A Sociopolitical Analysis of Marine Resource Management: The TEDs Case*

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There are many instances in which environmental issues and economic concerns have clashed. Tension exists in many different realms between the preservation of the environment and its utilitarian use. Conflict appears both over land-based and marine resources. Certain conflicts have become infamous. These include the concern for the horned owl in the Northwest and the impact its preservation is having on the harvesting of lumber. Efforts to preserve the unique habitat of the Mojave Desert which has been threatened by current land use patterns, such as ranching and mining have also received considerable attention. Similarly, preservation of the tiny snail darter fish in the Tennessee/Tom Bigby water system brought development of the Tellico project in which these rivers were involved to a lengthy halt in the 1970s. More recently in the Gulf and South Atlantic, regulations were imposed in order to halt the demise of sea turtles. Resistance by shrimpers was widespread and vocal. In each of these cases contending parties are making conflicting claims on the resource. The need for management to effectively address these conflicts is widely recognized (Johnson, Jeffrey C. and Richard B. Pollnac, 1989:192; Charles, 1988:290). We develop a sociopolitical approach for analyzing the conflict between resource preservation and utilitarian conservation that takes into account competing values, goals, and interests.

The purpose of this paper is to demonstrate the utility of a sociopolitical approach to fisheries management in accomplishing three goals: (1) analyzing a multi-objective policy process encountered in fisheries management; (2) locating the source(s) of tension during the policy development and implementation process; and (3) clarifying the collective resistence to regulations and their implementation.

BACKGROUND

Devices to exclude sea turtles from the nets of marine shrimpers--turtle

excluder devices (TEDs)--have been officially implemented by the National Marine Fisheries Service (NMFS) and are their use is now being enforced by the U.S. Coast Guard (New Orleans Times Picayune, October 16, 1989). Strong protest and opposition to their implementation has been occurring in the Gulf of Mexico over a long period. The President of the United States is currently considering ways to resolve the conflict engendered by this enforcement. The following is a description of the principal events which occurred over the last two decades leading up to the current volatile situation and the federal legislation whose implementation led to the conflict (Durrenberger, 1989).

In 1978, marine turtles, including the most endangered Kemp's ridley, were included on the endangered species list and NMFS was mandated to protect them. Because sea turtles are caught in trawling nets--although the number being caught is still disputed--NMFS began developing a device which would allow turtles to escape. In 1980, NMFS began modifying an existing device which had been used to exclude jellyfish and trash. The agency subsequently developed and tested the turtle excluder device with assistance from Sea Grant scientists as well. By 1983, NMFS was promoting a voluntary TEDs program. This did not prove to be successful. In February of 1986, the U.S. Fish and Wildlife Service in concert with conservation groups requested that the Gulf of Mexico Management Council require the use of TEDs. In July of the same year, the Shrimp Committee of the Gulf Council recommended their limited use.

In August of 1986, Tony Calio of the National Oceanic and Atmospheric Administration (NOAA) summoned representatives of the shrimping industry to Washington for a briefing on the TEDs proposal. Shortly thereafter, the Center for Environmental Education (now renamed the Marine Conservation Center) informed the Department of Commerce that it intended to sue NOAA and NMFS to force the TEDs requirement. In August, Calio invited fisheries

associations to participate in mediation with conservation groups. There were four negotiation sessions, a report, and a forty-five day period of public hearings. The hearings and subsequent meetings produced an agreement to adopt the TEDs, at least among some representatives of the industry (Durrenberger, 1988).

Some leaders never accepted the agreement. It appears that the "fleet" shrimpers were in favor of the TEDS and the more numerous "independent" shrimpers opposed it (interview with a labor organizer, 1989). Tee John Mialjevich, president of the Concerned Shrimpers--the organization of the smaller shrimpers--and the rank and file members of that organization have remained firm in their resistance. The shrimpers continue to argue that they only rarely encounter turtles. One bay shrimper reported that in the thirty years of trawling, he has caught one turtle (personal interview, September, 1989). Some shrimpers contend that TEDs don't work and that using them would cost them 20 to 30 percent of their catch (White, 1989).

In the summer of 1987 the issue was further muddled by lawsuits, debates, and ammendments to the Endangered Species Act (discussed below in detail), which in the interim had expired. State politicians holding state and federal positions waged a political war on TEDs. In November of 1987, the Merchant Marine and Fisheries Committee of the U.S. House of Representatives voted against an ammendment to delay the TEDs requirement. They did, however, approve an ammendment to postpone the requirement on inshore waters for two years. However, a Louisiana Attorney-General's lawsuit against the Department of Commerce and Alabama Senator Heflin's hold on the new Endangered Species Act further delayed implementation of TEDs regulations. By July of 1988, a compromise agreement emerged from the Senate that would further delay TEDs until May of 1989 in offshore waters and 1990 inshore. Since May of 1989, the on-again and off-again regulations have spawned lawsuits, countersuits, new

legislation, and in July of 1989, the blockade of four Gulf ports in Texas and Louisiana. This mass protest ended with an agreement to use TEDs or alternatively limit trawl time.

