sexual maturity in the wild. Thus far no new recruitment is known to have occurred at the nesting beaches. Biologists estimate that it may take a female Kemp's ridley 10 years to reach sexual maturity, so if the program is successful new recruits should start returning to the nesting sites within the next few years. The responsible agencies and environmentalists argue that until these programs are proven to be effective conservation techniques, efforts to relieve pressure on the species must continue on all fronts.²⁵

As can be seen from the foregoing discussion, the controversy may eventually have to be resolved by the courts. In order to fully understand the basis for legal action by either side and to be able to assess the probabilities for success, it is necessary to examine carefully the Endangered Species Act of 1973 (1973 Act) and the litigation that has arisen under it pertinent to the issue at hand.

STATUTORY PROTECTIONS FOR ENDANGERED SPECIES

The 1973 Act remains, despite important amendments, the most comprehensive and powerful legislation for the protection of threatened and endangered wildlife. The 1973 Act was preceded by two earlier acts: the Endangered Species Preservation Act of 1966 (1966 Act) and the Endangered Species Conservation Act of 1969 (1969 Act). An examination of the earlier acts and an analysis of the differences between them and the 1973 Act is necessary to fully understand the intent and resolve of Congress when it enacted the 1973 Act.

Neither of the two earlier acts comes close to being as effective and far reaching as the 1973 Act. The major thrust of the 1966 Act was to provide the Secretary of the Interior a vehicle with which to use existing laws to acquire land to protect the habitat of endangered species. In addition, it directed the Secretary to utilize other programs under his authority "to the extent practical" to further the purposes of the endangered species program and to encourage other federal agencies to do likewise. The Secretary was also directed to "seek advice and recommendations of interested persons" in formulating a list of species threatened with extinction which was to be published in the Federal Register "after consultation with the affected States." There were no restrictions on the taking of or interstate commerce in endangered species. It did not apply to foreign wildlife and was interpreted to apply only to vertebrate animals.²⁶

The 1969 Act expanded the scope to include animals threatened with "worldwide extinction" and prohibited their importation into the United States. It also specifically defined fish and wildlife to include molluscs and crustaceans as well as vertebrate animals. Listings of endangered species were to be based on the "best scientific and commercial data available" to the Secretary. The Secretary was also directed to foster international cooperation in the protection of wildlife. To this end an international ministerial meeting was held. From it came the Convention on International Trade in Endangered Species of Wild Fauna and Flora which was not truly comprehensive since it dealt solely with matters of international trade.²⁷

In the early 1970's, the mood of Congress favored even greater wildlife protection. This was forecast by the passage of the Marine Mammal Protection Act of 1972 which provided protection for marine mammals that were not yet threatened or endangered but whose stocks were depleted. Against the backdrop of this pre-existing legislation the Endangered Species Act of 1973 evidenced congressional intent to provide a more far reaching and comprehensive scheme for the protection of endangered and threatened wildlife. The major changes made by the 1973 Act were to establish prohibited acts, such as the "take" provisions; to remove qualifying language, such as "to the extent practicable;" and to include all phyla (groups) of organisms within the scope of its protection.²⁸

THE ENDANGERED SPECIES ACT OF 1973

The congressional findings and declaration of purposes and policy in the 1973 Act are indicative of a commitment to establish strong and effective legislation.²⁹ Section 2(a) states that "various species of fish, wildlife, and plants in the United States have been rendered extinct as a consequence of economic growth and development untempered by adequate concern and conservation"³⁰ and that "other species of fish, wildlife, and plants have been so depleted in numbers that they are in danger of or

threatened with extinction."³¹ This section further recognizes that "these species of fish, wildlife, and plants are of esthetic, ecological, educational, historical, recreational, and scientific value to the Nation and its people."³²

The purpose of the Act, stated in Section 2, is "to provide a program for the conservation of such endangered species and threatened species...."³³ The policy of Congress, stated in Section 2, is that "all federal departments and agencies shall seek to conserve endangered species and threatened species and shall utilize their authorities in furtherance of the purposes of this Act."³⁴

The lack of qualifying language has not gone unnoticed by the courts in deciding challenges to the Act based on economic considerations. Perhaps the most famous decision under the Act is the 1978 Supreme Court case of Tennessee Valley Authority v. Hill, wherein the Court was asked whether construction on the Tellico Dam had to be stopped because continued construction could wipe out the habitat of a small endangered fish, the snail darter. The Court noted: "The pointed omission of the type of qualifying language previously included in endangered species legislation reveals a conscious decision by Congress to give endangered species priority over the 'primary missions' of federal agencies."³⁵ After a thorough examination of the legislative history, the Court concluded that the intent of the Act to give endangered species priority was so pronounced that it mandated what many believed to be an absurd result in the case. The snail darter was not discovered or listed as endangered until after the Tellico Dam project was well under way. The Court's holding meant that the continued existence of a species of small fish was more important than a project which had already cost 78 million dollars and was 70-80% complete when the snail darter was placed on the endangered species list.

