COOPERATIVE MANAGEMENT: AN ALTERNATIVE APPROACH TO MULTIJURISDICTIONAL MANAGEMENT OF ENVIRONMENTAL RESOURCES

by

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Chapter I

SCOPE AND PURPOSE

The objective of this research is to formulate a more effective process of multijurisdictional management of environmental resources, within a fragmented organization of management responsibilities and authority involving several public agencies. The need for such a process arises owing to the likely incidence of conflicts that may be precipitated by the fragmented process of decision making at several jurisdictional levels.

Environmental management became very complex as response capabilities became more specialized, and management functions and responsibilities got distributed among a large number of public agencies at several jurisdictional levels. Typical environmental entities such as water sheds, coastal zones, coastal wetlands, air sheds, and the like, are coherent entities which require greater integration of management functions and agency activities. In such an inherent paradoxical situation, an integrated process of multijurisdictional management of environmental entities which negotiates the fragmented structure of management responsibilities and authority appears to be a critical and current need. This study is the response to the recognition and acknowledgement of this critical need.

Emerging Public Programs in Environmental Management

Since colonial times, environmental management programs have traditionally been organized as part of the services provided by local governments. In most parts of the United States, these programs, however, have tended to be very limited in scope and jurisdiction. They have focused on specific aspects, such as solid waste disposal or water supply. Only since 1950 have the federal and state governments become more directly involved in an activity formerly dominated by local governments. This involvement resulted from the growing recognition of the relative inadequacy of local environmental programs to examine or take into account the impacts of local decisions on the larger "environment." This evolution has been accompanied by the growing public concern for conservation and protection of forests, fish and wildlife, improvement of environmental health, urban and regional planning, and ecological considerations. This movement has gradually gained momentum not only in the United States but also throughout the world. By the mid-sixties, the issue of "environmental quality" had grown from a concern of a few scientists, naturalists, and planners to a movement of global dimensions.

During this period in the United States, the public became more alert to the physical degradation, despolita-

tion and destruction of the environment, as represented by oil spills, smog, lethal air pollution, fish kills in rivers, poisoned ecosystems, vanishing fish and wildlife species, waste lands caused by strip mining, and so forth. By the mid-sixties, the growing public pressure resulted in several pieces of Congressional legislation.

The federal response to the public concern for the environment took several forms. These include:

1. Enactment of the National Environmental Policy Act of 1970 (NEPA), requiring environmental impact assessment of all federal projects;

2. Amendments to the Clean Air Act in 1970 (CAA) to set and enforce air quality standards by the federal government;

3. Enactment of the Water Pollution Control Act of 1970 and its amendments in 1972 to establish and enforce standards of water quality, and to regulate the quality of liquid waste pollutants discharging into water courses;

4. Enactment of the Pesticide Control Act in 1972, requiring the registration of all pesticides with EPA;

5. Enactment of the Noise Control Act in 1972 to regulate noise emissions from construction and transportation equipment, motors and engines, and electrical devices;

6. Enactment of the Land Use Act in 1973, encouraging states to prepare state land use plans and to designate areas of special concern;

7. Enactment of the Coastal Zone Management Act in 1972, providing funding for the states to develop and implement plans for the management of coastal resources;

8. Enactment of the Endangered Species Act in 1973, which provides for the conservation of endangered and threatened species and the ecosystems upon which they depend;

9. Enactment of the Wild and Scenic Rivers Act in 1974, which provides for the preservation of certain streams in their natural condition and the establishment of procedures for their designation and protection;

10. Enactment of the National Historic Preservation Act of 1966 requiring federal agencies to consider the effects of proposed projects on sites and structures of historic or cultural significance;

11. Enactment of the Marine Protection, Research and Sanctuaries Act in 1972, providing for the designation of parts of the ocean as sanctuaries for marine life;

12. Enactment of the Wilderness Act and the creation of the National Wilderness Preservation System to designate selected areas as wilderness areas;

13. Creation of the National Wildlife Refuge System to acquire land and water areas for purposes of wildlife management;

14. Establishment of the National Park System to designate areas as national parks, national historic parks, monuments and recreation areas;

15. Enactment of the Water Resources Development Act in 1976 which provides for the preservation and creation of wetlands.

Executive action followed in the wake of this legislation with the creation of three federal agencies -- the Environmental Protection Agency (EPA) (Reorganization Plan No. 3 of 1970), the National Oceanic and Atmospheric Administration (NOAA) (Reorganization Plan No. 4 of 1970), and

the Council on Environmental Quality (CEQ) (Section 102(C) Procedures).

State governments responded to the federal initiative through a wide range of actions on several environmental issues. By 1971, approximately forty state legislatures had enacted laws to preserve environmental quality. Actions taken included a broad spectrum of programs, ranging from wetlands protection, land-use controls, and noise regulations to administrative reorganizations. Six states* permitted citizens to file suits against pollutors. Most states have adopted larger appropriations for environmental programs and have also formulated and enforced more comprehensive environmental controls.

Many local governments followed suit and stepped up their own environmental programs. These programs include setting up independent local environmental units adding environmental information inputs into the planning program, improving pollution control facilities, improving solid waste collection and disposal, working with citizen groups concerned with the environment, developing procedures for controlling growth, and evaluating the environmental impact of local activities.

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*Michigan, Connecticut, Florida, Massachusetts, Minnesota and Nebraska.

Regional entities have also been established to cope with environmental management problems that cannot be dealt with effectively within a single local jurisdiction. A wide variety of regional entities have emerged. They include regional planning commissions, councils of governments, special districts, metropolitan federations, consolidated city/county forms, and compacts. Many of these entities are attributed to the provisions of recent federal planning legislation, including the A-95 review process stemming from Section 204 of the Metropolitan Development Act of 1966 (PL 89-754), the Intergovernmental Cooperation Act of 1968 (PL 90-577), and Section 208 of the Water Pollution Control Act Amendments of 1972 (PL 92-500).

The Problem Statement

From the preceding, it may be concluded that management of the environment has emerged as a multijurisdictional responsibility. A more detailed examination of the fragmented organizational responses to the problems of environmental management is provided in Appendix A. Government agencies at the federal, state and local level make many decisions affecting the environment or exercise some forms of control over private decisions that affect the environment. The increase in the number of public programs at

different jurisdictional levels, along with other factors, has rendered the management of the environment into an extremely complex process. This complexity tends to be further exacerbated by the increasing role played by a wide variety of public interest groups in influencing the decisions and/or the agencies making them.

Environmental issues often have multijurisdictional ramifications. The physical boundary of a coherent environmental entity such as a coastal zone, water shed or an air shed is seldom coincident with, or contained within the jurisdictional boundary of a state, county, or incorporated area. Functional specialization of activities has frequently resulted in the fragmentation and distribution of responsibilities among a large number of agencies. Concerns for different aspects of environmental quality vary from one agency to another, and from one public interest group to another. Decisions made by one agency may inevitably clash with policies, programs, projects and concerns of another. Since programs, often, are not integrated across jurisdictional divisions, there is considerable scope for the emergence of conflicts. These conflicts tend to impede the implementation of the decisions made. Thereby, effectiveness of management may be reduced. Thus, it can be inferred that to ensure optimum effectiveness of

environmental management more durable interjurisdictional arrangements must be developed to overcome such conflicts.

Alternative Approaches for Multijurisdictional Management of the Environment

Integration of management programs across jurisdictional boundaries is one approach to overcome conflict emergence. Numerous multijurisdictional arrangements have been innovated and institutionalized in the form of regions, compacts, councils of government and so forth. A more elaborate discussion of these approaches is provided in Appendix E.

Such structural reorganization, however, is often perceived as a threat to home rule and as a loss of independence of the local governments involved. Some significant limitations to the regional organization include questions of appropriate leadership, preoccupations with local programs and territorial integrity. Other limitations include the requirement to sacrifice parochial priorities and programs for the general wellbeing of a region, and varying jurisdiction-oriented commitments. Many formal intergovernmental arrangements have also been restricted in their activities to research, plan formulation, and advisory services, which occur at the pre-action stage.

While the regional approach addresses problems that transcend jurisdictional boundaries, not every problem is amenable to negotiation by a regional organization. This approach may also be extremely cumbersome and time consuming. It may also contribute to the proliferation of a new generation of management organizations.

Formal processes of conflict resolution are processes which have been institutionalized through the mechanisms of judicial action and/or legislative intervention. Mediation and arbitration are two approaches which gradually are attaining considerable significance in the resolution of conflicts. Political approaches of negotiation and direct agreements are also frequently used to resolve conflicts. These processes are applicable, however, only after a decision has been made and the conflict has occurred. Judicial and legislative intervention also tend to be very cumbersome, costly, and time consuming. Both approaches may delay urgent measures for averting environmental deterioration. Such intervention also raises questions about the credibility of public decisions and public agencies making them.

Current decision making practices in multijurisdictional management seldom incorporate any formal mechanisms for

preemptive identification, negotiation, and resolution of conflicts within the decision-making process. In places where such mechanisms exist, (as in the case of advisory boards, commissions, special studies, public hearings, and joint task forces, among others), the recommendations made are usually advisory and are not binding upon the conflicting parties. The constraint to preemptive identification of conflict stems from the fact that organizational autonomy tends to insulate public agencies along program and jurisdictional lines -- there is little spontaneous cooperation in decision making. Considerable defensiveness and "turf protection" are evident in the attitudes of agencies. Public agencies and public and private interest groups are also relatively polarized and interaction and communication among them towards forging a conflict-free decision usually takes place only to satisfy the formality. In these circumstances, decisions are made first, and conflicts which may arise must be dealt with after the fact. Conflict resolution invariably is conducted outside (or imposed upon) the management system.

An alternative multijurisdictional management process is needed -- one which incorporates mechanisms for pre-emptive identification, negotiation, and resolution of conflict, which results in compatible public decisions, and commitments for implementation of the decision.

The Cooperative Management Process

The key to effective multijurisdictional management, as suggested in this study, turns on the means by which public agencies work out decisions which are mutually compatible and to which all parties are fully committed. In other words, the objective is to devise a decision making process which culminates in decisions which are not "unaccepatable" to any of the agencies influencing or affected by them. Under such ideal circumstances, there would be little or no room for conflict among the participants. A conflict-free decision is more likely to be unopposed by any of the agencies involved, when implemented. The design of a cooperative management process is based on this hypothesis.

Cooperative management incorporates a process of interactive decision making that seeks to achieve more compatible decisions. It embodies mechanisms for facilitating greater cooperation among all participating agencies involved in multijurisdictional problem solving. It also incorporates mechanisms for sensing potential conflicts and managing them so as to facilitate more compatible decisions.

The conventional process of rational decision making has to be adapted in the context of the problem requiring a

multijurisdictional response. The adaptation will consist of the following steps:

1. Problem Sensing
2. Information gathering by lead agency.
3. Assessment of the state of the system and problem identification.
4. Identification of interests and concerns, agencies and interest groups.
5. Organization of cooperation and establishment of forums for interactive decision making.
6. Problem confirmation and redefinition incorporating multiple concerns and issues.
7. Statement of goals and objectives.
8. Construction of conceptual model of the management system.
9. Formulation and evaluation of alternatives.
10. Compatibility/conflict sensing.
11. Conflict management.
12. Selection of and commitment to alternatives.

This decision making process must be embedded at all locations in the sequence of decisions at strategic, managerial, and operational levels of multijurisdictional management. The design objective for cooperative management is to ensure decision compatibility and continuity through the sequence at each level and from one level to another.

The Scope of the Study

In this study, cooperative management aims towards reaching and implementing compatible decisions. The parties involved include public agencies at federal, state, and local levels, as well as public and private interest groups and the general public at large. This implies that in respect of any decision, compatibility needs to be brought about: (1) between agencies; (2) between public and private interest groups and the general public; and (3) among agencies and interest groups. For purposes of this study, the scope of cooperative management is restricted to bringing about interagency compatibility only, as a critical starting step. The study recognizes the importance of bringing about compatibility in respect of the other two interactions as well. However, for purposes of manageability of this study, these interactions will be accorded lesser emphasis.

The choice of decision making paradigms must also be defined. Decision making takes place in the context of at least two contrasting philosophies. Wildavsky classifies them as the planning system (intellectual cogitation) and the political process (social interaction). In other words, these refer to the pure rational model and the incremental model of decision making, respectively. He observes that

"Problems are discovered, solved and reformulated both by interchange among organized actors and by their efforts to guide events along paths they anticipate in their minds."[1]

Both these approaches coexist and operate at different levels "which can be made manifest when convenient,"[2] even though some tension may exist between them. Wildavsky quoting Churchman suggests that the planning system has to do with multistage decision makers who formulate and choose among alternative courses of action in order to reach certain desired goals and objectives. In the political system, the electorate chooses from among a group of candidates in order to reach certain desired first stage goals which lead to the implicit goals of society at large.[3] The close correspondence between the outlines of the two systems is characterized in Appendix F.

It is not the purpose of this study to conduct a review and evaluation of the two approaches. It is acknowledged that both these approaches coexist, and that they complement each other depending upon the situation at hand. For purposes of this study, the decision making paradigm, implicit in the rational approach is used as the selected framework for analysis and adaptation in the design and formulation of the cooperative management process. It is

acknowledged that the paradigm in the incremental approach is deserving of equal consideration. It is contended, however, that such consideration would necessitate a separate and independent study on its own merits. This is not being attempted in this study.

Further, it has to be recognized that a study of this nature may be conducted deductively or inductively, or both simultaneously. A theoretical, non-empirical approach is adopted for purposes of this study for want of adequate opportunity and sanction to conduct the needed experiments to test alternative decision making processes in a setting of a selected real world problem involving actual agencies.

Several techniques, such as cooperation and conflict management, are expected to be called into play as ingredients for the proposed design of the decision making process in cooperative management. It is not the purpose of this study, however, to critically examine or appraise each of these techniques. An attempt has been made in Appendices G and H to identify from the literature different techniques of conflict resolution and facilitation of cooperation. Justification for the selection of methods or techniques will be made depending on the contingencies in hand.

Finally, in order to provide some credibility of possible application of the proposed design, a suitable problem situation, namely, the "(d)(2)" land management issue in Alaska, is used. Whereas the application is not proposed to be prescriptive, or critical of the actual sequence of events which have actually taken place in the selected problem setting, a simulated attempt is made to broadly illustrate the applicability of the designed management process to the selected problem. occurred had the proposed approach been applied.

Endnotes to Chapter 1

1. Aaron Wildavsky. Speaking Truth to Power: The Art and Craft of Policy Analysis. Boston: Little, Brown and Company, 1979. pp. 114 - 141.

2. Ibid. p. 140.

3. Ibid. p. 129.

Chapter II

THE HYPOTHESIS -- COOPERATIVE MANAGEMENT

Current practices of multijurisdictional management seldom incorporate formal mechanisms for interagency cooperation and/or pre-emptive identification, negotiation and resolution of conflicts. Interagency cooperation can be implemented by the establishment of formal intergovernmental relations through the legislative process. In the absence of such mechanisms, the incidence of interagency conflict tends to be comparatively high. Conflict resolution usually takes place ex-post-facto and may require external intervention by the courts and/or the legislatures for their resolution.

The Hypotheses

The principal hypothesis in this study is that the effectiveness of multijurisdictional management of the environment may be enhanced through a cooperative management process. This hypothesis is based on the operational principle that management decisions which are not "unacceptable" to any agency are more likely to be implemented effectively.

A central premise to this hypothesis is that conflict in multijurisdictional management of the environment arises

from, or is rooted in the incompatibility of decisions made by various participating public agencies that have fragmented responsibility for the policies, programs, and projects undertaken to achieve environmental objectives. The obverse of this premise justifies the hypothesis that compatible agency decisions are the principal requisite for more effective environmental management and timely attainment of environmental objectives.

A second hypothesis is that such decisions are more likely to occur if there is cooperation among the participating agencies in the decision process. Also, decisions may be compatible if conflict can be forestalled and resolved before the decision is actually made.

These hypotheses may be interpreted in operational terms. A decision-making process which incorporates mechanisms for cooperation among participants, and negotiation and resolution of potential conflicts, may significantly increase the probability of compatible decisions. Thereby the effectiveness of environmental management may be enhanced. The concept of "cooperative management" is founded on this operational principle.

The Scope of Cooperative Management

It must be acknowledged from the outset that there are many diverse actors involved in environmental management -- many of these "players" have roles outside the formal structure of government and the public agencies that have assigned planning and management responsibilities. It is not the intent of this study to ignore or to downplay the importance of the full *dramatis personae* that form the playbill of environmental management.

The central premise of the hypothesis is that conflict arises from or is rooted in the incompatibility of fragmented decisions made by public agencies. In keeping with this premise, the main focus of this study will be on strategies to facilitate decisions which are more compatible, i.e., not "unacceptable", to agencies which participate in carrying out the public mandate of environmental management. The possible involvement of public interest groups which support the objectives of environmental management, as well as private groups and individuals which may find these objectives in contradiction to their own vested interests, will be cited as appropriate, within this more central context. A vital starting point, however, is that much of the conflict that results in litigation and legislative intervention stems from the inability of public

agencies to achieve compatible decisions (policies, programs, and projects) applicable to problems having multijurisdictional dimensions.

Therefore, cooperative management incorporates an interactive process of decision making involving, to the extent possible, both decision makers and public interest groups. It utilizes this interaction to resolve interjurisdictional and interagency conflicts and facilitates decisions which are compatible to these parties. By securing such compatibility and conflict free decisions, cooperative management attempts to eliminate future resistance and opposition to implementation of these decisions. Cooperative management offers an alternative approach which seeks to reduce the need for external intervention by either the judiciary or the legislature for the resolution of conflicts.

Other Relevant Definitions

In beginning any discussion on cooperative management, it is important to define and distinguish among certain terms. Therefore, the following terms are defined for purposes of this study.

Decision making process - Rational decision making characterized by a process of making a choice among two or more available options after an evaluation is made of such options in terms of their capacity to achieve desired objectives as they relate to an identified problem.

The subject of rational decision making has been dealt with extensively by such writers as Alchian[1], Churchman[2], Cyert and March[3], Drucker[4], Easton[5], Eilon[6], Radford [7] [8], Raiffa[9], Simon[10] [11], Simon and Newell[12] and Tannenbaum[13], among others. There is consensus among these authors that decision making involves a sequence of steps against the background of a goal, objective or policy. These steps, as summarized by Radford, are:

1. Perception and formulation of the problem;
2. Construction of a model of the decision process;
3. Determination (as possible) of quantitative parameters involved in the process;
4. Specification of available options, strategies, or alternatives open to the decision maker;
5. Evaluation of the outcomes of each of the available options;
6. Resolution of the decision[14].

The decision is followed by action. The outcome of the decisions is dependent on the outcome of the action.

Management - Conduct of the affairs of a mission. Management is distinguished from administration in that the latter relates to the conduct of the affairs of an organization.

Legitimate participants - Those who make, influence, or are affected by public decisions.

Key Agency - The agency, department, or section that senses the problem having multijurisdictional dimensions.

Lead Agency - The agency, department, or section of an organization designated with the role of leading the forum. The key agency may or may not be the lead agency.

Forum - A closed assembly of legitimate participants convened on a continuing basis with the objective of working towards compatible decisions.

Cooperation - A process where all parties come together on a voluntary basis to confront a common problem. Cooperation is less potent than collaboration in that relationships are not necessarily among equals.

Collaboration - A subset of cooperation associated with greater equality and involvement among parties in any given undertaking. Collaboration involves shared and/or interdependent leadership functions. The relationships are reciprocal and involve equal exchange.

Coordination - A process of getting people to act in concert, voluntarily or involuntarily, in response to directions from a superior.

Conflict management - The process of securing compatibility among individuals, groups, or agencies. It differs from the term 'conflict resolution' in that conflict resolution implies a terminal process and a short duration of opposition. On the other hand, opposition may be overcome temporarily, but it may reemerge in the same or some other manifestation over the long run. As such, the conflict has to be continuously "managed," rather than "terminally resolved".

Responses to Decision Choices - There are five responses for the selection of and commitment to an alternative. These are:

1. Support: an active or passive response indicating that the alternative is acceptable and is endorsed.

2. Opposition: an active or passive response indicating that the alternative is unacceptable and is rejected.

3. Neutrality: an active or passive response indicating that the alternative is neither supported nor opposed. Neutrality responses are made in the face of availability of adequate information.

4. No response: a dysfunctional response arising out of lack of concern, apathy, or commitment; such a response is only of statistical importance.

5. Indecision: a passive response that the alternative is neither supported nor opposed owing to such factors as lack of adequate information, lack of confidence, and so forth. Indecision may turn to support, opposition or neutrality when adequate information is available.

It may be noted that responses 1, 2, 3 and 4 appear to fall along a continuum with "support" and "opposition" being the end points. Indecision is not along the continuum as the status is likely to change to any other responses in the continuum.

Compatible Decision - A decision which is not "unacceptable" to any legitimate participant. This relates to any state along the above mentioned continuum other than opposition. Since opposition reflects on "unacceptable" status, compatibility refers to any status which is not "unacceptable".

The Goal of Cooperative Management

The principal goal of cooperative management is to enhance the effectiveness of managerial decisions by contributing to their successful implementation. Several objectives have to be attained to fulfill this goal. In the sequential order* for accomplishment, these objectives are as follows:

Objective #1: Ensuring cooperation, communication and interaction among public agencies brought together by involvement in, commitment to, or the effect of a common problem;

Objective #2: Ensuring adequate integration of multi-jurisdictional management programs to deal with the common problem;

Objective #3: Ensuring that the courses of action for problem solving will be practical and workable;

Objective #4: Ensuring that the courses of action will facilitate peak effectiveness in the achievement of desired objectives with optimum efficiency and economy;

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*The order may change to the following in the context of importance: 5, 1, 6, 4, 3 and 2.

Objective #5: Ensuring that the course of action that is finally selected will be mutually compatible to all the participants;

Objective #6: Reducing the need for external intervention by either the judiciary and/or the legislature at different jurisdictional levels for the resolution of conflicts.

These objectives may be fulfilled by designing an appropriate process of management -- a cooperative management process.

Endnotes to Chapter 2

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Chapter III

SUMMARY OF INTERGOVERNMENTAL LINKAGES

The organization of environmental management and the complexity of fragmented responsibility among agencies having different jurisdictions are identified and discussed in further detail in Appendix A. Several networks of intergovernmental relationships, which currently exist, are identified and discussed in Appendix E. These relationships are reviewed in this chapter in an effort to set more clearly the framework within which cooperative management must operate.

Areas of Intergovernmental Cooperation

The complex network of intergovernmental administrative linkages is illustrated in Figure 3-1, adopted from the work of Simmons and Dvorin.

As Simmons and Dvorin observe:

> These administrative linkages make the American federal system of government by far the most complex and difficult to understand of any governmental system in the world. Each of the separate governments and authorities must maintain external relationships with a multitude of other public agencies at the same level or at higher or lower levels.[1]

Some of the most common inter-governmental relationships suggested in Figure 3-1 include:

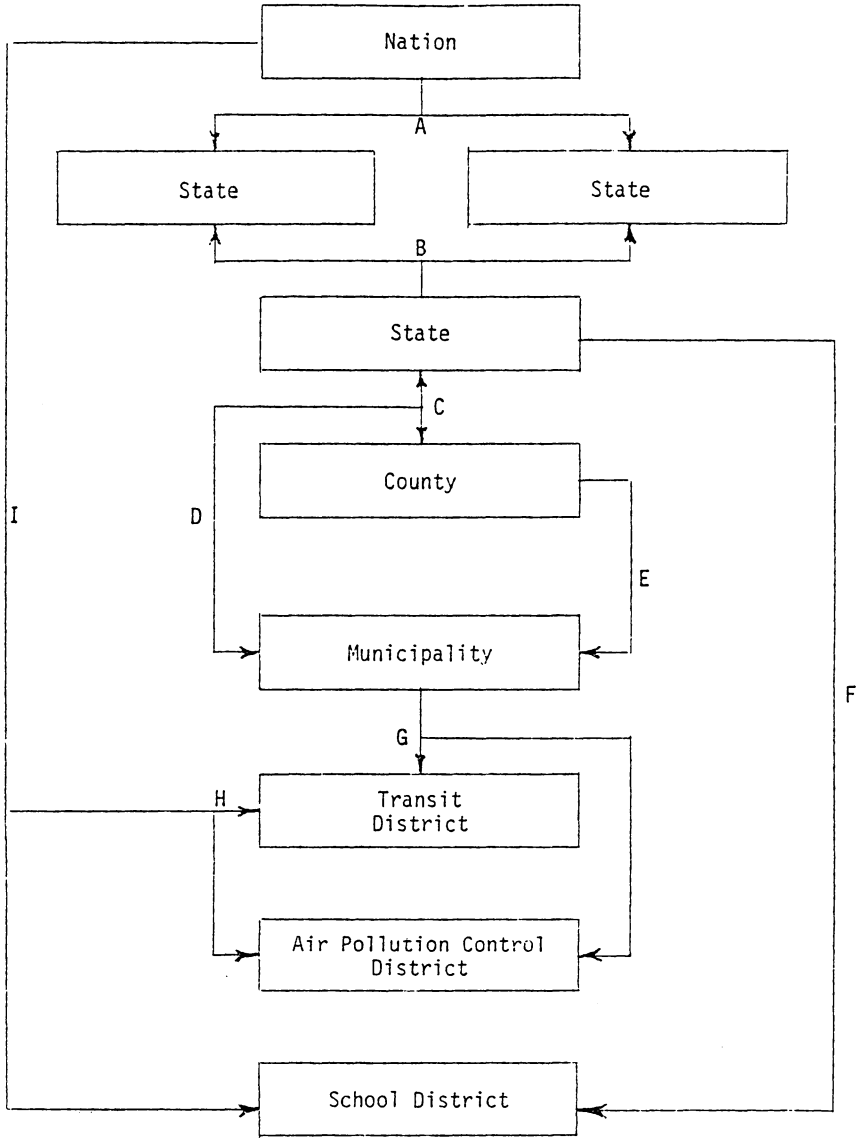


FIGURE 3-1 INTERGOVERNMENTAL ADMINISTRATIVE RELATIONSHIPS

Source: Robert H. Simmons and Eugene P. Dvorin: Public Administration: Values, Policy and Change; Alfred Publishing Co. Inc.; Port Washington, NY.; 1977; p.298. Fig. 9-3.

A. Federal-to-state relationships which govern state-to-state administrative relationships, to a significant extent by constitutional provisions and congressional action;

B. State-to-state relationships involving executive negotiations between states, followed by individual state legislation;

C. State-to-county relationships, where the state authorizes counties to serve as agents of state policy at the local level;

D. State-to-municipality relationships, where the state authorizes the creation, legal recognition, and powers for different classifications of "incorporated areas";

E. County-to-municipality relationships, involving county ordinances, enforceable by the municipality, for county services and other responsibilities, mandated by state law and not subject to municipal option or discretion;

F. State-to-school district relationships, involving direct state authority over local education, including facilities, standards for teaching credentials, curriculum requirements, and adoption of text books;

G. Municipality-to-special districts at the local level, established under municipal authority, to provide specified services to citizens. District budgets, fiscal planning, and personnel practices are often subject to municipal supervision and review;

H. Nation-to-special districts at the local level, involving direct administrative links, and utilizing federal funds;

I. Nation-to-school district at the local level, involving federal regulation of hiring of teachers and staff, funding of remedial, experimental, and minority programs, and for certain types of physical facilities, as well as racial desegregation and sexual anti-discrimination guidelines.

As Simmons and Dvorin conclude:

> If the thousands of private and quasi-public special interest and pressure groups are also considered as significant shapers of governmental administrative decision making in our fragmented system, it is obvious that the complexity of the influence patterns and administrative relationships will truly lay to rest any simplistic approach. Indeed, if the student is temporarily confused, this is perhaps the best indication that he is beginning to understand the true nature of our intergovernmental maze.[2]

As inferred earlier, different thematic issues bring about different combinations of formal cooperative intergovernmental arrangements. Table 3-1 provides examples of

the different combinations and the levels at which they exist. Table 3-2 illustrates most, if not all, the alternative interactions that may exist within the scope of interagency arrangements, as visualized in multijurisdictional management.

Alternative Scenarios of Management

The different scenarios represented schematically in the two tables can be classified under two major categories, based on the type of relationship. A lateral relationship relationship is one implying partnership; a vertical relationship is one implying control. Figure 3-2 shows the schematic representation of the above typology.

The control relationships -- coordination and pre-emption -- are usually institutionalized in the organizational process of federal, state, and local agencies, through the medium of authority delegation. Control decisions which are coordinative or preemptive are not normally open to litigation or legislative review, except to examine due process, conformity to responsibility or authority assignments or safeguard against prejudice.