On September 7, 1989 the unadulturated TEDs regulation was re-imposed. On September 8, some forty shrimp boats blocked the channel at Belle Pass near Grand Isle, Louisiana, while other shrimpers, including Mialjevich staged a sign-carrying protest which greeted the then visiting President Bush. In the meantime, the Coast Guard issued tickets to and developed lists of violators of trawling-time limits for the purposes of fining them at some future time. In addition, a list of boats involved in the blockade was developed by the Coast Guard with the threat to shortly impose large (up to $55,000) fines on the protesters. In order to continue to challenge the validity of the TEDs as a necessity in protecting the turtles, the Louisiana shrimpers have hired a research firm to assess the existing data on TEDs and have issued their own report (Times Picayune, September 25, 1989). On October 16, 1989 the Coast Guard announced that it would now enforce the original TEDs regulation--all offshore shrimp trawls must include them. The President's staff also announced that it would receive suggestions for alternatives to the TEDs (ref.).

The future of TEDs is, at least in part, in the President's hands. The shrimpers remain angry and vow to resist. Violence is not unlikely if fines are imposed on the blockade participants. The outcome will be determined by court decisions, strength of state opposition, federal and local politics, and Presidential ministrations, all of which actions have become far removed from considerations of saving the industry or the turtles (Durrenberger, 1988:207). Meanwhile, the results of an NMFS study of TEDs, due to be completed in January of 1990, is awaited for its hoped-for contribution to the data necessary to assess the impact of TEDs on catch sizes (White, 1989: 77). A

National Academy of Science study on the Kemp Ridley's turtle is also expected at about the same time.

The protest cannot be dismissed as a local problem of enforcement. Florida shrimpers, due in part to the efforts of Concerned Shrimpers of America, have staged their own protest (personal interview with a Florida Sea Grant official, October, 1989). Nor is the resistance confined to the Gulf. North Carolina has filed its own suit over the eleventh hour change to include TEDs in inshore waters and northern reaches of the South Atlantic Region (Personal interview with a North Carolina State Fishery Commissioner, October, 1989). The level of resistence in each case mentioned above is by no means identical but it does appear that resistance is not waning. The issues are clearly still unresolved.

SOCIETAL VALUE INCONSISTENCIES

The continuing conflicts surrounding TEDs regulations mirror the larger societal conflicts over environmental issues. In part, these tensions arise from the fragmentation of purpose with which Americans face environmental concerns (Fox, 1981). Should the environment be preserved for the ultimate sake of its existence--the preservationist or environmental view--or should it be preserved for the sake of its use by humans--the conservationist view? Tension between these two purposes has been evident in government policy for at least 100 years since Western resources were first coming under government control and supervision (Fox, 1981). While recent national polls reflect a growing consensus of support for the environment on the part of Americans (Dunlap, 1985), there is far less agreement about 1) how that support articulates into the use and treatment of the environment and 2) how to implement environmental goals once they are agreed upon. The old divisions appear to continue.

The ambiguity toward the environment which envelopes our national

consciousness is reflected in environmental and conservation legislation. The inconsistencies between environmental laws which espouse preservation values and conservation laws which espouse more utilitarian or use values have made regulation and implementation problematic. Furthermore, value inconsistencies exist within the laws, and both sources of value inconsistency have created an undercurrent of tensions in the policy making and implementation processes in the TEDs case. A review of the two Acts involved in the TEDs implementation demonstrate these tensions.

The Endangered Species Act. TEDs policy was developed in response to the need to protect endangered species of sea turtles. The Endangered Species Act, 1973 (U.S. Code PL 93-205) charged the Secretary of the Interior with this responsibility; both the Fish and Wildlife Service (FWS) in the Interior Department and the National Marine Fisheries Service (NMFS) in the Department of Commerce are directly responsible for protecting endangered species. The jurisdiction of NMFS includes commercial marine fisheries in offshore waters (Reed and Drabelle, 1984:12). Accordingly, when in 1978 the sea turtles were included on the list of endangered species, they became the main responsibility of NMFS.

The Endangered Species Act, which is clearly environmental law and therefore, was intended to be preservationist, is not wholly without incongruous conservationist elements. The intrusion of these elements has been problematic. A case in point is the allowance of exceptions, such as "hardship cases" like the Alaskan natives whose subsistence depends on the taking of prohibited species (U.S.C.A. 16:1539). In addition, an application for exemption procedure was included in the Act (U.S.C.A. 16:1536). In effect, this invites the introduction of non-biological factors in the policy-making and implementation process. Furthermore, the Act frontstaged the

importance of "critical habitat" (U.S.C.A. 16:1532). In doing so, it increased the chances that conflicts would arise with projects which impacted land and water use patterns. In the instance of the fate of the snail darter and the habitat on which it depended, the very expensive Tellico Project was blocked. Inevitably, lawsuits were filed and the claimants argued that the high economic costs already expended and the many benefits forsaken were to preserve a tiny fish which has no use value. District Courts did not resolve the conflict.

