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SOCIAL ASSESSMENT AND RESOURCE POLICY: LESSONS FROM WATER PLANNING*

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While social assessment remains more promise than practice,¹ great strides have been made in water planning. Responding to changing environmental factors, legislative mandates, and organizational imperative, the water resource development agencies have advanced the state-of-the-art in social well-being and quality of life accounting systems.² In this light, aspects of the water planning process provide a model of potentials and limitations in social and life-quality accounting systems for a range of public policy areas. As social and environmental assessments become widely utilized, the importance of presently held distinctions between land, air, and water planning, as well as natural vs. built systems, will diminish. This discussion illustrates the significance of social accounting in policy formulation and evaluation by tracing the development of social accounting and outlining its potential with special reference to water development policy.

SOCIAL ASSESSMENT vs. TRADITIONAL RESOURCE ASSESSMENTS

Various forms of social accounting have emerged primarily as alternatives to traditional resource assessment strategies. Traditional

*This discussion does not necessarily reflect the views of the U.S. Army Corps of Engineers nor the U.S. General Accounting Office.

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1. See, the following general assessments: J. DE NUEFVILLE, *SOCIAL INDICATORS AND PUBLIC POLICY* (1975) and several pieces in: K. FINSTERBUSCH and C. WOLF, *METHODOLOGY OF SOCIAL IMPACT ASSESSMENT* (1977); For the state of the art in environmental assessment and life quality accounting see: P. HOUSE, *THE QUEST FOR COMPLETENESS* (1976); and R. ANDREWS & M. WAITS, *ENVIRONMENTAL VALUES IN PUBLIC DECISIONS* (1978).

2. See, S. Fitzsimmons, *et al.*, *Social Assessment Manual* (1975); T. Wagner & L. Ortolano, *TESTING AN INTERACTIVE, OPEN PROCESS FOR WATER RESOURCE PLANNING* (1976); U.S. DEPT OF AGRICULTURE, *GUIDE TO ENVIRONMENTAL ASSESSMENT* (1977). *Life-Quality Accounting* as it is used here implies a combination of social, economic and environmental features. As a logical extension of social impact assessment it strives to synthesis and circumscribe traditional assessments such as cost-benefit analyses, environmental impact statements and social well-being accounts.

assessment, especially in water resources, has relied heavily upon cost-benefit analysis. Cost-benefit, in turn, has placed a good deal of emphasis on primarily economic indicators such as construction costs of a control structure and the potential costs of flooding (i.e. projected damage in dollars if the structure were not built), translated in flood control benefits. While such economic measures provide a glimpse of social utility, they are not the entire story. For example, flood control projects often involve additional costs such as social dislocation, foregone aesthetic and recreational opportunities, and destruction of wildlife habitat. Recognizing these and other costs as well as benefits, water resource development agencies have been directed by statute and regulation to assemble additional environmental, social, and general life-quality impact information about their projects and programs. Compliance with these directives has been sporadic, yet impressive. Nevertheless, the exact role of these additional indicators remains problematic.

This ambiguity within agencies over social accounts reflects a larger societal ambivalence (or in some cases ignorance) over what aspects of life experience are ultimately more valuable. The gradual evolution of resource analysis toward a comprehensive perspective is, in a sense, merely mirroring changing societal definitions of social utility. Lurking beneath this ambiguity is the issue of whether resource analysts have an obligation to either clarify the nature of social utility or inform individuals of yet unperceived costs and benefits. However, whether or not one views the resource analyst as a change agent, the status that agencies give social accounting systems often depends on how much public conflict the agency has experienced. An increase in conflict experience calls for broader forms of analyses. Those trends are particularly evident in water resources planning.

THE PROBLEMS AND PROSPECTS OF ECONOMIC ANALYSIS

Economic assessments provide necessary, if not sufficient, forms of social analyses. Economic assessments often define the first sphere of social concerns (e.g. populations, geographic locations, and regional subsystems), identify the basic ingredients of resource developments (e.g. labor, materials, and time), and recognize the first order impacts (e.g. savings from flood damage, benefits from increased navigation, and electrical generating capacity). However, more detailed social assessments may be required to determine what these various impacts actually mean. Social assessments can identify a range of value concern not often expressed in the standard economic account.