Only some of the partnership relationships -- cooperation and collaboration -- are institutionalized through

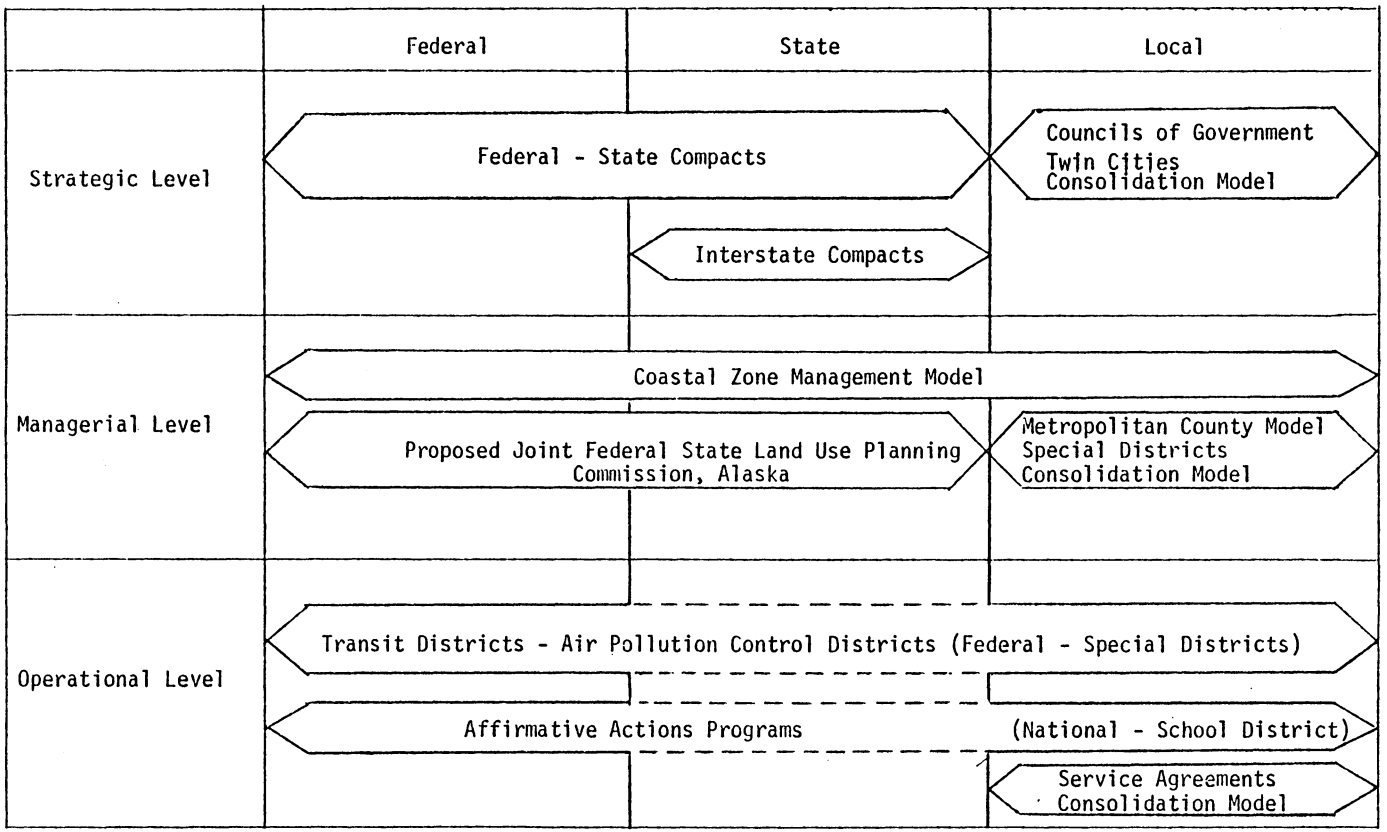


TABLE 3-1: ARRANGEMENTS INVOLVING INTERGOVERNMENTAL COOPERATION

TABLE 3-2: OVERALL SETTING OF MULTI-JURISDICTIONAL MANAGEMENT SHOWING ALTERNATIVE INTERAGENCY SCENARIOS

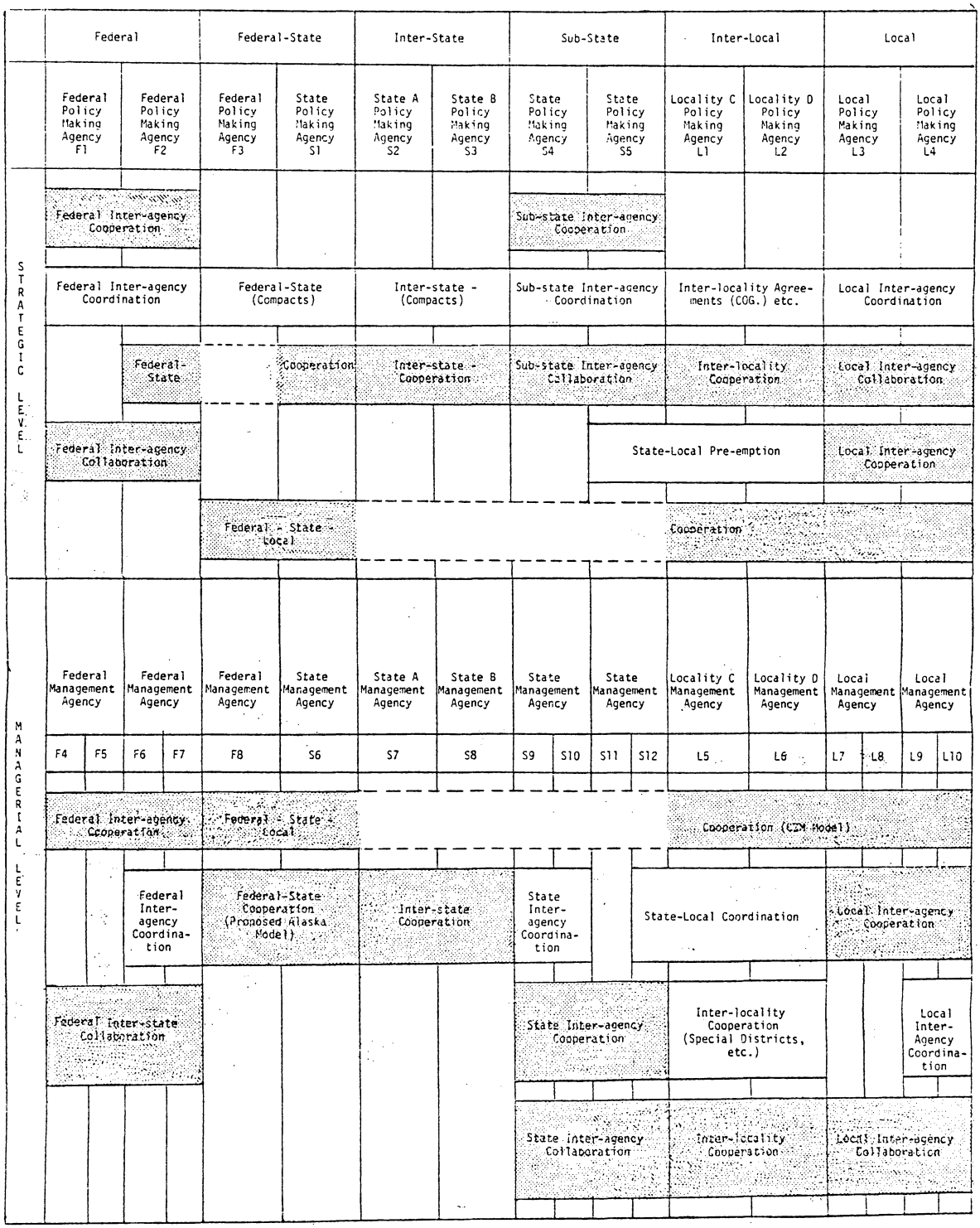


TABLE 3-2: OVERALL SETTING OF MULTI-JURISDICTIONAL MANAGEMENT SHOWING ALTERNATIVE INTERAGENCY SCENARIOS (Continued)

	Federal		Federal-State		Inter-State		Sub-State		Inter-Local		Local	
STRATEGIC LEVEL	Federal Policy Making Agency	Federal Policy Making Agency	Federal Policy Making Agency	State Policy Making Agency	State A Policy Making Agency	State B Policy Making Agency	State Policy Making Agency	State Policy Making Agency	Locality C Policy Making Agency	Locality D Policy Making Agency	Local Policy Making Agency	Local Policy Making Agency
	F1	F2	F3	S1	S2	S3	S4	S4	L1	L2	L3	L4
MANAGERIAL LEVEL	Federal Management Agency	Federal Management Agency	Federal Management Agency	State Management Agency	State A Management Agency	State B Management Agency	State Management Agency	State Management Agency	Locality C Management Agency	Locality D Management Agency	Local Management Agency	Local Management Agency
	F4 F5	F6 F7	F8	S6	S7	S8	S9 S10	S11 S12	L5	L6	L7 L8	L9 L10
OPERATIONAL LEVEL	Federal-Inter-agency Cooperation		Federal-State-Local						Cooperation			
		Federal Inter-agency Coordination	Federal-State Cooperation		Inter-state Cooperation		State Inter-agency Coordination		State-Local Coordination		Local Inter-agency Cooperation	
	Federal - Inter-agency Collaboration						State Inter-agency Cooperation		Inter-locality Cooperation (Service Agreements etc.)			Local Inter-agency Coordination
							State Inter-agency Collaboration		Inter-locality Cooperation		Local Inter-agency Collaboration	

Note: 1. All shaded areas indicate inter-agency relationships which are not institutionalized.

2. Barring Coordination and pre-emption, all other relationships can be subjected to the application of Cooperative management

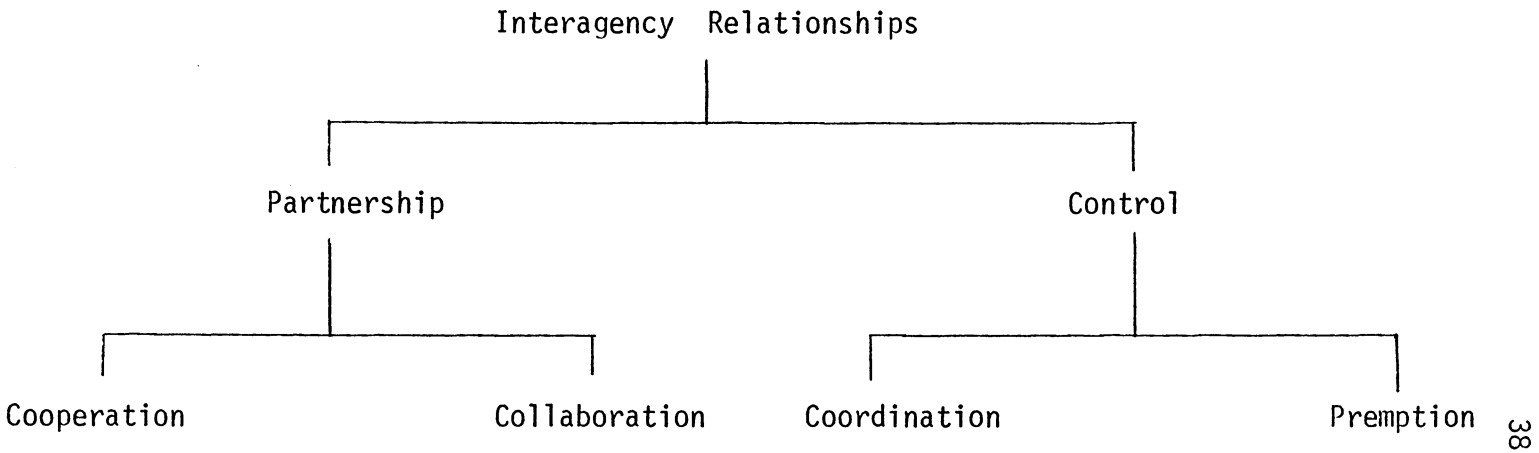


FIGURE 3-2: CLASSIFICATION OF INTERAGENCY RELATIONSHIPS

intergovernmental arrangements. It is very likely that conflict may arise before, during, or after the process of decision making, irrespective of institutionalization of the forum of decision makers. Cooperative management attains special significance in most cases where conflict among decision makers and interest groups are likely to emerge, whether or not the decision-making forum is institutionalized.

Endnotes to Chapter 3

1. Robert H. Simmons, and Eugene P. Dvorin, Public Administration: Values, Policy, and Change (New York, Alfred Publishing Co., Inc., 1977), pp. 296-297.

2. Ibid., p. 297.

Chapter IV

FRAMEWORK OF DECISION MAKING INVOLVING NUMEROUS AGENCIES WITH DIFFERENT JURISDICTIONS

The key element in effective management involving multiple agencies with different jurisdictions is decision making. A number of decisions are made and implemented in sequence. Decisions made by each agency are likely to be implemented without opposition if they are compatible to the interests of others. Conflict may occur in the absence of such compatibility. A detailed review of conflict has been conducted in Appendix G. Whereas some conflicts do possess positive connotations, the negative connotations of conflict often override them. (See Appendix G). If the negative conflict occurs early on in the decision making sequence, it is very likely to be compounded in later decisions and may emerge as opposition.

In order to design a process of management which is capable of negotiating and overcoming conflict, the overall framework of decisions must first be understood. This framework is reviewed in this chapter.

Overall Framework for Decision Making

As stated in the scope of this study, the rational decision-making approach is selected for review. The overall framework of decision making is schematically represented

in Figure 4-1. Figure 4-2 shows the different levels at which public decisions are made. These are the strategic, managerial and operational levels.*

Different types of public decisions have been identified by Lee[1] and by Steiss and Daneke[2]. These are adapted and elaborated as follows:

Strategic Decisions

1. Strategic agenda decisions relate to overall problem recognition and the associated opportunities and challenges ahead. The decisions emerge from the identification, classification, and appraisal of the problems from the assessment.

2. Strategic planning decisions involve the statement of strategic goals as they relate to selected items from the strategic agenda.

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* The details of steps involved at each level (as shown within each row in Figure 4-2) is based on class dicussions with James Hackett and on an adaptation of the methodology suggested by James Hackett in "Interprofessional Functions and Advanced Graduate Studies in Comprehensive Environmental Management", Nuove Metodologie Per La Gestione Del Territorio. Centro Studi E Ticerche Dell' Amministrazione Dell' Universita' Degli Studi Di Parma, Parma, 3 Luglio 1978. p.16.

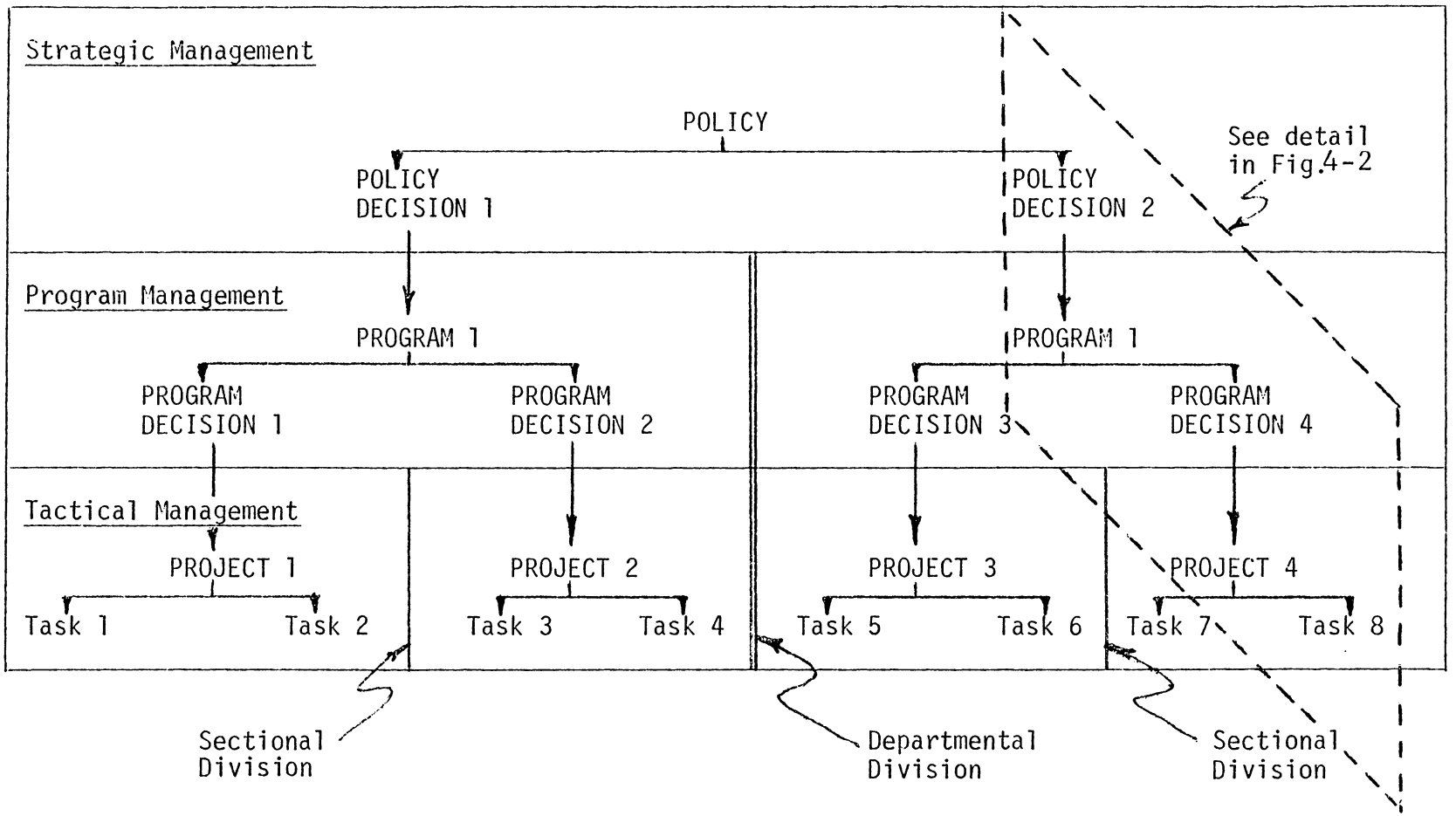


FIGURE 4-1 : OVERALL FRAMEWORK FOR DECISIONS

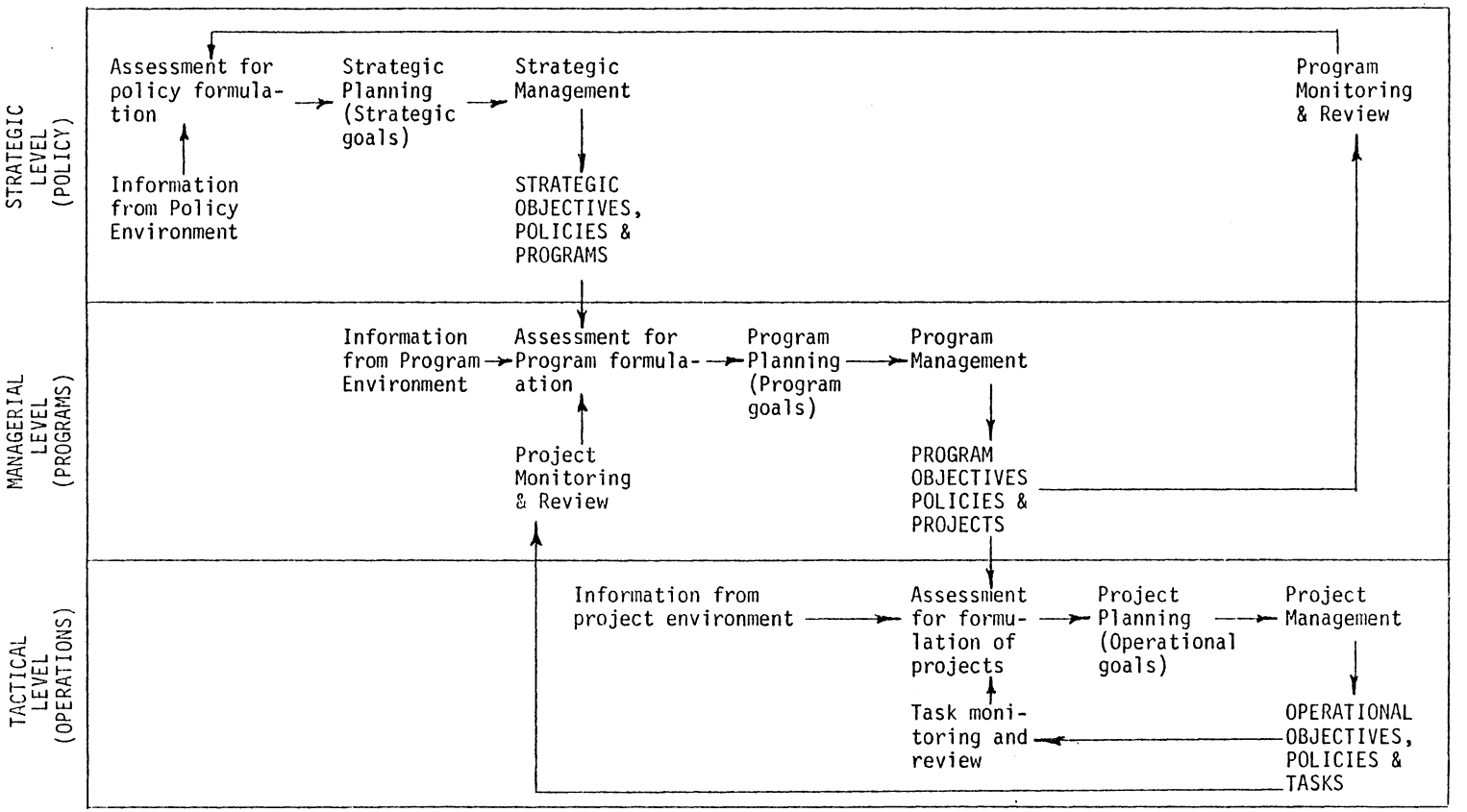


FIGURE4-2 DETAILS OF BOX IN FIGURE 4-1

3. Strategic management decisions relate to the statement of policy guidelines and the organization of programs, together with the commitment of resources to perform such programs.

4. Program monitoring decisions relate to the judgment of program performance, and determine the need to readjust, depending on plans.

Managerial Decisions

1. Managerial agenda decisions involve the identification of problems, opportunities, and challenges in relation to specific programs.

2. Managerial planning decisions determine the goals as they relate to selected items from the managerial agenda above.

3. Program management decisions relate to the statement of managerial policies, the organization of projects, and the assignment of resources to conduct such projects.

4. Project monitoring decisons relate to the judgment of project performance and verify effectiveness of programs.

Operational Decisions

1. Operational agenda decisions involve the identification of problems, opportunities and challenges in relation to specific projects.

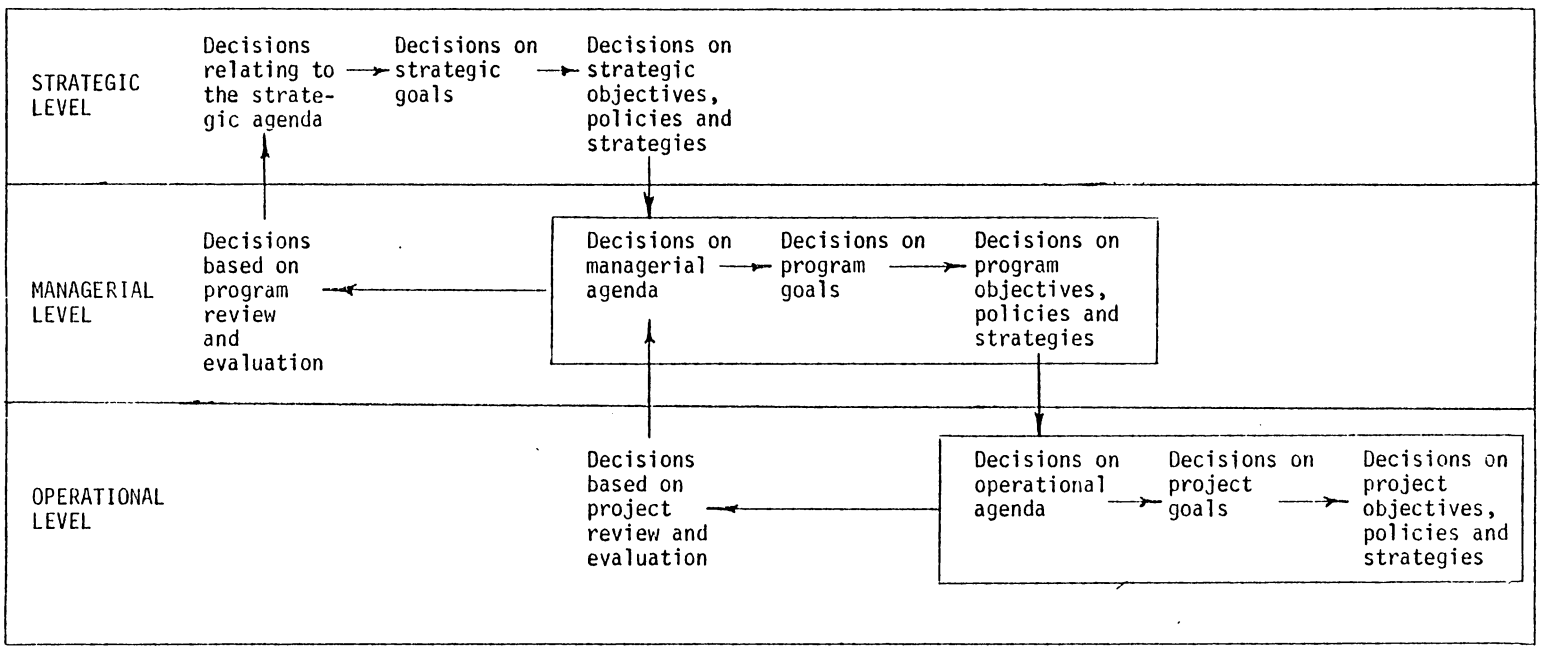
2. Project planning decisions determine the operational goals as they relate to selected items from the operational agenda above.

3. Project management decisions relate to the statement of operational policies and the organization of tasks, together with the assignment of resources to conduct such tasks.

4. Task monitoring decisions relate to the judgment of the effectiveness of performing tasks.

The sequence of public decisions is represented in Figure 4-3.

Cooperative management is the process of negotiating the sequence of decisions listed above and synchronizing their outcomes, so that conflicts may not emerge (or will be held to a minimum) after any decision stage. The sequence of public decisions, represented in Figure 4-3, is typical of management involving a single organization under a single chain of command. In environmental management, decisions



The sequence of decision making steps will be nested in each of the eleven decision points in the above diagram.

The decision process at the managerial and operational levels (shown in the two boxes) is subject to review and evaluation.

FIGURE 4-3: THE SEQUENCE OF DECISIONS IN PUBLIC MANAGEMENT

are likely to involve or implicate several participants at each stage of the sequence. In cooperative management each decision needs to be made in an interactive setting, and compatibility must be attained at each stage before commencing with the next decision.

Ideally, if such compatibility can be achieved and sustained throughout the process, it may be inferred that there may be no room for conflict in the entire sequence, and management is likely to be devoid of any interruptions. It may be concluded that, if the above structure can be operationalized, the effectiveness of cooperative management may be enhanced. This implies the need for designing a decision making process which may facilitate compatible outcomes.

The Conditions of Public Decision Making

Decision making is a process of making choices among two or more available options after evaluating their capabilities to achieve desired outcomes in the context of a given problem. Radford[3] identifies a sequence of steps involved in decision making as discussed earlier. Within this sequential process, four conditions are encountered, as discussed by Luce and Raiffa,[4] Lee[5] and Miller and Starr.[6] These are certainty, risk, uncertainty and competition/conflict.

Decisions made under conditions of certainty are those in which only one outcome for any or all of the alternative options appears to be open to the decision maker. Decisions are said to be made in the face of risk when more than one outcome can result by the selection of any one alternative, and the probability of each outcome is known. Decisions are said to be made under uncertainty when a number of possible outcomes exist and probabilities of the occurrence of such outcomes are unknown. Decisions are said to be made in the face of conflict when identified adversary/adversaries exist, whose actions are in opposition to those of the decision maker.[7]

Decisions under certainty appear to be extremely unlikely in the real world. Many decisions, however, do fall close to this category in such situations where considerable past experience exists. Most routine administrative decisions, particularly at the operational level in an organization, are examples of such types of public decisions. The approach to decision making under conditions of certainty may incorporate the use of mathematical models, such as linear programming models, dynamic programming, and

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* Linear programming models are concerned with the solution of a problem occurring at one point in time, and addressed to one objective. Dynamic programming models deal with a sequence of decision processes over time, and address one objective. Goal programming is an extended application of

goal programming*, and are usually designated as programmed decisions, based on deterministic models.

The earliest approaches to decisions under risk situations recommended that the selection of the alternative was to be based on the "maximum expected value" of the outcome. Hertz showed the likely dangers of the use of deterministic models when many of the parameters that are called into play are subject to uncertainty.[8] In order to overcome this limitation, past experiences may be used to provide reasonably accurate estimates of the possible outcomes and the probabilities of their occurences. Some judgement is involved in assigning these probabilities, thereby rendering them subjective. Sensitivity analysis, probabilistic (stochastic) models, simulation and decision trees** are among the more commonly used approaches to facilitate decision making in the face of risk.

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linear programming used to resolve a problem with multiple objectives.

** Sensitivity analysis examines the effects of variations to the values assigned to parameters used in a deterministic model. Probabilistic models use probability distributions representing all values that the parameter may take and the probabilities of their occurrence in place of the single value used in the deterministic case. Simulation involves the formulation and design of a model of the operation or system under study representing the elements and relationships pertinent to the decision process. The model simulates a decision process. Variations of values of parameters are made to observe their influence as outcomes. Decision trees are means to examine conditional probabilities of outcomes.

There is no direct method for decision making in the face of uncertainty. Usually, uncertainty is reinterpreted in terms of risks, and the methodologies adopted above are used to facilitate decision making.

Optimization is the process by which the best decision may be selected. However, it is not always possible to select the best decision, owing to the influence of conflicts. For example, such conflicts may emerge in the face of resource allocation. Some major objections may arise to making the optimum allocation of resources to secure the desired results. Such objections may relate to the economic feasibility, physical viability, or political compatibility of such resource allocation. As such, the best decision may not be the most acceptable decision. In these instances, one may have to resort to satisficing in which the most acceptable alternative is selected. It may be coincidental if the best decision does become the most acceptable decision. More often than not, however, a decision other than the best one may be the most acceptable alternative.

In multijurisdictional management--involving several participants and/or decision makers, with different jurisdictions and a multiplicity of missions, goals and objec-

tives--the influence of conflict on decisions that are made attain the greatest significance. The complexity of such influences may be individually unique and may not be amenable to treatment merely by a formal analytical procedure incoporating a process of optimization. Nor may they be negotiated through a satisficing process. Various requirements are likely to involve conflicting objectives. Maximum achievement of one objective may result in less than satisfactory achievement of others. The conflict is likely to become more significant where the commitments to objectives vary from one participant/decision maker to another. Resolution of such conflict may be reached through a process of interaction, involving communication, negotiation, and bargaining. The design of decision-making in the cooperative management process emphasizes this aspect, since its main thrust is to generate compatible decisions.

Endnotes to Chapter 4

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2. Alan Walter Steiss, and Gregory Daneke, Performance Administration (Lexington, Ma., Lexington Books, 1980).

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5. Wayne Lee, Decision Theory and Human Behavior (New York, John Wiley and sons, 1971), pp.23-25.

6. David Miller, and Martin K. Starr, The Structure of Human Decisions (Englewood Cliffs, N.J., Prentice Hall, 1967), pp.108-111.

7. Radford, op. cit., pp.57-81.

8. David B. Hertz, "Risk Analysis in Capital Investment," Harvard Business Review, (January-February 1964).

Chapter V

DECISION MAKING IN COOPERATIVE MANAGEMENT

In public management, sequential decisions are made at different locations in a cyclic chain, as shown in Figure 4-3. A conflict at any location may adversely affect and interrupt the continuity of decisions in the sequence. The products of decision-making need to be be rendered compatible to all participants in order to forestall the likely adverse effect and interruptions imposed by conflicts. Further, the status of compatibility needs to be achieved for each decision in sequence.

The conventional procedure for decision making is not always equipped to ensure compatibility of decisions, and may require adaptation to bring about compatibility. The adapted decision making process may then be embedded at each location in the three tiered system of decisions. This strategy is used in the design of the cooperative management process.

The Decision Making Process in Cooperative Management

The decision making process adapted from the conventional rational approach will incorporate the following steps immediately succeeding the sensing of a problem:

1. Problem Sensing;

2. Information gathering by lead agency;

3. Assessment of the state of the system;

4. Identification of interests and concerns that must be considered and identification of agencies and interest groups representing them;

5. Organization of cooperation and establishment of forums for interactive decision making;

6. Problem confirmation and redefinition incorporating multiple concerns and issues;

7. Statement of goals and objectives;

8. Construction of conceptual model of the management systems;

9. Formulation and evaluation of alternatives;

10. Compatibility/conflict sensing;

11. Conflict management;

12. Selection of and commitment to alternatives;

The dynamics and sequence of decision making steps in cooperative management are schematically represented in Figure 5-1. It may be noted that the decision-making process for cooperative management is being developed in the context of problems relating to the environment. A theoretical, non-empirical approach is being applied for purposes of design, as indicated earlier, in the scope of this study.