Other language in the decision may have indicated the Court's feeling that Congress should resolve the issue by amending the 1973 Act or exempting the Tellico Dam from its requirements: "Our individual appraisal of the wisdom or unwisdom of a particular course consciously selected by the Congress is to be put aside in the process of interpreting a statute." Congress did indeed react to the Court's decision in 1978 by passing amendments that established a formal process for exempting agency actions which could not be reconciled with the provisions of the 1973 Act.³⁶ The exemption process, however, is very complex and stringent. The Tellico Dam project, the first to be considered, did not meet the requirements, although Congress later exempted it from all federal law in the Energy and Water Development Appropriation Act of 1980.³⁷

To date, the exemption process has rarely been used. This is in part due to the rigorous requirements for qualifying. More importantly, however, it is due to other 1978 amendments to the 1973 Act in which Congress codified the procedures of the consultation process required to take place between the Secretary (of Commerce or the Interior) and other federal agencies. These procedures reflect a strong effort on the part of Congress to avoid unsolvable conflicts between endangered species and federal projects such as the Tellico Dam. The consultation process is utilized to recognize potential conflicts at the earliest possible moment so that alternative measures can be considered and taken before they are foreclosed. Once it has been determined that a federal agency action is likely to affect an endangered or threatened species or its habitat, the federal agency must consult with the Secretary to insure that the proposed action is not likely to jeopardize the species. After initiation of the consultation, an agency is forbidden from making "any irreversible or irretrievable commitment of resources with respect to the agency action which has the effect of foreclosing the formulation or implementation of any reasonable and prudent alternative measures."³⁸

The effect of the consultation process does not give the Secretary veto power over the actions of other federal

agencies if the agency disputes the Secretary's opinion that the action is likely to jeopardize an endangered or threatened species. It does, however, provide a strong incentive for the agency to follow reasonable and prudent alternatives suggested in the Secretary's opinion.³⁹

The 1978 amendments also eroded somewhat the philosophies of the 1973 Act by requiring economic considerations in critical habitat designations. The Reagan administration buttressed this move to weaken the 1973 Act three years later in 1981 with Executive Order 12291 requiring a regulatory impact analysis in the listing process. Congress responded the next year by revising the listing process and repealing many of the stifling requirements imposed by the Reagan administration.⁴⁰ Congress' actions, therefore, indicate the continuing viability of the goals and purposes of the Endangered Species Act. Today it remains a potent weapon in the arsenal of conservationists.

REGULATORY SCOPE

The 1973 Act is intended to protect any "member of the animal kingdom" that is endangered or threatened. This includes "any part, product, egg, or offspring thereof or the dead body or parts thereof."⁴¹ Endangered species are those that are "in danger of extinction throughout all or a significant portion of its range other than species of the Class Insecta (insects) ..."⁴² A threatened species is one that "is likely to become an endangered species within the foreseeable future throughout all or a significant portion of its range."⁴³ Species include "any subspecies of fish, wildlife, or plants and any distinct population segment of any species of vertebrate fish or wildlife which interbreeds when mature."⁴⁴

The Act also protects the critical habitat of threatened or endangered species. Critical habitat is defined as "specific areas within the geographical area occupied by the species at the time listed ... on which are found those physical or biological features essential to the conservation of the species and which may require special management considerations or protection" and "specific areas outside the geographical area occupied by the species ... essential for the conservation of the species."⁴⁵ Therefore, coverage extends both to endangered and threatened species as defined above and to their critical habitats. Once a species is listed as endangered or threatened, the regulatory mechanisms of the 1973 Act are triggered. It should be noted that with respect to vertebrates, a particular or distinct population may be listed as endangered even though other populations of the same species may not even be threatened. The listing of endangered and threatened species and their critical habitats is worldwide in scope.

The 1973 Act regulates the conduct of both governmental agencies and private entities. The authority to administer the provisions of the Act are vested in the Secretary of the Interior and the Secretary of Commerce. The United States Fish and Wildlife Service (USFWS) and the National Marine Fisheries Service (NMFS) have been delegated the functions of the respective Secretaries.

Two sections regulate the federal government. Section 7, Interagency Cooperation, imposes both affirmative and prohibitory duties on federal agencies. It requires the Secretaries of the Interior and Commerce to "review other programs administered by [them] and utilize such programs in furtherance of the Act."⁴⁶ Further, all other federal agencies must utilize their authorities in furtherance of the purposes of the Act in consultation with and with the assistance of the Secretaries of the Interior and Commerce. The affirmative duty of the Secretaries of the Interior and Commerce was interpreted by the courts to mean that the Secretaries must "do far more than merely avoid the elimination of protected species. They have affirmative duties to increase the population of protected species."⁴⁷ This decision and others are important to the controversy at hand in defining the Secretary's duty to protect endangered sea turtles.⁴⁸

While no court decisions have defined the affirmative duties of other federal agencies the prohibitory duties of Section 7 are the most important provisions of the 1973 Act which regulate these agencies.⁴⁹ These provisions require all federal agencies "in consultation with and with the assistance of the Secretary" to "insure that any action authorized, funded, or carried out by such agency ... is not likely to jeopardize the continued existence of any endangered species or threatened species or result in the destruction or adverse modification of habitat of such species which is determined ... to be critical."⁵⁰ The consultation process is operative here.