Economic assessment has been critical to water development justification decisions since the federal government got into the business. Current cost-benefit analysis was initiated as early as 1902 with the establishment of the Rivers and Harbors Act. However, it was specifically articulated in the 1936 Flood-Control Act. That act stated that projects would be undertaken "if the benefits to whomever they may accrue are in excess of the estimated costs."³ By 1950 the practice of assembling elaborate benefit packages was institutionalized with the publication of the *Proposed Practices for Economic Analysis*, better known as the *Greenbook*.⁴ Into the 1960s and 1970s, cost-benefit analysis has ascended the throne of high art. Indeed, cost-benefit ratios often assume lives of their own. David Socolow observes that water resource development often skews in favor of these immutable "golden numbers." He explains that,

... the need to have precision in the rules of the game is so desperate that administrators seize on numbers (in fact, get legislatures to write them into laws) and then carefully forget where they came from. Then *noone* wants to reopen an argument that hinges on one of these golden numbers.⁵

Over the years the apparent tangibility of quantitative indices (particularly when measured in dollars and cents) has awarded a certain preferred status to what is often a very narrow interpretation of social utility. Peter Black refers to reifying cost-benefit ratios as being "as tempting as a pocketful of cash."⁶

A primary dependence on narrow economic cost-benefit analysis can encourage a variety of misapplications of basic economic thinking. In the past, these have included:⁷

- (1) A failure to generate a full or even partial range of alternatives;
- (2) A focus on easily measured costs, and thus a discounting of intangible and/or broadly distributed costs;
- (3) A tendency to inflate the "bag of benefits" and/or manipulate other facets in response to political pressures.

In all fairness, the record of resource development is not a true test of economic theory. The processes of "marginal analysis," for

3. Quoted and summarized in: L. HINES, ENVIRONMENTAL ISSUES 111 (1973).

4. SUBCOMMITTEE ON BENEFITS AND COSTS, REPORT TO THE FEDERAL INTER-AGENCY RIVER BASIN COMMITTEE (1950).

5. See, Socolow, *Failures in Discourse*, in *Boundaries of Analysis* 15 (1976).

6. Black, *Environmental Impact Statements in Planning Water Related Land Resources*, 9 WATER RESOURCES BULLETIN, 861 (1975).

7. For elaborations on these issues see, Johnson & Pierce, *The Economic Evaluation of Policy Impacts in METHODOLOGIES FOR ANALYZING PUBLIC POLICIES* (1975); and L. MEREWITZ & S. SOSNICK, *THE BUDGET'S NEW CLOTHES* (1971); U.S. GENERAL ACCOUNTING OFFICE, *BETTER ANALYSIS OF UNCERTAINTY NEEDED FOR WATER RESOURCE PROJECTS* (PAD-78-67; June 1978).

example, are certainly not without their utility, given a full range of alternatives and a modicum of "market signals."⁸ These conditions have rarely been met in the economic analysis applied to water resource allocations. Moreover, even if all the preconditions of authentic cost-benefit analysis could be met, more fundamental issues involving the nature of social utility and the logic of the "discount rate" might be raised.⁹

The apparent failure to account for the full spectrum of social costs and benefits and their distribution is, of course, the major point of concern here. However, some contend that these oversights are easily ameliorated and that cost-benefit analysis can be expanded to encompass social accounts.¹⁰ While it may be true that marginal analysis can accommodate a wide range of distributional and secondary impact analyses, integrating aesthetic and environmental indices with economic indicators may produce what E. J. Mishan calls "Horse and Rabbit Stew." Having added one horse and one rabbit, the stew still tastes of horse. The rationale for separate accounts is that: (1) some social values cannot be equated in economic terms, and (2) these values may be discounted in a system which responds to more conventional indices such as "regional gross product." However, these unresolved issues are at the center of many current agency debates over the role of social accounting.

How narrowly one draws the boundaries of a closed system and whether the economic system is appropriate, are critical questions to the rational use of natural systems. Edmunds and Letey point out that:

Marginal theory in economics described a closed system, because *ceteris parabus*, all other things are equal, which is to say, the environmental (implying the forces outside the given system) is excluded. Hence if economic theory chooses to exclude the environment and to deal only with past costs or observable market prices (past demand), the economic model or system becomes deterministic. That is, the economic model is a static or one-state system in which no events occur and the equilibrium is posited in the data.¹¹

8. For excellent introduction to and illustration of the utility of the concepts of "market" and "marginality" see, J. SYNDER, *FISCAL MANAGEMENT AND PLANNING IN LOCAL GOVERNMENT* ch. 1, 12 (1977).

9. See, Michael D. Yokell, *Benefit-Cost and Environmental Decisions* (Symposium presented at the Conference of the American Association for the Advancement of Science, Denver, Colorado, 1977).

10. See, Conopask & Reynolds, *Using Cost-Benefit in Social Impact Assessment in METHODOLOGY OF SOCIAL IMPACT ASSESSMENT* 83-90 (1977); also note experiments with combining social accounts and cost-benefit in Harrisburg and Milton Penn. by the Baltimore District Corps of Engineers.