The procedural guidelines that may be followed for carrying out the initial four steps of the decision making process, as described above, are explained in this chapter.

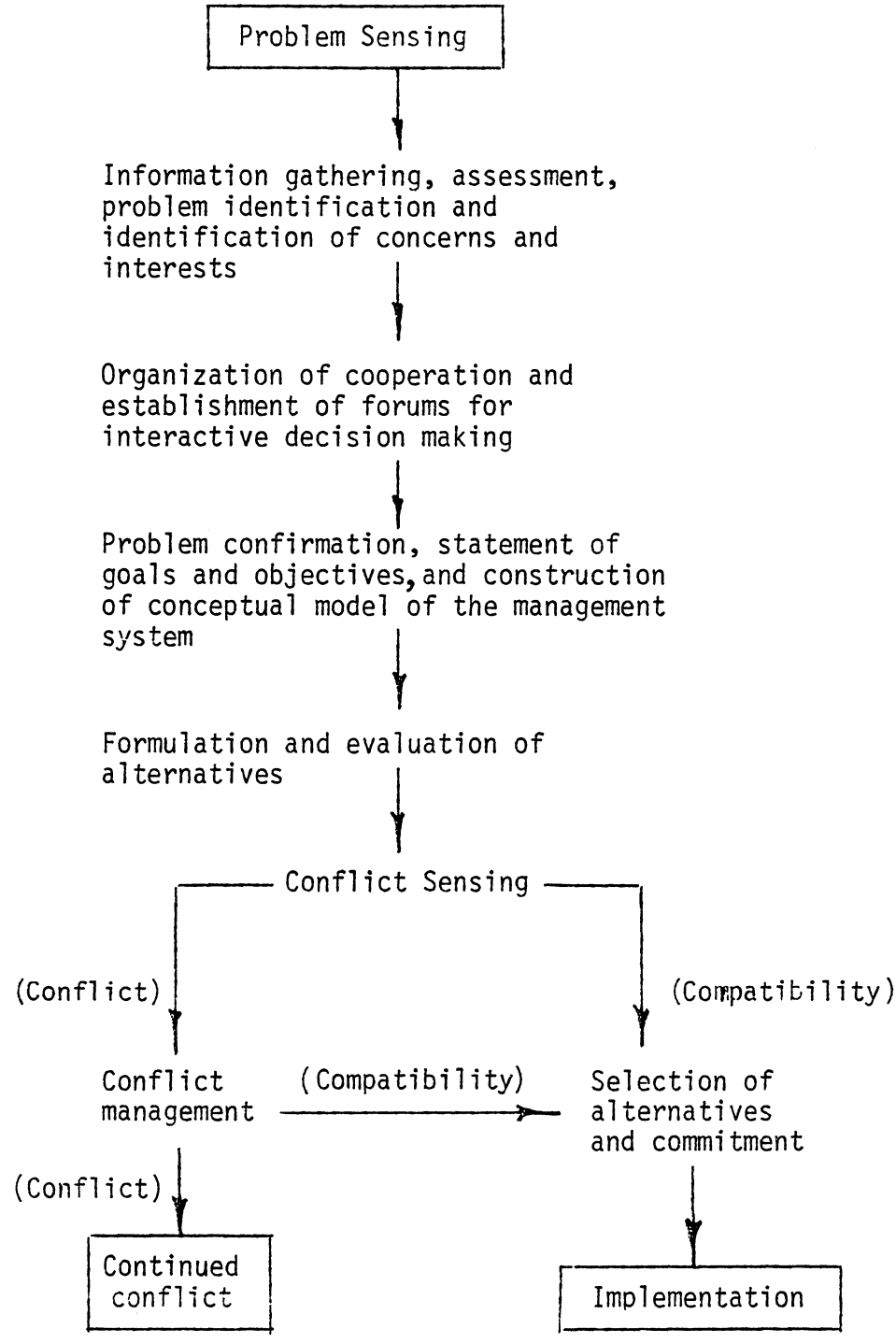


FIGURE 5-1: THE SEQUENCE OF DECISION MAKING STEPS IN COOPERATIVE MANAGEMENT

For purposes of reporting convenience, the decision process is broken up into phases based on the coherence of related steps.

Phase I. Problem Sensing

Decision making commences following the sensing of a problem which has multijurisdictional dimensions. Problem sensing may occur as the consequence of at least two principal streams of events as follows.

A part or all of the system being managed by any agency may be sensed as "out-of-phase" by that agency itself. This sensing usually occurs in consistency with the needs and expectations of the agency which, in turn, may be conditioned and oriented by its representatives' value systems, educational background and experience, and allegiance to specific disciplines or constituencies. This sensing often occurs as a consequence of intuition or experience and judgement of a percieved situation. Quite often, the problem may be obvious or latent. Sometimes, only a vague and unidentified suspicion that something is not as right as it appears to be, or a feeling of diffidence, may be all that is sensed. In some instances, the sensing of a problem may occur as a result of an analytical problem sensing approach and may occur following strategic

decisions or the review of managerial decisions and implementation of these decisions.

A part or all of the management system being managed by an agency may be sensed as "out-of-phase" by parties other than the agency, and may come to the notice of the agency directly or indirectly. This sensing occurs in consistency with the needs and expectations of the parties concerned and are again oriented by their value systems, educational backgrounds and experience, allegiance to specific constituencies and vested interests. The expression of concerns may emerge in the form of overt or covert demands, which may or may not reflect the true concerns of the parties expressing them. Quite often these demands may shroud the real concerns of the parties involved and may or may not be relevant to the activities of the agency to whom they are conveyed. The demands may be integrated or fragmented, specific or comprehensive, vague or articulate. They may be area oriented, function oriented or product oriented, and may express dissatisfaction, concern, opposition or support. They may be amenable to fulfillment by distributive policies, redistributive policies, regulative policies or self regulative policies as suggested by Steiss and Daneke[1] citing the works of Lowi, Salisbury and Salisbury and Heinz.

The agency which senses the problem becomes the key agency. The managerial agenda that is drawn up by the key agency may emerge from either of the two streams mentioned above. It should reflect the level at which the problem sensing has been conducted (strategic, managerial, or operational level). It should also be expressed as the result of the problem sensing process in either or both of the streams mentioned to set the stage for decision-making.

Phase II. Information Gathering, Assessment, Problem Identification and Identification of Interests and Concerns

A visual representation of the first part of this phase of decision making is presented in the diagram (Figure 5-2) on the following page.

Information Gathering and Assessment

Any decision-making agency involved in environmental management usually generates extensive back-up information relating to the social, physical, economic, political, behavioral and technological elements relevant to the problem setting (agenda). Such information may be necessary in order to obtain an overall characterization of the problem vis-a-vis its different dimensions.

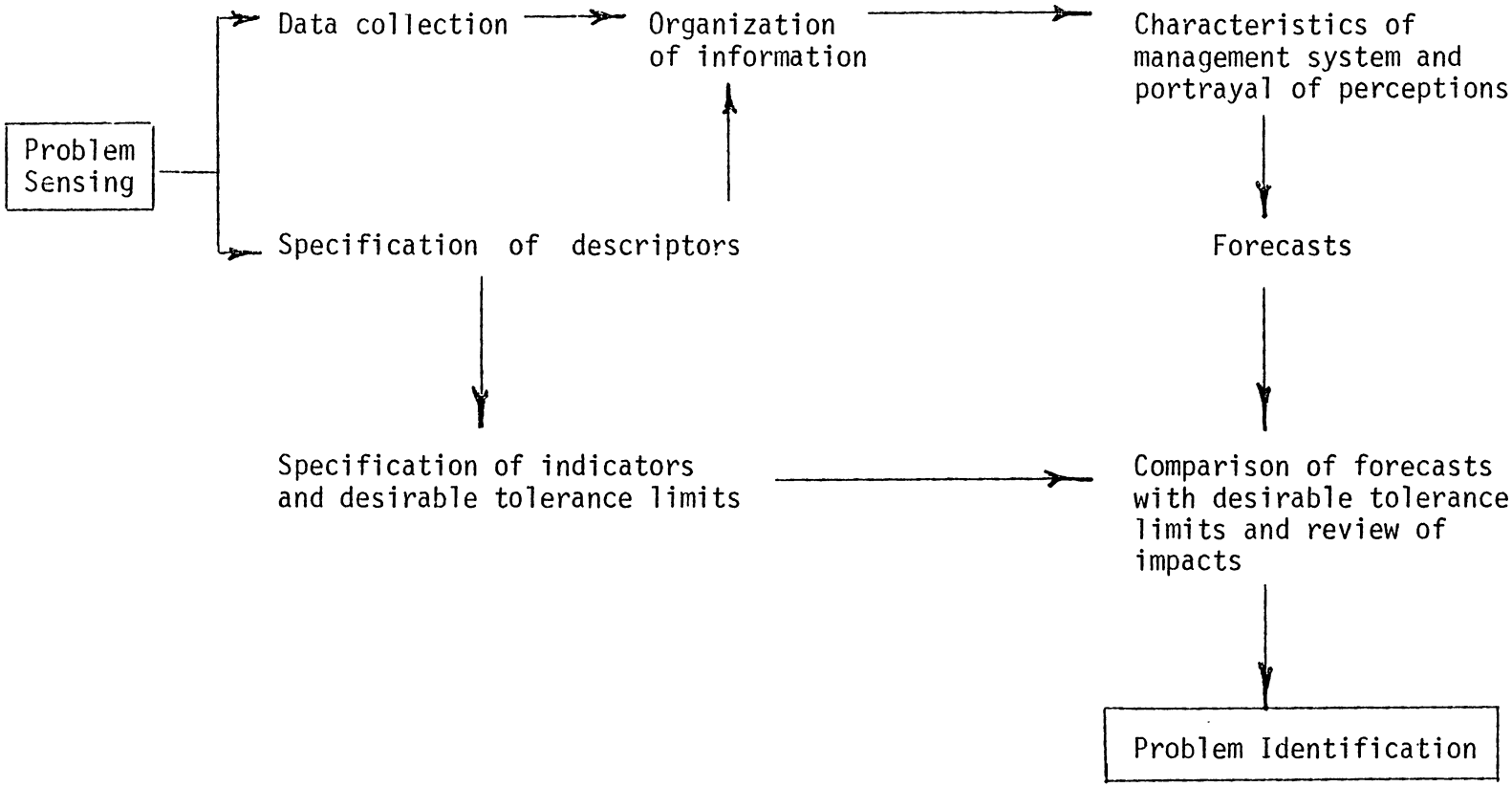


FIGURE 5-2: PHASE II. PROBLEM IDENTIFICATION

Data must be collected by a key agency based on the availability of time and resources. Such data must be relevant to the functions to be performed, the roles to be played, and the authorized responsibilities of the key agency. Two categories of data need to be collected: (1) quantitative data obtained by observation and measurement of factors pertaining to the decision situation; and (2) qualitative data. Quantitative data consist of data relating to those variables which may be easily defined, measured, and are comprehendable. Money, manpower, time, resource volume, and area are typical examples of such variables. Quantitative data form the basis for making forecasts. Qualitative data provide estimates, opinions and perceptions based on observations of the intangible and nonquantifiable elements in the decision environment. In order to collect quantitative data about intangible variables, surrogates often are used in lieu of direct measurement. Examples of such surrogates include quality of life, security of life and limb, convenience or benefits of environmental conservation.

The organization of information has to be made relevant to specific descriptor elements that collectively constitute the organization of the percieved management system, based on the data collected. Identification and specifica-

tion of descriptors is usually based on the needs and expectations of the key agency which, in turn, are conditioned and oriented by its representatives' value systems, educational background and experience, and allegiance to specific disciplines. For purposes of better articulation, appropriate means for measuring the descriptors may be devised, and measurements may be organized as information for making forecasts.

Once descriptors are established, some of them must be selected to serve as indicators and tolerance limits established for purposes of assesment. Conventionally, leads or lags in output production, shortages or excesses of available resources, or declining values may serve as indicators for assessment. Surrogate measures, such as delays, additional costs, or depreciation, may serve as measuring devices for intangible factors. Tolerance limits which are acceptable to the decision maker need to be established. Tolerance limits are usually determined consistent with the needs and expectations of the decision maker, with due consideration for those specific to parties who make demands

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* An elaboration of forecasting techniques may be obtained from a) Joseph P. Martino, Technological Forecasting for Decision Making (New York, American Elsevier Publishing Co., 1972). and b) Robert V. Ayers, Technological Forecasting and Long Range Planning (New York, McGraw Hill, 1969).

or influence the managerial agenda and for anticipated contingencies that are likely to be encountered.

Based on the organization of information, the management system may be characterized and portrayed as a scenario in which problems may be nested. Forecasts of future conditions of the management system may be conducted using such techniques as growth projections, trend analysis, and various analytical models.* It must be noted that the accuracy of predictions, based on the forecasts is subject to considerable uncertainty, which will have to be taken into account at the assessment phase.

The assessment phase usually involves a comparison between the results of the forecasts and the desired tolerance limits for the appropriate set of indicator variables. Two outcomes are likely. Either the values of indicators may fall within the prescribed limits, or they may exceed the prescribed tolerance limits. It is the latter situation which may be interpreted as a component of a problem.

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* An elaboration of forecasting techniques may be obtained from a) Joseph P. Martino, Technological Forecasting for Decision Making (New York, American Elsevier Publishing Co., 1972); and b) Robert V. Ayers, Technological Forecasting and Long Range Planning (New York, McGraw Hill, 1969).

Another important component of the assessment phase is the review of likely impacts on the management system. It may be observed that alternative decision choices may have a wide ranging set of impacts on the management system within the jurisdiction of the key agency as well as outside it. These impacts are likely to affect or influence the activities and functions of other agencies. Typical methods which may be used to determine these impacts are environmental impact assessments, social and economic impact studies, and so forth. The review of impacts as determined by these studies sets the stage for a more comprehensive understanding and definition of the real scope of the management system and of the range of considerations that may be required to be made in order to arrive at a compatible decision.

Identification of Interests and Concerns

After the state of the system has been assessed and the problem identified, the interests and concerns that need to be represented and considered for decision making must be clarified and confirmed. The impacts of decisions that are likely to be made may provide the means for identifying interests and concerns. This analysis of impacts will enable the clarification of the true scope of the problem

being addressed. It may also enable an accurate accounting of the real demands that must be considered and the agencies and groups with whom solutions may be worked through. The sequence of steps involved in this latter part of the second phase is graphically represented in the diagram (Figure 5-3) on the following page.

Each dimension of the problem or the whole problem itself may represent an area of interest and/or concern for a public agency or interest group. This may occur because any decision made in solving the problem may impact, affect or influence another jurisdiction or constituency. Also specific demands may be addressed to specific components of the system being managed. Decisions made by one agency which respond to these demands are likely to have impacts on the domain of another. It is very likely that conflict may arise if an accurate reading of all these concerns and impacts of decisions is not made.

The initial step is to review and analyze the problem sensed in terms of its component elements, issues and likely impacts of decisions. This review seeks to ensure adequate consideration of all concerns and demands expressed. The concerns and impacts may be classified relevant to the jurisdictions and constituencies likely to be

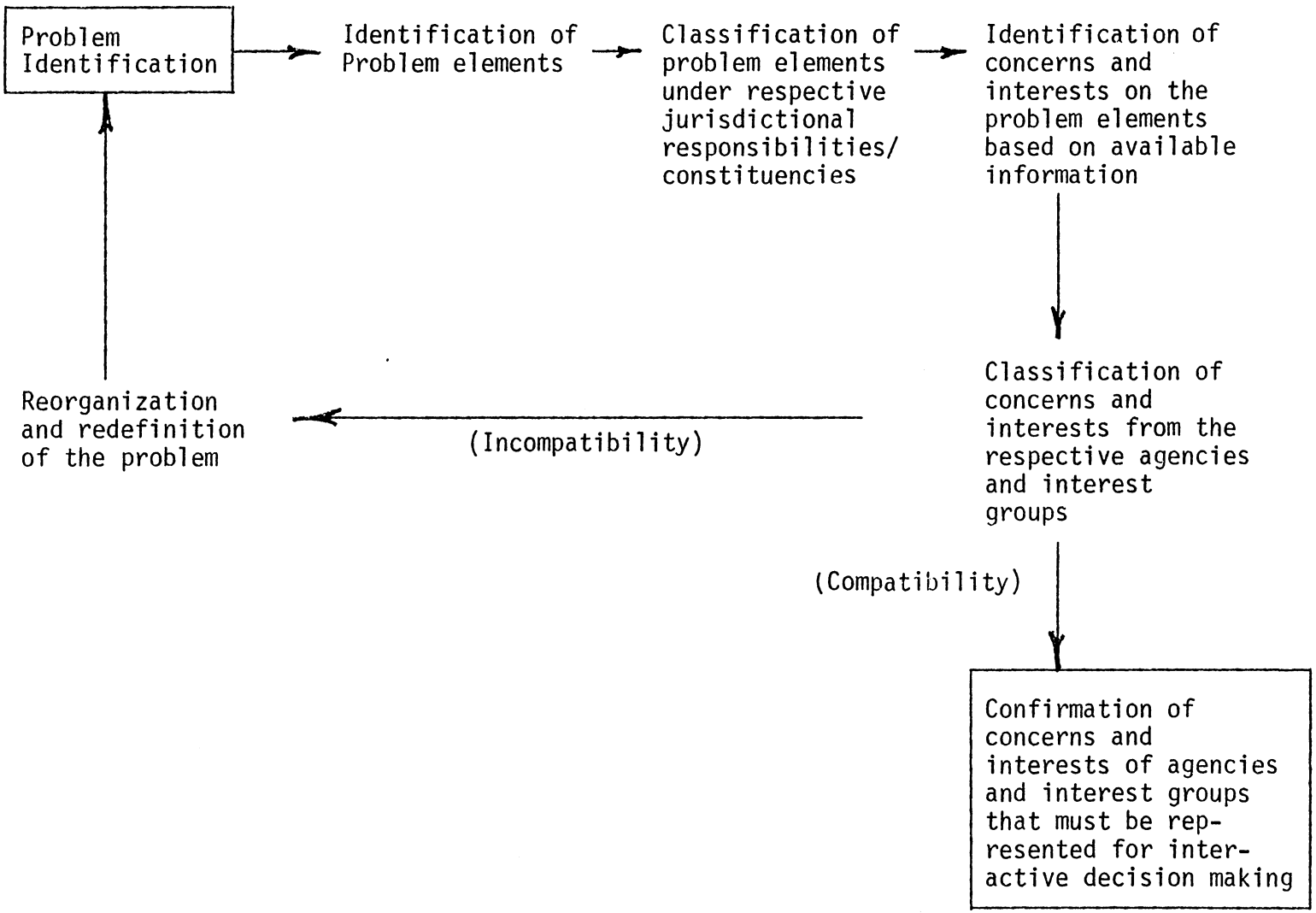


FIGURE 5-3: PHASE II. (contd.) IDENTIFICATION OF CONCERNS

impacted by any decision made and/or may have a bearing or influence on forthcoming decisions. A simple issues-constituencies or issues/concerns matrix format may be developed and used for making this classification.

The next step is to secure as much information as possible of the nature of impacts, concerns, interests, and priorities of each agency/interest group in respect of each of the issues being addressed. This elaboration may be based on current knowledge, information and intuition. A more detailed verification will follow later. From this exercise, the analyst may be expected to become familiar with the complexity of the decision making environment that has to be negotiated.

The scenario thus generated may not always be fully accurate and reliable, however. Additional reconnaissance may be required to clarify the validity and accuracy of the first-run check-list of issues versus concerns and impacts. This reconnaissance may not only provide the needed clarifications and confirmations, but may also provide an opportunity to gain some additional familiarity with interjurisdictional impacts in the specific geographic area or area of functional specialization. Issues, relevant structures and levels of government, extent of jurisdiction, levels of

authority and responsibility, spans of control, chains of command, organization of demand groups, power, authority and influence to force decisions and so forth may be verified through this exercise. This reconnaissance is also likely to provide an opportunity to conduct preliminary negotiations with potential participants in cooperative management. It may also facilitate their familiarity of the decision environment. Such preliminary negotiations tend to promote potentials for support, and increased responsiveness for cooperation and involvement in the decision making process as appropriate.

Two outcomes are likely to emerge out of this process of reconnaissance and clarification. On the one hand, the impacts of likely decisions, together with the concerns and interests of agencies and interest groups may be confirmed. In this case, it signals the readiness of the key agency to mobilize support and cooperation for decision making of relevant agencies and interest groups.

On the other hand, the clarification of impacts, issues and concerns is likely to unravel a whole new range of problem dimensions that have not been considered. In this eventuality, a second iteration of information gathering, assessments and problem identification may be conducted. A

number of iterations may be necessary until all impacts, concerns and interests are adequately encompassed. The actual number of iterations will depend upon the timing when the key agency is satisfied that all concerns and interests are adequately accounted for, and when the managerial agenda adequately and appropriately reflects them. There is no set formula for determining the number of iterations. A number which is labeled "manageable" may influence the actual number of iterations that are actually resorted to.

Endnotes to Chapter 5

1. Alan Walter Steiss and Gregory A Daneke. Performance Administration. Lexington, Massachussetts, Lexington Books, 1980. pp.121-140.

Chapter VI

PHASE III: ORGANIZATION OF COOPERATION AND ESTABLISHMENT OF AN INTERACTIVE DECISION MAKING FORUM

Characteristics of an Interactive Decision Making Forum

One of the most critical parts of the cooperative management process is the organization of cooperation and the establishment of a forum for continuous interaction among legitimate participants in decision making. The importance of cooperation in multijurisdictional management is explained in Appendix H. This forum attempts to provide a temporary and neutral arena in which interjurisdictional issues may be tabled and discussed. Ideas may be introduced easily, legitimately, and without inhibition, regardless of concern for their competing with solutions already considered and accepted. New relationships may be formed, and new roles designated.

Values of participants may be clarified in such a forum. An opportunity is provided for parties to confront one another with their value differences. The skills of the parties may be strengthened in such areas as policy development and implementation, value clarification, conflict management, and interjurisdictional negotiation. Oppurtunities are likely for creating new relationships and strengthening existing ties through which support may be

mobilized. The forum may also serve as a medium for sharing, exchange, and circulation of information.

The forum provides parties, normally excluded from the decision-making process, with an alternative means and opportunity to secure their acknowledgement in a politically sensitive arena. It also assists in identifying and establishing their leadership and credibility in an inter-jurisdictional system.

It is essential that the organizational autonomy of the forum be protected so that participants do not feel threatened and their power and authority are not questioned. The forum should enable voluntary selection of issues and provide opportunities for discussing all the issues raised. New ideas should be welcomed from all sources. Conventional approaches should be transcended to increase uninhibited expression of participant feelings in a constructive way. Controversial issues should be given legitimate hearings. Pressures and agendas of everyday contexts should be eliminated. In this way, issues may be examined, without undue inhibitions, in different lights, and, through varying approaches.

Finally, the forum should provide a means for participants to learn what others are doing. In this way, partic-

ipants may learn how their inputs could contribute to the development of solutions for dealing with common problems.

The forum, as suggested in this study, is not a "one-shot" assembly of participants. Rather, the forum represents an assembly which facilitates continuous dialogue. This dialogue enables the address of complex issues that must be resolved to achieve compatible decisions in environmental management. As such, the actual assembly may be temporary, but its functions are continuous and on-going. Further, different sets of legitimate participants may be involved. Their identity may depend upon the issues being addressed, and the level of decision making.* An example of this continuous dialogue approach is the State-wide Citizens Forum which has been organized in 1975 as part of the Coastal Zone Management Program in the State of Hawaii. This Forum has operated for the past six years in examining various issues involved in the development and implementation of Hawaii's CZM Plan. The Citizens Forum has operated in tandem with a Technical Advisory Committee composed of State and Technical agency personnel. Other examples are public hearings, advisory boards, special committees, task

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* For instance, the assembly of legitimate participants involved in making strategic management decisions is not necessarily and/or likely to be composed of the same set of legitimate participants involved in making operational decisions.

forces and so forth. All these are rigid and formal. Their composition of membership is firmly established. The forum, as suggested, is a formal but more flexible arrangement. Membership may continuously change -- even the lead agency identity may change -- depending upon the issues being addressed and the levels at which decisions are made. The details of steps in this Phase are illustrataed in Fig. 6-1.

Method of Organizing the Forum

The preceding phase helped to identify the legitimate participants, including both public agencies as well as private interest groups. These participants should form a cooperative partnership for decision making. There are three stages involved : (1) Identification and designation of the lead agency; (2) Organization of the forum, and (3) Organization of the partnership.

Identification and Designation of Lead Agency

By definition, the key agency was the initiator of the cooperative management process. In phases I and II, discussed in the previous chapter, the key agency was responsible for the sensing and identification of the problem, as well as the identification of legitimate participants, rep-

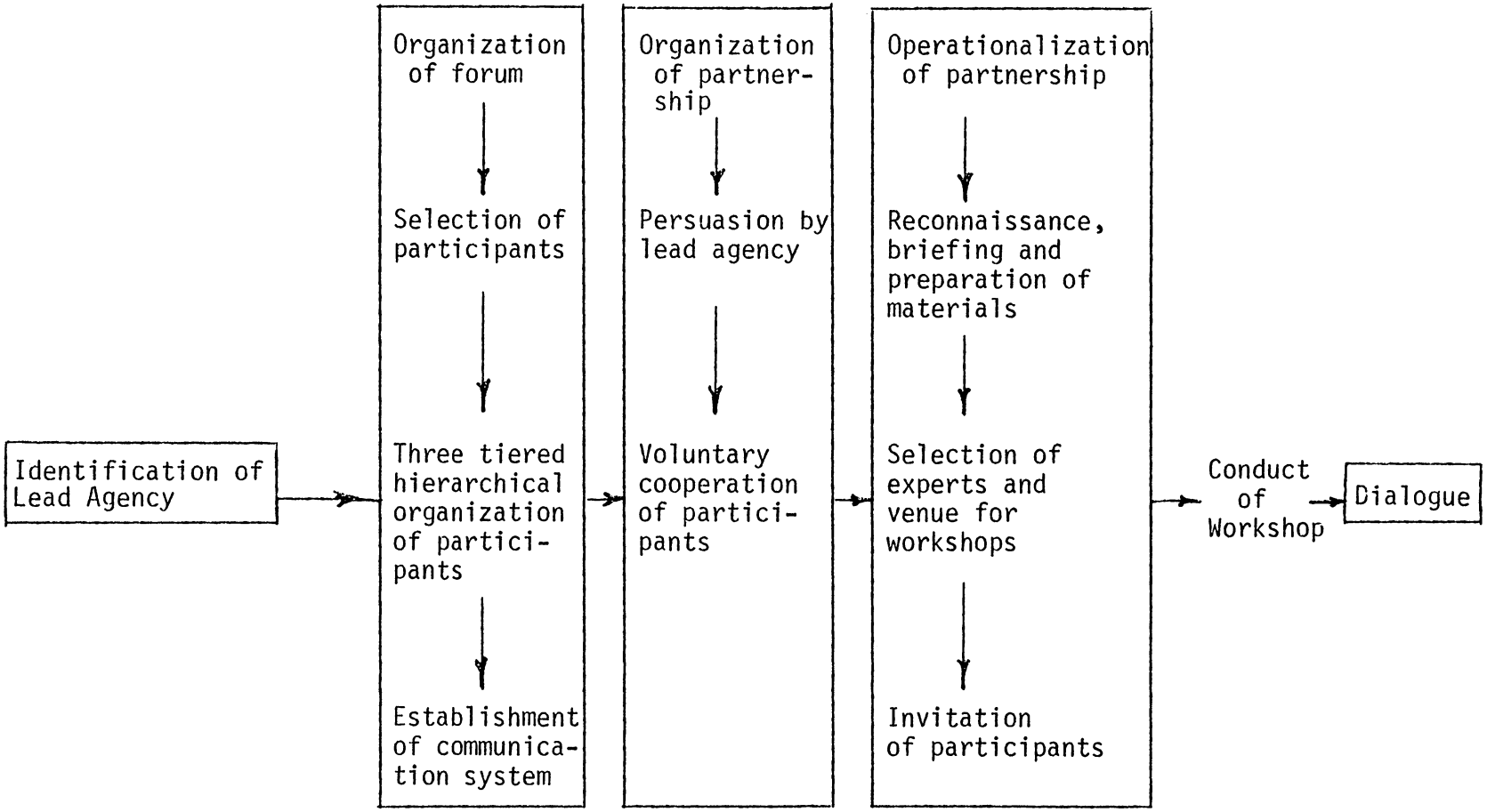


FIGURE 6-1: PHASE III. ORGANIZATION OF COOPERATION

resenting the different concerns and interests. The key agency status may have occurred at the level of agency head, department head, or section head in the chain of command of a federal, state, or local management organization. The key agency status does not automatically qualify the key agency for lead agency status, by definition. The key agency status only provides the rationale for the identity of the primary chain of command from which the lead agency may be designated. The following operational principle may be applied to determine the appropriate lead agency. The lead agency status should occur at least at the level of the key agency or the highest level represented in any other chains of command involved, whichever is higher.* The justification for this arrangement stems from the fact that the credibility for the lead agency is greatest (in respect of power, authority, and capacity to influence other legitimate participants and securing their cooperation and/or collaboration) at a level at par with the highest level represented in other chains of command represented in the

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* To illustrate, if the key agency was a department, and the other legitimate participants included another agency head and a section head, the department qualifies only as the key agency. The lead agency designation will have to be made at the higher level of agency, within the same chain of command in which the key agency is a part. In another instance, if the key agency was an agency and the other legitimate participants included only section heads and department heads, the key agency will attain the status of lead agency, as well.

group of legitimate participants.

Organization of the Forum

Two components are involved in the organization of the forum: (1) Selection of participants, and (2) Hierarchical organization of the forum. The structure of agencies and jurisdictions has to be examined in order to select the participants at the forum.* In multijurisdictional management, participants from different agencies -- representing departments whose functions or activities have common bearings on the problem, wielding different levels of power and authority -- may be required to interact with each other and work towards compatible decisions.

The forum in cooperative management provides a setting for interaction among this amorphous assortment of participants. The organization of the forum, however, should distinguish between collaborative, cooperative, and coordinative relationships among the participants. The mechanics of organization of the forum in respect of the above three

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* For purposes of administration, activities are usually grouped into units through a process of departmentation. Departmentation takes place at all levels in an organization. Authority for decision making is normally delegated at different levels within the chain of command in each department. This horizontal and vertical organization and separation of responsibility and authority characterizes the complexity of any typical organization.

relationships is illustrated in Appendix I. It may be observed that the potential participants include representatives from those agencies, departments, or sections that are needed to cooperate and/or collaborate. The representation should occur at the highest and most appropriate levels of authority, responsibility, and power to make decisions on behalf of their respective jurisdictions, corresponding to those of the lead agency. It is suggested that appropriate representatives at the forum may bring members of support personnel who may be familiar with the local issues or have specific knowledge to support the arguments put forward. The actual number of such support personnel may vary from one organization to another. The number should not be too unwieldy to diffuse the discussion into matters of technical detail. By the same token, all personnel who have authority, pertinent to actions relating to the issues at stake, must be represented. In this way commitments may be made without having to be ratified later from "forces that be".