The second section, Section 9, Prohibited Acts, makes a distinction between endangered species and threatened species. It automatically prohibits certain acts by governmental and private entities when those acts affect endangered species⁵¹ and prohibits the violation of any regulations pertaining to threatened species that may have been issued by the Secretary.⁵²

Section 9 makes it "unlawful for any person subject to the jurisdiction of the United States" to import or export any endangered species to or from the United States, or to take any such species within the United States or its territorial sea or on the high seas. It also prohibits virtually any possession, transportation, delivery or sale of endangered species.⁵³ Section 4 requires the Secretary to "issue such regulations as he deems necessary and advisable to provide for the conservation of" threatened species.⁵⁴ These prohibitions may be as protective as those mandated for endangered species under Section 9.

The prohibitions apply to any "person" which is defined as "any individual, corporation, partnership, trust, association, or any other private entity or any officer, employee, agent, department, or instrumentality of the Federal Government, of any state or political subdivision thereof or of any foreign government."⁵⁵ "Take" is defined to mean "harass, harm, pursue, hunt, shoot, wound, kill, trap, capture or collect or to attempt to engage in any such conduct."⁵⁶

In essence, these prohibitions apply to everyone and prohibit any actions harmful to an endangered or threatened species. One case, Palila v. Hawaii Department of Land and Natural Resources, held that direct physical harm was not necessary to trigger the "take" prohibitions. Mere destruction of habitat that threatened the survival⁵⁷ of an endangered species was enough to constitute harm. Therefore, the maintaining of sheep and goat herds in the critical habitat of an endangered bird by the state was a taking since the grazing of the herds was destructive to the bird's habitat. The USFWS incorporated this decision when it subsequently promulgated a definition of "harm" which included "significant habitat modification or degradation where it actually kills or injures wildlife by significantly impairing essential behavioral patterns including breeding, feeding, or sheltering."⁵⁸ It should be noted that intent is not a requisite element of a taking, so that even an incidental catch of endangered species in fishing nets, without a permit, amounts to a taking and thus, would be prohibited by the 1973 Act.

Section 10 allows the Secretary to make an exception by granting a permit for incidental taking, which would be prohibited under Section 9. To be permitted, such a taking must be "incidental to and not the purpose of the carrying out of an otherwise lawful activity."⁵⁹ To obtain such a permit the applicant must submit a conservation plan specifying the likely impact, the steps that will be taken to minimize and mitigate the impact, the funding available for implementation, and the alternative actions that were considered.⁶⁰ The Secretary must also find that such incidental "taking will not appreciably reduce the likelihood of the survival and recovery of the species in the wild."⁶¹

Section 11 directs the Secretary of Commerce to enforce the provisions of the Act⁶² and to promulgate such regulations as may be appropriate to do so.⁶³ If the Secretary fails to enforce the prohibitions of the Act,

any interested person may bring a civil suit: (1) to compel the Secretary to apply the prohibitions of the Act (or regulations authorized pursuant to it) with respect to taking of any resident endangered or threatened species; (2) seeking to enjoin any person or governmental entity from violating any provision of the Act; or (3) against the Secretary for failure to perform any nondiscretionary duty under Section 4.⁶⁴ Written notice must be given to the Secretary, at least 60 days prior to filing suit⁶⁵ and must state the reasons why an emergency is thought to exist with respect to an endangered species or threatened species.⁶⁶

LEGAL POSITIONS OF THE PARTIES TO THE TED CONTROVERSY

On August 22, 1986, the Center for Environmental Education (CEE) gave written notice that the Secretary of Commerce was violating Section 11 of the 1973 Act by failing to either close the shrimping industry or require the use of TEDs on shrimp nets.⁶⁷ This section requires the Secretary to enforce the prohibition against taking of endangered species,⁶⁸ including the incidental taking without a permit.⁶⁹ CEE maintained that the Secretary of Commerce was aware that the shrimping industry is killing turtles and that the industry does not qualify for an incidental taking exception because it has not fulfilled the requirements for an exception and, at least with respect to the Kemp's ridley, taking would "appreciably reduce the likelihood of the survival and recovery of the species in the wild."⁶⁹

CEE's notice also alleged failure of the Secretary to perform his affirmative duties of conserving endangered and threatened species under Sections 2 and 7.⁷⁰ Conservation is defined to mean "the use of all methods and procedures which are necessary to bring any endangered species or threatened species to the point at which it is no longer threatened or endangered." In addition the affirmative duties of the Secretary under Section 7 have been amplified by the courts in Defenders of Wildlife v. Andrus.⁷² In Defenders the court held that the USFWS had affirmative duties "to increase the population of protected species," to "bring these species back from the brink [of extinction] so that they may be removed from the protected class," and to "use all methods necessary to do so."⁷³ CEE thus seems to be in a strong position, both on the face of the 1973 Act and from jurisprudential interpretations. The action requested by CEE, though economically burdensome, is not without precedent. The multimillion dollar Tellico Dam project was held up to save the snail darter.