11. S. EDMUNDS & J. LETEY, *ENVIRONMENTAL ADMINISTRATION* 282 (1973).

Viewed as a stage in the process of reaching conclusions about social viability rather than a conclusion in and of itself, cost-benefit analysis is a highly useful tool. Having conducted a cost-benefit analysis, one has a glimpse of the approximate market value (shadow price) that would have to be placed upon various intangibles (such as environmental impacts) in order to offset the benefits package. While market value is not the only measure of value, it is a starting place for public discussion.

THE EMERGENCE OF SOCIAL ANALYSIS IN WATER PLANNING

Struggles over appropriate forms of social analysis have been apparent for decades in water resource development policy. Water resource development has been a vital policy concern to the United States from its birth. Beginning with Chief Justice Marshall's decisions on the utility of interstate canal traffic, the federal government has been defining and defending its federal role in water resource development.¹² During the past several decades the struggle over water policy has been one of seeking comprehensiveness of purposes in a fragmented institutional service delivery system.

The current set of *Principles and Standards for Water Resources Planning*¹³ is not simply a recent development. They are the culmination of numerous commissions and policy research efforts spanning the last thirty years. The quest for comprehensiveness continues. In recent years increased environmental awareness and greater demand for public access made the quest more critical and tenuous.

A panoply of contemporary statutes and regulations call for comprehensive analyses. The National Environmental Policy Act (NEPA), the Policy Objectives of CEQ (The Council on Environmental Quality), and earlier Rivers and Harbors Act, all either explicitly or implicitly set forth provisions for the development of broad based social as well as environmental assessments in water resource development decisions. But these provisions are vague at best. As Richard Andrews suggests, the stipulation for giving "appropriate consideration" to such things as "environmental values" is certainly present in NEPA and similar mandates, yet what constitutes "appropriate consideration" remains unclear.¹⁴ In water resources, as opposed to other fields, greater procedural clarity is provided by the *Principles*

12. *Gibbons v. Ogden*, 22 U.S. 1 (1824).

13. *Principles and Standards for Planning Water and Related Land Resources*, 38 Fed. Reg. 24, 777 (1973).

14. R. ANDREWS & M. WAITE, *ENVIRONMENTAL VALUES IN PUBLIC DECISIONS* 19 (1978).

and Standards (P/S) established by the Water Resources Council in 1973. The basic objective of the P/S is stated as follows:

Plans for the use of the Nation's water and land resources will be directed to improvement in the quality of life through contributions to the objectives of national economic development and environmental quality. The beneficial and adverse effects on each of these objectives will be displayed in separate accounts with other accounts for the beneficial and adverse effects on regional development and social well-being. Planning for the use of water and land resources in terms of these objectives will aid in identifying alternative courses of action and will provide the type of information needed to improve the public decision-making processes.¹⁵

Toward these ends the P/S stipulate four unique accounts involving: (1) National Economic Development (NED), (2) Regional Economic Development (RD), (3) Environmental Quality (EQ), and (4) Social Well-Being (SWB).

The P/S also explicitly call for public involvement, consideration of social values, and forecasting future social conditions. Implicitly, the P/S demand even more life-quality consideration. Indeed, NED and EQ accounts are seen in terms of "preferences of individuals."¹⁶ Beneficial and adverse effects of EQ objectives are determined by "perceptions and values" and "social stratification."¹⁷ Planners are required to evaluate "real income effects," "distribution" of effects in "with" project and "without" project conditions.¹⁸ In fact, all alternative consideration is to be done against a "without" project condition that is the projected social and economic conditions without a proposed project. Such a "without" baseline is really a basic social projection. Social analysis and quality of life accounting are thus firmly embedded in the mandates for water resource planning and management. Thus, agencies such as the Corps of Engineers have employed cadres of social scientists to carry out these mandates.¹⁹

The activities of these social scientists vary greatly. Some strive to align technical capabilities with social needs. Others merely attempt to identify those needs. Still others look at the feasibility of projects (in terms of local effects) and devise strategies for mitigating adverse impacts where present.

15. Principles and Standards, *supra* note 13.

16. *Id.*

17. *Id.*

18. *Id.*

19. For examples of the activities of these social scientists, see, U.S. ARMY CORPS OF ENGINEERS, PROCEEDINGS OF THE SOCIAL SCIENTISTS CONFERENCES Vols. I, II (1977); in particular: Donovan, *Economic, Social, and Environmental Requirements and Related Considerations*, *id.* at Vol. I, 14-34.