Not surprisingly, in 1978 Congress ammended the Endangered Species Act to include the Endangered Species Interagency Committee, which was empowered to determine whether projects under review should be exempt from federal prohibitions (U.S. Code PL 100-240:2701-2702). In the same session, Congress ammended the Act to require economic impacts in any determination process to designate a "critical habitat". The immediate impact was a drastic decrease in the number of listings and alarm among interested parties that the effectiveness of the Act had been compromised. Meanwhile, the Tellico Project and the fate of the snail darter was argued all the way to the Supreme Court. The Court referred the question of costs and benefits to the Endangered Species Committee whose review ended in a thumbs down to Tellico. The project was eventually, however, attached to an omnibus bill and signed into law in 1979 (Yaffee, 1982:165). A resolution was achieved then at the highest levels of government.

No doubt, the 1978 ammendments were attempts to build in a mediation and review process. But after a period of declining listings, Congress ammended the Act in 1982. The new ammendments removed those provisions that invited economic and social consideration in the determination decisions in the designation of "critical habitat". These ammendments notwithstanding, pressures still exist to apply conservationist procedures in the

implementation of the Endangered Species Act. These pressures result in continuing conflicts so severe as to require resolution at the highest levels of government. This was the case in the Tellico Project (snail darter) and it is the case with TEDs.

The Magnuson Act. By contrast, the Federal Fisheries Conservation and Management (Magnuson) Act 1976 (U.S. Code PL 94-265) created conservationist policy. Its stated intent was to conserve and manage marine fishery resources out to the 200 mile limit. The fisheries management legislation stands in contrast to the endangered species legislation in that it provides for a structure whose intent it is to address both resource maintenance and distribution issues. It declares a use value for species and habitat. While it may develop plans which prohibit human predators who threaten the marine resources, its' primary goal is to conserve the resources for "harvesters". It accomplishes its' task by playing regulatory and distributive roles to ensure that the resources are allocated in an equitable way. Because property rights cannot resolve disputes over the use of resources held in common, mediating also becomes an essential role played by policymakers (McCay and Creed, 1989). While informal traditional solutions are capable of mediating disputes when the "harvesters" are few and the resources of the "commons" bountiful, more formal mediation is required when the "harvesters" are many with large "appetites" harvesting a shrinking "commons" (Hardin, 1968). Accordingly, planners must take the social and economic impacts of plans on users into account as well as the biological impacts on the regulated species.

Called by some a "tangle" of bureaucracy (Durrenberger, 1988), fisheries management is accomplished through a complex structure. This legislation created eight regional fishery management councils under the Secretary of Commerce. The Gulf of Mexico Fishery Management Council, under which Louisiana

fishing is regulated, is one such council and is composed of voting and non voting members. The voting members include representatives from State agencies, the Regional Director of NMFS (National Marine Fisheries Service) and appointees of the Secretary of Commerce. The non-voting members include representatives from the U.S. Fish and Wildlife Service, the Department of State, the Coast Guard, and the Gulf States Marine Fisheries Commission. The latter is composed of each state's top fisheries administrator or designee, a legislator, and a knowledgeable citizen appointed by the Governor. The Commission is charged to study fisheries and recommend joint legislation.

It is through the structure created by the Magnuson Act that the policy of the Endangered Species Act must be operationalized and implemented because protection of the endangered turtles impacts resource use regulated by the Magnuson Act. TEDs, then is a "hybrid" of two very different, and thus conflicting, acts.

The tensions between these two legislative Acts recapitulate the inconsistencies between preservationist and conservationist values found in society. The differences between preservation and conservation can be summarized as divergent: 1) value assumptions; 2) goals; and 3) roles assigned to policymakers and implementers.

1) Value assumptions. On the one hand, preservation assumes the intrinsic incalculable value of a single species and attributes the same priceless worth to "critical habitat". It makes no distinction between higher and lower forms or animal and plant species. Conservation, conversely, is concerned with the instrumental use value of marine resources.

2) Goals. The goal of preservation is to protect, preserve and recover endangered and threatened species. The goal of conservation is to maintain for use the marine resources and to supervise their distribution.

3) Roles. The goals of preservation are achieved primarily through

absolute prohibitions admitting few qualifications or flexibility in actions taken (Yaffee, 1982:1). In simple terms, it declares, 'Thou shalt not'.

It directs the appropriate agencies to play an assessing role to determine lists of species and "critical habitat". It further directs these same agencies to develop recovery plans and regulations to achieve these objectives. However, it expressely eschews regulatory and distributive roles aimed at allocating and distributing resources in an equitable way. In its' ideal expression, it excludes from consideration all non-biological factors in the development of recovery plans and its' prohibitions of endangering actions. The Endangered Species Act is clearly preservationist.

On the other hand, the Magnuson Act is conservationist and is implemented in a way which permits discussion of the conflicts between resource conservation and resource use. The Act requires that the resources be allocated in an equitable way. Such a requirement forces consideration of social and economic impacts of resource use (primarily restriction of use) in addition to the biological consideration of resource preservation. The users are viewed as "harvesters" rather than "predators" which would be the view of the Endangered Species Act toward the taking of endangered species.

