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Fallacies Associated with "Bottom-Up" Management: Lessons Learned from a Tier 5 NEP

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COMMENTARY

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FALLACIES ASSOCIATED WITH "BOTTOM-UP" MANAGEMENT: LESSONS LEARNED FROM A TIER 5 NEP—Management of the resource base in modern America is undergoing two parallel and potentially conflicting paradigm shifts from traditional precedent. On one hand there have been a cry and demand for public participation and particularly "stakeholders" as in the concept of "comanagement." The pressure has evolved because conflicting uses for ever more limited resources have become more prevalent. The coastal zone is a particularly sensitive area since the land under and resources within coastal zone waters have largely been found to belong within the public trust (Slade et al., 1997). In earlier and richer times there had been a simple process of allocation practiced by the government because there were relatively abundant resources. It didn't take an enormous amount of information or "intelligence" to reach decisions and people were largely compensated adequately for the effort that they were willing and able to make.

On the other hand, population growth and demographic changes, particularly in the coastal zone, have been coupled with an economic approach driven by the requirement for an ever-growing Gross National Product. The fact that negative impact thresholds have already been crossed in some coastal areas is unquestioned (Kildow, 1997), and the subsequent complexity of blending science, technology, sociology, economy, and politics is currently unparalleled in our nation. Hardin (1968) first elucidated the problems associated with allocation of commonly owned resources. Crance and Draper (1996) have summarized the interaction of *social dilemma theory* with resource management issues. The dilemma takes the form of conflicting interests between individual and collective well-being. They contrast structural solutions, involving some form of coercion or restriction, with behavioral solutions, involving human behavior modification—both having the effect of reducing the social dilemma created by resource demand/conflict. Structural solutions are clearly equated with what is referred to as "top-down" management, which has worked successfully for many decades and must certainly remain part of management strategies for the foreseeable fu-

ture. But expanded regulation is increasingly unpopular, perhaps properly so.

Stakeholder involvement is the current conventional wisdom (and cliché) for bringing together diverse interests. It is viewed as a collaborative process, requiring identification and engagement of groups previously excluded for a variety of reasons and the participation of traditional antagonists. To some extent, this process was initiated and institutionalized by the Federal Advisory Committee Act (FACA) passed in 1972, and the agencies have embraced the application of the legislation to varying degrees (Gray and Kusel, 1998). This has become an extraordinarily complex process because participation in the advisory committees is perceived as providing significant control over decisions to be made, as opposed to the provision of advice to decision makers.

This active inclusion of user communities has enormous significance because it now appears that the sociological obstacles may equal or exceed the technical environmental difficulties in enormity. Economic ecology, ecophilosophy, environmental ethics, law and politics, and even morality are the forums of the future for environmental scientists, and the intellectual challenges are immense. It seems likely that changing our ideas and policies dealing with environmental management may take more effort and time than that normally seen in the environment itself—cynics might say, even in geological time! A most elegant discussion of the technical issues is provided by Fairweather (1993) in a consideration of erecting the *precautionary principle* as a policy directive for the Australian coastal zone.

The precautionary principle is almost totally absent from American policy, although it may emerge if the policy trend of all-inclusive stakeholder involvement continues for reasons presented below. This evolving legal principle has developed within the European community, particularly Germany, where most tangible resources have become, to some degree, limited. More important, this situation became widely recognized decades ago and sociopolitical "evolution" has occurred as demonstrated by the Green Party. The principle, as applied, attempts to reverse the burden of proof with regard to environmental impact. Instead of assuming that the natural system has adequate assimilative capacity with regard to some demand (e.g., habitat loss or pollutant detoxi-

fication), the principle demands that the user prove that it has that ability. Under the American permitting system, which has been dealing with a largesse of capacity for almost 200 years, the burden of proof lies with those concerned about the environment. This means that the permit will be granted unless harm can be legally demonstrated. The Precautionary Principle would demand that environmental safety be proven before the action would be allowed.

While this may sound appealing, there are serious concerns with the application of the principle as summarized by Gray (1990). The point is simple because the variability inherent to the environment may confound proving just about anything. The uncertainty that is actively incorporated into the scientific method further undermines the public's confidence in the technocracy that supports the decision making and allocation process.