In pursuing these tasks a variety of distinct life-quality accounting methodologies have emerged. Some of the more widely used techniques are:

- (1) *Social Profiling*: an inventory of life-styles, social interactions, relative life quality, and common community values.²⁰
- (2) *Institutional Analysis*: looking at the organizational, procedural, political, and financial parameters of a given target area.²¹
- (3) *Community Assessment*: the identification of critical relationships between public demands and the ability of community government to meet them.²²
- (4) *Construction Impacts Analysis*: measuring or predicting the effects of a given project upon the entire impacted area.²³
- (5) *Mitigation Design*: discovering trade-offs between negative and positive effects.²⁴
- (6) *Survey Research*: more a tool than a strategy, surveys are often the most representative form of social inquiry.²⁵

Although such accounts are being done, their effect on key decisions is another matter. Just as the procedural requirements of Environmental Impact Statements (EIS) may not have a substantive effect on policy, there is also no guarantee that the results of life-quality accounts will be given full weight in the decision-making process. The Office of Management and Budget (OMB) has contended for some time that the social accounts are too amorphous and subjective to warrant "practical acceptability."²⁶ Furthermore, OMB fears that once liberated from economic analyses, agencies would build more projects that are of only vague social benefit. Thus, while agencies are required to do their social accounting homework, economic analyses tend to prevail.

The dominance of economic accounting was partially challenged when the Water Resources Council published its review of the P/S in

20. See, the section on profiling in FINSTERBUSCH & WOLF, *supra* note 1, at 155-199.

21. See, Taylor, *The Relevancy and Applicability of Institutional Analysis as a Social Science Approach to Comprehensive River Basin Planning*, in PROCEEDINGS, *supra* note 19, at 122-127.

22. Harnish, *Development, Application and Review Techniques for Community Impact Measures*, *id.* at 128-148.

23. Thiel, *An Approach to Social Impact Assessment*, *Id.* at 83-88.

24. WAGNER & ORTOLANO, *supra* note 2.

25. See, Daneke & Edwards, *Survey Research for Public Administrators*, _____ PUB. AD. REV. _____ (1979).

26. Caulfield, *Political and Institutional Constraints* in TECHCOM (The Technical Committee of the Thirteen Western States Water Resources Research Institutes) WATER RESOURCES AND SOCIAL GOALS 31 (1974); See also Johnston, *Postlude: Past, Present and Future* ANNALS No. 435 at 286-294 (1978).

late 1977. Their recommendations to President Carter might be summarized as follows:

- (1) Re-affirm the basic objectives of NED and EQ, with provisions for making water conservation rather than use a "cornerstone" of national policy;
- (2) Expand the EQ account to encompass both human and natural factors;
- (3) Include life, health, safety, and community preferences in the SWB account;
- (4) Allow nonstructural alternatives (such as flood plain zoning) to be included in the NED account.²⁷

These changes are, of course, rather minor. Thus, the exact future of life-quality accounting remains uncertain. Nevertheless, public agencies generally, and water agencies in particular, are likely to continue social analyses as a means of discovering more socially acceptable projects.

SOCIAL ASSESSMENT AND THE PUBLIC INTEREST

As mentioned above, social and/or life-quality assessments do more than provide alternative criteria of aggregate social utility. In many instances, social indicators greatly expand one's understanding of the distribution of project costs and benefits by: (1) exploring individual perceptions, expectations, and feelings of "relative deprivation," (2) identifying "affected publics," and (3) facilitating trade-offs between conflicting interests.

In recent years the public's trust in government and the administrative process has decreased. At the same time, willingness to intervene directly on a short-term, ad-hoc basis has increased where government activities threaten some aspect of the public's perceived social well-being. Edwin Haefele polemicizes on the implications of these trends as follows:

Today, when management agencies begin to get into important areas, such as influencing or controlling land use and making life and death decisions for communities and areas, they find themselves besieged in the courts. Politicians who practice consensus politics find it impossible to please everyone, and if the legislature did not decide the policy, the one displeased by the policy can often bring the whole administrative process to a standstill in the courts. . . . We

27. See, TASK FORCE ON REVISION OF WATER RESOURCES PLANNING AND EVALUATION CRITERIA AND PROCEDURES, NATIONAL WATER RESOURCES POLICY STUDY (1977).

in the United States are being estopped from doing more and more things. Highways are not being built, dams are not being located, electrical generation capacity is not being expanded. The blockages are not happening everywhere of course, but they are happening in a growing number of places.²⁸

If Haefele is correct, there is a profound rationale for more skillful adjudication of conflicting claims. A rationale stems, not only from the fact that more projects and programs might go forward, but that these projects themselves would be more consistent with the broadly defined public interest. Social analysis is, almost by definition, an effort to distill an operational concept from this ill-defined substance—the “public interest.”

Individuals rarely see projects as absolute gains or losses for the community. Rather, they perceive their own loss or gain relative to other individuals. Even when a project demonstrates that each party benefits, a perception of equity or fairness may not be assured. For example, when a project brings boating to an area, benefits are seldom evenly distributed. Although all individuals may have boating opportunities, some people will utilize the facilities more than others. A new peer inequity may be introduced when none previously existed. When these perceived inequities are serious, debilitating conflicts can and do erupt.