Another strong precedent comes from an action under the Marine Mammal Protection Act of 1972 which prohibits the taking of marine mammals. Its prohibitions are very similar to those of the 1973 Act and, as in the 1973 Act, it contains an exception for the taking of marine mammals incidental to commercial fishing activities. Permits for such taking are issued pursuant to regulations. In the case Committee for Humane Legislation Inc. v. Richardson,⁷⁴ the plaintiffs challenged the regulations and the general permit issued to the American Tunaboat Association for the incidental taking of porpoises in tuna purse seines. The court upheld the challenge on the grounds that the regulations were not supported by the required scientific evidence showing that the permitted taking would not be detrimental to the porpoise population. The court of appeals affirmed and directed the Secretary to issue regulations in compliance with the Marine Mammal Protection Act for 1977, but allowed the Secretary to amend the 1976 permit by placing a ceiling on the total number of porpoises that could be taken that year. Thus, the tuna fleet continued fishing but reached the quota two months before the end of the season, thereby invalidating the permit. The tuna industry was unsuccessful in obtaining a preliminary injunction against the enforcement of the quota and therefore was prohibited from using the "on porpoise" method of tuna fishing for the remainder of the season.⁷⁵ The Marine Mammal Protection Act was not amended despite pressure from the economically important tuna industry.⁷⁶ In a similar context, with no permit for taking endangered sea turtles,

the shrimping industry could face a shutdown if it fails to reach an agreement with the environmentalists. The 1973 Act requires the Secretary to conserve endangered sea turtles by using any means necessary to bring them to a state where they are neither endangered nor threatened. NMFS has determined that enforcing the taking prohibition is necessary. Environmentalists argue that without the use of TEDs, shutting down the economically important shrimping industry is the only method of preventing taking of sea turtles in shrimp nets. The law and the precedents therefore seem to place the environmentalists in a fairly strong position in the TED controversy.

The shrimping industry's position is based on economic hardship and challenges to the rational basis for the proposed regulations. As for the economic argument, the 1973 Act on its face contains almost no requirements to consider economic impact. No such requirements are contained in the sections covering purposes and policy, the determination of and listing of threatened and endangered species, or the protective regulations and prohibited acts. The only requirements to consider economic impacts are in the exemption procedure for federal agency action in Section 7 (which is rarely used) and in the designation of critical habitat. As to the latter, economic considerations are overridden if the failure to designate an area as a critical habitat will result in extinction of the species. It was on this basis that the Tellico Dam project failed to qualify for an exemption from the 1973 Act.

There appears to be, however, implicit consideration of economic impacts by providing for an exception from the prohibited acts for incidental taking in commercial fishing operations. There would be no other reason to exempt such a taking from the otherwise absolute prohibitions of the Act. The exception seems contradictory to the requirement that the Secretary use any means necessary to conserve endangered species. However, this exception, as mentioned before, is subject to fairly rigorous requirements and will not be allowed if the Secretary determines that the taking will "appreciably reduce the likelihood of the survival and recovery of species in the wild."⁷⁷ This question, the effect of incidental taking on the continued survival of sea turtles in the wild, is a hotly contested issue.

The NMFS conclusions regarding the status of all sea turtle species are based on sampling and statistical data as well as what is considered to be almost absolute knowledge of the number of reproducing Kemp's ridley females. Estimates based on statistically sound sampling are widely used and accepted in the scientific community. This fact is important in the consideration of the other possible challenge to the proposed regulations. Regulations must be issued in compliance with the notice and comment rulemaking procedures of the federal Administrative Procedure Act and may be challenged as being arbitrary and capricious.⁷⁸

A successful challenge to regulations promulgated under the 1973 Act by the USFWS was mounted in Connor v. Andrus where the plaintiffs attacked hunting regulations designed to protect the endangered Mexican duck from being mistakenly shot by hunters. The court recognized the affirmative duty of the agency to bring endangered species back from the brink of extinction but stated that the goal was not accomplished by "promulgating regulations which do not attack the cause or causes of population depletion of a species."⁷⁹ In that case, the court found that the plaintiffs had met their burden of proving from the administrative record and other extra record evidence that the Mexican duck was threatened by the destruction of its habitat rather than from hunting. An important factor in the decision was that a biological opinion had previously determined that the lack of the hunting restrictions would not jeopardize the continued existence of the duck. Based on that biological opinion, the regulations as originally proposed had not contained the challenged hunting restriction. The court stated that the deference was required to give the agency's expertise was not boundless.