The preceding discussion suggests that the forum cannot be organized and represented consistently in one body involving actors from strategic, managerial, and operational levels of different agencies, assembled together. There is also likely to be considerable inconsistency in

the levels of active participation if representatives from different levels in different chains of command are called upon to work together. There may even be some resistance by some of the participants to work with such an arrangement. Some separation of representatives has to be made. It is recommended that all agencies operating at the strategic level may interact with one another at a common forum. Separate corresponding forums may be set up at managerial and operational levels. In this way, representatives operating at the same level in the chain of command may form a more cohesive and coherent group than a mixed group of representatives from different levels of the chains of command of different agencies.

This suggests a three tiered system of forums. The agencies involved in formulating policy may be represented at the forum at the strategic level; the agencies with managerial responsibilities may be represented at the forum at the managerial level; and agencies performing tasks may be represented at the forum at the operational level. Agency heads may represent the respective agencies at the forum at the strategic level. Department heads may be represented at the forum at the managerial level and section heads may be represented at the operational level.

A two way communication system is to be installed linking the forum at the strategic level to that at the operational level, through the forum at the managerial level. The "feed-forward" flow of information from the forum at the operational level to that at the strategic level may provide reports on such aspects as problem sensing, impact assessments, problem identification and information support relating to the formulation and evaluation of alternatives. This information may be used as inputs for decision making at the respective upper tier forums. Correspondingly, the "feedback" flow of information and direction from the upper tier forums to that at the operational level may provide reports on such aspects as the progress and results of decision making at the upper tiers. Guidelines for policies, programs and projects that have been agreed upon may also be conveyed to the lower order forums. The upper tier forums may, thereby, serve as coordinators for decisions at lower tier forums.

The three tiered system of forums enables continuous dialogue and negotiations to be maintained at all levels of decision making, simultaneously. It also enables interagency coordination of decisions at lower levels in the hierarchy. By this arrangement, the first safeguard against interjurisdictional interagency conflict may have been set in place.

Organization of the Partnership

The next step is to secure the participation of legitimate participants whose inputs may influence the process of working towards a compatible decision. It must be remembered that in voluntary cooperation, there is usually no provision for mustering the participants into an interactive decision making forum by direction from a superior coordinating body. In fact, there may not be such an interjurisdictional coordinator in existence in most cases. The assembly of appropriate participants has to occur through their own motivation or that of a persuader. In cooperative management, the lead agency has to provide this motivation. It should persuade the appropriate participants to volunteer their participation at the forum for decision making. Actual participation is therefore pivoted on the means for convincing persuasion.

The key to persuasion is to enlighten and secure the acknowledgement of the different parties that every participant has a stake in the decision being made. The participants must be convinced that only by participating in the decision making process can the ensuing decisions be influenced and rendered compatible to their own interests and concerns. Cooperative management provides an opportunity for different constituencies to represent their interests and indicate their concerns. It also provides

opportunities to protect and safeguard their interests and negotiate compatible decisions which may have minimal negative impacts on their activities and functions. The incentive to voluntary participation stems from the fact that advocacy of parochial interests may not occur without representation and participation. The decisions are likely to ignore extrajurisdictional impacts, with adverse consequences if the concerns and interests of the affected agencies are neither represented nor advocated. The lead agency is responsible for persuading the participants to involve theirselves in the forum. An illustrative example is provided in Appendix J.

Operationalization of Partnership

The next step is to operationalize the partnership of legitimate participants. Three steps are involved to initiate this partnership. They are reconnaissance, contacting and generating attendance.

A preliminary reconnaissance must first be conducted to know the territory and secure the first contact. Initial briefing sessions must be conducted by the sponsoring lead agency to design the tentative scope, format, agenda, and auspices of the proposed cooperative interaction. Letters of invitation, compilation of relevant and current litera-

ture relating to the problem, alternative approaches for their solution, preparation of issue papers, handouts, readers, and exercises should be assembled and distributed. All material that is prepared relating to the problem and its solution should be carefully edited to obviate the semblance of rigidity and inflexibility and to avoid any negative responses and defensiveness. The material should highlight the likely impacts that may occur and may have a bearing on the jurisdictional activities and functions of other agencies. It should also clearly highlight the opportunities and benefits that are at stake to influence a compatible decision through participation. It should further stress the disadvantages that may have to be confronted if such participation and representation of interests are not forthcoming.

It is also advisable to assemble a team of non-partisan experts possessing required knowledge in selected areas. This group should possess skills for interpersonal communication, perceptions, conflict management, group decision making, effective group behavior, and should be prepared to deal with issues of intergroup collaboration, questions of political roles, and impacts on political behavior.

A suitable venue should be selected to conduct interactive dialogue. Adequate accommodation for all participants should be made available for the entire duration of the forum exercise.

Workshop Format and Continuing Dialogue

The workshop suggests a suitable format for the ongoing activities and functions of the forum. The workshop is considered as a subset of the forum which will punctuate its proceedings.

The workshop possesses the attributes of being a temporary, neutral, and non-threatening arena for confrontation, interaction and dialogue. It offers equal opportunities of representation and expression within the realm of the prescribed agenda. Such a workshop may serve as an eye-opener to new ideas and innovations. It could provide an educational experience to the participants concerning dependency relationships and the need for cooperation. It may permit participants to work their individual interjurisdictional agendas with each other under neutral auspices. It could trigger discussion of new issues not normally considered, and may help to identify common issues and reach compatibility. It might provide a mechanism to demonstrate the concern of the sponsoring agency and may facilitate the

establishment of interjurisdictional agency networks. Participants may be assisted in adapting to changed relationships among themselves, their jurisdictions, and their power and authority. Interdependent roles and responsibilities of participants in an interjurisdictional arena may also be clarified.

The workshop format is adopted for purposes of the conduct of proceedings at the forum on account of the aforementioned advantages. This does not discount the fact that the workshop does not possess any inherent disadvantages. The workshop is founded on the premise that participants will cooperate in its proceedings. Several factors may impede such cooperation. Such factors as lack of awareness for the need to interact with others, an isolationist view of individual roles, turf protection and fear of external intervention in internal affairs of an agency, defensive postures of participants, confidence to "go it alone", insufficient experience in participation at workshops, and the absence of real motivation or rewards in participating, among others, may be detrimental to the conduct of the workshop. Further, the workshop may deteriorate into the initial battleground, where the lines of fire are drawn. Any scope for cooperative interaction may be fully stifled in such a hostile decision making environment. In acknowl-

edging these disadvantages, it is felt that the advantages tend to outweigh the disadvantages. Therefore the selection of the workshop is justified.

Procedures for Conduct of Dialogue

Once the partnership has been organized, the agenda of discussions to be conducted at each of the workshop sessions should be carefully drawn up for presentation by the lead agency. The agenda should consist of three components:

1. An opening presentation of the main purpose and scope of the discussion.
2. Smaller group discussions of specific problem modules.
3. A synthesis of the products of discussion and summary of commitments and recommendations.

Once the workshops are underway on a frequent basis, the opening presentations may be substituted by a short review session of past workshops, and their achievements, and the approval of the minutes of previous workshops, if any, as a backdrop and starting point for the proceedings of the current workshop. Any specific issues that may be required, or suggested may be included in the workshop agenda.

No discussion is provided here about the conduct of the workshop. Complete details for conducting a typical interjurisdictional workshop can be obtained from Vinton D. Fisher and F. Gerald Brown, Interjurisdictional Policy Makers Workshop: A Learning Package About Interjurisdictional Policy Management for Elected, Appointed and Citizen Leaders. (Storrs, Conn., Institute of Public Service, University of Connecticut, August 1977). Appropriate measures for leading, coordinating, and directing the workshop should be made, and their results should be synthesized and recorded in the form of minutes. The minutes reflecting points of compatibility and opposition must be recorded and reported. Copies of these minutes should be circulated to all participants before the next workshop is convened and their approval sought at the start of each subsequent workshop.

Several scenarios are possible at several stages of this phase:

1. All agencies agree to cooperate and come together.
2. Some agencies agree to cooperate and some do not.
3. None of the agencies contacted agree to cooperate.

These scenarios may occur prior to, during, or after one or more workshops have been conducted. The best scenario is

the first one which virtually assures the tenure of the assembly. In the event of the second or the third scenarios occurring, additional efforts must be initiated to mobilize cooperation. The most logical first step is to verify the reasons for non-cooperation. Depending on the reasons that may be forthcoming, three alternative courses of action are possible:

1. The agenda, program, venue, or modules of discussion may be altered to suit the needs of the noncooperating party without altering the major scope of the interaction.

2. A new lead agency, considered more nonpartisan and acceptable to the noncooperating party, may be identified and designated. This may result in cooperation with or without recourse to alternative 1 above.

3. Special techniques to mobilize cooperation, as discussed in Appendix G may be brought to bear. This alternative may be applied in conjunction with alternative 2 above.

The selection of alternative 2 or 3 requires clarification and acceptance of the new terms of reference, with the rest of the cooperating participants. This implies an additional round of iterations of phase III to guarantee that the cooperation of other members will not be disturbed or diminished by the proposed modifications. The above process of mobilizing cooperation is schematically represented in the Figure 6-2.

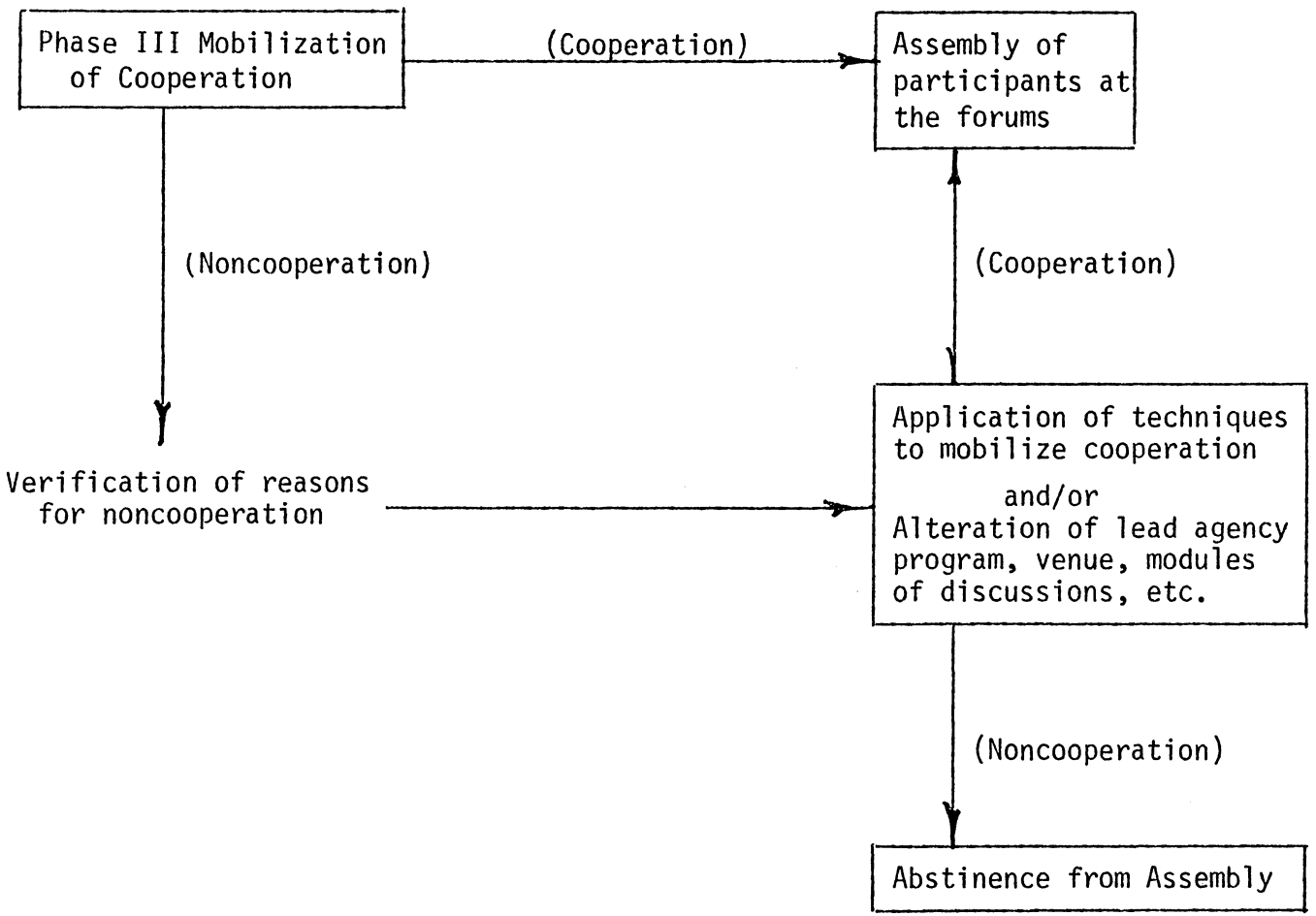


FIGURE 6-2: ADDITIONAL STEPS TO MOBILIZE COOPERATION

Despite these efforts, it may still be inevitable that some agencies may avoid cooperation for reasons not expressed. If the grounds for their cooperation cannot be accommodated without detriment to the rest of the cooperating body, the only option may be to accommodate this non-cooperation and continue with the proceedings of interactive decision making with or without token representation of the abstaining participants.

One other possibility that may occur may be the alienation of the lead agency itself. In this eventuality, the forum may collapse altogether, or another lead agency may require to be designated. The latter may involve a complete recasting of the process discussed so far, commencing with the sensing of problems and definition of the managerial agenda of the new lead agency as suggested in the previous phase. Without ignoring these contingencies, the succeeding parts of the paradigm contained in the following chapters are designed assuming that the forum may have been established.

Chapter VII

PHASE IV: FORMULATION AND EVALUATION OF ALTERNATIVES

Phase III provided the procedures for assembling the cooperative body of participants for interactive decision making. The point of departure from that phase assumed that the forum had been established. The next step is to conduct the actual interaction process for problem solving.

Formulating Alternatives

The following diagram (Figure 7-1) provides a schematic representation of procedural steps involved in the formulation of alternatives.

Once the assembly of participants has been convened, the initial step in this phase is to obtain confirmation of the problem at hand. At this point, the key agency working as or with the lead agency is the only unit in the forum which may be fully familiar with the overall problem and the constituent issues. The lead agency now has the responsibility to inform other participants about the perceptions of the management system, the definition of the problem and the issues that must be addressed. The findings of the issues-concerns matrix may then be presented before the forum identifying and linking the issues with those directly or indirectly associated with them. In doing so,

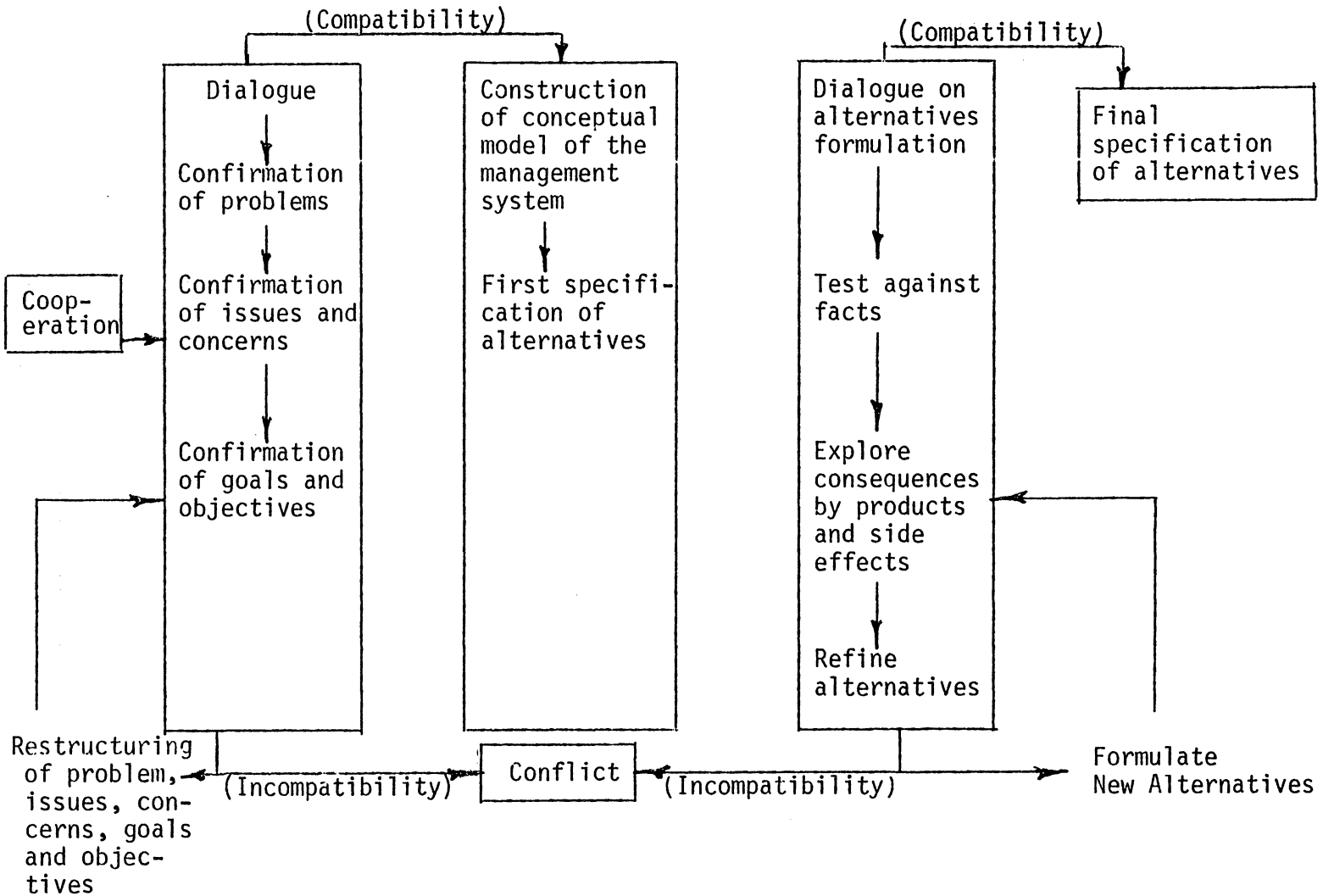


FIGURE 7-1: PHASE IV. ALTERNATIVES FORMULATION

the lead agency may open up discussions and debate from the floor to secure clarifications, confirmations and contradictions. There are likely to be variations in opinion about the perception of the management system. There may be misrepresentation of concerns and their translation in the issues-concerns matrix. It is essential that there is full accord about the identity, scope and boundary of the management system, as this is critical to the formulation of alternatives. It is also critical that an accurate reading of concerns be made and related to the constituencies that support them, failing which the wrong issues may be addressed, and the real sources of potential conflict may be left unidentified. It is very likely that several new issues, not originally considered, may emerge as additional factors for consideration. The issues that are brought up may facilitate the redefinition of the problem boundaries. Again, the significance, importance, and degrees of emphases of each issue may be clarified to facilitate consideration of priorities in decision making. Care should be taken in the specification of issues, as randomness at this stage may diffuse the problem considerably. Also, assignment of special significance to some issues and summary discard of others should be avoided to prevent any likelihood of alienation of agencies sponsoring or opposing such issues.

The Delphi technique may be used for the determination and clarification of issues. Two or three iterations may facilitate the narrowing down of the number of issues to a manageable size. Ranking of issues may also be attempted using the Delphi technique. The outcome of this step is very likely to be a ranked ordering of issues and concerns that are considered critical in problem solving.

Goals, objectives and policies may be formulated based on the articulation of the problem, and the ranking of critical issues for consideration. Goals identify the desired state of the management system over a given period in time. Objectives determine desired landmarks, relating to the specific issues which have to be addressed, which must be attained in achieving the desired goal. Policies represent the guidelines for action by which the objectives may be attained.

Whereas two or three overall goals may be articulated in the process of goal specification, several objectives and policies are likely to be suggested by the different participants. Care should be taken to ensure that all objectives and policies are relevant to the issues being addressed, and that they are constructively formulated towards goal achievement. In recording the formulation of

objectives and policies, it is essential to verify the validity and justification for their inclusion. The Delphi technique may once again be utilized to secure the acknowledgement of all participants of the selection of multiple goals, objectives and policies.*

It is not the purpose here to elaborate on the formulation process of goals and objectives, as this will vary from one problem to another. Moreover, this process is extensively covered in the literature on the subject. It is very likely that goals and objectives may have been formulated by each of the participants in preparation for the assembly. What is critical, once the assembly is convened, is to secure acknowledgement of the range of goals and objectives, their priorities, and standards for evaluation.

Based upon the likely acceptance of the scope of the problem, and the array of goals and objectives, a conceptual model of the management system may be developed as a means to obtain a better understanding of the overall complexity of the problem setting. This conceptual model need

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* The purpose of this exercise is not to reach a complete consensus among, or to unify, the goals and objectives. Such unification would destroy the diversity of a pluralistic society, and could be viewed as an imposition of unacceptable restrictions on the rights of free action of the participants. In this light, some objectives are very likely to be in conflict with some others. This is to be taken as one of the given constraints to problem solving.

not be an elaborate simulation model, as such a model is likely to be very cumbersome, esoteric, and time consuming. The conceptual model is expected to lay out the overall structure of the problem, depicting the various component elements that represent the issues, and the interrelatedness of the component issues. This model is intended to demonstrate and convince the participants of the interdependency of one group with another. It may enable a more comprehensive approach to problem solving. It may be noted that considerable detail may be spared in formulating the model. This is suggested since the detailing process may provide room for overplaying some areas and underplaying some others. In doing so, some participants may feel slighted and alienated, and may interpret that the lesser level of detail provided, may be an indicator of prejudicial treatment accorded to their interests.

The purpose of having the team of professional experts in the forum is to facilitate the development of the conceptual model. They may provide the interdisciplinary dimensions to the array of issues that must be considered and may contribute towards a better non-partisan understanding of the complexity of multiple considerations that are involved. They may also provide any back-up technical know-how in matters of detail in the respective areas of

their specialization by elaborating, explaining, or clarifying specific points of interest or misunderstanding.

The conceptual model should be subject to adjustments until a final compatible format and structure is finally achieved. A compatible format is one that is generally acceptable to all participants. The model should then provide the mechanism for working out and testing the alternative strategies to solve the problem.

The first generation of alternatives, formulated, should address each issue and be sensitive to each objective, or combinations of objectives that have to be fulfilled. This generation of alternatives must then be subjected to tests, against relevant factual information, to explore the consequences, byproducts, and side-effects consequent on their application.

Four basic outcomes are possible. The consequences are likely to affect functional, geographic, or jurisdictional areas beyond the confines of the problem boundary already established. At the other extreme, the consequences within the confines of the problem boundary may not be found to be fully desirable. A third outcome is a combination of both of the above. The fourth outcome, quite obviously the most desirable one, may be that the consequences are within the

confines of the problem boundary and may be fully desirable.

In the first contingency, a completely new iteration of determining the problem boundary has to be conducted so that the consequences likely to occur, in fact, will become part of the consideration for selection. Another alternative is to abandon those alternatives which tend to create outcomes beyond the scope of the problem area, and formulate new ones which may not affect such broader areas.

The second contingency is likely to arise if the range of alternatives is only partially complete, or if some alternatives tend to create undesirable* outcomes, or both. In the first case, the range of alternatives should be complemented by additional alternatives which encompass all the issues under consideration. In the second case, alternatives may have to be redefined and their scope altered to prevent the consequence of undesirable outcomes. Another means may be to devise a system of subsidiary alternatives to counter the undesirable consequences of the first generation alternatives. A combination of these two measures might suffice when the two cases mentioned occur

* Undesirable outcomes are to be differentiated from unacceptable outcomes. For example, emissions from automobile engines without catalytic convertors produce undesirable air pollution, which may or may not be acceptable.

simultaneously.

In the third contingency, the measures suggested for the first two contingencies, as described above, may be applied in combination. As mentioned earlier, the fourth contingency may be the ideal, and measures should be taken to ensure this outcome every time.

To conclude this component of phase IV, each alternative must be refined and fine tuned for workability and feasibility before a final specification of the range of alternatives can be recorded.

The final outcome of this component envisages two possibilities. Either the alternatives are integrated or they are in aggregate. Integrated strategies may involve mutually interrelated alternatives where due consideration for interfaces between alternatives is given adequate consideration.* Aggregate strategies may involve approaches that are formulated without adequate consideration for interactions and interfaces among alternatives.**

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* For example, an integrated approach to regulate automobile emissions would treat automobile emissions as part of a larger system of air pollution, and work out a composite, holistic array of alternatives which deal with air pollution as a whole. This array would then be scaled down to the regulation of automobile emissions as a part of a program of air pollution regulation.

** This is the converse of integrated strategies. Regulation of automobile emissions would be considered independ-

In this phase, it is more than likely that aggregation rather than integration may characterize the outcome. The lack of integration does not signify lack of cooperation by the participants. It only symbolizes the fact that the alternatives may not yet have been synthesized after adequate consideration for trade offs. A preliminary attempt at synthesis may be made in this phase. It is considered more desirable, however, to carry the synthesis forward to the next component of this phase -- the evaluation of alternatives -- so that such integration may be justified after adequate consideration of evaluated results of tradeoffs.

Evaluating Alternatives

The outcome of the previous steps are likely to be an array of technically feasible and physically workable alternatives. When these alternatives are synthesized in a variety of unique combinations, the given problem may be solved. It must be noted that independently each alternative may be technically feasible and physically workable, but some alternatives may be technically incompatible with some others.*

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ently, and alternative strategies will be formulated individually for each aspect of pollution by automobile emissions. The collectivity of strategies will constitute the aggregate.

The next step, therefore, is to synthesize and combine alternatives to form arrays of strategies which, when applied, may contribute to a wide array of alternative end states of the management system. The systems approach, among others, may be employed to synthesize the various alternatives. None of the alternatives should be discarded as unacceptable. Also no designation of any alternatives as the "best" should be made, since compromises may, invariably have to be made later on. Every possible combination should be explored and evaluated before any are discarded as being unacceptable. In the long run, however, optimizing may have to give way to satisficing.

Once the alternatives have been integrated, it is necessary to determine which strategy is the most desirable in terms of certain specified criteria. This determination is

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* A typical multijurisdictional management setting -- wetland management -- is selected for purposes of illustration. Two legitimate objectives may be the protection and preservation of marshes in pristine conditions, and the development of these areas as tourist attractions. The two objectives automatically imply conflicts, since a strategy for developing tourism facilities involves measures for draining the marshes, stabilizing the soils, introducing access roads and buildings into the area, all of which clash with strategies for preserving the marsh in its natural state which preclude any form of man made alterations to the natural environment. Synthesizing these alternatives into an integrated strategy would require due consideration of trade-offs by selecting one or the other, and may involve the development of an optimum mix of preservation and development which will satisfy both objectives with mutual adjustments between one and the other.

made following a process of comparative evaluation of each alternative strategy in relation to the following criteria:

1. Physical feasibility -- the practical workability of each alternative strategy;

2. Effectiveness -- the capacity to achieve desired results;

3. Economy -- the capacity to optimize utilization of input resources - manpower, money, time, etc.;

4. Efficiency -- the capacity to achieve peak productivity of given resources;

5. Timing -- the capacity to complete preceding tasks and/or commence succeeding tasks according to given schedules of starting and completion;

6. Benefits -- the capacity to miximize desirable spinoff effects and to minimize undesirable side effects;

7. Opportunity costs -- the capacity to minimize losses of favorable outcomes of one alternative by choosing those of another; and

8. Risks -- the enhanced predictability of outcomes of one alternative over that of another.

The above list is by no means comprehensive and there is no set priority or sequential order in which the above evaluations are to be conducted. In some cases, some of the evaluations may not be performed at all, if all parties consider that those criteria are unimportant.

Minimum levels of tolerance should be established for each of the above criteria. Measuring methods and devices should be set up to gauge the performance of each alterna-

tive strategy in meeting or surpassing these tolerance limits. Direct measures or proxies may be used for measuring each criterion. Key value judgments are frequently involved in using proxies. Some proxies may not have equal applicability to different groups of people. Since many participants are involved, several proxies representing different measuring scales for the same criterion (acceptable to different groups) may be used simultaneously for measurement. In some instances, ordinal ranking in terms of subjective preferences may also be used for measuring performance of some alternatives in terms of such criteria as benefits and/or opportunity costs.

Based on the tests conducted, alternative strategies may be accepted, modified, adapted, or rejected, depending on how satisfactorily they may satisfy minimum tolerance requirements. All strategies may then be ranked in order of merit. The evaluation component of this phase is schematically represented in Figure 7-2.