In addition to projecting divergent perceptions, social analysis can often be used to forecast “affected interest publics,” and also those individuals who are impacted (either directly or indirectly) but are relatively indifferent. Unlike “interested publics,” these individuals rarely avail themselves of the standard channels of public involvement such as the public hearing.²⁹ The broad range of affected publics have a variety of claims that might be ignored if concern is given merely to highly interested publics (such as environmentalists or “developmentalists”).³⁰

Social analysis might assist the arraying of claims early in the planning and policy development process. In the process, alternatives could be expanded or evaluated in terms of the balance of social claims in addition to basic economic considerations. In situations with noncommensurate claims, planners and policy analysts might

28. E. HAEFELE, REPRESENTATIVE GOVERNMENT AND ENVIRONMENTAL MANAGEMENT 121-123 (1973).

29. This distinction is developed in: Willike, *Identification of Publics* in WATER POLITICS AND PUBLIC INVOLVEMENT 10-18 (1976).

30. For a discussion of this phenomena see, Daneke, *Public Involvement in Natural Resource Development*, 6 ENV'TL AFF. 30-31, and *Surveying Community Conflicts*, MIDWEST REVIEW OF PUBLIC ADMINISTRATION (forthcoming).

rely upon a concept of equity borrowed from welfare economics or metaethics.³¹ In this way, perhaps projects and policies might reflect a closer approximation of the public interest.

IMPROVING THE PROSPECTS OF SOCIAL ASSESSMENT

Social assessment continues to be more of a procedural requirement than a substantive form of policy development. Despite the rationale for anchoring project design in a much broader social criteria, social accounts are often under-utilized or just overlooked. Beyond previously mentioned resilience of economic thinking and OMB resistance, social assessment is constrained by a variety of methodological and organizational impediments. These might include:

- (1) The time, effort, and expertise required to do social assessments;
- (2) The "soft" and often subjective character of social indices;
- (3) General bureaucratic resistance to change;
- (4) A failure to integrate procedures for social assessment within existing planning and policy development processes.

These impediments do not necessarily imply that social assessments are forever doomed to second class citizenship. To the extent that social accounts may establish life-quality enhancement missions³² and facilitate the targeting of scarce resources, the prospects of social assessments seem promising. Achieving this promise will, of course, require careful attention to implementation and integration.

SOCIAL ASSESSMENT AND PUBLIC INVOLVEMENT

Water planning has traditionally been a decentralized process. Consequently, the development of local support has been at the nexus of water planning for several decades.³³ This fact, together with the impetus of numerous mandates and directives has placed the water

31. See, Donovan, *supra* note 19, at 29-30; see also Berry & Steiker, *The Concept of Justice in Regional Planning*, 15 J. AM. INST. PLANNERS 414-420 (1974). Welfare economics is concerned primarily with the distribution of burdens and benefits, and means of reintroducing "Pareto efficiency" (a situation in which no one is made worse off). Metaethics on the other hand is concerned with the logic of normative justification. See also the comparison presented in J. RAWLS, *A THEORY OF JUSTICE* ch. 5 (1971).

32. This perspective is developed in Daneke, *Life Quality Accounting and Organizational Change*, BUREAUCRAT 31-35 (1978). Life quality enhancement missions represent projects aimed at providing greater esthetic, social and/or recreational opportunities as opposed to direct services such as flood control, water supply, etc. An example of a life-quality mission might be "green-belt" planning and development.

33. See, A. MAASS, *MUDDY WATERS* (1951); see also, Daneke, *The New Politics of Water Resource Planning*, MIDWEST REV. PUB. AD. 91-104 (1977).

development agencies in the vanguard of public involvement.³⁴ As noted, the *Principles and Standards for Water Planning* make specific reference to increased public involvement. This reference implies that public involvement is vital to the process of social accounting. However, the relationship between public involvement and social accounting remains vague at best. For example, in the Corps of Engineers, those planners most likely to do social impact studies are not always those active in public involvement.³⁵ Overcoming this lacuna between analysis and involvement is the first step in realizing the potential of social assessment.³⁶

The task of uniting social assessment and involvement cuts across several apparent dichotomies, including: "the technical vs. the political," "the citizen vs. the expert," and "the activity of participation vs. the activity of planning." These dichotomies might be reduced to the more traditional distinction of "objective science and subjective social values." This distinction, while perhaps useful, cannot be judiciously maintained in areas of social policy. As Martin Rein points out, there is little empirical knowledge separate and distinct from social values.³⁷ Economists and planners often assume that their quasi-scientific principles and practices embody basic social values. Kenneth Arrow's "Impossibility Theorem" suggests that it is futile to look for an objective basis for valuing social welfare independent of the political system.³⁸ Until recently most planners were trained in a professional disposition that encouraged them to be "apolitical."³⁹ Thus, the planner relied largely on physical and operational research. Newly trained planners are perhaps better equipped to deal with the demands of social interaction. But, until these planners become more influential, analysts should strive to: (1) demonstrate the payoffs of effective involvement (to planners and politicians), (2) illustrate how public involvement might mesh with the traditional concerns of planning, and (3) show how public involvement can bridge the gap between planning and politics.