A SOCIO-POLITICAL APPROACH TO RESOURCE MANAGEMENT

In his recent survey of fishery socioeconomics, Charles (1988:291) suggests the need to develop a theoretical groundwork for an integrated "bio-socio-economic" fishery analysis. This conclusion is based on a realization of the complex interrelated group of biological, social, economic and political issues involved in fisheries management. Symptomatic of this need is the evident lack of consensus on fishery objectives which is rooted in the fundamental "fact that in a multi-objective world, differences exist in the weights placed on fishery objectives by various groups" (Charles, 1988:291).

The diversity of management values and objectives is a pervasive concern in recent fishery literature. While some researchers have emphasized the need to consider and measure value diversity, they have failed to cloth these concerns in sufficiently broad-based theories to make good use of the social science perspectives (Smith, 1976). Finally, other researchers have argued that historically, social science research has focused on fishing communities and the industry, being slow to take policy process into account (Harris, 1986). The work of Anderson (1984, 1987) is an important exception, but his perspective is the narrow one of microeconomic theory.

In response to this challenge, we propose that fisheries management issues such as conflict between preservation and conservation goals be examined utilizing a more socio-political orientation which includes four perspectives: 1) public policy/public administration, 2) environmental sociology, 3) collective behavior, and 4) labor dispute/differential class power theory.

1. The public policy/public administration perspective.

Policy analysis of fisheries policy illuminates the tension between environmental concerns (preservation) and fisheries management (conservation). Furthermore, Ripley and Franklin (1982:175-176) argue that the protective regulatory goal (preservation) is inherently volatile, that routines which emphasize the regulatory goal are hard to establish and that it invites both congressional and presidential attention. It inevitably tempts bureaucrats to play a direct role in implemtation which in turn helps create pressure from user groups to cut back their efforts to more reasonable (less threatening) proportions. These actions may only encourage pro-enforcement groups to redouble their efforts (Ripley and Franklin, 1982:175-176).

Brewer and de Leon (1983:291) argue that a failure to create coordination among existing agencies or new coordinating agencies is a root cause of the

unsatisfactory state of affairs in marine policy. But, if managers are asked to do the impossible, namely, balance incompatible policy goals, agency coordination will not have the desired affect. Spheres of responsibility for policy among the various agencies have never been clearly resolved. Failures, however, have not been from malice but rather from failures of the "structure" (Guy, 1984:186). Bardach and Kagan (1982:46-47) emphasize the unrealistic goals and over-specification of how managers are to achieve the regulation enforcement. Accordingly, regulators are given little discretion in balancing competing values. Furthermore, managers are uncertain as to which role to play. Should their role be "that of a guarantor of resource and fishing interests, a referee, or simply a source of data to feed the system" (Evans, 1987:5). The extent to which managers in the TEDs case feel "trapped" by incongruous structures needs to be answered. For as Evans (1987:5) has said, "the issue is how to structure the choice [contrasting roles] to provide the greatest overall benefit of the nation".

2. The environmental sociology perspective.

Environmental sociology makes the connection between competing values and interests. Of course, everyone is for a good environment. Some, however, are preservationists and would not countenance a single act of defilement. Others are conservationists and may be willing to concede the necessity of selective degradation if this enhances a "manageable" conservation (within societal limits of economic costs, values, attitudes, etc.) in the long run (Fox, 1981). How one uses the environment helps determine toward which position they lean. Values are inextricably tied to interests and interests are more readily realized if one has a favorable power base.

In order to appreciate the motives behind individuals and groups poised to respond one way or the other on fisheries issues, it is necessary to

examine the beliefs, attitudes and "vested interests" which they have toward various scenarios and outcomes of the process as well as how they view what is transpiring. Recently, environmental sociologists interested in risk analysis have revised their approach to argue that it is important to know how various members of the society examine and deal with risk rather than merely focusing on developing a formal expert response to risk (Slovic, et al. 1980).

Similarly, in the case of the evolution of marine resource policy development and implementation, it is important to clearly understand how the various participants are "defining the situation" (Thomas and Znaniecki, 1918-20), not merely to delineate some ideal way in which the situation should be defined. As with risk, it is from these definitions of the situation, no matter how possibly inappropriate, conflictual or counterproductive they may seem, that those involved will respond. Thus, it is necessary to appreciate their definitions of the situation, how these definitions conflict, overlap, etc. in order to understand their response. From this examination of definitions can evolve an understanding of ways to resolve the conflicts stemming from strongly different perspectives.

3. Organized protest and collective behavior theory.

Collective behavior studies have employed a variety of perspectives. Some are particularly relevant to understand the Louisiana shrimpers response based upon preliminary analysis of some of their concerns. Contagion theory helps to explain the rapid spread of intense resistence to TEDs as reflected in the blocking of marine traffic (Blumer, 1966). Some began the protest and others merely went along, "got caught up in it." But, contagion theory does not explain the underlying grievances which produced these strong feelings.