The effect of Connor may be somewhat limited by two other cases. In Cayman Turtle Farm Ltd. v. Andrus, the plaintiffs challenged regulations issued by the Secretary of Commerce under the 1973 Act prohibiting importation of threatened Green Sea turtles raised in their mariculture operations. One basis for the challenge was that the necessity for the regulations was not supported by the evidence in the administrative record. Citing the Administrative Procedure Act⁸⁰ and a United States Supreme Court case,⁸¹ the court stated that the agency's action would be set aside only if a review of the administrative record revealed that the regulations were "so lacking in evidentiary support that the action is arbitrary, capricious, or an abuse of agency discretion." To this end, the court continued, it "must determine whether the decision was based upon consideration of all relevant factors" and the decision would be "upheld if the conclusions reached are rationally supported." Of special importance was the statement that "A reviewing court is to be particularly deferential where an agency has been delegated discretion to reach decisions based upon technical and scientific data [because] the expertise to assess disputed scientific facts properly lies within the province of the agency rather than the reviewing court."⁸² Unlike the record in Connor, the record in Cayman was unambiguous as to the effects of the challenged activity, although there was still considerable uncertainty concerning the long term impacts of the plaintiff's activities on the populations of sea turtles in the wild.

The other case relevant to this issue is Defenders of Wildlife v. Andrus in which regulations restricting hunting times were struck down as not protective enough of endangered and threatened species. The USFWS argued that the regulations did not jeopardize the continued existence of the species since the most important factor in the demise of a species was the quality of its habitat. The court however, found that the USFWS affirmative duties under the 1973 Act required it to use all methods necessary to bring an endangered or threatened species back from the brink of extinction and it could not "limit its focus to what it considers the most important management tool available to it, i.e. habitat control, to accomplish this end."⁸³

Although these federal district court decisions are not authoritative determinations, they seem to be in accord with the United States Supreme Court's stand in Tennessee Valley Authority. From the examination of these cases two points seem to stand out. The first is that merely because the interpretation of scientific data is disputed, that in itself is probably not sufficient for a court to overturn an agency's decision. The second is that even if incidental taking is not the major factor in the demise of a species, the affirmative duties imposed by the 1973 Act still require an agency to minimize the incidental taking. Thus it seems critical for the opponents of TED regulations that their position be based on reliable scientific data rather than on mere testimonials. This is true both with respect to the effect of incidental taking on the future survival of the threatened and endangered sea turtles and with respect to the level of shrimp loss and other economic hardships resulting from the use of TEDs. It seems that possible shrimp loss is still the key factor in the shrimper's negative attitude toward TEDs, although safety, insurance rates, and time loss are also important. If the results of such testing verify the claims of the shrimpers, then their position is only made stronger. Whatever the weight of their economic arguments, it will certainly be worth more if they are based on reliable scientific data rather than mere conjecture. On the other hand, if it turns out that NMFS' assessment of the situation is more correct, then it would appear to be a false conflict. If the use of TEDs pose no significant economic burden on shrimpers, they should not oppose the use of a device that will result in a healthier ecosystem, on which their livelihood depends.

The legal position of the shrimping industry is by no means hopeless. Indeed, it may even be a fairly strong position assuming the industry is correct in its assessment of the economic burden mandatory use of TEDs

will place on shrimpers. The effect of strong economic considerations on a court's review of agency action should not be underestimated, especially in depressed economic conditions. The shrimping industry is important to the state and the nation and in light of society's present value system it is difficult to conceive of the industry being significantly burdened for the sake of a non-commercially valuable species. A reviewing court could be influenced to discount the agency's data interpretation and find its action arbitrary and capricious under the Administrative Procedure Act. A court could also be influenced when reviewing the Secretary's finding that incidental taking would appreciably reduce the likelihood of the survival and recovery of the species in the wild. If courts could be influenced in this manner then the Endangered Species Act will need to be reexamined to see if it is compatible with present and future environmental values. When courts begin using escape devices to avoid upholding legislation it is time for the legislature to reexamine the rationale behind the law.

Responding to the outcry of their constituents the Louisiana congressional delegation took action aimed at preventing implementation or lessening the impact of the proposed regulations. Senator Bob Livingston introduced legislation in the form of an amendment to the Supplemental Appropriations Bill. The amendment would have prohibited funds appropriated for the Department of Commerce from being expended to implement the regulations in the Western Gulf inshore and offshore and Louisiana inshore zones for one year until July 15, 1988.⁸⁴ The Western Gulf covers zones 10-21 which run from the tip of the Florida panhandle to the Texas-Mexico border. The final version passed by Congress delayed implementation to the end of the 1987 fiscal year (September 30, 1987).