Those responsible for public involvement must insure that the "right people" are involved at the "right time." As implied previously, this discovery of affected and other publics requires some

34. See, Daneke, *supra* note 30, at 11-31.

35. See, Priscoli, *Social Aspects of Comprehensive Planning*, in PROCEEDINGS, *supra* note 19, at 66-68.

36. For a more elaborate picture of these relationships see, J. PRISCOLI, PUBLIC INVOLVEMENT AND SOCIAL IMPACT ANALYSIS: UNION LOOKING FOR MARRIAGE (Working paper 78-2, Institute of Water Resources, U.S. Army Corps of Engineers, 1978).

37. M. REIN, SOCIAL SCIENCE AND PUBLIC POLICY ch. 2 (1976).

38. K. ARROW, SOCIAL CHOICE AND INDIVIDUAL VALUES (1951).

39. See, A. CATANESE, PLANNING AND LOCAL POLITICS (1974).

type of social assessment. Therefore, public involvement and social assessment should be mixed. A good mixture can be achieved through an "iterative planning process."

The Corps of Engineers presently uses an iterative process in which four planning tasks—problem identification, evaluation, impact assessment, and formulation of alternatives—are carried out in varying proportions during three distinct phases: (1) *Plan of Study*, (2) *Intermediate Plans*, and (3) *Detailed Plans*. (Figure 1). The problem of task identification is more important in the *Plan of Study* than in the intermediate planning stage. In the *Detailed Plans*, impact assessment programs are tailored to meet changing priorities within the evolution of a plan. Consequently, the techniques used for public involvement will vary. For example, hearings, feedback balloting, and other media techniques work better in problem identification than alternative formulation. Workshops might be better suited to alternative consideration and evaluation. In some cases, the same techniques and information can be used in more than one phase. For instance, preliminary impact assessment information gained from survey research at the *Plan of Study* stage could be reconstituted for use in alternative formulation workshops in the *Intermediate Plan* stage. Different situations demand different mixes of techniques, but the basic logic of interactive processes seems relatively sound.

PLANNING ON THE BASIS OF SOCIAL ASSESSMENT

Actual planning on the basis of social analysis presents some special problems. If "knowledge is power," then one's acceptance of knowledge entails another's relinquishment of some power. Planners, particularly those trained in the engineering and design arts, may be unwilling to give up a portion of their power to the social policy analyst. Moreover, politicians may view social assessment and involvement strategies as a usurpation of their prerogatives. The social analyst must strive to reduce these fears and demonstrate how social analysis can relieve pressures on both technical expertise and the political process.

Initially, the social analyst must seek balance between concerns for "theoretical competence" and concerns for "policy acceptability."⁴⁰ Inserting social analysis into the planning process requires a set of skills beyond competent social and policy science. Personal communication skills, salesmanship, a clear understanding of internal organizational dynamics, and an appreciation of the process and

40. See, Priscoli, *Integrating Social Analysis into Water Resources Planning*, 13 WATER RESOURCES BULL. 953-957 (1977); see also, DE NUEFVILLE, *supra* note 1, at 239-246.