Shrimpers have argued that TEDs regulations are the latest threat to their existence. They perceive that their condition has been steadily eroding. Foreign competition, influx of newcomers, high fuel costs,

diminished catches, an unfavorable price structure, TEDs and other factors will eventually bring about their demise. They feel "relative deprivation" because the opportunities to realize their goals are shrinking (Morrison, 1972). Whatever "social strains" they feel, however, are out of reach, embedded in a complex social structure (Smelser, 1963). Under these conditions, protesters may single out immediate and visible objects to target their discontent. These actions, according to Smelser (1963), are a "short circuiting" of the process of normative change.

Grievances notwithstanding, the TEDs protest could not have gone beyond collective griping without the ability of the shrimpers to mobilize (Jenkins, 1983). The resources the shrimpers mobilized include their numbers (there has been a marked increase in the number of shrimpers, as many as 15,000 now shrimp in Louisiana); the existing social networks which may include kin; their radio technology which allows them to communicate with other shrimpers; their protest experience; and their access to experienced protest leaders (movement entrepreneurs) and public sentiment.

Specifically, research on mass protests against government regulations informs this analysis. Examples include the Iowan dairy farmers' protest to testing and elimination of tubercular cows (Durrenberger, 1987) and the more recent trucker's protest in Ohio and Pennsylvania. These are parallels to the TED protest (Bisanz, 1977). This literature emphasizes the feelings among protesters of powerlessness in the face of a life and death threat to their way of life. The essential ingredients of mass protests against governmental regulations appear to be:

a. A collection of citizens who see themselves as possessing a unique culture and way of life. Gorlach (1988:165-167) has argued that autonomy and solidarity among peasants enhances mobilization. However, Opp (1988:99-100)

has found that integration had either a positive or negative impact on anti-nuclear protest in West Germany depending on the extent of community consensus. What prevails among Louisiana shrimpers is not known, but needs to be assessed.

b. The pervasive feeling that their way of life was threatened by government policies or inaction was symptomatic of the striking truckers (Bisanz, 1977). Although this perceived threat to shrimpers is not exclusively economic, these concerns predominate. The farmers protest attending the PCB contaminated milk was grounded in specific economic damage resulting from government regulations (Coyer and Schwerin, 1981:705). In the case of the TEDs protest, shrimpers may anticipate an economic loss. Significantly, research on the nature of the grievance has frequently emphasized a precipitating factor (Smelser, 1963; Kerner Report, 1969). TEDs may have been the proverbial "last straw" for the shrimpers. However, this fact should not be allowed to eclipse other greivances. The impact of the appearance of Vietnamese shrimpers and the recent influx of other newcomers may well be important contextual elements in explaining the TEDs protest. Clearly, the issue of the relative salience of the various grievances vocalized by the shrimpers needs to be assessed. How deeply held and believed are these grievances? To what extent are these grievances important in explaining the variation in level of resistance encountered across the Gulf and in the South Atlantic?

c. The perception of being cheated is accompanied by a deep seated mistrust of government and agents of other institutions (Bisanz,1977:63-64). The perception of a lack of power and powerful friends is also stressed. In the case of the protest of the government's handling of the PCB contaminated milk, the farmers "reacted as much to the appearance of official arrogance as to the concrete damages" (Coyer and Schwerin, 1981:705). In the case of the TEDs protest, the intensity and the nature of mistrust remains an empirical

question. The mistrust appears to be directed at the government agencies such as NMFS, which some shrimpers see as agents of the powerful environmentalists whose agenda is to stop all trawling in all waters. This later charge has been made by a variety fisheries managers and agents (personal Interviews, September and October, 1989).

d. The existence of a communication and social network which accounts for swift unitary action was essential to the mobilizing of the truckers (Bisanz, 1977:63). By contrast, communication among and recruitment of the farmers in the American Agricultural Movement was accomplished through intensive efforts of professional organizers and the local and state organizations (Browne, 1983:29-30). As in the case of the truckers' blockade, TEDs protesters took advantage of their radio communication capability. Shrimpers were in constant communication via their CBs and the decision to stage the blockade grew out of the intense radio communication among them (National Fisherman, October, 1989). The role of CBs at earlier stages in the protest is unclear but deserves attention as does the importance of quick communication channels in forming the mass response.

e. The presence of at least a few protesters with experience or access to movement entrepreneurs was important in the development of the truckers' strike (Bisanz, 1977:63). This played a crucial role in the American Agricultural Movement (Browne, 1983:31-32). The importance of these factors in the TEDs case needs to be determined. While first appearances suggest a grass roots indigenous protest, the appearance of protesting shrimpers in front of the Times Picayune newspaper office brought there by national labor organizers suggests at least some involvement. Furthermore, some evidence indicates that the "fleet" fishermen may have been approached first by union organizers (interview with labor organizer, October, 1989). The facts are

still too sketchy to evaluate the role of professional organizers. It is important to ascertain the extent of their organizing effort, on which group of shrimpers was this effort expended, and whether further organizing success will occur and what role such success might play in future marine resource management issues. Furthermore, little is known about the impact of the Sea Grant marine agents' role on the resistance to TEDs. Reports of their being threatened in parts of the Gulf have been countered by reports of a respect by the shrimpers of the agents in other parts (personal communication, October, 1989). [Tony, summary of this section]