The evaluation of alternatives may be done by different groups of participants jointly or independently. Only the criteria for evaluation and the tolerance limits may be consistently observed by each group. As such, the evaluation exercises are very likely to culminate in an array of

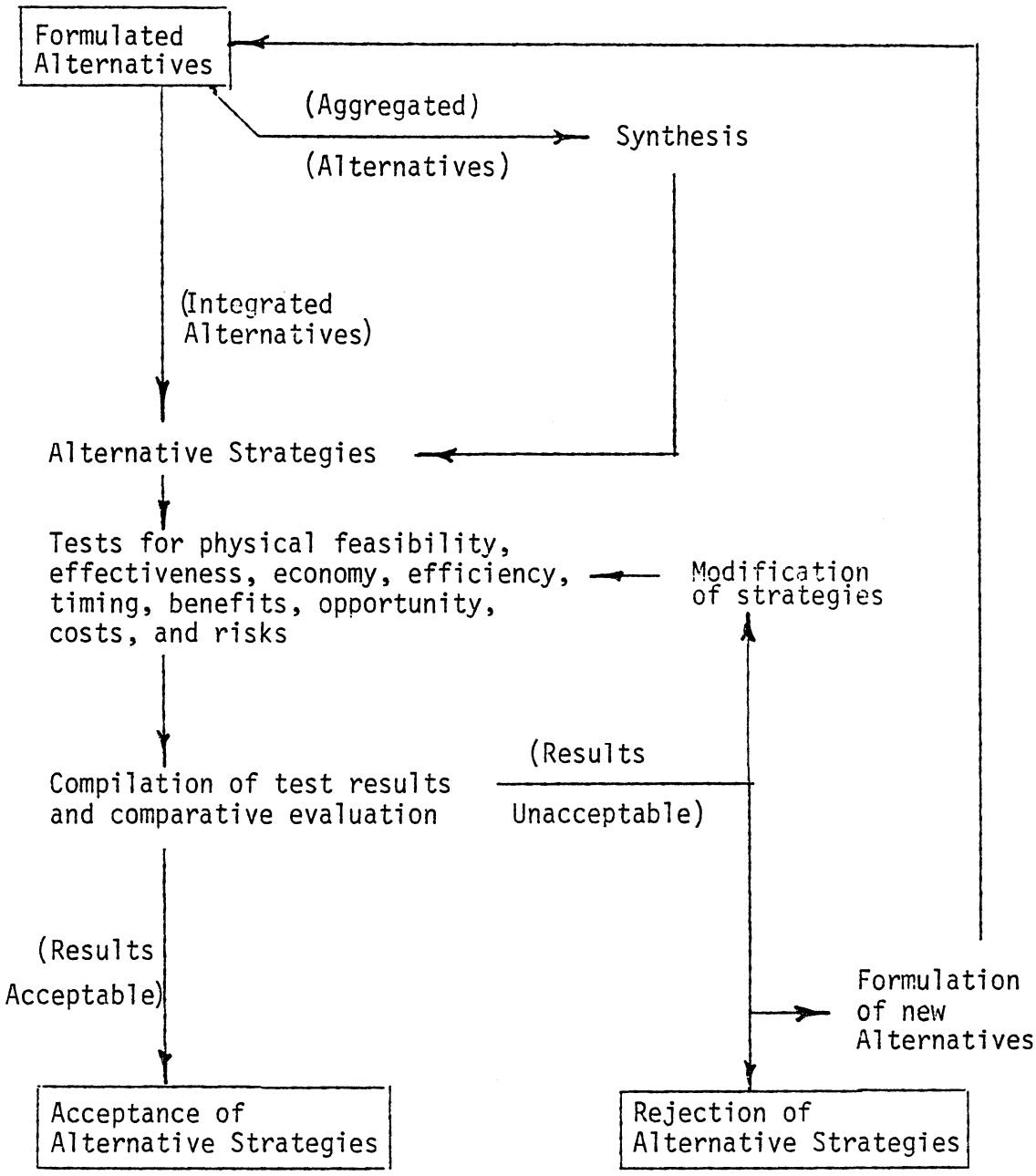


FIGURE 7-2: PHASE IV. (contd.) EVALUATION OF ALTERNATIVES

different results and rankings of strategies. Each ranking is likely to be consistent with the values and emphasis given to different criteria. The differences in ranking therefore may not necessarily represent superiority or inferiority of one evaluation over another.

It may take a number of workshop sessions before a range of satisfactory alternatives are evaluated. This is the justification for the forum being a continuous, rather than a terminal assembly.

It is now timely to determine the sensitivity of choice of any specific set of alternatives over all the others i.e., the set of alternatives considered most acceptable to all participants. This is the next phase of the process.

Chapter VIII

PHASE V: COMPATABILITY/CONFLICT SENSING

The outcome of Phase IV is the generation of an array of alternatives that may at least meet or surpass minimum expectations for a range of criteria. Each package of integrated alternatives are expected to be responsive to all the issues and objectives to varying degrees. This variation may be attributable to the diversity of the value systems, educational training and experience, priorities, allegiance to specific constituencies, and/or specializations of the different parties. It may only be coincidental that all parties come up consistently with one integrated package of alternatives. Such a contingency may be very rare but not impossible.

Any variation in the sponsorship of alternative packages of integrated strategies may be identified as the trigger for conflict. As such, these packages have to be subjected to a test to determine the level of compatibility/conflict that is likely to arise between the parties.

Steiss suggests some important guidelines for conducting the compatibility/conflict sensing component. The structure of Steiss' paradigm is reproduced in Figure 8-1. Parts of this paradigm are adapted to develop the compati-

bility/conflict sensing module of interactive decision making as represented in Figure 8-2.

Each integrated alternative representing the outcomes of Phase IV should be submitted before the groups for verifying support or opposition. Each alternative must be subjected to several tests to confirm consistency with an array of personal and organizational factors among the participants. These may include values, perceptions, organizational goals, organizational objectives, jurisdictions, authority, responsibility, power, priorities, roles, allegiance to specific constituencies, and prior commitments. Several responses are likely by each of the participants depending on their levels of solidarity to each of the above factors. These responses are likely to be opposition, indecision, neutrality, (neither support nor opposition), no response, or support.*

These basic responses signify three alternative outcomes. Opposition signifies the existence of conflict; support signifies compatibility. Neutrality and no

* These responses are a variation from Steiss' paradigm listing only three likely responses: "Expectation in accord with best solution," "Expectation ambivalent" and "Expectations hostile." This is justifiable as follows: The ambivalent condition may arise out of indecision which is likely to change when commitments are made. The states of support, neutrality, and no response, represent a situation of compatibility.

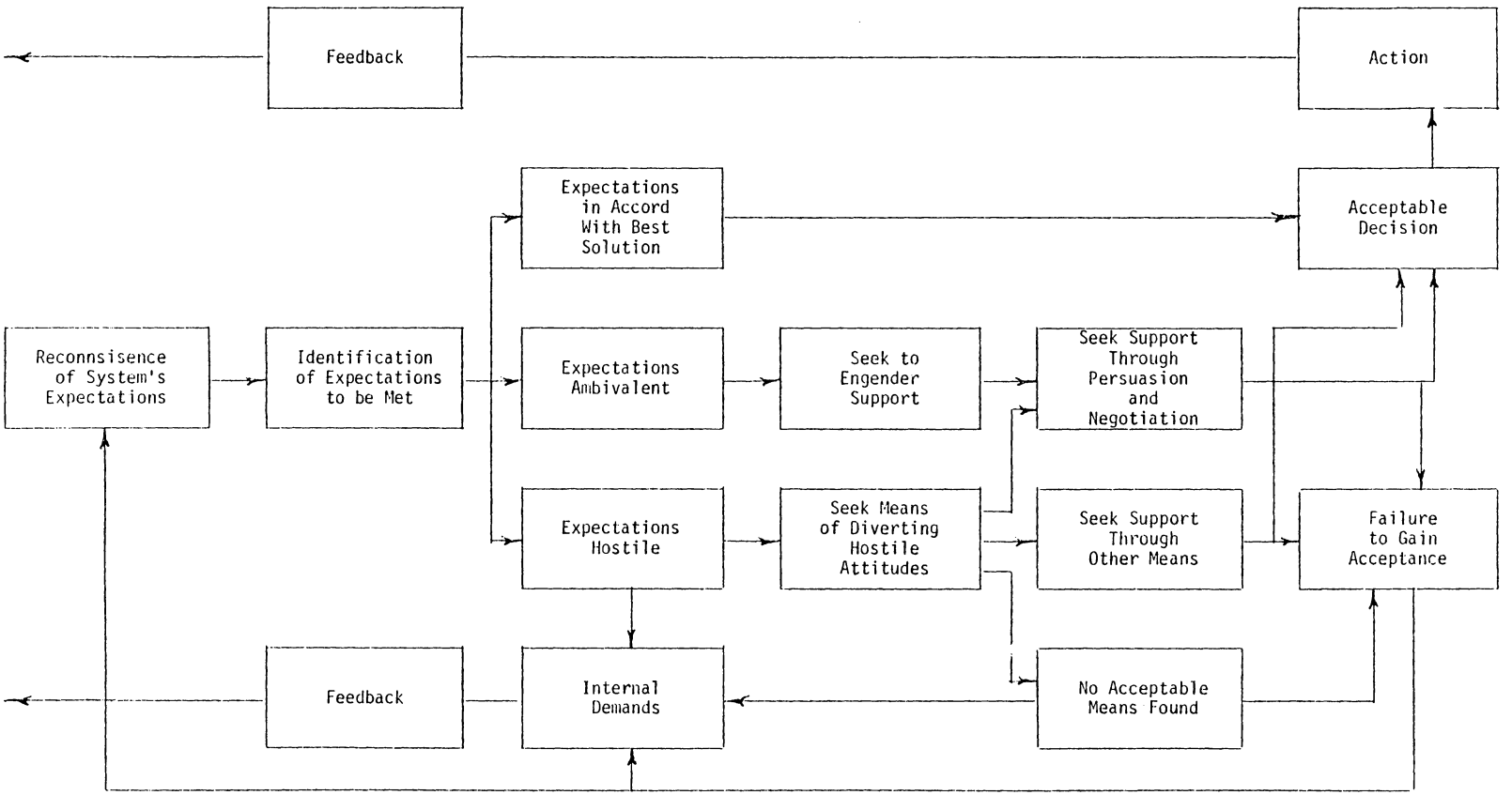


FIGURE 8-1: ACHIEVEMENT OF AN ACCEPTABLE DECISION THROUGH MODIFICATION AND COMPROMISE

Source: A. W. Steiss and Gregory Daneke: Performance Administration. Lexington Books, Lexington, MA. 1980, p. 115.

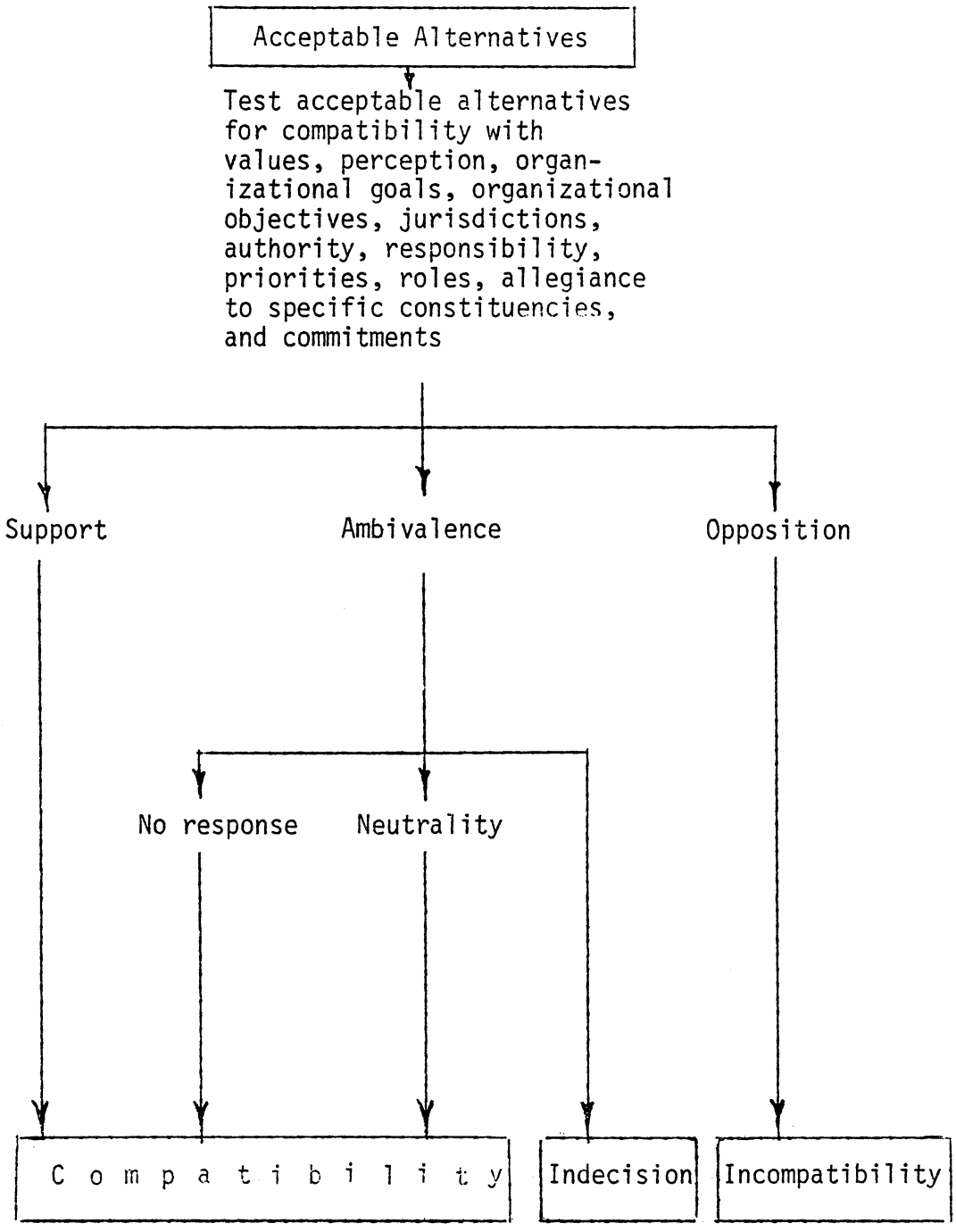


FIGURE 8-2: PHASE V. COMPATIBILITY/CONFLICT SENSING

response, (subject to the commitment with which such responses are made), may be treated as signifying compatibility, since compatibility represents a status wherein the alternative package is not "unacceptable". However, indecision is an ambivalent response which one has to guard against, since the response may shift towards support or opposition at a later stage of decision making, when commitments are to be made. As such, indecisive responses are characteristic of an impasse, in which a later response may be supportive or opposing.

The results of this test are then compiled for each integrated alternative package, indicating the extent to which such package is supported or opposed. No alternatives should be discarded at this stage as it would be premature to do so. During the conflict management phase, variations in the responses and attitudes, and shifts in support or opposition are likely. Sufficient opportunity must be provided for a review of all integrated alternatives before those which consistently meet with opposition are discarded.

Chapter IX

PHASE VI: CONFLICT MANAGEMENT

Three outcomes were observed in Phase V. These were:

1. Alternatives which were opposed by some parties.

2. Alternatives which were ambivalent.

3. Alternatives which were supported by some parties.

Support or opposition for each package may not be uniform among all groups and a package which may be compatible to one group may not be compatible to another.

The objective of conflict management is to forge compatibility among all parties on one specific package of alternative strategies. This objective is based on the premise that any decision that is based on multilateral compatibility is not likely to be opposed at the time of implementation.

Different strategies are required to fulfill this objective. For example, the selection of the appropriate techniques for conflict management will depend upon the actual situation and will vary from one situation to another. A more detailed survey of conflict and techniques of conflict management is contained in Appendix G.

For purposes of demonstration of the working of the conflict management phase, one alternative package may be picked from the range of packages and subjected to a classification into scenarios. It may be assumed, for purposes of this illustration, that there are only two parties involved. The matrix in Table 9-1 gives an indication of the different scenarios that are likely. They are numbered to represent each one of the possibilities. The 25 different scenarios may be reclassified into 3 basic categories, as represented in Table 9-2.

The above classification may be conducted progressively for each of the alternatives and the results tabulated for each alternative. Figure 9-1 provides a schematic representation of the classification of scenarios in the conflict management phase. Based on the tabulated results, the following procedural steps are suggested.

1. Strategies for Alternatives which Conform to Category A

It is likely that there may be more than one alternative which may conform to Category A. In this instance, the next step is to generate preferences among parties through a ranking procedure to determine those alternatives which may meet with the greatest support, and those which may meet with the least support. The Delphi technique is one

TABLE 9-1: MATRIX OF ALTERNATIVE SCENARIOS FOR ONE ALTERNATIVE

Party		PARTY A				
	Response	Support	Undecided	Neutral	No Response	Opposition
Party B	Support	1	2	3	4	5
	Undecided	6	7	8	9	10
	Neutral	11	12	13	14	15
	No response	16	17	18	19	20
	Opposition	21	22	23	24	25

TABLE 9-2: RECLASSIFICATION OF SCENARIOS

Category	Scenarios	Observations
A	1, 3, 4, 11, 16	The alternative is compatible since it is not opposed by any party, actively. This is subject to verification at the commitment phase.
B	5, 15, 20, 21, 23, 24 and 25	The alternative is incompatible as there is opposition by at least one party.
C	All other scenarios not mentioned in A or B above.	There is an Impasse which requires to be resolved.

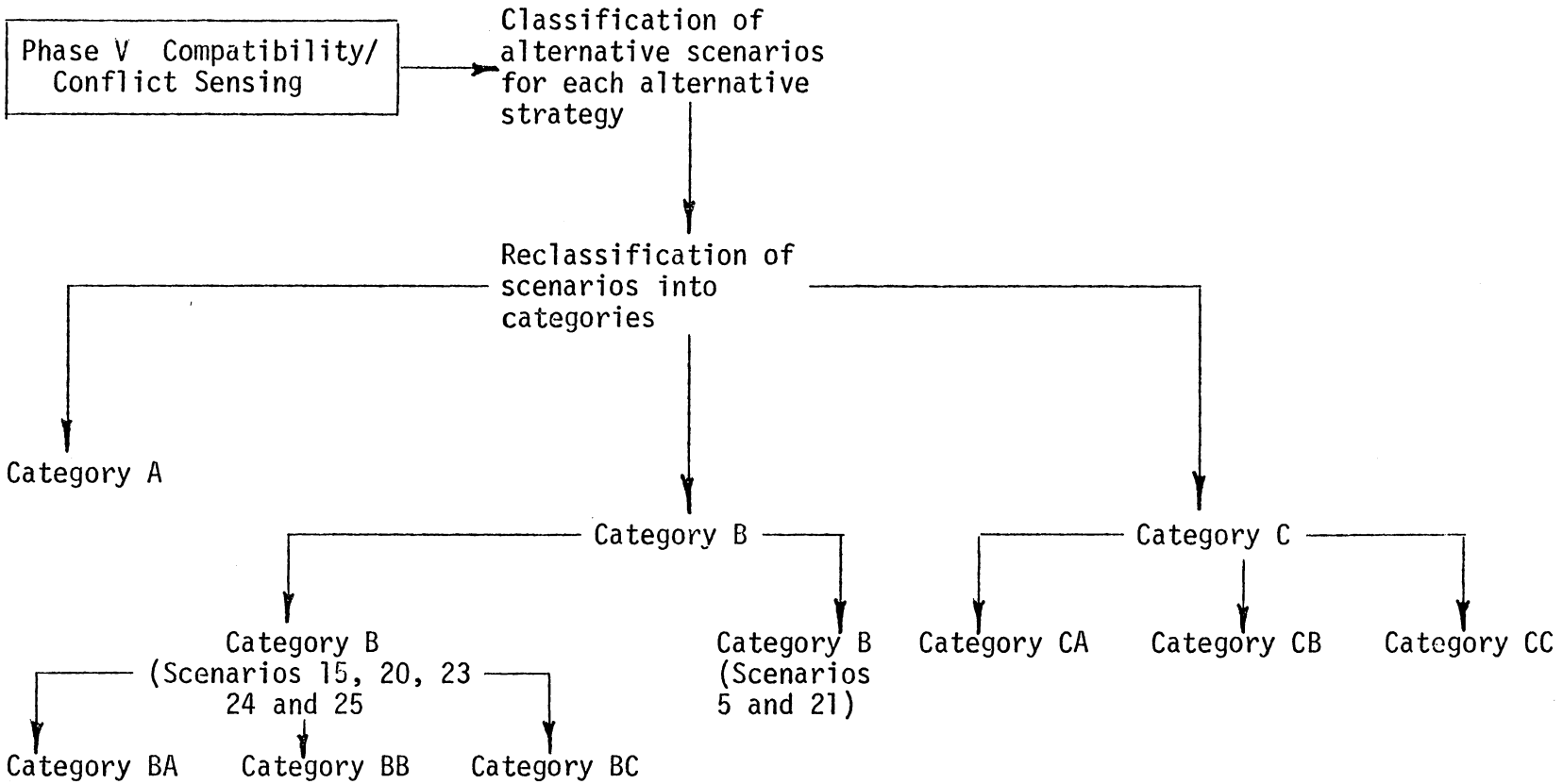


FIGURE 9-1: PHASE VI CONFLICT MANAGEMENT

CLASSIFICATION OF SCENARIOS

method by which preferences may be enumerated. Other suitable methods may be brainstorming or free discussion. Subsequent iterative rounds using these techniques may be utilized to narrow down the first preference until only one alternative package is consistently and uniformly supported as the first preference. This procedure may be continued to determine second and subsequent preferences as well. The narrowing down process toward selection of one alternative is carried over into the next phase of decision making, and discussed in the next chapter.

If at the very outset, one alternative ranks as the most acceptable one, this alternative may automatically qualify as the most compatible package, eligible for seeking commitments. A schematic diagram of procedures is given in Figure 9-2.

2. Strategies for Alternatives which Conform to Category B

In this case, there are two basic subcategories in which the process of conflict management is to be negotiated. In one case, Category B is characterized by scenarios 15, 20, 23, 24, and 25 in which the alternative may have no support from any party. In the second case, Category B is characterized by scenarios 5 and 21 in which the same alternative may be deadlocked between support by one party and opposition by another. Different treatments are required.

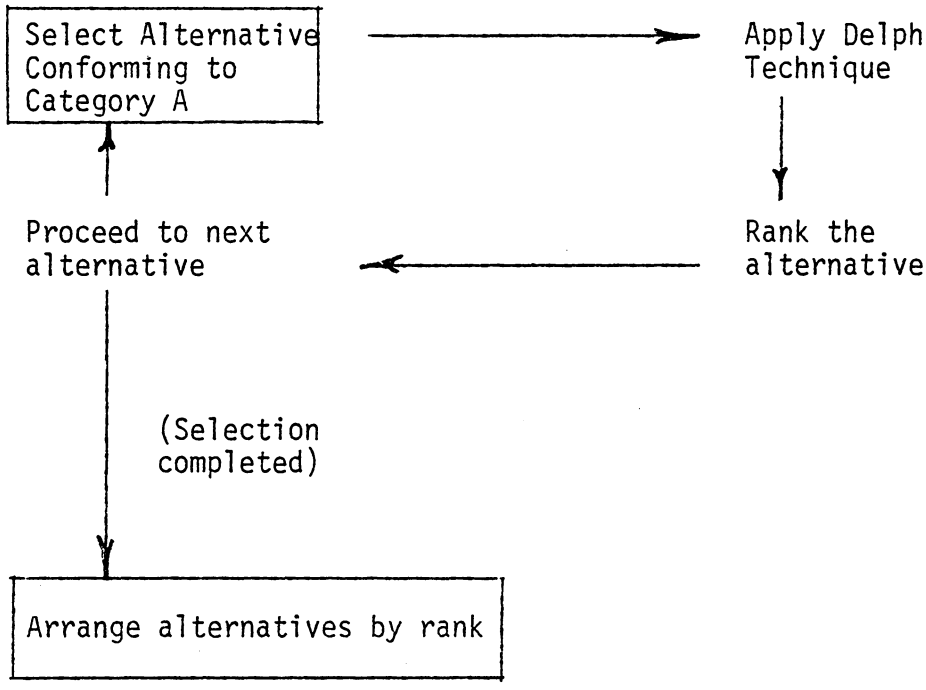


FIGURE 9-2: CONFLICT MANAGEMENT SCENARIO - CATEGORY A

In the first case, the category has to be examined in conjunction with categories for other alternatives as shown in Table 9-3.

If Category BA occurs, it is very likely that the alternative in question is totally opposed. Since there are other supported alternatives which will come up for selection, there may be little point in retaining this alternative for further consideration. As such the alternative which conforms to BA category may be summarily rejected.

If category BB occurs, it may imply that all the alternatives under consideration are opposed by all parties, and that there may be no alternative which has received any support. It may be concluded from the above that there may be little meaning in pursuing any of the alternatives any further. It is therefore appropriate to get "back to the drawing board" to formulate and evaluate a whole new range of alternatives for consideration. Some of these alternatives may eventually gain support.

Category BC is a condition very similar to Category BA. The existence of an impasse may reflect that other alternatives may still be under some degree of active consideration. Pursuing the alternative which is opposed may therefore be dysfunctional and may be summarily rejected from further consideration.

TABLE 9-3: CONJUNCTION OF CATEGORY B WITH OTHER CATEGORIES (ONLY SCENARIOS 15,20,23,24 AND 25 CONSIDERED IN CATEGORY B).

	Category	Any one Alternative Conforms to Category B
All other Alternatives Conform to Category	A	BA
	B	BB
	C	BC

A summary of steps to manage conflict under all the above scenarios is given in Figure 9-3.

The conjunction of Category B with other categories (where B involves scenarios 5 and 21) must be discussed as a special case. In this case the alternative may have the support of one party and may be opposed by another. Since there may be at least one sponsor for the alternative, rejection of the alternative may not be in order. What may be confronted may be a deadlock situation which has to be overcome. The conjunctive approach used above may be dysfunctional in this case.

The deadlock is likely to have occurred owing to one of two possibilities. On the one hand, the deadlock may occur because support or opposition is founded on conflicting values, perceptions, organizational goals and objectives, jurisdictions, authority, responsibility, priorities, roles, allegiance to specific constituencies, and prior commitments of the parties reviewing the alternative. In this event, the best approach to resolve the deadlock may be to use apporpriate approaches of conflict management, including value clarification, negotiation and bargaining with or without mediation, as described in Appendix G. If this succeeds, in either the opposing party being willing

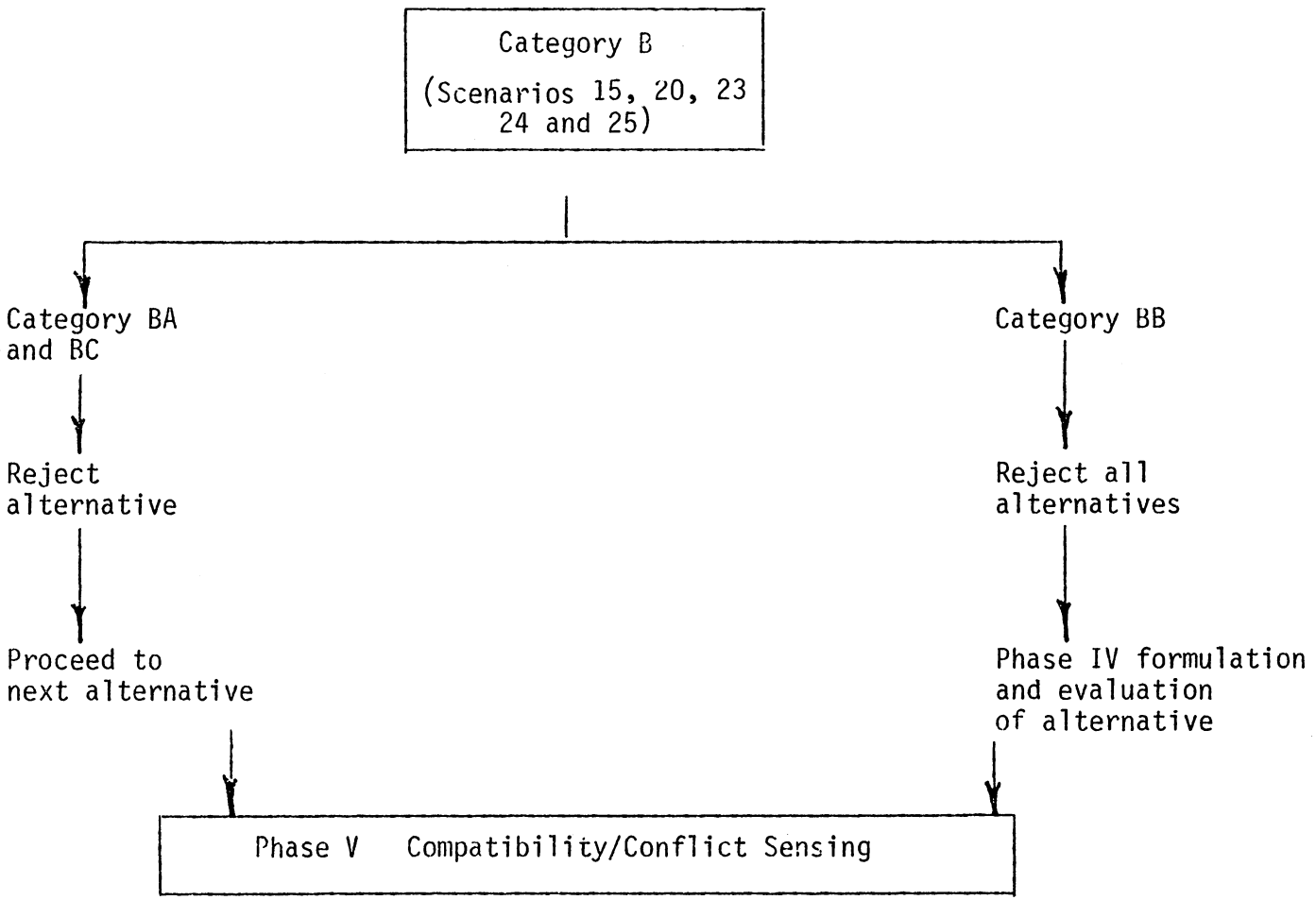


FIGURE 9-3: CONFLICT MANAGEMENT
SCENARIO CATEGORY B

to accommodate the alternative or both parties willing to adjust to an intermediate position (partisan mutual adjustment), the deadlock may be resolved. If, however, the deadlock cannot be resolved through compromise or reconciliation, other alternatives may have to be found to resolve the deadlock.

On the other hand, the deadlock may occur due to unacceptable nature of outcomes of the alternative being reviewed. This deadlock may be resolved by several means. If the deadlock is triggered by inadequate information about the alternative, the provision of additional information by the experts, or from relevant documented literature, may act as reassurances to the opposing parties to reconsider and, perhaps, alter their stand to one of support. Another approach may be to abandon the alternative by mutual consent of both deadlocked groups and revert to the reformulation of alternatives (phase IV). The outcomes of the new alternatives may be more acceptable to both parties. If this also fails, the deadlock continues and the only alternative as before may be to find other alternatives to reconciliation and compromise to resolve the conflict.

A summary of steps to manage conflicts under this special case is schematically represented in Figure 9-4.

3. Strategies for Alternatives which Conform to Category C

The same methodology used for the first sub-category B may be followed for Category C as well. The possibilities that are likely to coexist are classified and shown in Table 9-4.

If category CA occurs, it may not be justifiable to reject the alternative in question since the impasse may be resolved in due course. This resolution may occur following the rest of the proceedings proposed, and may terminate with an outcome which may correspond with categories A or B. In this eventuality, a compatibility one way or another (support or opposition) may have to be induced.

The impasse is likely to have occurred owing to one of two possibilities. On the one hand, the impasse may occur because support or opposition to the alternative being reviewed may be inconsistent with the values, perceptions, organizational goals and objectives, jurisdictions, authority, responsibility, priorities, roles, allegiance to specific constituencies, and prior commitments of the party conducting the review. In this event, the best approaches to resolve the impasse may be to use appropriate measures of persuasion and cooperation as suggested in Appendix H.