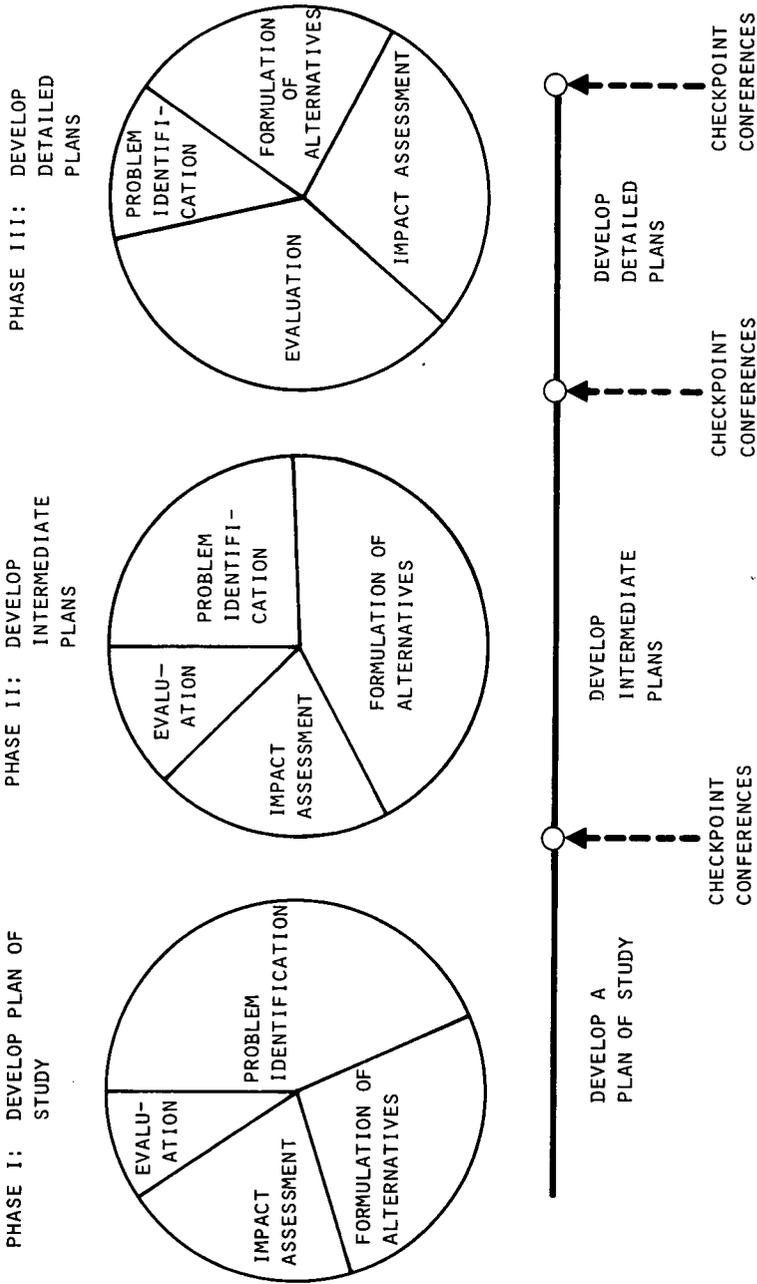


FIGURE 1

Corps Planning Process

problems of planning are equally significant. Social analysts are often aliens in traditional planning agencies and thus, by attempting to define their role, they are easily drawn to extremes. One extreme is to become aloof scientists, concerned primarily with esoteric research that is rarely applicable.⁴¹ The other extreme is to become the skillful bureaucrats who may be willing to sacrifice both the rigor and the substance of research to either protect the organization or obtain political acceptability.⁴² Hopefully, a happy medium between these extremes can be reached. This middle position does not necessarily imply a watering down of techniques. New research strategies can and have been developed that lend respectability to the terms "quick and dirty."⁴³

In addition to producing timely research that aids the organization in performing its mission, the mode of displaying the results may be important to utilization. Projected social and environmental impacts should be tied to specific planning issues and displayed in graphic form. In this way perhaps, social questions could become logical extensions of physical planning questions, and engineers and social scientists could discuss how they would go about answering these questions. In this discussion, differences in perspective and measurement techniques could be addressed, and trade-offs between planning strategies and social indices approached. For this integration of perspectives to be effective, however, these types of discussions should be carried out at the review level and management decision level, as well as the field level. This necessity implies that social analysts be employed in higher ranking positions in resource development agencies and not merely as "gophers."

Equally important to placement of social analysts in the organization is defining their function. This definition raises questions of status and the acceptability of the social scientist as a vital contributor to multi-disciplinary planning. In some cases, the Corps of Engineers has attempted to emphasize the importance of the social scientist by recruiting team members at approximately the same GS rating,⁴⁴ and allowing social analysts to work through several stages

41. For a discussion of the problems of social research utilization see, AGARWALA-ROGERS, *Why is Evaluation Research not Utilized?* in 2 *Evaluation Studies* 327-333 (1977). See also, N. CAPLAN, *et al.*, *THE USE OF SOCIAL SCIENCE KNOWLEDGE IN POLICY DECISIONS* (1975).

42. See, Weiss, *The Politicization of Evaluation Research*, in *EVALUATING ACTION PROGRAMS* 327-338 (1972).

43. See, e.g., H. HATRY, *et al.*, *PRACTICAL PROGRAM EVALUATION* (1973), and; H. HATRY, *et al.*, *HOW EFFECTIVE ARE YOUR COMMUNITY SERVICES: PROCEDURES FOR MONITORING THE EFFECTIVENESS OF MUNICIPAL SERVICES* (1977).