4. Labor conflict/class power imbalance.

Recently, a Senate committee approved a measure to shield U.S. shrimpers from competition from foreign shrimpers, because the latter are not bound by TEDs regulations (New Orleans Times Picayune, September 28, 1989, B1,2). This act underscores the need to create and implement policy which is responsive to the global context of economic impacts (Wallerstein, 1979). It is necessary to see power not merely in direct actions and decisions, but also in the "possession or control of society's valued items" (Marger, 1981: 23). In this context the question becomes "Who controls the resources of the sea?"

National and multinational corporations constitute a key sector of economic power in the U.S. and the structural dependence of the government on the corporate sector give that sector a disproportionate amount of power (O'Connor, 1973; Lindbloom, 1982; Griffin, Devine and Wallace, 1983; Mintz and Schwartz, 1985; Przeworski and Wallerstein, 1988). Social policy at the macro-level (eg., military spending, fiscal policies, welfare expenditures) tend to favor the interests of the corporate sector and economic elites (Griffin, Devine and Wallace, 1983a, 1983b; Devine, 1983). Interest groups often serve as intermediaries between economic elites and the general citizenry.

There is a link, however, between the scope and intensity of participation and one's class; the higher one's class, the greater the participation (Verba and Nie, 1972). Furthermore, it is often through the compatibility of shared values that economic elites exert an influence over governmental decision makers even at local levels (Mott, 1970: 172; Domhoff, 1983). Additionally, labor legislation has, historically, restricted the strategies of protest available to workers thus muting mobilization in the face of threats to their control over the labor process (Wallace, Rubin and Smith, 1988).

Thus, the combination of structural dependence of the state on the business community and direct influence of corporate actors on the state, in conjunction with legal limitation on the strategies available to workers, create greater access to policy makers for the business community and the affluent than for the worker community. Accordingly, in order to understand the tension between the preservationist and conservationist goals of these conflicting Acts, it is necessary to consider not only the economic impacts of the regulations, but also the role of the relative power of the involved social groups in the creation and implementation of the regulations.

Using the above model, we propose that the TEDs controversy be examined as contention among the key parties. The model does not assume that the parties are completely internally homogeneous but that there is more intragroup homogeneity of values and goals than intergroup. To understand better the intragroup differences, we also examine the sources of tension within the ranks of each of the contenders.

CONTENDING PARTIES OVER RESOURCE ALLOCATION

Numerous "players" are in contention for control of marine resources. The evolution of the Law of the Sea underscores the global context in which

the "battle" is waged (Burke, 1983:28-36). The history of the development and implementation of TEDs reveals that the central contending parties are shrimpers, politicians, government agencies, environmentalist groups and scientists. Other contending parties, while they are not central, play important roles. These include: the courts, sports fishers, oil and gas industry, developers and the general public.

1. The shrimpers. The role of the shrimpers has been extensively reviewed above in the collective behavior section. As indicated there, it is important, however, to underscore the fact that the shrimpers are not a homogeneous group. There are two main groups of shrimpers, fleet shrimpers and independent owner captain shrimpers. The independent shrimpers can be either full time or seasonal and temporary. Furthermore, the independents are either new to shrimping or they or their kin have been shrimping prior to the oil bust. The newly entered shrimpers are either displaced workers from the oil patch and related industries or Vietnamese. In both instances, the newly arrived have increased pressure on the resources in the northern Gulf. In addition to increasing shrimping competition, the newly arrived have been unfamiliar with the informal rules which have guided fishing families in the area for decades.

The different groups of shrimpers have different values and interests and this is reflected in part by their membership in shrimping associations. Fleet shrimpers generally belong to the Louisiana Shrimpers Association. The independent shrimpers belong to the Concerned Shrimpers of America (formally, Concerned Shrimpers of Louisiana). The Vietnamese and other newcomers allign themselves with this latter association, although the Vietnamese also have their own association (Vietnamese Shrimpers' Association). Recently, Vietnamese shrimpers from five Gulf states met in Kenner, Louisiana to discuss the fines levied against them and to seek help from the lawyers retained by

the Concerned Shrimpers of America (Vietnamese Newsletter, November, 1989:29).

Shrimpers are not all in agreement over the TEDs regulations. The perspective of the independent shrimpers is different from that of the fleet shrimpers. TEDs will have a different impact on the two groups. Some of the independent shrimpers trawl alone. In such cases, TEDs regulations do not pose merely an unknown potential threat to the catch size, but are so heavy that one person may not be able to lift them, the net and the catch, thus threatening their actual livelihood (personal interview with a shrimper, September, 1989).