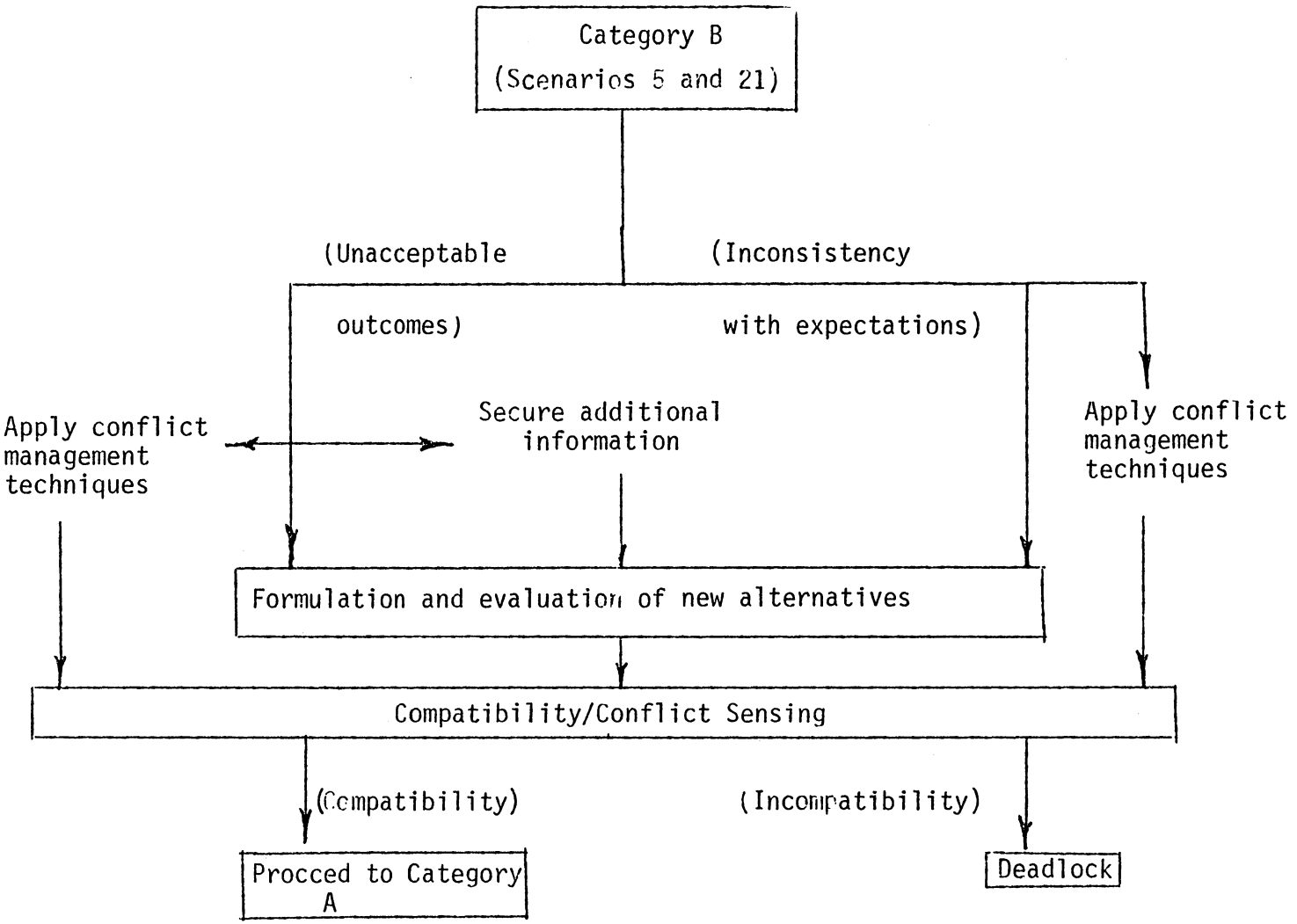


FIGURE 9-4: CONFLICT MANAGEMENT SCENARIO - CATEGORY B (Contd.)

TABLE 9-4: CONJUNCTION OF CATEGORY C WITH OTHER CATEGORIES.

	Category	Any One Alternative Conforms to Category C
All other Alternatives Conform to Category	A	CA
	B	CB
	C	CC

The objective of their application is to persuade the party to shift their stand from one of indecision, to one of support, opposition, or neutrality to the given alternative. If this succeeds, the steps suggested in the strategies (1) and (2) above may be reiterated. If this fails, it may be assumed that the party is probably committed to neutrality and strategy (1) may continue to apply.

On the other hand, the impasse may occur due to the unacceptable nature of outcomes of the alternative being reviewed. This impasse may be resolved by one of several means. One cause of the impasse may be the lack of adequate information about the alternative being reviewed, and uncertainty about the outcome. This may be resolved by providing additional information about the alternative through expert opinions, or documented literature. Such information may provide inducements to shift from the indecisive stand. A personal touch may be added if the groups which support the alternative provide the inputs and clarifications to lead the persuasion. Another cause may be that the outcomes, regardless of all supportive information, clarification, and background, may just not be acceptable. In this eventuality, the best approach may be to revert back to formulation of alternatives which may have more acceptable outcomes, and to reiterate them

through the evaluation and compatibility/conflict sensing phase.

A summary of steps to manage conflicts under scenario CA is schematically represented in Figure 9-5.

Category CB is dissimilar to category BC discussed earlier. The difference may be that the response to the alternative being considered is inconclusive. The same steps as observed for CA above may have to be conducted for this one alternative. If the impasse resolves itself, two outcomes are possible -- BA or BB category. Either way, the steps suggested for alternatives which conform to Category B may be applied. If the impasse remains unresolved, the procedures in Category B may be followed through.

A summary of steps to manage conflicts under scenario CB is schematically represented in Figure 9-6.

If Category CC occurs, it may signify the inadequacy of information about all the alternatives in question, or the lack of assurance and security in an unfamiliar setting. This setting is unlikely to last long if adequate information about the alternatives is forthcoming. It may also chanage if one agency quickly shifts its stand to support one alternative and initiates negotiations to win the sup-

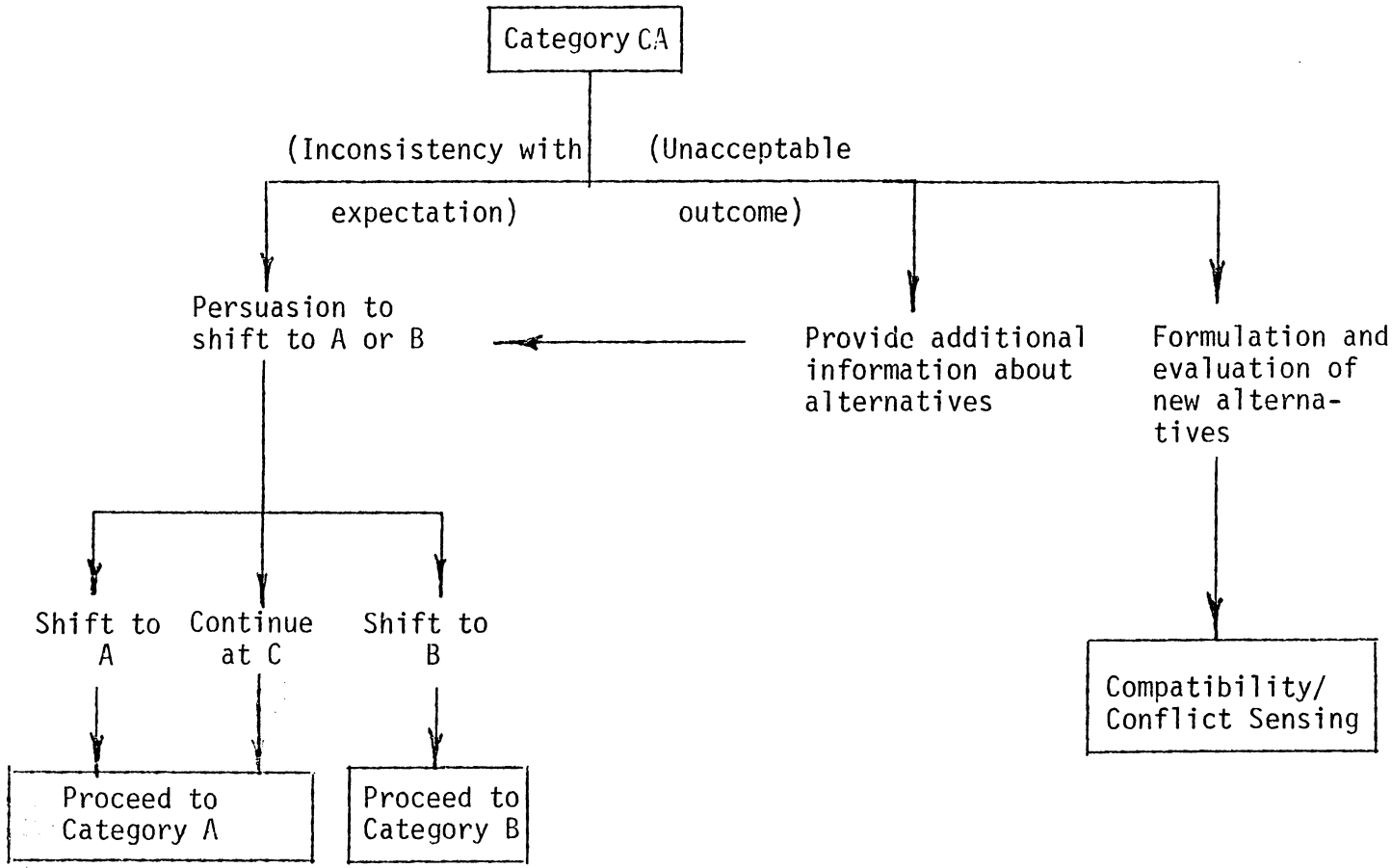


FIGURE 9-5: CONFLICT MANAGEMENT SCENARIO CA

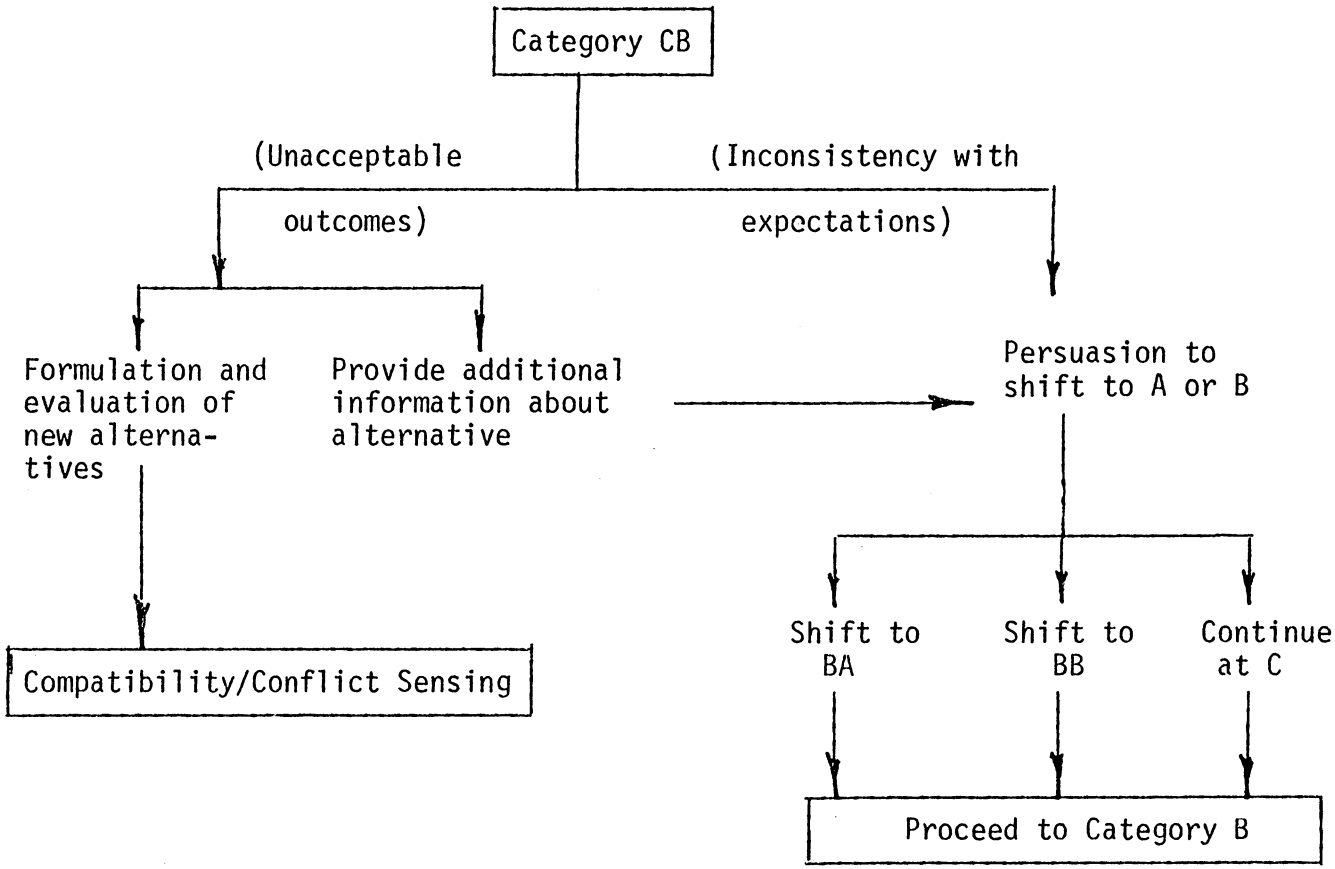


FIGURE 9-6: CONFLICT MANAGEMENT SCENARIO CB

port of others. If, on the other hand, the impasse is inconclusive, indefinitely, it may reflect lack of adequate preparation for negotiations and discussions. In this contingency, it may be best to terminate all steps for compatible decision making until such time as all participants are more prepared for entering into a dialogue. An action research approach appears to be a suitable strategy that may be employed by the participants to better prepare themselves for future dialogue.* The forum may be reconvened at a later time and proceedings continued from the point of termination.

The above illustration demonstrates a suitable framework for the conflict management phase involving two parties. In a typical real world situation there are likely to be more than two parties. Also, different parties may have different responses for each alternative. This exacerbates the complexity of conflict management. The complexity is reduced as the number of alternatives under consideration are fewer in number.

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* A discussion of action research is not provided herein. A brief discussion of action research applications to policy analysis is contained in Craig G. Heatwole, Lawrence F. Keller, and Gary L. Wamsley: "Action Research and Public Policy Analysis: Sharpening the Political Perspectives of Public Policy Research", Western Political Science Quarterly. Vol. 29, 4, December 1976.

The first step may be to classify the alternatives coming up for selection in terms of their levels of support or opposition. Two alternative routes may be possible. Either they may be arranged in the order commencing with those receiving greatest support to those with the least support. Alternatively, they may be arranged in the order commencing with those receiving least opposition to those with the greatest opposition. Since the objective of conflict management is to determine the alternative which is compatible rather than that which is most acceptable, the latter route may be more appropriate.

The alternative with the least opposition may then be selected as the target for the first iteration of conflict management. The initial step in respect of that alternative may be to identify the "in groups" (those who support the alternative or are neutral), and distinguish them from the "out groups" (those who oppose the alternative). A third group representing those subject to the impasse response may also emerge as a result of this classification. The succeeding sequence of steps may follow the same guidelines as those discussed earlier in this chapter. The only difference may be that the process uses groups rather than individuals as targets for securing compatible responses. The added advantage in this case is that more influ-

ences towards securing compatible responses are available from the different members of sponsoring groups. Similar contingencies to those discussed earlier are very likely to occur and further discussion may be redundant.

The final outcome of the conflict management phase in respect of the alternative under study may indicate: (1) total compatibility; (2) greater compatibility than that at the start; (3) equal compatibility to that at the start; (4) less compatibility to that at the start; (5) equal opposition to that at the start; (6) greater opposition than that at the start; or (7) total opposition.

The conflict management phase may be considered fully effective only if the first response, above, occurs. If any of the other responses occur, the alternative under study is not yet compatible to all of the parties involved. The result of the conflict management phase, in respect of the alternative under review, may be recorded and a different alternative may be taken up as the subject of review. This process may be conducted progressively until all alternatives have been reviewed, or one alternative achieves total support, whichever occurs earlier. These recorded observations may be brought up iteratively in subsequent reviews of alternatives. It may be noted that each

alternative under review is very likely to undergo considerable modification and adaptation during the conflict management phase. The ultimate objective is to secure an alternative which is compatible to any of the parties. This may be achieved by varying the scope and content of the alternative, shifting attitudes and commitments, and partisan mutual adjustment vis-a-vis minimum expectations, or a combination of all of the above.

Another possibility to the above is that a deadlocked situation may occur even after several iterations of conflict management are completed. Deadlocked situations are discussed later in this chapter.

The ultimate outcome of this phase is expected to be either a ranked array of compatible alternatives which may become the subject of consideration for commitments by the different participants, or the emergence of deadlock as shown in Figure 9-7.

Points of Entry of Conflict Management

Whereas conflict management has been discussed as Phase VI of the decision making process, this subprocess may be required to be called into play at several points of entry, where conflict is manifest. One manifestation of conflict

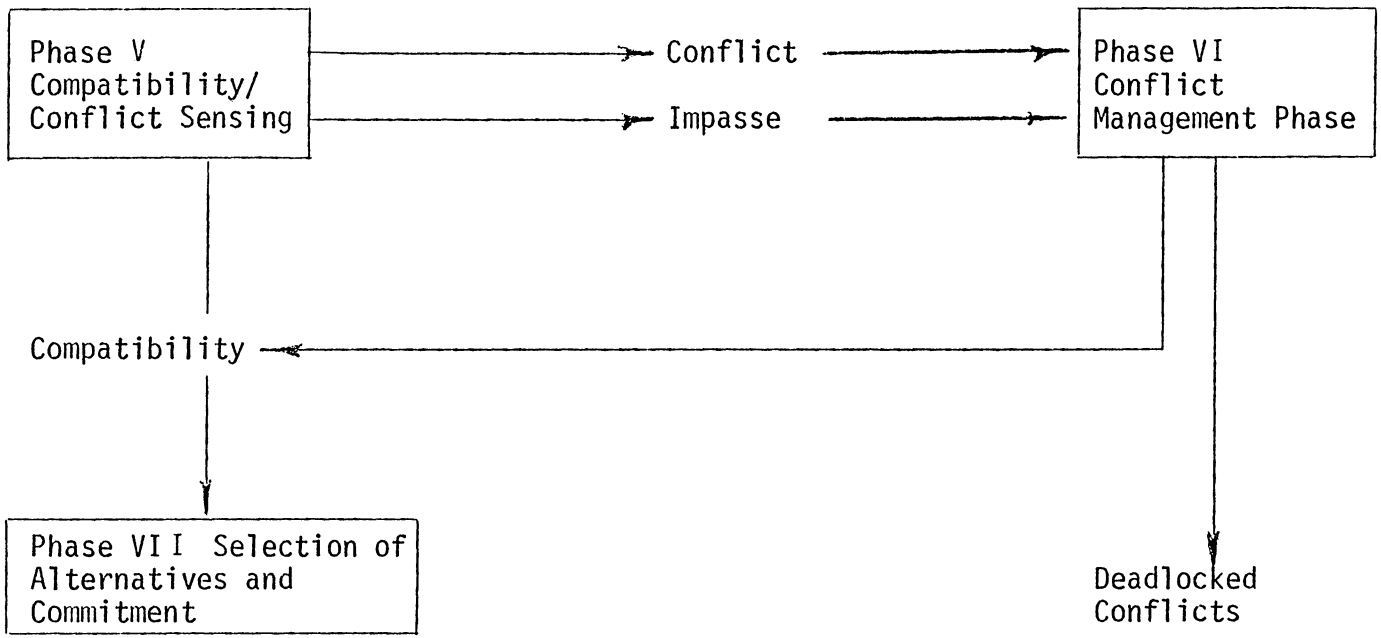


FIGURE 9-7: SCHEMATIC REPRESENTATION OF THE SEQUEL TO COMPATIBILITY/CONFLICT SENSING

may arise from incompatibilities encountered in the assessment stage, or at the stage of goals/objectives specification. It is very apparent that, in such a contingency, it may not be possible to overcome the deadlock through the application of conflict resolution techniques which address the theme of alternative formulation.

In this eventuality, a complete reiteration of the decision-making process may be necessary, commencing with a reassessment of the problem situation. The conflict may have arisen due to inadequate information or inadequacy of circulation of information about the problem, resulting in misunderstanding and/or misrepresentation of the problem by different parties. It may have arisen due to variations in the result of forecasts, or in the selection and measurement of descriptors. Or it may be the consequence of incompatibilities in the determination of tolerance limits. The conflict management phase in these eventualities may follow the same procedure contained above with different objectives. The objectives of this process will be to resolve the conflict and establish compatibility in the given context.

A second manifestation of conflict may arise out of differences in goals and objectives. It must be remembered

that it is not the purpose of conflict management to bring about convergence in goals and objectives. Practically, such convergence may neither be feasible nor desirable. The variations of goals and objectives is an inherent characteristic of multijurisdictional management and reflects the diversity of values, needs, and expectations of a pluralistic society. Unification of goals and objectives would destroy this diversity and would be inconsistent with the values, needs and expectations of such a society. Moreover, it would then become an imposition of unacceptable restrictions on the rights to free action characteristic of a free society.

Yet another manifestation of the conflict situation may culminate in a collapse of the cooperative relationship that was established in Phase III. This breakdown may emerge due to a breakdown in communication, a misunderstanding of facts, threats to power and authority, or a history of incompatible hostilities that exist between parties. In this event, the introduction of conflict management occurs during the reorganization of the forum of cooperation. The causes of the breakdown must be identified and attempts made to "mend fences". Attempts should also be made to provide reassurances to the incompatible parties to allay their fears and to diffuse the conflicts. A tem-

porary suspension of proceedings in the interactive decision making process may be introduced for reevaluating the hostile situation that exists. The setting of the forum may be changed from the existing location to a more neutral location. It may be necessary to change the leadership of the forum so as to be vested with a more neutral party. Persuasive skills may be brought to bear on the rival factions to facilitate their continued participation.

Deadlocked Situations

A deadlocked situation is one where conflict management has failed to reconcile the parties, and compatibility cannot be achieved. If all efforts to reconcile the parties fail, two options are open. The proceedings may continue without the participation of the respective parties. This option may be meaningful only if the roles of the parties concerned are not central to the problem under consideration. This option is not recommended, as it defeats the spirit of cooperation as a means of decision making, involving all participants. The other option is to acknowledge the failure of the cooperative management process.

Regardless of the different routes of conflict management that have been suggested and the different techniques

that are brought to bear on the participants to resolve conflicts, an array of compatible alternatives acceptable to all parties may not always be expected as the final outcome. There may be some instances where the deadlock continues despite any number of iterations of conflict management. The interminable nature of the conflict, in whichever manifestation it occurs, may indicate that the cooperative and interactive process of decision making is ineffective. Other methods may have to be used. It also tends to confirm the fact that reconciliation and compromise arrangements may not always be admissible as methods for making compatible decisions.

It may be concluded from this that the only alternative may be to transfer the proceedings of decision making in a multijurisdictional setting from the cooperative forum to another forum. Arbitration, judicial settlement, or legislative intervention may become the only alternative recourses. These alternatives, of course, fall outside the scope of the cooperative forum but have to be cited as stand-by complements to cooperative management.

The schematic representation of the complement to the conflict management phase in the wake of deadlocked situations is shown in Figure 9-8.

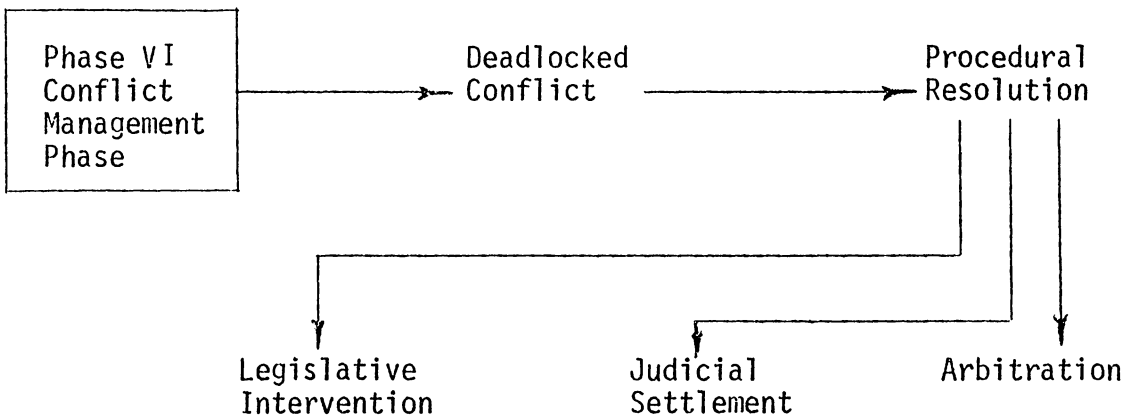


FIGURE 9-8: SEQUEL TO CONFLICT MANAGEMENT PHASE IN THE WAKE OF INTERMINABLE CONFLICT

Chapter X

PHASE VII: SELECTION OF ALTERNATIVES AND COMMITMENT FOR IMPLEMENTATION

The conflict management phase discussed in the preceding chapter is necessary if either the existence of a conflict or an impasse that confronted the ranking and selection of alternatives is identified in the compatibility/conflict sensing phase. The conflict management phase may be bypassed if there is compatibility among the participants in the ranking and selection of alternatives.

Securing Commitments to the Acceptable Alternative

The positive outcome of the conflict management phase is expected to be an array of alternatives which have successfully negotiated that phase. It may be remembered that, at this stage, no alternative may be consistently supported as the most desirable alternative by all participants. Some alternatives receive the support of some participants. Some alternatives are subject to a neutral posture by some participants. Either way, the commonality may be that all the alternatives which have negotiated the conflict management phase are compatible and are therefore not likely to meet with any opposition from any of the participants.

The range of alternatives must next be narrowed down to one which receives the greatest amount of support. This may usually be achieved either through brainstorming or a Delphi process in which the evaluated results of the different alternatives are compared and outcomes most acceptable to the largest number of participants provide the grounds for selection. Voting procedures may also be effective in determining the most acceptable alternative. Isard suggests a process of negotiation using incremental concessions and the veto incremax method as suitable approaches for reaching a compatible selection.*

Once the most acceptable alternative has been determined, the next step is to secure the commitments of the different participants to implement the decision.

The problem which is confronted has interjurisdictional dimensions, involving several organizations, agencies, and groups, which may have worked out a compatible solution. If management is to be effective, the selected method which is the subject of the decision must be implemented. The decision has several component elements which must be carried out by different agencies and groups, all of whom may

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* These two approaches are discussed in greater detail in Walter Isard. Introduction to Regional Science. Englewood Cliffs, New Jersey, Prentice-Hall Inc., 1975. pp.265-280.

have been party to the decision. Therefore, it is required that they be committed to participate in an action plan in which responsibilities for specific tasks are divided among the participants. They may, thereafter, begin to work separately on agreed parts of the action plan and secure the assistance of others who are needed to carry out the plan.

The important components of an Action Plan will include the following:

1. The specific steps that may have to be taken to implement the selected alternative should first be identified.

2. Individuals responsible for each selected action step should be identified, among those who are present. Commitments should be sought from them right away. If others who may not be present are to be involved, arrangements should be made to identify them and secure their commitment.

3. A schedule of tasks should be prepared to determine when each task will be completed by the committed individuals and the sequence of tasks should be formalized.

4. A schedule of reviews should be drawn up as a means to monitor performance and ensure that the implementation of the decision is progressing according to the action plan. The reviews will also enable the determination of the need for any modifications or adjustments to the action plan in the event of unforeseen contingencies. Suitable locations and dates for such review should be set up.

Two alternative arrangements for establishing commitments of individuals are the task force and the matrix

organization. Both are temporary organizations in which people from different jurisdictions or organizations are mustered together to deal with the problem at hand.

The matrix organization is a more formal kind of temporary organization which again involves people from different agencies and jurisdictions to work together for the duration of the tasks at hand.*

The task force and the matrix organization are different from one another. In the former the personnel are recruited from different agencies to collectively carry out the tasks and use the authority vested in the task force to implement the tasks. In the latter, the personnel are recruited from different agencies to collectively carry out the tasks. They use the authority vested in their parent organizations to implement the tasks. Whereas the former is a cohesive temporary organizational unit, the latter is more amorphous.

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* For more details on matrix organizations see David O. Porter. "Accounting for Discretion and Local Environments in Social Experimentation and Program Administration: Some Proposed Alternative Conceptualizations," in Katherine L. Bradbury and Anthony Downs. Do Housing Allowances Work? Brookings Conference Volume on the Experimental Housing Allowance Program, 1980.

A third alternative is the "implementation structure". These are not organizations but are conceptualized to identify the units of purposive action which implement programs. Program oriented actors view the resources of the various organizations in their implementation structures as a field within which they practice the familiar "budgetary strategies." Monetary and nonmonetary resources are mobilized. Within implementation structures subgroups of actors and organizations perform specialized roles. There are separate substructures for policy making, planning and intelligence, resource provision, intermediary and coordinating roles, service provision and evaluation. Implementation structures are developed and regular, or undeveloped and ad hoc. The former may be more accurately described as networks of relationships in which participants have rather settled expectations about each other's actions. In the latter, expectations among actors are not settled, and mutually beneficial interactions are poorly understood or have not been negotiated.*

Yet another approach is the multi-organizational network. These networks are characterized by:

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* The above has been summarized from Benny Hjern and David O. Porter, "Implementation Structures: A New Unit of Administrative Analysis", Unpublished Manuscript, January 1980.

1. A multiplicity of power and authority centers;

2. Many suppliers of resources for any single program;

3. Overlapping and dynamic divisions of labor among the organizations within the networks;

4. A high potential for imbalanced and/or poorly coordinated capacities among the components of a network;

5. Program and region specific multi-organizational networks;

6. Massive needs for information exchanges among actors within the networks;

7. An absence of procedures for evaluating the performance of all actors within the networks.**

Leadership

One important aspect that must be resolved is leadership for the management of the tasks involved in the action plan. Leadership involves the stimulation and influence of others in the organization to contribute to the attainment of organizational goals. It also requires the leader to relate the organization to external factors by interpreting them, and steering the organization towards the poten-

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** A discussion of networks from which the above has been summarized is contained in Kenneth Hanf, Benny Hjern and David O. Porter, "Local Networks of Manpower Training in the Federal Republic of Germany and Sweden" in Kenneth Hanf and Fritz W. Scharpf (eds.). Interorganizational Policy Making: Limits to Coordination and Central Control. London, SAGE Modern Politics Series, Vol. 1, 1978. pp.303-341.

tialities that are envisioned. The leader encourages the establishment of organizational goals that are consistent with the needs of the organization and its individual members. The leader is responsive to the developments in the broader environment and changes the direction of his organization, suitably. In doing so, the leader should also conform to external forces, group pressures, and the opinions of power figures in much of what he does. These qualities should characterize the head of the lead agency who has the role of leader in cooperative management.

Leadership is discussed in greater detail as follows. There are three styles of leadership -- authoritarian, democratic, and laissez-faire. These styles are redesignated by Carlisle in more neutral and apolitical terms -- directive, participative, and free-rein.[1] These styles are discussed in detail in Appendix K.