Senator John Breaux attempted to effect a compromise between environmentalists and the shrimping industry. The agreement would have required testing various TED designs in typical offshore waters of the Western Gulf to determine if any of the TED designs maintained an acceptable shrimp catch (97% retention). If such a device were found it would be phased in for offshore shrimping between 1988 and 1989. If no TEDs were found to meet the shrimping efficiency requirement alternative conservation techniques would be considered. TEDs would not have been required in inshore waters of the Western Gulf pending further studies. Those negotiations were not successful.⁸⁶

Meanwhile, strong opposition to the proposed regulations was being voiced in the form of public comments during the public hearing phase of the rulemaking. The final regulations published in the Federal Register on June 29, 1987 reflected concern for the public opinion by limiting the required use of TEDs to offshore boats of 25 feet or more and substituting 90 minute tow times for all other areas and boats.

While the final regulations appear to be a significant withdrawal by NOAA from their former position, the shrimping industry representatives are still unsatisfied and have threatened court action. Environmentalists, on the other hand, appear fairly satisfied with the regulations but are also ready to file suit to force stiffer regulations should the shrimping industry sue to have them struck down.⁸⁷ Further compromise by the government at this time appears unlikely. Whether or not any compromise is justified depends on the system of values under which it is evaluated.

ENDANGERED SEA TURTLES AND THE ENDANGERED SPECIES ACT

The importance of the TED controversy to the survival of the Kemp's ridley depends, of course, on the truth behind the hotly contested issues of the effects of incidental catch. That truth will probably only be revealed with time. Ironically, however, the very aspect of the turtles biology that has contributed the most to its demise may be the one that could contribute most to its recovery. The fact that the turtle nests on land in only one area made

it easy to exploit. It also makes it relatively easy to protect the area during nesting season and to collect eggs for the beach transfer and headstarting programs. It would seem that headstarting the turtles could greatly increase the survival rate from each clutch of eggs taken, thereby rapidly expanding the population. While the possibilities seem promising, the program, which is still experimental, has thus far failed to bring about an increase in the number of nesting females. The first headstarted turtles are expected to reach sexual maturity within the next few years and their arrival at the nesting beaches is eagerly awaited by those who have worked so diligently to prevent the extinction of the Kemp's ridley.

FOOTNOTES

1. 50 C.F.R. §17.11 (1986).
2. National Oceanic and Atmospheric Administration, U.S. Department of Commerce, Five-year Status Reviews of Sea Turtles Listed under the Endangered Species Act of 1973 (1985) [herein after cited as 5 year status report].
3. 50 C.F.R. §17.11 (1986).
4. M. Thompson, T. Hanwood, and M. Stunts, A Summary of Information on Three Species of Marine Turtles in U.S. Waters (1986) [herein after cited as M. Thompson].
5. 5 year status report, supra note 2.
6. Telephone interview with Jack B. Woody, Deputy Regional Director Federal Assistance and Fisheries/National Sea Turtle Coordinator, United States Fish and Wildlife Service (February 1987). [herein after cited as J. Woody].
7. Id.
8. M. Thompson, supra note 4.
9. 5 year status report, supra note 2.
10. Id.
11. M. Thompson, supra note 4.
12. Unpublished NMFS data show that in sampling experiments over a five year period four Kemp's ridley turtles were captured in shrimp nets off the Louisiana coast. Two of those turtles drowned.
13. Letter from Richard Barry to William Farret (Dec. 3, 1986).
14. M. Thompson, supra note 4.
15. Letter from Michael Weber to Julius Collins (Jan. 9, 1986). [herein after cited as Weber letter].
16. Telephone interview with Wilbur Stidell, Chief, Harvesting System and Fishing Survey Division, National Marine Fisheries Service (Feb. 26, 1987).
17. Weber letter, supra note 16.
18. National Oceanic and Atmospheric Administration, U.S. Department of Commerce, Draft Supplement to the Final Environmental Impact Statement on Listing and Protecting the Green Sea Turtle, Loggerhead Sea Turtle, and Pacific Ridley Sea Turtle under the Endangered Species Act of 1973 and Regulatory Impact Review/Regulatory Flexibility Analysis for Regulations which Require the Use of Turtle Excluder Devices by Shrimpers to Conserve Sea Turtles [herein after cited as Environmental Impact Statement].
19. Telephone interview with Michael Weber, Director, Center for Environmental Education (Feb. 1987). [herein after cited as Weber personal communication].
20. Weber letter supra note 15.
21. 16 U.S.C. §1801-1882.
22. 16 U.S.C. §1540 (a)(2)(B).
23. 16 U.S.C. §1540 (a)(1)(B).
24. Negotiation Agreement to Reduce Incidental Capture of Sea Turtles by Shrimp Trawlers, Appendix A of Environmental Impact Statement, supra note 15.
25. Weber personal communication, supra note 19.
26. M. Bean, The Evolution of National Wildlife Law 319-321 (1982) [herein after cited as M. Bean].
27. Id. at 321.
28. Id. at 330.
29. 16 U.S.C. §1551.
30. 16 U.S.C. §1551(a)(1).
31. 16 U.S.C. §1551(a)(2).
32. 16 U.S.C. §1551(a)(3).
33. 16 U.S.C. §1551(b).
34. 16 U.S.C. §1551(c).
35. Tennessee Valley Authority v. Hill 437 U.S. 153, 186 (1978).
36. 16 U.S.C. §1536.
37. Subsequent, other populations of the snail darter were discovered so the fish has for the moment escaped extinction, Bean at 365 supra note 26.
38. 16 U.S.C. §1536(d).
39. M. Bean at 356 supra note 26.
40. Id.
41. 16 U.S.C. §1552(8).
42. 16 U.S.C. §1552(6).
43. 16 U.S.C. §1552(10).
44. 16 U.S.C. §1552(16).
45. 16 U.S.C. §1552(5).
46. 16 U.S.C. §1552(1).
47. Defenders of Wildlife v. Andrus 426 F. Supp. 167, 170 (D.D.C. 1977).
48. Conner v. Andrus 453 F. Supp. 1037, 1041 (W.D. Tex. 1978).
49. M. Bean at 356 supra note 26.