Furthermore, TEDs are costly ($300 to $400) and may contribute to reduced catches. Fleet shrimpers can absorb the cost better than the independent shrimpers can. Thus, the regulations will serve the function of limiting entry to the Gulf. The Louisiana Shrimpers Association, an organization of fleet shrimpers, has been supportive of the TEDs since the beginning. Some of their support may be due to the contribution which the TEDs will make to limiting entry into the fishery (interview with fishery labor organizer, October, 1989). With the large numbers of independent shrimpers reduced, the fleet shrimpers would enjoy the economic benefits that attend reduced competition. Thus, it may be by supporting the enforcement of the Endangered Species Act, fleet shrimpers are hoping to alter the power balance in the fisheries management arena.

While resistance to TEDs spread to other areas outside of Texas and Louisiana, resistance in other areas in the Gulf and South Atlantic has been less intense. The level of protest seems to be linked to economic conditions in the industry. In the South Atlantic, where resistence has been minimal, shrimpers have not faced the kind of economic conditions that have plagued Louisiana and Texas since the oil bust.

2. Government agencies. Within each nation, a variety of governmental agencies are charged with making policies. It is apparent that that they do not all share the same goals or develop goals and policies in the same way (Sinclair, 1988). Governmental regulatory agencies sometimes work at cross purposes. At times these differences surface as in the case of the Endangered Species Act. The General Accounting Office prepared a report criticizing the Fish and Wildlife Service for highlighting endangered species with "public appeal" and taking actions based on expediency (White, 1989:79).

Social scientists have not been silent in their criticism of goverrnmental agencies, the confusion among them, their policy decisions and implementation processes. It is interesting to note, however, that when some social scientists are called upon to counsel agencies, they come to appreciate the complexity of the task and have more sympathy for, if not agreement with the managers (Paredes, 1985).

It is important to examine the structures and processes of both policy development and implementation for each Act and the perceptions of the individuals holding the positions responsible for each act as they relate to the TEDs case study. Managers should be queried for infomation about structural elements and procedures which contribute to the tension between the two Acts. They should also be asked to present their "definition of the situation" in order to ascertain differential perceptions which might indicate structures or procedures where such tension is exacerbated. No doubt, some of their difficulty stems from faulty organizational structures.

It has been suggested that improvement in organizational structures, particularly forms which produce a broader based participation in policy decisions is necessary (Leary, 1985). To what extent do current organizational structures encourage or discourage participation of the interested parties in policy decisions for these two Acts? Would more

involvement of shrimpers in the early stages of developing the TEDs have reduced the opposition later on? What kinds of bureaucratic structures would have facilitated mediation of the conflicts? It would not be correct to believe that managers are at fault if the structure imposed on them from above is inadequate to meet the need. On the other hand, given the problems of the shrimping industry in Louisiana and Texas, it may not be asking too much for them to have explored subsidizing shrimpers much the way farmers are subsidized.

Preliminary evidence on managers indicates that reaction to the threat of lawsuits limited their activity. Inaction appears to be a big temptation (Breen,1989). Without a clear mandate from above or from the public, they steer the "safe" course of doing nothing until lawsuits and the threat of lawsuits compels immediate action. Cautiously they try to remain non-political as they perceive their role, but are unable to reconcile the contending parties.

In the abscence of unambiguious goals, implementation too suffers. The on-again and off-again enforcement of regulations has been a significant factor in keeping the protest alive in the Gulf and a primary recruitment incentive of shrimpers outside Louisiana (Personal Interview with a Florida Marine Agent, October, 1989).

3. Politicians. Local, state and national politicians have played a variety of roles in the political response to the TEDs and in the subsequent proliferation of resistance to it. Louisiana executive branch officials, state senators and legislators as well as federal Congressional representatives and Senators have all taken a role. It is unclear to what extent their involvement has impacted the efforts of the marine resource managers in implementing the two Acts and to what extent it added to the

already existing tensions inherent in the value and goal conflicts they experienced in the development of TEDs.

The goal in examining their definition of the situation would be to ascertain at what point the tensions between the two Acts became so great as to encourage their involvement. In addition they will be interviewed for solutions which they believe to be viable, solutions found not just at later stages of the conflict (such as Congressional or Presidential intervention) but ones which they might propose be considered for resolving the conflict in early stages of TEDs.

4. The environmentalists. in the form of voluntary, non-profit environmental activitist associations have taken on the role of energetically supporting the Endangered Species Act. This role should have been anticipated given the preservationist orientation of such organizations. The groups, namely the Center for Marine Conservation brought the original suit which required the use of TEDs and then sued again when it appeared that trawl time limits would replace TEDs regulations. Such actual or anticipated law suits and demonstrations by them are a very important aspect of the policy implementation process (Parades, 1985: 179).

The definition of the situation from the perspective of the leaders of these groups is important to study. There is a realization that if the opposition to implementation of the Endangered Species Act is too powerful and too frequent, the Act's intent might be undermined (comment made by several respondents in interviews conducted September-October, 1989). It is important to examine to what extent the actions which the environmentalists took are consciously calculated to accomplish certain goals and to what extent the ramifications were not expected. It is clear that some environmentalists have as their long term agenda the total prohibition of trawling in all waters. Pressure to enforce the TEDs may be seen by some environmentalists as a means

of accomplishing this goal.