In cooperative management, the appropriate style of leadership to be exercised by the lead agency will depend entirely on the situation at hand. Situational management techniques as postulated by Carlisle[2] appear to be most appropriate to cooperative management. The objective will be to identify each key factor and dimension in the situation, and to determine the course of action or leadership styles that will be most effective.

Motivation

The next step to leadership is to manage motivation among the committed participants, who are required to carry the action plan through. Raia includes the following considerations for managing motivation:

1. the latent needs of the individual (the subordinate);
2. latent needs and leadership style of the manager (his supervisor);
3. the nature of the tasks to be performed; and
4. the organizational climate or work environment.[4]

People usually participate according to their competence, and not necessarily by position. This requires communication channels and flow of accurate information in all directions. Also, employee involvement tends to increase motivation and participation. The underlying principle for motivation is that greater commitment to specific decisions and to the organization occurs, when the person has a stake in self actualization, and decides how the system will work. Cooperative management, which enables this participation, provides a chance to the individual to express himself, and to become involved with the directions of the organization to use his skills and abilities to their fullest potential.

Jablonsky and DeVries suggest practical principles with which to motivate people. These are:

1. avoidance of punishment as a primary measure for controlling behavior;

2. minimization of the time lag between the behavior and the response;

3. application of positive reinforcers in a systematic manner; and

4. specification of the desired behavior in clear operational ways.[5]

Mitchell suggests additional methods to motivate people into participation in an action plan. Information exchange between leader and subordinate is one critical method of stimulating participation. Information of what behavior is likely to be rewarded, and which behavior will not, must be explicitly communicated. Employees may be involved in setting work standards, negotiating working conditions, and influencing reward structures. In this way, higher evaluations may be ascribed to outcomes that are contingent on the effort, and employees will be better able to choose courses of action, that will provide rewards which are valued highly.[6]

Vroom emphasizes that participation tends to increase "the strength of group norms regarding execution of the decisions, and the workers ego involvement in the decision."[7] At least two sets of orientation are involved. The

internal orientations usually include those rewards such as salary, promotion or intrinsic satisfaction focussing on one's own expectations. The external orientations tend to focus on rewards which others get in addition to oneself. Participation caters to both these orientations. In Mitchell's words, "Participation increases the amount of control that a person has over his own behavior."[8]

The methods suggested by Mitchell are as follows:

1. Rewards are more effective than punishment;
2. Both social group processes and the formal reward system can influence behavior;
3. To optimize the appropriate behavior, rewards should be suited to the individual; and
4. Feedback in the form of rewards and punishments should be given frequently and consistently.[9]

Other methods of motivation are discussed by Raia[10], Maslow[11], McClelland[12], Herzburg[13], Brayfield and Crockett[14], Vroom[15], and Litwin and Stringer[16].

Programming of Tasks

Preparation of the schedule of tasks may involve such techniques as PERT (Program Evaluation Review Technique). Once the tasks are determined; their sequence must be determined; the duration of each task has to be fixed; the timing for completing preceding tasks and commencing suc-

ceeding tasks must be established. Resources in terms of manpower and finance must be allocated for each task. Responsibilities must also be assigned.

Action Plan Review

The review process usually provides the means by which the results and progress of implementation can be monitored and controlled. This process seeks to verify the attainment of specific milestones or targets set by dates, and to evaluate them in terms of quantitative criteria such as costs, expended resources of time and manpower, and so forth. This review may be effectuated by the preparation of weekly/monthly progress reports and statements of output, productivity, and expenditure which may be verified at special review meetings for consistency and concurrence with the provisions of the action plan. These reviews may enable the verification of effectiveness of the management program in attaining objectives, and may provide a means of monitoring and controlling the shortcomings, or practical limitations of implementing the action plan. The review may also serve as the problem sensing phase for succeeding iterations of the decision making process. The timing of review meetings may provide intermediate occasions when the reviews might justify needed adjustments to

correct undesirable trends of implementation, while also keeping the actors themselves alert of the urgency to meet predetermined deadlines.

Endnotes to Chapter 10

1. Howard M. Carlisle, Situational Management: A Contingency Approach to Leadership (New York, Amacom, 1973), p.129.

2. Ibid., pp.133-140.

3. Rensis Likert, New Patterns of Management (New York, McGraw Hill Book Company Inc., 1961), pp.94-95.

4. Anthony P. Raia, Managing by Objectives (Glenview, Illinois, Scott, Foresman and Company, 1974), p.98.

5. S. F. Jablonsky, and D.L. DeVries, "Operant Conditioning Principles Extrapolated to the Theory of Management," Organizational Behavior and Human Performance, 7 (1972), pp.340-358.

6. Terence R. Mitchell, "Applied Principles in Motivation Theory," Personal Goals and Work Design ed. by John Warr, (London, John Wiley and Sons, 1976), pp. 163-171.

7. V.H. Vroom, Work and Motivation (London, John Wiley and Sons, 1964).

8. Mitchell, op. cit., p. 169.

9. Ibid., pp. 169-170.

10. Raia, op. cit., pp. 83-105.

11. A.H. Maslow, Motivation and Personality (New York, Harper and Row, 1954).

12. D.C. McClelland, The Achieving Society (New York, Van Nostrand Publishers, 1961).

13. F. Herzburg, B. Mausner, and B. Snyderman, The Motivation to Work (London, John Wiley and Sons, 1959).

14. A. H. Brayfield, and W. H. Crockett, "Employee Attitudes and Employment Performance," Psychological Bulletin, 52 (1955), pp. 396-424.

15. Vroom, op. cit.

16. G. H. Litwin, and R. A. Stringer Jr., Motivation and Organization Climate (Harvard, Mass., Division of Research, Graduate School of Business Administration, Harvard University, 1968).

Chapter XI

HYPOTHESIS TESTING AND EVALUATION OF THE COOPERATIVE MANAGEMENT PROCESS

Hypothesis Testing

It was hypothesized that cooperative management may be a more effective method of multijurisdictional management. The effectiveness of multijurisdictional management was to be judged by how effectively the managerial decisions would be implemented. Public decisions are more likely to be implemented effectively if they are not opposed. In order to demonstrate the validity of the hypothesis it is necessary to compare the potential of the cooperative management process to facilitate unopposed decisions with that of the fragmented process of decision making. By observing the differences in potentials, it may be possible to determine whether the former has certain definite advantages over the latter. Perhaps, the best method of testing the validity of the hypothesis may be by actually applying the concept to a typical real world problem, and observing its performance in securing unopposed decisions. But since this study is theoretical in nature and since a real world application is not attempted, an alternative means has to be improvised, to test and prove the hypothesis.

The probabilities of outcomes is utilized as the surrogate which may serve as an indicator for measuring effectiveness. Certain assumptions must be made. For purposes of demonstration, each outcome is assumed to be mutually exclusive of every other outcome. Also it is assumed that each outcome is equally likely. (In the real world, the possibility of the latter condition occuring is extremely remote.)

In the fragmented approach of multijurisdictional management, the response of one agency to management decisions made by another, may be (1) compatible, (2) ambivalent (impasse), or (3) incompatible. It is assumed that each of these responses are equally likely. In these circumstances, the probabilities of each such response, therefore are 1/3.

In the face of a compatible response, the decision may be implemented without further impediment.

In the face of ambivalence (impasse), two ultimate outcomes are likely. The impasse may be resolved and the decision may be contested or uncontested. The probability of each such outcome is 1/6, i.e. 1/2x1/3.

In the face of incompatibility, two ultimate outcomes are likely. The decision may be contested or may be uncontested. The probability of each such outcome is also 1/6.

The probabilities may then be summed up and classified under two categories: (1) those outcomes which are not contested; (2) those which are contested.

The probability of uncontested outcomes= 0.667

The probability of contested outcomes= 0.333

The above analysis is schematically represented using the decision tree approach in Figure 11-1.

The decision tree approach is used to analyze the probabilities of responses using the cooperative management approach. At the conflict sensing phase, three outcomes are possible - compatibility, incompatibility, and impasse. Each of them have probabilities of 1/3. (See Figure 11-2.)

No further action may be needed if a compatible outcome occurs.

In the event of an impasse, conflict management approaches are applied. Three outcomes are possible. The impasse may be resolved and the decision may be supported. Or it may be opposed. The third possible outcome is that the impasse continues. The probability of each outcome is 1/9, i.e. 1/3x1/3.

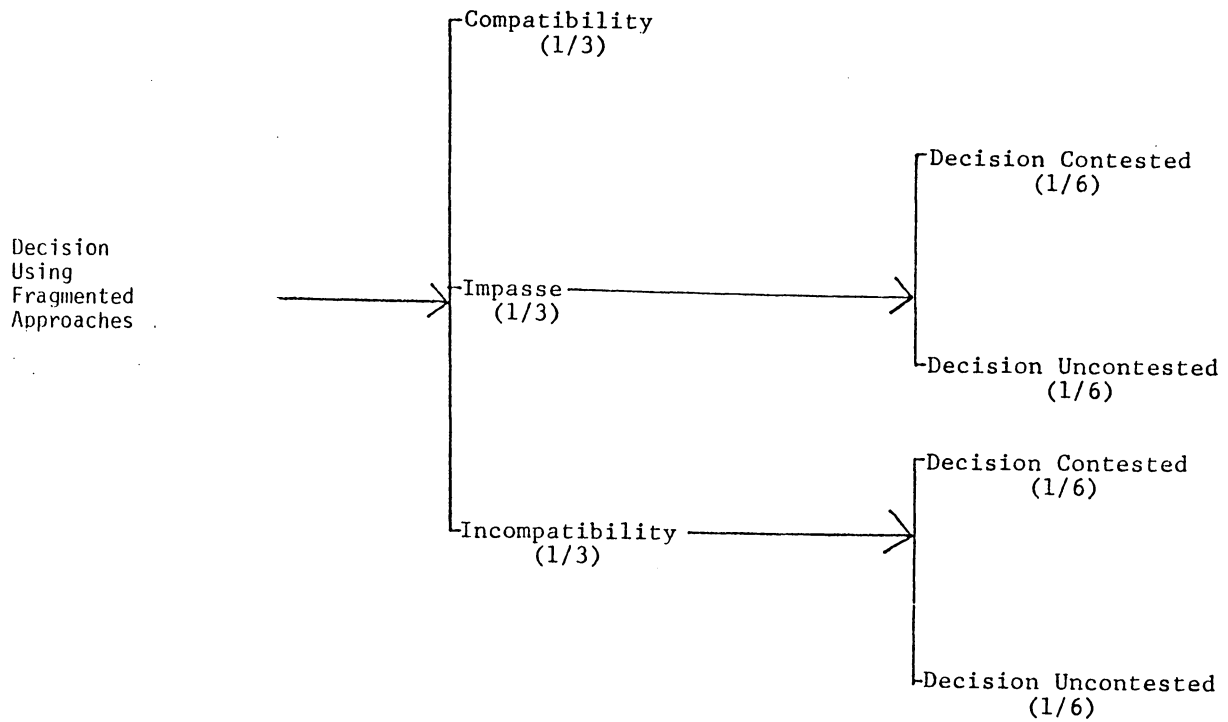


FIGURE 11-1 DECISION TREE SHOWING RESPONSES FOR DECISION MADE USING TRADITIONAL FRAGMENTED MANAGEMENT APPROACHES

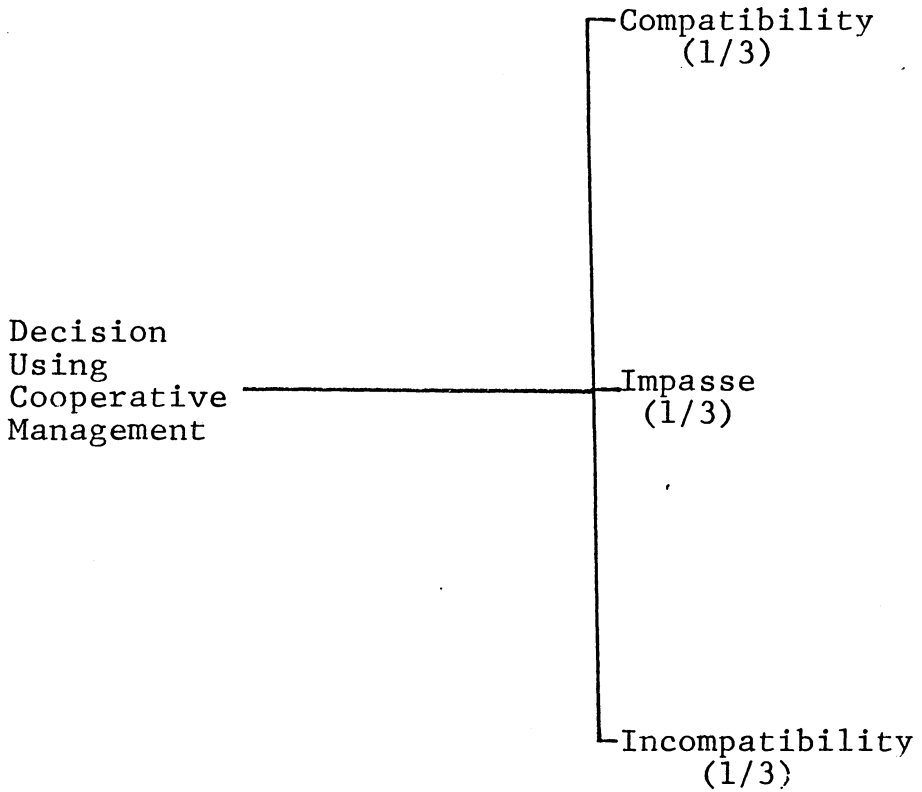


FIGURE 11-2: DECISION TREE SHOWING THE PROBABILITY OF OUTCOME FOLLOWING THE CONFLICT SENSING PHASE OF THE COOPERATIVE MANAGEMENT PROCESS

No action is needed if support is obtained for the decision. If opposition is the sequel to the attempt to resolve the impasse, a second round of conflict management may be applied. This may result in two outcomes - compatibility or incompatibility. No action is needed if a compatible outcome is achieved. This outcome has a probability of 1/18. In the face of continued incompatibility, the decision may either be contested or uncontested. The probability of either outcome is 1/36.

In the face of an impasse continuing after the first round of conflict management application, two ultimate outcomes are possible. The decision may be contested or may go uncontested. The probability of each of these outcomes is 1/18.

The decision tree indicating the probabilities of outcomes in the event of an impasse is shown in Figure 11-3.

If incompatibility is the outcome following the conflict sensing phase, cooperative manangement has two approaches to negotiate this contingency. Conflict management approaches may be applied or new alternatives may be formulated. The probability of each of these choices is 1/6.

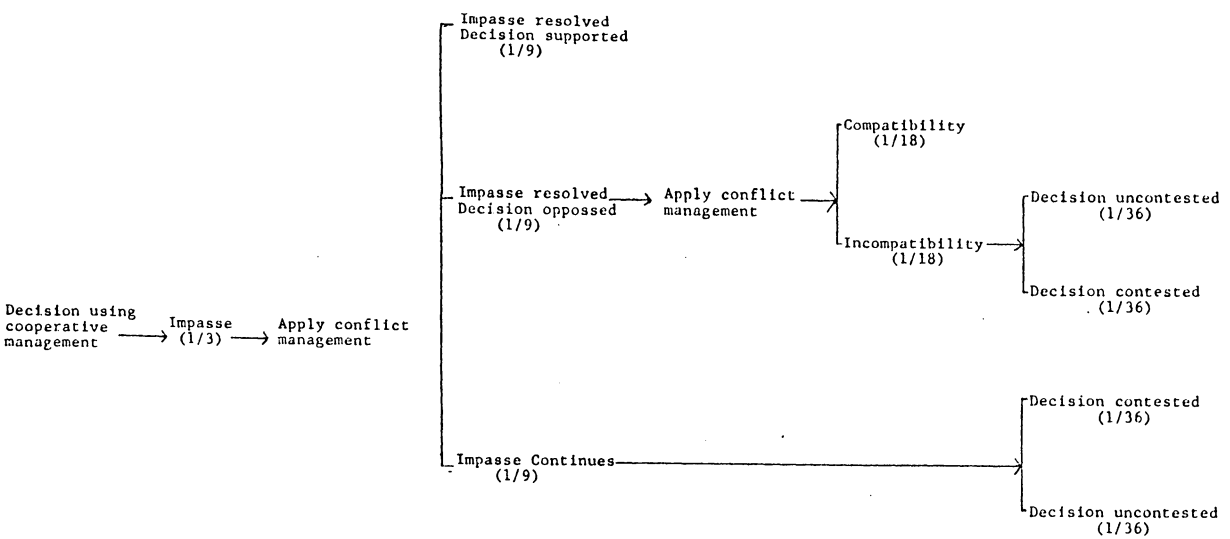


FIGURE 11-3: DECISION TREE SHOWING THE PROBABILITIES OF OUTCOMES IN THE EVENT OF AN IMPASSE

In the event of the use of either conflict management or the formulation of new alternatives, two parallel streams of outcomes are possbile.

Figure 11-4 shows the decision tree which analyzes the probabilities of outcomes in the event of incompatibility.

The outcomes may be classified under two categories as before, and the probabilities in each category summed up.

The probability of uncontested outcomes= 0.833

The probability of contested outcomes= 0.167

The probability of uncontested outcomes may be further increased by increasing the number of iterations.

It may be inferred from the above that the hypothesis appears to be valid and that cooperative management is more likely to bring about more uncontested decisions and their unimpeded implementation than the fragmented approach to multijurisdictional management. It must be remembered that the validity of the cooperative management process has only been demonstrated in an ideal theoretical setting, and subject to ideal theoretical conditions. The real validity of this concept needs more empirical testing which may be obtained through real world testing in a given pragmatic

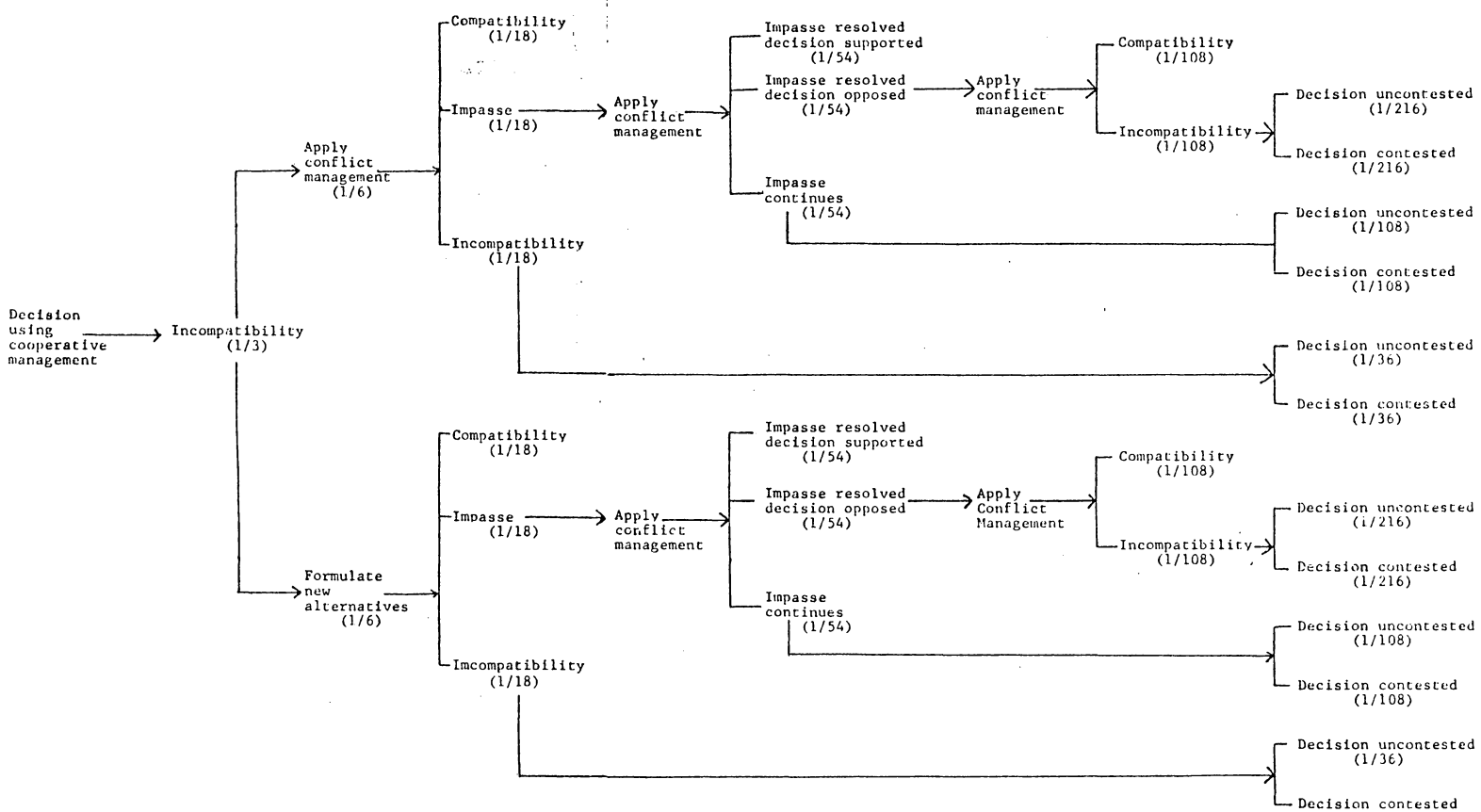


FIGURE 11-4: DECISION TREE SHOWING THE PROBABILITIES OF OUTCOMES IN THE EVENT OF INCOMPATIBILITY

situation. This however falls beyond the scope of this study.

Evaluation of the Cooperative Management Process

For purposes of evaluation, the inherent advantages and disadvantages of the cooperative management process are examined. The cooperative management process has a number of applications in any multijurisdictional management problem involving public agencies having different goals and objectives. It offers an alternative to the range of interjurisdictional arrangements that require considerable legislative manuvering and political lobbying for their establishment and institutionalization. It may also serve as a less cumbersome and time consuming alternative to judicial intervention and/or legislative intervention. In these instances, the validity of decisions are clarified or rejected after the decision is made or the game rules of the decision making process vis-a-vis responsibility, authority and jurisdiction are reorganized. It may provide a pre-emptive mechanism for sensing and overcoming interjurisdictional conflicts during the process of decision making itself, by facilitating interaction among all decision makers or parties who may influence or be affected by the decision. It may offer the prospect of having a temporary

and neutral setting where interjurisdictional problems may be discussed and negotiated. A decision which may be compatible to all the participants may be worked out through constructive dialogue, exchange of information, and reiterative negotiation and bargaining. It appears to be suitable for a wide range of problems requiring continuous interagency involvement and interaction where forums may be established for making strategic, managerial and operational decisions and for making commitments. By virtue of its orientation to deal with decision situations, as and when they arise, costs and time involved may be minimized by adopting the process. A long term establishment as characteristic of the compacts or regional decision making bodies is not required. Finally, cooperative management tends to improve interagency interaction, understanding and communication. It seeks to maintain continuous liaison among those agencies which may be frequently called upon to work together to manage environmental resources which fall within their functional or geographic domain. A good repertoire, once established among parties, may provide the incentive and motivation to maintain and continue associations and prolongs the continued application of the cooperative management process.

It must be noted that whereas cooperative management does have some inherent advantages and appears to have universal applications, it may not always be effective in all circumstances. There are risks that the process may break down at several points during decision making.

The first possibility is the likely breakdown of the decision making process by not being able to achieve compatibility at several points in the process of decision making. Compatibility may not be achieved during the problem articulation phase. It may not be possible to secure agreement by all parties on the issues, or on their priority. If such disagreement occurs, all legitimate issues may fail to receive adequate consideration, and the lapse may become compounded so as to precipitate a conflict. Any denial of consideration of some issues may also result in a breakdown of cooperative interaction by the party which may be aggrieved by the denial.

A very similar situation may occur at the alternative formulation phase, where an alternative suggested by one party may be passed up, without an evaluation. This may lead to a breakdown of communication between parties and a collapse of interactive decision making.

If participation continues, failure to achieve compatibility in the selection of alternatives manifests itself in the compatibility/conflict sensing phase as an impasse or as opposition. It may not always be possible to overcome the impasse or the opposition and to facilitate compatibility in the selection of alternatives even after several iterations of the conflict management process. As a result, it may not be possible to secure commitments.

The conflict/compatibility sensing phase identifies the conflicts at each stage and attempts to resolve them. Different approaches are applied in different iterative rounds, with the intent of resolving the conflict. The conflict may not be settled amicably, regardless of the number of rounds of conflict management that are attempted. Two possibilities may emerge in this situation: the conflict situation continues without resolution, or the failure to resolve the conflict may result in a breakdown of the cooperative forum itself.

The above discussion reflected the possibility of a breakdown of the decision making process. Cooperation, itself, may break down at any point in the interactive process of decision making commencing with the third phase -- the organization of the decision making forum -- result-

ing in some parties removing themselves from participation in the forum. Decisions may then have to be made even without the input of the absentee party. Such decisions run the risk of being challenged as unacceptable by that party after they are made.

In either of these contingencies, the resolution of conflict (with or without the breakdown of cooperation) may not occur within the scope or purview of cooperative management. External means of resolution by the intervention of the judiciary or the legislature may be inevitable to overcome the stalemate. It may be concluded from the above that the cooperative management approach does have limitations and problems involving multiple jurisdictions, multiple agencies, and multiple goals and objectives.

Despite these disadvantages, cooperative management attempts to overcome these disadvantages by incorporating appropriate procedures to negotiate them, and embedding these procedures in appropriate locations in the decision making process. It may also be remembered that all the disadvantages are as likely to occur in the fragmented approach,as well. The worst conditions scenario that may occur, using cooperative management is not likely to be any different from,, or inferior to the corresponding scenario

using the fragmented approach. As such, cooperative management does appear to be a very workable and viable alternative for a range of multijurisdictional management problems where the problems need quick responses and solutions, and cannot await the creation of institutionalized interjurisdictional arrangements such as the regional organization. Cooperative management seeks to facilitate compatible decisions. Since such decisions are unlikely to be opposed, cooperation management enhances the effectiveness of multijurisdictional management. It also tends to reduce the total dependence on judicial and legislative intervention for the resolution of all interjurisdictional or interagency conflict. It may further provide an opportunity for different agencies to relate to one another on a continuous basis to deal with common or pervasive problems. It might facilitate the establishment of a durable repertoire of cooperation and partnership among agencies in dealing with problems in which they all have stakes to preserve and protect. It tries to present conflict in a new and positive light, where legitimate concerns and opinions, (which are not necessarily compatible with one another), may be presented in a neutral setting as alternative points of view. Compatibility may be brought about by negotiation bargaining, and compromise, involving the participants

without external interference or intervention. Finally, cooperative management is a more economical, less cumbersome, and less time-consuming alternative for multijurisdictional management than the more traditional approaches that are currently in use.

Chapter XII

THE APPLICATION OF COOPERATIVE MANAGEMENT -- A CASE EXAMPLE

The management of land and resources in the State of Alaska provides a typical case example of multijurisdictional management of the environment. The Alsaka setting offers an opportunity to demonstrate, albeit in a somewhat contrived and simplified manner, the possible application of the conceptual framework or model embodied in the cooperative management process. In selecting this "case example", however, it is not the intent to conduct a full and accurate representation of what has actually occurred, or is occurring in the conduct of deliberations surrounding the "d-2" lands issue. Certain liberties have been taken with the sequence and time frame in which reported events occurred. Also certain complexities have been reduced to make this presentation manageable within this discussion. For instance, the scope of this illustrative example will largely focus on federal-state interaction for multijurisdictional management at the strategic level. The author begs the indulgence of those who participated in these deliberations and those who are more intimately familiar with the actual proceedings.

The Management Setting

Until recently, most of Alaska's lands and resources were federally owned and managed. Under the Alaska Statehood Act of 1959 the State was allocated a quota of land from the federal reserve. The State has been in the process of selecting lands since the early sixties and did not fill its quota until 1978. Many of the lands requested were considered by federal conservation agencies as areas to be preserved and protected, and therefore, their allocation to the State was opposed. Urban boroughs and municipalities also have to obtain land for government services, such as parks and schools, and may petition for up to ten percent of the land selected by the State. Native Corporations have claims on considerable extents of land which were targets for municipal expansion, delivery of public services and so forth. A scenario of agencies and interest groups competing to secure managerial rights over different parcels of land gradually began to emerge.

It became evident that to be able to cope with the problems related to land distribution, classification, and determination of land use in the State, a coordinating commission had to be established. In response to this concern, the Joint Federal-State Land Use Planning Commission for Alaska was established as part of Section 17(a)(1) of

the Alaska Native Claims Settlement Act of 1971. The mandate of the Commission was to:

1. undertake a process of land-use planning, including the identification of and the making of recommendations concerning areas planned and best suited for permanent reservation in Federal ownership as parks, game refuges, and other public uses, areas of Federal and State lands to be made available for disposal, and uses to be made of lands remaining in Federal and State ownership;

2. make recommendations with respect to proposed land selections by the State under the Alaska Statehood Act and by Village and Regional Corporations under this Act;

3. be to advise upon and assist in the development and review of land-use plans for lands selected by the Native Village and Regional Corporations under this Act and by the State under the Alaska Statehood Act;

4. review existing withdrawals of Federal public lands and recommend to the President of the United States such additions to, or modifications of, withdrawals as are deemed desirable;

5. establish procedures, including public hearings, for obtaining public views on the land-use planning programs of the State and Federal Governments for lands under their administration;

6. establish a committee of land-use advisers to the Commission, made up of representatives of commercial and industrial land users in Alaska, recreational land users, wilderness users, environmental groups, Alaska Natives, and other citizens;

7. make recommendations to the President of the United States and the Governor of Alaska as to programs and budgets of the Federal and State agencies responsible for the administration of Federal and State lands;

8. make recommendations from time to time to the President of the United States, Congress, and the Governor and legislature of the State as to

changes in laws, policies, and programs that the Planning Commission determines are necessary or desirable;

9. make recommendations to insure that economic growth and development is orderly, planned and compatible with State and national environmental objectives, the public interest in the public lands, parks, forests, and wildlife refuges in Alaska, and the economic and social wellbeing of the Native people and other residents of Alaska;

10. make recommendations to improve coordination and consultation between the State and Federal Governments in making resource allocation and land use decisions; and

11. make recommendations on ways to avoid conflict between the State and the Native people in the selection of public lands.[4]

In view of the pressures and demands imposed on federal land holdings in Alaska, it was found very necessary to identify, delineate, and specify areas which were to be preserved and protected, and to be withdrawn from likely targeting by the State. This was one of the prime objectives contemplated in the formulation of the "d-2" lands legislation. Under Section 17(d)(2) of the Alaska Native Claims Settlement Act, up to 80 million acres were to be withdrawn by the Secretary of the Interior for consideration by Congress as additions to, or new units of the National Park, Forest, Wildlife Refuge, and Wild and Scenic Rivers Systems. Considerable political lobbying during the latter part of the decade resulted in the enactment of federal legislation under Section (17)(d)(2) of the Alaska

Native Claims Settlement Act. This Act provided for the designation of certain lands for preservation and protection as natural wilderness under federal control, and for the earmarking of some lands for use by the State and the Native Corporations and local bodies, based on State requests. Areas designated as "d-2" lands were to be withdrawn from the land eligible for reassignment to State and local agencies and Native Corporations.