30. 16 U.S.C. §1536(a) (2).
31. 16 U.S.C. §1538(a)(1)(A-P).
32. 16 U.S.C. §1539(a)(1)(G).
33. 16 U.S.C. §1538 a-f.
34. 16 U.S.C. §1533(d).
35. 16 U.S.C. §1532(13).
36. 16 U.S.C. §1532(19).
37. Teila v. Hawaii Department of Land and Natural Resources, 471 F. Supp. 985(D. Ha. 1979).
38. 50 C.F.R. §17.3.
39. 16 U.S.C. §1539(a)(1)(B).
40. 16 U.S.C. §1539(a)(2)(A).
41. 16 U.S.C. §1539(a)(2)(B).
42. 16 U.S.C. §1540(a).
43. 16 U.S.C. §1540(e).
44. 16 U.S.C. §1540(g)(1).
45. 16 U.S.C. §1540(g)(2).
46. 16 U.S.C. §1540(g)(2)(b).
47. Weber personal communication supra note 19.
48. 16 U.S.C. §1540(a)(1).
49. 16 U.S.C. §1539(a)(2)(B)(iv).
50. 16 U.S.C. §1531(b)(6)(c) and 16 U.S.C. §1536(a)(1).
51. 16 U.S.C. §1532(13).
52. Defenders of Wildlife v. Andrus 428 F. Supp. 167 (D.D.C. 1977).
53. *Id.* at 170.
54. Committee for Humane Legislation Inc. v. Richardson 414 F. Supp. 297 (D.D.C. 1976).
55. "On porpoise" tuna fishing is practice of encircling schools of porpoise with nets in order to capture the yellow fin tuna that are frequently found swimming beneath them.
56. H. Benn at 307 supra note 26.
57. 16 U.S.C. §1539(a)(2)(b)(iv).
58. 5 U.S.C. §552.
59. Conner v. Andrus 453 F. Supp. 1037, 1041 (W.U. Tex. 1978).
60. 5 U.S.C. §706(2)(A).
61. Citizens to Preserve Overton Park v. Volpe 401 U.S. 402 (1971) contained the U.S. Supreme Court's interpretation of the APA's section 706 provision that a reviewing court may "hold unlawful and set aside agency action, findings, and conclusions found to be ... arbitrary, capricious, or abuse of discretion, or otherwise not in accordance with law."
62. Cayman Turtle Farm Ltd. v. Andrus 478 F. Supp. 125, 131 (D.D.C. 1979). The Administrative Procedure Act (APA) governs agency actions.
63. Defenders of Wildlife v. Andrus 428 F. Supp. 167, 170 (D.D.C. 1977).
64. Program Supplementals, Pub. L. No. 100-71, 101 Stat. 852 (1987).
65. Telephone interview with Will Stoycon, Legislative Correspondent for United States Representative Bob Livingston, 1st District, Louisiana (August 13, 1987).
66. Telephone interview with Glen Delaney, Legislative Correspondent for United States Senator John Broussard, (August 1, 1987).
67. Telephone interview with Michael Weber, Director, Center for Environmental Education (August 7, 1987).

TURTLE PROTECTION REGULATIONS

On June 29, 1987, the National Marine Fisheries Service published the final regulations for the protection of endangered sea turtles from shrimping activity. The final regulations impose limits on tow times but are substantially less restrictive than the draft regulations in the requirements for the use of turtle excluder devices (TEDs). The regulations cover the eastern seaboard from North Carolina to the southern tip of Florida and the entire Gulf Coast. The regulations vary according to inshore or offshore waters, boat length, net type, and season.