5.Scientists. A pattern is emerging of response to environmental problems. The group which contends that the environment is not being adversely impacted by humans or that humans are not being adversely impacted by the environment (as in the case of pollution) argue inadequate data is available to prove the impact. Those who argue that there is a negative effect attempt to obtain convincing evidence of the problem. They, however, are confronted with an imperfect science (much to the contrary of the myths about science contained within our culture) and impacts which are only one of a series of causes of a pathology (multiple etiology) and frequently interrelated with other dynamics also going on (an interaction effect).

This description is relevant to the attempt to obtain accurate scientific information about 1) the endangered sea turtles, 2) whether and to what extent shrimping impacts them and 3) what is the best method, device, to prevent the known impact. Obtaining scientific information useful for solving problems is done in a certain structure with certain processes. It is important to study these structures and processes to answer several questions: How was the pursuit of information organized? Who (what agencies, government officials, scientists) were central to the pursuit of this information? To what extent were their efforts coordinated? Was the fact that two Acts mandating the solutions causing confusion as to leadership, appropriate agencies? Did the confusion slow the process, change the process in ways which differed from the normal process done to obtain scientific information for normal fisheries management? Was the review process of selecting the scientists appropriate? What modifications are warranted of the structures and processes used to initiate such research when more than one goal, in fact conflicting goals (as mandated by the different Acts) are involved? Examining the scientific

process is an important aspect of understanding the clash between the two Acts.

The unresolved conflict between preservation and conservation has hindered scientists' role in resource management. Scientists were among the first to draw attention to environmental pollution and organism extinction and so have been among the first to assume the preservationist stance. Yet, as members of society, scientists recognize the legitimate use of biological resources. They too have found it difficult to balance the demands of preservation and conservation. Because of their concern for preservation, they are often at once attracted to environmental groups and also repulsed by them because of the disregard for objective science and human welfare they sometimes encounter among these groups (personal interview, fisheries biologist, November, 1989). But the dilemma facing scientists goes beyond this and includes other contradictions in scientific role playing.

Predisposed by training, most scientists are favorably inclined toward pure or basic science as opposed to applied science. This, in part, accounts for the reluctance of some scientists to get involved in the practical concerns of management. There are, of course, structural reasons as well for this reluctance. Largely motivated by an academic and discipline reward structure, scientists are aware that their contribution to pure science will evoke greater respect among their peers and consequently more likely to be rewarded by the institutions with which they are affiliated. Luminaries may not face the same dilemma. For example, Pasteur played both games with distinction.

Maybe more problematic than the decision to engage in applied research, is the pressing need to balance the norms of objectivity and the demands of patrons (funding agencies) who apply subtle and sometimes not so subtle pressure to return the "correct" findings. The relationship between patron

and scientists and its' affect on objectivity has not been adequately condidered in marine resource science. We argue that the TEDs case demonstrates the need to examine the question of scientific independence. Awareness of the problem of scientific independence is evident as the National Academy of Sciences has been called upon to conduct an independent study of sea turtles.

6.Other players. In addition to the five groups which are core to understanding the evolution of the TEDs conflict, other actors are also involved. They are, however, not so central to understanding what happened and why it occurred. These peripheral groups are: 1) the courts--used by contending parties, 2) developers--who contend for turtle nesting areas, 3) the oil & gas industry--which a) contributes to turtle habitat destruction and pollution, b) causes incidental killing of turtles in destruction of old rigs, and c) lays off oil workers in periods of oil production decline who have entered the shrimping industry, 4) the public--used by all sides to further their interests via the mass media, and 5) sport fishermen--who contend directly with shrimpers for marine resources.

DISCUSSION

An analysis of the conflicts and dilemmas in the development and implementation of the two Acts--the Endangered Species Act and the Magnuson Act--was developed in order to demonstrate the utility for understanding and improving marine resources management of a sociopolitical perspective which emphasizes: environmental sociology, collective behavior, public policy implementation analysis and analysis of the way groups with differential power interact with the government/political process. The implementation of the TEDs was the example analyzed.

Specifically, the analysis focused on attempting to: 1) explain one of

the largest protests against fishery policy in U.S. history including offering probable causes for the variation in the level of protest, not only between different types of shrimpers in Louisiana, but also between Gulf shrimpers and shrimpers of the South Atlantic; 2) clarify the conflicting values, goals and roles with which policy makers and implementers were compeled to balance the two Acts in the TEDs case; and 3) describe the context of other key players--politicians and environmentalists--in which the implementation of the two Acts occurs to understand the constraints under which the public officials operate.

The TEDs controvery is one example of the fundamental conflict over how and who uses natural resources. Who benefits from the sea and the resources it contains? Who should benefit? Who benefits from the forests and streams and the wildlife which knows nothing of property rights? Every resources management policy, whether explicitly or implicitly, confronts this issue. The TEDs controversy lays bare the unresolved issues with which all resource management policies are engulfed. Understanding it will bring us closer to a rapprochement between contending positions.

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