44. Such was the case in the Northeastern Water Supply Study, North Atlantic Division.

of the planning development, rather than merely providing data gathering.^{4 5}

THE FUTURE OF SOCIAL ASSESSMENT

While social assessment has a shaky past, it has a promising future. As our perception of resource use grows, and values of "wise and prudent" usage collide, social analysis will assume added importance. With all levels of government, and consequently most policy areas, experiencing a productivity crunch, increased knowledge of social concerns will be vital to facilitating trade-offs between efficiency and effectiveness. Local governments especially are likely to use social analysis to target dwindling funds on critical social needs in the wake of local property tax revolts. These various trends are likely to cause or coincide with other far reaching developments in public agency planning and policy such as:

- (1) A movement toward holistic, systems-oriented problem solving;
- (2) Increased emphasis on planning as the collective creation of alternative futures;
- (3) The exploration of life-quality enhancement missions.

We will discuss briefly the relationship of social assessment to these evolutionary forces.

Holistic problem solving

Numerous public agencies are plagued by fragmented and disjointed decision structures; this is especially true of the water resource development agencies, which generally plan on a project-by-project basis. As Harvey Brooks suggests in reference to the much-analyzed Tocks Island Dam Project, the project emphasis tends to exclude a range of certain social values out-of-hand. Brooks contends that "as one extends the boundaries of the system with respect to which analyses are conducted, the difference between hard-headed traditional engineering analyses and analyses that take greater account of human values may narrow."^{4 6} Since few resource problems neatly fit existing institutional boundaries, a mere reasonable argument can be made for regional perspectives and integrated program packages.

Social assessment, integrated with public involvement, may actually stimulate a more regional and programmatic focus in agencies.

45. This was facilitated in the Mississippi River Flood Study for Praire du Chien, St. Paul District.

46. Brooks, *Environmental Decisions Making: Analysis and Values*, in, WHEN VALUES CONFLICT (1976).

The holistic perspective may come about as social assessments expand the planners' vision beyond preproject stages to project implementation and operation stages.⁴⁷ Eventually, as planners begin to rely on a regional data base, to reason in terms of problem solving instead of merely project construction, and to develop a range of life-quality enhancement tasks, the logic of program packages is likely to prevail.

Planning as creating

Planning is often viewed as a process of predicting or forecasting inexorable futures. It is increasingly evident, particularly in realms of social policy, that these predictions are highly assumption-sensitive.⁴⁸ In other words, the future depends on numerous variable states of the system. Since the demise of federal PPBS (Planning, Programming, Budgeting, Systems), planning has been ostracized from the budgetary process, and thus separated from policymaking. Even in its short-lived heyday, PPBS was, as one planner put it, "a little bit of planning and a lot of BS." Planning is currently reemerging as a dominant force in policy-making. However, it is a very different type of planning. Given the fluidity of social systems and pervasiveness of policy change, planning is forced to be: (1) interactive, (2) iterative, and (3) dependent upon broadly defined social assessments. Planning is no longer a matter of fatalistic commitment, but rather of collective choice.

Life Quality Enhancement

In an era of declining resources, dichotomies such as "economy vs. the environment" "energy vs. environment" are less useful. A holistic perspective suggests that such dichotomies are spurious and that future choices may well be assessed via common denominators such as net life-quality.

In this context, many traditional resource development missions will either die or change in character. Traditional flood control now competes for funds among other alternative community growth expenditures. Growth itself is now often questioned. The social costs and benefits of alternative nonstructural approaches are still unclear, however. Social values are changing. Today, demands for environmental enhancement and wetland preservation are frequently heard. But new values are not automatically integrated with the old. Indeed,

47. See, Priscoli, *supra* note 36, at 7-11.

48. See, W. ASCHER, FORECASTING: AN APPRAISAL FOR POLICY-MAKERS AND PLANNERS (1978).

there is an enormous structural engineering pricetag associated with environmental enhancement. Life-quality enhancement will depend on synthesizing such new and old values.

Agencies may find new missions that improve life-quality while using few resources, and increase the supply and the durability of resources without reducing life-quality. Flood plain management, urban waterfront developments, watermapping, water conservation, and retrofitting existing dams for hydro-electric activities are but a few of many possible new water resources. Only detailed social assessments will tell for sure whether or not these activities are worth the effort.

CONCLUSIONS

These views depend on a number of contingencies. Initially, social analysts must overcome significant bureaucratic inertia. Secondly, social analysts may skillfully develop strategies that blend methodological sophistication and practical application. Finally, and perhaps most importantly, social analysis must nurture the public trust. This last item is, of course, the most difficult in the current socio-political climate. Furthermore, the very nature of social analysis makes it highly susceptible to misinterpretation and manipulation. Nevertheless, just as the iterative process of planning can build up the store of public policy information, social analysis can add to the store of public trust in government. If social information is used to: (1) display and help adjudicate conflicting claims, (2) design socially useful projects and programs which produce minimal social disruptions, and (3) explore means of enhancing the general quality of life, then it will earn the public confidence. Without such goals social assessment has little justification. Without social assessment the resource development agencies will have increasing difficulty identifying public programs as in the public interest.