TEDs will be required on all nets used on all boats 25 feet or longer fishing in offshore waters. Boats less than 25 feet long have the option of using TEDs or limiting tow times to a maximum of 90 minutes. The coverage extends to all offshore waters for the Canaveral and Atlantic areas and out to 15 miles for the Southwest Florida and Gulf areas. The coverage expands to all offshore waters for the Southwest Florida and Gulf areas in January 1 and March 1, 1989 respectively. The Canaveral Area lies off the east coast of Florida between 28° N latitude and 29° N latitude (from approximately New Smyrna Beach to Malabar). The Atlantic Area runs from 36° 33' 00.8" N latitude (North Carolina/Virginia border) to 81° W longitude at the tip of the Florida peninsula, excluding the Canaveral Area. The Southwest Florida Area is that area off the southwest Florida coast from 23° 40' N latitude to 27° N latitude (the tip of the peninsula to

approximately Englewood) between 81° W longitude and 84° W longitude. The Gulf Area includes all the United States Gulf of Mexico waters except the Southwest Florida Area.

The regulations presently provide that offshore waters are demarcated by the baseline from which the territorial sea is measured. In Louisiana with its irregular coastline and possibly in other areas the dividing line will likely be changed to the Colregs line which more accurately follows the actual coastline. This line can be found on all National Oceanic and Atmospheric Administration (NOAA) charts and is defined at 33 C.F.R. §80.

All boats fishing in inshore waters will be required to either pull TEDs or limit tow times to a maximum of 90 minutes. Seasons and starting dates for all regulations are as follows: Canaveral area, all year beginning October 1, 1987; Atlantic area, May 1 to August 31 beginning May 1, 1988; Southwest Florida area, all year beginning January 1, 1988; Gulf Area, March 1 to November 30 beginning March 1, 1988.

Length of tow times are calculated from the time when the trawl doors enter to when they leave the water. Test nets with a headrope length of 20 feet or less are exempt from TED requirements if the test net is independent of the primary net. Test nets, however, are still subject to tow time restrictions.

Jim Wilkins

LOUISIANA REACTION TO TED REGULATIONS

Federal law imposing turtle excluder device (TED) regulations on the economically and culturally important Louisiana shrimp industry has not been well received by the state. Industry opposition has been voiced through the Concerned Shrimpers of America (formerly the Concerned Shrimpers of Louisiana) led by commercial shrimper Tee John Mialjevich. Originally, the Concerned Shrimpers were a local group of commercial fishermen interested in pursuing state issues. The group was recently expanded into a multi-region (Gulf of Mexico and South Atlantic) organization whose main purpose is to oppose federal TED regulations.

In the political arena, every major gubernatorial candidate, as well as many coastal Senators and Representatives, has recorded strong opposition to any TED requirements. In addition, during the 1987 Louisiana

Legislative Session three bills and four concurrent resolutions were passed concerning TEDs. The four resolutions either urge the United States Congress to delay implementation of TED regulations (HCR 15 and 16) or direct the state Department of Wildlife and Fisheries to study the Kemp's ridley turtle (HCR 20) or various types of shrimp gear (HCR 125).

The three acts provide a different approach. Acts 283 and 891 prohibit Department of Wildlife and Fisheries enforcement agents from enforcing any federal TED regulations. The other act, Act 896, creates a special office in the Louisiana Department of Justice to undertake whatever legal action is necessary to prevent implementation and enforcement of federal TED regulations. This Act also appropriates \$100,000 to the special office to carry out its mandate.

Fred Whitlock

Summary of Final Turtle Protection Regulations

Areas	Vessel size	Requirement	Season	Start	Coverage
Offshore:					
Canaveral area.....	≥25 ft.....	TED.....	All year.....	10-1-87	All waters
Atlantic area.....	".....	TED.....	May 1 to August 31.....	05-1-88	"
Southwest Florida area.....	".....	TED.....	All year.....	01-1-88	Shore to 15 miles ¹
Gulf area.....	".....	TED.....	March 1 to November 30.....	03-1-88	Shore to 15 miles ²
Canaveral area.....	<25 ft.....	90 minute tow ³	All year.....	10-1-87	All waters
Atlantic area.....	".....	".....	May 1 to August 31.....	05-1-88	"
Southwest Florida area.....	".....	".....	All year.....	01-1-88	Shore to 15 miles ¹
Gulf area.....	".....	".....	March 1 to November 30.....	03-1-88	Shore to 15 miles ²
Inshore:					
Canaveral area.....	All.....	90 minute tow ³	All year.....	10-1-87	
Atlantic area.....	All.....	".....	May 1 to August 31.....	05-1-88	
Southwest Florida area.....	All.....	".....	All year.....	01-1-88	
Gulf area.....	All.....	".....	March 1 to November 30.....	03-1-88	

¹Will extend to all waters 1-1-89.

²Will extend to all waters 3-1-89.

³Tow time restrictions do not apply to shrimp trawlers that are using a TED in each net during trawling.

This table adopted from 52 Fed. Reg. 24,248 (1987).

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