That lack of confidence is one of the most serious problems that we have to deal with at this time. The general public most frequently does not trust the bureaucracy, particularly when environmental decisions are made. The permitting agencies are perceived by much of the public as exactly that—created to grant permits! And frankly, the policies based on assimilative capacity and presumption of “no harm until demonstrated” support that contention more often than not! The problem is exacerbated by yet another interesting social theory which has also emerged in Germany. Ulrich Beck (1992) has advanced a theory dealing most directly with hazardous technology, which is referred to as the *risk society thesis*. In this country the hazards are represented most clearly by toxic chemical manufacture and release. These are products of a relatively modern and “developed” nation in which the standard of living is relatively high on a global scale. The societies of these robust economies have progressed beyond the status of being principally engrossed with obtaining enough food to survive. When you are hungry enough, you take certain risks, physically or economically, in an effort to assuage that primal need.

Once achieved, however, the risk society shifts to the next highest motivational level of survival, which is fear of external harm. Personal concerns may be manifested by concern about crime, political extremism, racial bias, climate change, or meteor showers. The popular press and electronic media are full of these messages: real, perceived, and completely imagined. The technical community has designed an elaborate and arcane system of risk assessment which is specifically intended to

deal with the burgeoning concerns of the public but which is clearly understood by almost no one.

Environmental concerns are abundant, as in: Is it safe to swim in the water? Can I eat the food without getting sick because of either assimilated or deliberately applied toxins? Cohen (1997) attempted to reconcile Beck's thesis with that of Joseph Huber which is referred to as *ecological modernization*. That approach requires a commitment to the concept of sustainability, an adoption to some degree of the precautionary principle, and a continued commitment to strict environmental regulation. This relatively optimistic viewpoint most closely resembles the thesis rejected by Hardin (1968) because it advances the belief that advanced technology can solve the problems that it creates. Even without that qualification, it should be noted that, although sustainable development is attracting some interest in this country, the precautionary principle and “top-down” management are not! The cautious approach is not going to be invoked until we achieve the same level of enlightened “fear” as the European community and the regulatory approach is increasingly unpopular in our political climate.

Interestingly enough, the community around Mobile Bay has begun to evidence symptoms of a society that Cohen (1997) clearly describes as being in a transition state. The potential is there to become either a risk society, motivated by fear, or an ecologically modern society guided by reason and planning. Local concerns about inadequate Best Management Practices on construction sites and zoning debates reflect a growing local awareness that could go in either direction.

NATIONAL ESTUARY PROGRAM

The management model that typifies the modern approach to coastal issues is a consequence of the passage of the Water Quality Act of 1987—the National Estuary Program. The structures emerged from years of experimentation and investment of public money in the problems of Chesapeake Bay. The model consists of a Management Conference composed of a high-level Policy Committee, guided by Citizens' and Technical Advisory Committees, complemented by an implementing group referred to as the Management Committee (EPA, 1989). Ideally, the role of the two advisory groups provides that emerging public participation imperative in the form of advice, outreach, and consensus building. The approach

has been largely successful given the eminent logic of comprehensive planning, the emergence of adaptive management (Colt, 1994; Hennessey, 1994; McLain and Lee, 1996), and the infusion of about \$5 million over more than 5 yr for each program.

The terminology may reflect one of the first inherent flaws of the protocol, however, because there may be an early polarization separating the "citizens" from the "technicians." This reinforces the lack of confidence in technology felt by the public (as described above) because of the technical community's partially failing coastal policy of assimilative capacity. The EPA has openly acknowledged that the policy of national standards and permitting is flawed, saying that many environmental declines "would not be reversed even with perfect compliance with all environmental laws and regulations" (EPA, 1997:1). The structural separation of the two sectors is also interesting in that it implies that not only are citizens not scientists but also that the technicians are somehow not citizens. Both attitudes place the development interests, which are obviously committed to the existing approach to permitting, on the defensive, thus worsening the polarization.

GULF OF MEXICO PROGRAM

The most explicit movement away from the Chesapeake/NEP model emerged during a reorganization of one of the EPA's own efforts (Gulf of Mexico Program, 1997). New leadership examined the existing structure and moved to eliminate the distinction between the two advisory committees. While retaining the Policy and Management Committees, "citizens" and technicians were united within "Focus Teams," which concentrate on selected issues. The approach organized the scheme around strategic, tactical, and operational concepts.

The approach clearly attacks the flaws and artificial separation of the original construct, enhancing communication between the two "classes." The technical community is placed in a position of hearing and debating the concerns, perceived or real, of the general public. The citizen is afforded the opportunity to both question the assumptions of the scientist and better understand the technical foundation of that professional position. The potential for this approach to work was evidenced during local meetings in the Mobile Bay region in late 1994. Issue-oriented public meetings orchestrated by the South Alabama Regional Plan-

ning Commission successfully combined "citizen" interests with the technical community. A structure virtually identical to that espoused by the NEP approach had been constructed with a view toward building a comprehensive management plan for the Bay.

MOBILE BAY NEP CASE STUDY

On 27 Dec. 1994, the Federal Register contained the EPA call for nominations to the National Estuary Program. These were referred to as Tier 5 NEPs. The call contained the explicit requirement that "EPA will give preference to nominations that describe actions underway . . ." (EPA, 1994, 59:31816). The Mobile Bay community responded with a successful nomination and Mobile Bay was so designated in late summer 1995.

Unfortunately, this timing coincided with the collapse of the federal funding process and there was no real progress until 1996. At that time Region 4 representatives met with the nominators and described the process to be followed as described in the estuary primer (EPA, 1989). This approach seemed to be ignorant of the implications of the Tier 5 definition established in the Federal Register. The subsequent re-creation of the already existing structures, as required in the call for nominations, created profound problems for those who had been participating for over a year. Many expressed significant frustration and abandoned the process altogether, writing the effort off to bureaucracy run amok.

The next debilitating factor to emerge was an overwhelming commitment to a complete "stakeholderdom" throughout the management structure. Policy was to be developed by every involved interest, management was to be provided by all concerned, and last, but not least, advice and community consensus was to be garnered from the stereotypical Citizens and Technical Advisory Committees. Given the alienation and subsequent flight of the bulk of these last two groups, the Mobile Bay NEP took on the look of an upside-down pyramid since the Policy Committee and Management Committee were each 32 members strong, in direct contrast to most of the earlier NEPs! The organizational lines have been further blurred within the Mobile Bay NEP because each member of the Policy Committee initially appointed a "representative" to the Management Committee, effectively creating a surrogate policy committee. Later, specific stakeholder groups were identified for each named member and a few were added where deemed appropriate

or when someone felt they had been left out of the process.

Part of the problem lies in the laudable, but possibly misguided, commitment to achieving consensus among stakeholders at every level. The original concept provided the opportunity for examination of issues at the lowest, most inclusive levels, with programs recommended to the policy group for implementation by the management entity. The redundancy of consensus review has led to rancorous debate and continued frustration within the community.

Progress has been achieved through a partial movement toward efficiency. The Mobile Bay NEP has developed issue-oriented task forces identical with the focus teams of the Gulf of Mexico program. This has had all the benefits attendant to that approach and brought the program much closer to a true "bottom-up" format. The Citizens and Technical Advisory Committee members have come to the table together to develop action plans which will become the management plan itself.

Unfortunately, the Policy and Management Committees have not yet found a way to streamline their activities. A persistent "top-down" philosophy continues to pervade the upper echelon of the Management Conference, confounding the entire process and jeopardizing the eventual successful implementation of the Comprehensive Conservation Management Plan.

CONCLUSIONS AND RECOMMENDATIONS

The true engagement of the public in decisions regarding resources of common value seems to be an inarguable position of great weight, a "no-brainer" in the vernacular of the day. But the rather mindless approach pursued by the EPA in constructing the Tier 5 Mobile Bay NEP flies in the face of sincere "bottom-up" management. The construct has been and remains a clumsy paean to democracy in its purest form overwhelmed by a continued insistence on thoughtless adherence to what has been.

The role of advisory committees must be clearly defined by the policy statements and then honestly respected and used in decision making and implementation. Repeated revisiting of issues and solutions by an unending sequence of stakeholders is counterproductive at best and debilitating or destructive at worst.

The Policy component must be established from the outset as the source of *policy* and not routine management. This group must be prepared to interact at the strategic level and leave

development of consensus to the broadest spectrum of stakeholding participants. This level must include all users, consumers, protectors, people who really don't much care at all, and even scientists. The exchange of information, technical and emotional, can only assist the process. Implementation by the management entities will succeed only if the affected groups have confidence in the planners and eventual success of the planning effort overall.

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