The Management Scenario

Prior to, as well as after the enactment of the "d-2" lands legislation, the responsibility for the management of lands and resources in Alaska was distributed among various agencies at federal, state, and local jurisdictional levels. Management responsibilities were distributed at three tiers within each jurisdiction -- strategic, managerial, and operational levels. The federal agencies involved at the strategic level include the Departments of Interior, Agriculture, Transportation, Housing and Urban Development, Health and Human Services, Education, Commerce, Defense, the Treasury, and the Federal Energy Administration. At the managerial level, the federal agencies include the U.S. Geological Service, Federal Highway Administration, the Bureau of Mines, the Bureau of Indian Affairs, the Fish and

Wildlife Service, the Environmental Protection Agency, the Army Corps of Engineers, the Bureau of Land Management, the Soil Conservation Service, the National Park Service, and the National Forests Service. At the operational level, the federal agencies include the various wildlife refuges, the park units, and other field units under the federal departments.

At the State level, the main agency at the strategic level is the Office of the Governor. Agencies at the managerial level include the State Division of Lands, the Division of Parks, the Department of Community and Regional Affairs, the Department of Highways, the Office of Policy Development and Planning, the Department of Fish and Game, Alaska Power Administration, the State Department of Environmental Conservation, and the Department of Natural Resources. At the operational level, the State agencies include the state parks, state wildlife refuges, the different boroughs and incorporated areas, and other state field units.

At the local level, the main agencies include the boroughs and incorporated areas; the Native Corporations dealing with different Indian and Eskimo tribes; and the Aleyska Pipeline Company, the Arctic Gas Pipeline Company, and other major corporations and vested interest groups.

Representatives of the citizenry at large also may be included to provide inputs to the decision making process.

The objectives of the federal government at the strategic level are likely to focus on: (1) the preservation and protection of wildlife, wilderness, water resources, forests, scenic and other natural values; and (2) the development and use of mineral resources to fulfil national objectives on energy development. Key objectives for the State are likely to focus on meeting the demands for the growing population, urbanization, agricultural and industrial production, and employment. An objective for the Native Corporations is likely to be to protect the subsistence culture of the natives, profit maximization and so forth. An objective common to all constituencies is very likely to be to provide adequate accessibility, and services to major parks, communities, production centers, and centers of trade and commerce.

Prior to the "d-2" lands legislation, the Joint Federal-State Land Use Planning Commission of Alaska advocated the cooperative planning and management of environmental resources in Alaska. The following reasons for recommending this strategy were identified by the Commission:

1. There is a continuing State-Federal relationship. This did not begin and will not end with the disposition of the d-2 lands.

2. The land ownership pattern in Alaska is growing evermore complex as a consequence of the implementation of the Alaska Statehood Act and the Alaska Native Claims Settlement Act. Lands owned by the Federal government, the State, Native corporations, and other parties lie adjacent to each other in tracts of varying size which do not necessarily follow rational boundary lines. This intermixture of land ownership can easily jeopardize prudent management. A systematic approach to resources which are similar but owned by different parties must be initiated to insure consistent and complementary management.

3. Private and state lands may be the essential buffer zone for certain of the more sensitive areas in Federal control. In other cases, the Federal government will own and regulate the mountain tops while the valleys are in State control, or the Federal government will have the wild and primitive areas while State lands will contain the people. Cooperative management is essential to protect the commonality of interest and to protect the national interest.

4. Resources have been divided by mixed ownership across the surface of the land, and between the surface and subsurface. The State, for example, owns the bed of navigable waterways and tidelands, while the water column within the Federal withdrawals will be controlled by various State and Federal Reserve Water Rights Doctrine. Ownership of the land surface and the underlying minerals may also be split between private owners and Federal agencies.

5. Migratory wildlife, e.g., caribou, waterfowl, etc., require extensive habitat that will occur on all land ownerships. Habitat must be maintained, and movement must remain free if these species are to survive.

6. Even if parks or refuges are contained ecosystems to the extent possible, there will be elements of the ecosystem that cannot be contained in area boundaries. Protection of entire ecosystems, and the full use of new knowledge about those systems will require extensive cooperation.

7. Issues may have a local significance but are actually regional, statewide or national, and they must be approached from that perspective. These include: (a) Outer Continenetal Shelf programs; (b) Coastal Zone Management; (c) international fisheries management; (d) marine mammals; (e) energy development; (f) fish and game management; (g) transportation; (h) wilderness study; (i) research; and (j) information systems.

8. The social, economic, and land use interweave is more fundamental in Alaska than in states with a more developed infrastructure. Any change can have an effect across the State.

9. National parks will become destination points for tourists. The State will be called upon to provide access and other infrastructure outside the parks. Close coordination and planning will be necessary to permit the State to provide these services without harmful impacts.

10. Ownership of land in Alaska is concentrated in government and corporate hands. Thus, there is no "grass roots" force to develop means of cooperation.

11. There are extensive federally owned areas in Alaska which remain largely in their natural state, and have natural values that are clearly of national importance. Nonrenewable and renewable resources found on these lands are largely unevaluated, and their possible importance in meeting future national and international needs for energy, minerals, wood, fiber, and food cannot be accurately estimated at this time. The existing Commission has recommended this area be placed in a new classification called Alaskan National Lands. Decisions regarding these lands must be made cooperatively, within a national context over time.

12. Land exchanges between Federal and State governments or between governments and Native corporations may offer a viable solution to certain problems. Cooperative planning is needed to provide the broader perspective to undertake such exchanges.[2]

The key points highlighted by the Joint Commission in advocating for cooperative planning and management of environmental resources in Alaska were that:

1. Fragmentation of the land and resource management system does not terminate the continuing federal-state relationship;

2. Land and resource managment in Alaska is regional in scope and must be approached with such an integrated perspective; and

3. Interagency coordination is a critical need to negate adverse impacts of one agency's decisions on the activities and functions of another.

Caldwell emphasized the first point by noting that:

(a) The pattern of each ownership and jurisdiction is mixed and interlarding so that no single existing authority is legally in position to assume responsibility for land use planning or decision making.

(b) To confine authority over national lands to existing federal agencies: (i) would not address the mixed ownership problem (federal-state-private) and (ii) would not provide coherent responsible jurisdiction because of the separately-focused responsibilities of the several agencies themselves and the well-documented ineffectiveness of inter-agency committees in dealing with complex problems that extend beyond the missions of their respective members.

(c) The greater number of land use decisions are made by whoever possesses proprietary authority over the land. Unless the proprietary interest is responsibly involved, land use decisions will: (i) fail to be coordinated; (ii) be made without regard to all of the parties affected; and (iii) give rise to excessive litigation.

(d) Unless the interests of all parties concerned (including future generations) are somehow taken into account in the planning process, the consequences are likely to be: (i) predominance of short-range over long-range considerations; (ii)

> high opportunity costs incurred, as short-range decisions unnecessarily foreclose desirable future possibilities; (iii) conflicting land use decisions being taken by proprietors without adequate knowledge of the plans of other proprietors or how the plans of one affect the interests of the others; and (iv) there is no efficient, responsible or, possibly, legitimate way (i) to accommodate divergent interests, (ii) to provide quid pro quo arrangements that facilitate the integrated management of whole ecosystems, and (iii) to avoid the "taking" issue from arising unnecessarily whenever the use of private lands must be restricted on behalf of a public purpose.[3]

In reviewing the second and third points -- namely, the need for an integrated regional perspective and interagency coordination -- it may be observed that in a fragmented structure of jurisdictions, each agency makes a wide range of decisions which may address the needs of areas under its own jurisdiction. These decisions may have influences and impacts on areas outside agency jurisdictions as well, and on the activities and functions of other agencies or groups. Some of these impacts are likely to result in interagency conflicts.

A summary of typical interagency conflicts were compiled and presented by the Joint Commission as follows:[4]

1. Federal Agencies

> Unresolved problems inherent in national policy objectives have created conflicts in land management philosophy. Pressures to remedy the balance of payments and resource shortages conflict with long-standing preservation attitudes of mission-oriented agencies. Each mission-oriented agency

is competitive, and emphasizes only a single function or approach in land management. This situation results in a lack of coordination, duplication, and waste. The implications of inconsistency in federal policy are particularly important in Alaska where a large percentage of land is in federal ownership.

2. Federal and State Agency Conflicts

Federal and State approaches to planning and management conflict with one another due to the number of different objectives involved. The federal government has abundant resources at its disposal. Its several mission-oriented agencies have a long history of planning and management. The State of Alaska, in contrast, has limited government financial resources, and is dependent on the federal government to achieve extensive levels of government service. National agencies are more sensitive to natural conservation and environmental interests. State agencies are liable to yield to local development pressures. In areas of crisis, however, such as those relating to energy, natural resource shortages, and balance of payments deficits, national policy tends to override conservation objectives and favor exploitation of Alaska's natural resources. In this context, The State tends to be a colony at the mercy of inconsistent Federal policies. The economic return which the State could otherwise obtain from the land (i.e. in the form of taxes, development, etc.) is limited by the large land holdings of the Federal and State governments.

3. Competing Interest among State Agencies

Different mission oriented agencies have different approaches to land management. They have different values in regard to who, what, and for what purpose land should be used. The competition for control and use of land, therefore ends in conflict. The fragmentation of planning functions into several departments of government, hinders coordination and encourages inconsistent policy. Potential for friction exists between planning carried out in operating agencies and more integrated planning performed at the executive or other levels.

4. State and Local Government Conflicts

The State is unable to secure its full quota of land because of the pressure for claims among other competing interests for the land. the State has, yet, to fill its full quota of land allowed under the Alaska Statehood Act. A borough is allowed to petition for 10 percent of the land selected by the State. Some urban boroughs and municipalities are, therefore, unable to obtain necessary land for government services, such as parks and schools.

5. Conflicts between Public and Private Organizations

Competing claims continue to occur between public and private interests and are largely being settled in an ad hoc, informal manner (out of court). The non-natives are concerned that large portions of land are allocated to private (Native owned) corporations. On the other hand, the natives resist the allocation of a portion of their claimed land for public (municipal) services and access. Deficiencies in native lands in some cases, have led to conflicts between claims by natives and the desire for protection of that land by conservationists. Native claims and the attendant subsistence way of life, in other cases, conflict with some objectives of mission-oriented federal agencies. The criteria of contiguity and like kind and character required of claim land cannot be satisfied because of the shortage of land.

As a result, there is a checkerboard pattern of ownership. Further, some provisions of the Settlement Act purposely encourage such a pattern. This configuration of ownership often does not take into consideration the nature of the land; it is also difficult to administer and control. Much of this new private land is choice development land, and there is little provision for subsequent control over its use, creating the potential for future conflict. In some cases, a tendency for these private coporations to assume de facto the function of local government agencies in providing services, etc., may create problems in accountability and responsibility.

Different (competing) interests of regional corporations -- arising out of different geographical characteristics, ethnic composition, natural resources and development philosophies -- makes planning of state-wide systems, (e.g., transportation) difficult.

6. Competing Interests Among Private Groups As a consequence of different ethnic characteristics, capacities, and resources, many conflicts may be enhanced and dependencies created among different regional corporations. Differences exist from region to region and from village to village, with the potential for intra- and inter-regional conflicts. Most of the monetary wealth may accrue to regions rather than villages, resulting in a white-collar middle class which may become more distant and hold different values from the village way of life. Provisions for redistribution of wealth among the regional corporations may not prove to be effective mechanisms for eliminating inequities among regions.

Thus it may be inferred that a team approach for the management of land and resources involving federal and state agencies, appears to be an inevitable need. The development of an integrated perception of the land and resource management system and the acknowledgement of a regional approach for planning and management also appears to be a critical requirement. And, a mechanism for inter-jurisdictional, interagency coordination of public decisions is needed so that conflicts may be more effectively negotiated.

Recommended Alternatives

Four alternative approaches according to levels of involvement/responsibility were reviewed by Anthony Catanese at an intensive two-day workshop on "Innovative Concepts of Cooperative Classification and Management of "d-2" lands of Alaska", sponsored by the Joint Commission in Anchorage during March, 1978. These alternatives are:

1. Existing agency approach, with reliance on interagency and intergovernmental agreements.
2. New agency approach, with greater emphasis on state roles.
3. Commission approach, and
4. Land Commissioner or Land Czar approach, with centralized powers.[5]

Catanese discussed these four organizational arrangements along an imaginary continuum, based on the level of centralization of authority. The level of centralization is greatest in the Land Czar alternative and least in the Existing Agencies approach.

Catanese suggested that the framework involving existing agencies at the State, federal, and local levels necessitated increased cooperation and coordination, largely on a voluntary basis. Therefore, some techniques for ensuring cooperation, coordination and conflict resolution were needed outside of judicial intervention and direction. The

techniques listed by Catanese included interagency agreements, legislation, rules and regulations through congressional or state legislative action, executive orders of the President, Governor, and other chief executives, persuasion through "good offices", authority/responsibility mandates involving executive or legislative changes or reorganization, referenda, and the networking of existing legislation, rules and regulations.

The New Agency approach was conceived as a new organization of appropriate stature, having proper mandates of authority and responsibility for land use decisions at federal and state levels, with techniques for interagency cooperation, coordination and conflict resolution between these agencies. These techniques included arbiters, administrative courts and a framework for plan or policies.

Two options for commissions were suggested: (1) a cooperative planning commissions, or (2) a commission with a statewide mandate, including representatives from interest groups, regional and local representatives, elected leaders and citizens. The same techniques for coordination, cooperation and conflict resolution were recommended by Catanese.

The final alternative was the appointment of a Land Czar with authority for coordination, cooperation and conflict resolution. Catanese suggested that the appointee could be by the state, the federal government, or through a joint arrangement.[6]

Irving Hand provided a summary evaluation of the alternatives as part of the March, 1978 workshop.* He contended that:

1. The Existing Agency approach portrays some measure of fragmentation of responsibilities, being both overlapping and mutually exclusive, with only limited (although perhaps growing) opportunities to bring parties of interest together in selected ways to deal with specific situations.

2. The New Agency and Commission approaches give fuller recognition to the more complete array of responsibilities defined under cooperative planning and management, as well as the need for a more clearly articulated organizational focus in the exercise of these responsibilities.

3. The Land Use Commissioner approach would seem to be a viable option only after other alternatives have been fully evaluated and found wanting in terms of the objectives envisioned under the national interest.[7]

A compromise to the above four alternatives was presented by Steiss at the March, 1978 workshop. He recommended federal cooperation among federal agencies, State cooperation among State agencies, and a Joint Commission

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* No further elaboration is attempted here, as the main purpose is to determine the applicability of cooperative management.

for coordination among the two levels. Agencies involved in this cooperation will be those responsible for land management, energy and transportation at the federal and state level. Interaction would be among parties with like responsibilities, that is, the U.S. Forest Service would relate to its counterpart at the state level, and so on. Steiss suggested that the State presence also needs to be strengthened through a comprehensive statewide planning effort, incorporating inputs from local bodies, boroughs, Native Corporations, and citizens. Under this compromise approach, the Joint Commission would have responsibility for task force formation, as appropriate, for any specific issue. The Joint Commission also would have an administrative review process, to provide a quasi-judicial avenue for review and arbitration of problems involving aggrieved parties.[8] In effect, the compromise approach embodies some of the characteristics of cooperative management although at a much more elemental level than envisioned herein.

The Applicability of Cooperative Management

From the above review, presented prior to the enactment of the "d-2" lands legislation, it is very apparent that cooperative management, as designed in this study, is a very appropriate alternative for multijurisdictional man-

agement of the environment in Alaska. Cooperative management has been designed to operate in a setting of fragmented jurisdictions, multiplicity of agencies, and diversity of managerial objectives and missions. It incorporates a process of compatible decision making through cooperation and voluntary participation of decision makers and interest groups who have authority to make or influence public decisions, as well as those who are affected by them. It reviews the likely impacts of alternative courses of action and attempts to facilitate compatible choices among them. It also seeks to provide a workable alternative to formulate conflict-free decisions which may be implemented without opposition or impediment.

Cooperative management does not restrict the leadership and authority for decision making to only one agency. It acknowledges that fragmentation of authority, responsibility, power, and jurisdiction is a reality that has to be contended with, and that decision making is a shared responsibility. It provides an opportunity for every agency or group to represent its own interests, and relate to them in the larger context of overall needs and concerns. It provides a setting where the impacts of likely decisions of one agency, on the interests, activities and functions of another, may be examined and evaluated openly

so that negative impacts, if any, may be minimized through constructive dialogue and negotiation.

This in effect amounts to interagency coordination that is effected by joint effort and cooperation of all agencies rather than through supervision, direction, and exercise of power by any one of them. Such coordination is likely to be more effective and may result in more committed action by the decision makers. Since each participant was instrumental in formulating compatible decisions, they have a stake in carrying them out.

Cooperative management, therefore, appears to be both appropriate and suitable as the needed approach for multijurisdictional management of the environment in Alaska. Its design conforms to the needs of an integrated regional approach for planning, shared responsibility for management, and interjurisdictional interagency coordination.

The Current Applicability of Cooperative Management

The "d-2" lands legislation was enacted in 1980. This Act fragmented the territory into tracts under federal and nonfederal jurisdictions, independent of one another. Whereas federal and nonfederal jurisdictional boundaries are clarified, responsibilities for land and resource man-

agement are also fragmented along these jurisdictional divisions. The multijurisdictional scope of land and resource management in Alaska was not changed by the "d-2" legislation -- it only was intensified. Before the "d-2" lands legislation was enacted, the Joint Commission possessed the powers and the authority for interjurisdictional interagency coordination. The Joint Commission was disbanded after the enactment of the legislation, and its coordination function was never replicated. There is no alternative provision for coordination of decisions made by the different agencies across jurisdictional lines. Therefore, the likelihood of conflict-free decisions appears to be relatively remote.

It is quite apparent that cooperative management was found to be an appropriate alternative for multijurisdictional management of the lands and resources of Alaska prior to the enactment of the "d-2" lands legislation. Its need attains even greater significance after the enactment. All the justifications described above continue to apply. In addition, the absence of the Joint Commission as a coordinating body underlines the critical need for coordination through cooperation among agencies, as inherent in cooperative management. In the wake of a more visible fragmentation of management responsibilities and authority, coopera-

tive management appears to have potential for direct application. The enactment of the "d-2" lands legislation, has only enhanced the justification for the application of the model approach described in this presentation.

Operationalization of Cooperative Management

Since the appropriateness and suitability of cooperative management for application in the context of current land and resource management in Alaska is very apparent, a framework for its actual incorporation in the management process may be contemplated. No detailed demonstration of its actual application is attempted. Only the current "fit" of its application will be discussed.

The starting point for the application of cooperative management is the identification of the key agency and the designation of the lead agency. According to the cooperative management paradigm, any agency, department, or section qualifies as a key agency, depending upon the level at which the multijurisdictional problem is first sensed. The lead agency designation, however, will depend upon the type of decision response that is needed and the level at which the sequence of decisions is initiated. The key agency only provides the identity of a "chain of command" from which the lead agency is to be designated. Such lead

agency should be designated at the level in the primary chain of command corresponding to the highest level in any other agency hierarchy that should be represented in the decision resolution process.

It is apparent that, in the setting of land and resource management, almost every agency, department or section is likely to be continuously involved in sensing problems with interjurisdictional dimensions and making decisions which may have extrajurisdictional impacts. It is also very likely that many problems may require compatible strategic decisions to be followed through with compatible managerial and operational decisions. It does not appear to be reasonable or practically workable, however, to designate lead agencies independently for each problem as it arises if (1) there are innumerable problems to be dealt with on a continuous basis; (2) each problem warrants a unique combination of compatible decision responses, involving different levels of decision making; and (3) the lead agency requires to be designated at the highest level of representation, as appropriate.

In order to develop a more practical approach for the lead agency designation, the organization of the forum may be examined first, and adapted appropriately, to match up

to the set of contingencies listed above. The forum is visualized as an assembly of all legitimate participants brought together with the objective of working out compatible decisions. As suggested earlier, compatible decisions are needed at strategic, managerial, and operational levels. Forums can be established at each of the three levels, therefore, to be supported by a two-way communication linkage among all three levels.* Information flow must be maintained continuously from the forum at the strategic level to that at the managerial level, and from the forum at the managerial level to that at the operational level.

Since problem sensing and identification by a host of key agencies at all levels are likely to be continuous, it is meaningful to maintain representation of all agencies and groups involved in decision making at all respective forums on a continuous basis. Impacts of decisions made by one agency may affect agencies with responsibilities that may or may not correspond to each other at different jurisdictional levels. Therefore a comprehensive mix of participants is needed.

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* In other words, there will be a forum at the strategic level, another at the managerial level, and a third at the operational level.

Two forms of information flow should also be established and routinized. Information should be "fed-forward" from the operational level forum to that at the strategic level through the forum at the managerial level. Such information should include reports on such aspects as problem sensing, impact assessments, problem identification and data support relating to the formulation and evaluation of alternatives, among others. Such information may be used as inputs for decision making at the respective upper level forums. Correspondingly, the "feed-back" flow of information from the strategic level forum to that at the operational level (through the forum at the managerial level) will provide reports on such aspects as the progress and results of decision making at the upper levels, together with guidelines for policies, programs, and projects, that have been agreed on. In effect, the upper level forums will act as coordinators for the decisions made at the lower level forums. Information needs for decision making at upper level forums may also be communicated through this feedback process.

Whereas this sets the stage for the process of decision making at all levels, the lead agency role has yet to be clarified. It is increasingly apparent that there does not appear to be any lead agency which may automatically qualify for leadership at any forum. The leadership function

for initiating dialogue and negotiation shifts from one agency to another, depending upon the identity of the problem being addressed, and on how central the problem is visualized in terms of the mission of any agency, department, or section. As such, a flexible "floating" lead agency designation appears to be the most workable arrangement that may be established in all the forums. The leadership at each forum may shift from one agency to another on an issue-by-issue basis within the scope of the prescribed agenda before the forum. Each agency representative which secures leadership for a specific issue will bear all the responsibilities as the representative of the lead agency, as suggested in the decision making paradigm for that issue. These responsibilities will be carried out until that issue is compatibly resolved.

The workshop format for the conduct of proceedings of the forum is most suited for this flexible organization. Leadership of different workshops may be distributed among different lead agencies, depending upon the issues at hand. In the event of several issues being interrelated, requiring more comprehensive treatment, a synthesis of workshops may be made by coordinating the agendas of different workshops. Workshops may be timed in accordance with the sensing of the problem and the priority assigned to it. Lead

agencies may communicate with one another to formulate joint agendas, and to schedule meetings for the workshops.

The actual mechanics of proceeding with the cooperative management approach is not discussed here in view of the nonidentity of a real problem and the likely redundancy with the discussions contained in the design of the process.

In conclusion, an important consideration that has to be discussed in this context focuses on the role of cooperation. Cooperation is a vital ingredient for cooperative management to be effective. It has been indicated that the establishment of the forum is dependent upon the voluntary cooperation of participants. As such persuasion, rather than coercion is the principal means by which the different parties may be mobilized for participation in cooperative management. The key to persuasion is to enlighten and secure the acknowledgement of the different parties that have a stake in the decision being made. Only by participating in the decision-making process can the ensuing decisions be influenced by these "stake holders" so as to be compatible to their interests and concerns. Cooperative management provides an opportunity for the participation of different constituencies in the decision making process.

Agencies and interest groups may avail of this opportunity to protect and safeguard their interests and negotiate compatible decisions which may have minimal negative impacts on their activities and functions. In this manner, the parties may be able to preempt negative impacts and forestall potential conflicts that are likely to occur if decisions were made without their legitimate input and influence through participation.

By resorting to the application of cooperative management for the management of land and resources in Alaska, there is greater likelihood of more effective, integrated, coordinated and comprehensive efforts which may be able to forestall the inherent shortcomings of a fragmented approach to management which are inevitable, following the "d-2" land designation.

Endnotes to Chapter 12

1. Lydia L. Selkregg, "Preliminary Report on Cooperative Institutions," (University of Alaska, Anchorage, Alaska, May 1978), pp. 10-11.

2. Joint Federal-State Land Use Planning Commission for Alaska, Cooperative Planning, Management, and Organization (Report of Recommendations of Meeting on September 15 and 16, 1977), pp. 1-3.

3. Lynton K. Caldwell, Report to the Joint Federal-State Land Use Planning Commission for Alaska Relative to Report of the Subcommittee on Cooperative Planning, Management, and Organization (Bloomington, Indiana, Indiana University, September 1, 1977), pp. 1-2.

4. Public Affairs Counseling, Toward a Land Use Planning Process for Alaska, 1974 (Report prepared for the Joint Federal-State Land Use Planning Commission for Alska, Anchorage, Alaska, 1974).

5. Anthony J. Catanese, "Organizational Alternatives," (Briefing Report of the Workshop on Innovative Concepts of Cooperative Land Classification and Management, Anchorage, Alaska, March 29-30, 1978).

6. Ibid.

7. Irving Hand, "Organization/Planning Formats," (Briefing Report of the Workshop on Innovative Concepts of Cooperative Land Classification and Management, Anchorage, Alaska, March 29-30, 1978).

8. Alan Walter Steiss, "Briefing Summary," (Briefing Report of the Workshop on Innovative Concepts of Cooperative Land Classification and Management, Anchorage, Alaska, March 29-30, 1978).

Chapter XIII

SUMMARY OF FINDINGS

Management of the environment has gradually become a multijurisdictional responsibility. Federal, state and local governments are all required to make decisions, which may affect the environment, or to exercise some forms of control over private decisions that may affect the environment. Since management programs are not usually integrated across jurisdictional divisions, there may be considerable scope for decisions made by one jurisdictional unit to affect policies, programs and projects in another. If such decisions are not compatible to such policies, programs and projects, interjurisdictional conflict may be triggered off. The opposition that emanates from these conflicts may interrupt and impede the implementation of public decisions and may delay or indefinitely hold up the effective management of environmental resources. There is a need to devise a workable arrangement for decision making which can negotiate and overcome interjurisdictional conflicts and enhance the effectiveness of management programs. This study attempts to design such a process.

The key to effective multijurisdictional management, as suggested in this study, is hinged on the means by which agencies work out public decisions which are mutually com-

patible, and to which all parties are fully committed. In other words, if a decision making process could be devised and put into practice, which may culminate in decisions which are compatible, i.e. not "unacceptable" to any of the parties influencing or affected by it, there may be no room for conflict among them. A conflict-free decision is more likely to be unopposed by any of the parties involved, when the same is being implemented. The design of a cooperative management process is based on this hypothesis.

The Scope of the Study

The study acknowledges that decisions have to be fully compatible to public and private interest groups to be fully effective. For purposes of this study, the scope is restricted to bringing about interagency compatibility as a first step towards total compatibility of public decisions.

The study further acknowledges that there are two contrasting philosophies for decision making -- rationalism and incrementalism. For purposes of this study, the decision making paradigm implicit in the rational approach is used for analysis and adaptation, though some of the basic concepts of incrementalism are borrowed and incorporated with suitable adaptations for the design and formulation of the proposed decision making process.

Finally, a theoretical approach, rather than an empirical inductive approach has been used for developing the concepts in the study.

What is Cooperative Management?

Cooperative management is a unique alternative for multijurisdictional management. It incorporates a process of interactive decision making which attempts to bring about decisions which are compatible to decision makers and public interest groups. It embodies mechanisms for facilitating cooperation among all legitimate participants from different jurisdictions. It also incorporates mechanisms for sensing potential conflicts and managing them so as to facilitate compatible decisions.

Such decision making is the key component which characterizes cooperative management. Cooperative management is visualized as a sequence of decisions and their implementation made at three consecutive levels: (1) the strategic level; (2) the managerial level; and (3) the operational level. The design objective for cooperative management is to ensure decision continuity through the sequence at each level and from one level to another.

Decision Making in Cooperative Management

The conventional process of decision making has been adapted to incorporate the following steps, in the context of the problem requiring a multijurisdictional response:

1. Problem solving;
2. Information gathering by lead agency;
3. Assessment of the state of the system and problem identification;
4. Identification of interests and concerns, agencies and interest groups;
5. Organization of cooperation and establishment of forums for interactive decision making;
6. Problem confirmation and redefinition incorporating multiple concerns and issues;
7. Statement of goals and objectives;
8. Construction of conceptual model of the management system;
9. Formulation and evaluation of alternatives;
10. Compatibility/conflict sensing;
11. Conflict management;
12. Selection of, and commitment to alternatives.

Decision making in cooperative management is initiated when a problem having multijurisdictional dimensions is sensed either directly or indirectly by a decision maker in a "key agency". The managerial agenda is drawn up by the key agency based on the recognition and acknowledgement of

an "out-of-phase" condition in the management system. The key agency then gathers information relevant to the problem, and sets up descriptor elements which portray the state of the management system. Selected variables are identified to serve as indicators of problems and issues, and tolerance limits are established for comparison with these indicators to enable the identification of problems and issues. The assessment process makes the comparison between indicators and tolerance limits to confirm the existence of likely problems. It also reviews likely impacts of alternative decision choices on the management system, both within the jurisdiction of the key agency, as well as beyond it. The review of impacts enables the key agency to identify the constituencies that are likely to be affected by these impacts and to determine the array of legitimate participants who may be required to be involved in working out compatible decision choices.

Once the problem and the legitimate participants are identified by the key agency, the next step is to organize an assembly of those participants, who may have lead roles in making or influencing decisions, and to facilitate interaction among them, as a means of working towards compatible decisions. Compatibility needs to be achieved at each step of the decision making process. There should be

compatibility about the nature, scope and extent of the problem being addressed. The problem needs to be articulated in such manner that all legitimate issues are given due consideration. The problem should be accurately represented and consistently understood by all participants. This understanding is to be made possible by reciprocation and exchange of information among all participants, supported by timely clarifications wherever required. Roles, interests, and concerns of each agency are to be identified and clarified, based on the problem identification, the articulation of issues and the impacts of likely decisions.

The articulation of the problem and the role verification will confirm the legitimacy of participation by decision makers from different agencies. The next step in the process is to ensure that all legitimate participants are represented and interact with one another. This involves the organization of appropriate forums for interaction among the decision makers. The forum is not a "one-shot" assembly of participants. It represents an assembly which may facilitate continuous dialogue to review complex issues and resolve conflicts so as to achieve compatible decisions. The forum is to be primarily made up of decision makers but may be complemented by a team of non-partisan professional experts possessing required skills and exper-

tise in selected areas pertaining to the local scene or substantive bodies of knowledge or disciplines that are likely to be called upon.

The first component of organization of the forum is the identification and designation of the lead agency. The identity of the key agency provides the identity of the chain of command from which the lead agency designation may be made. The lead agency status should occur at the level of the key agency or the highest level represented in any other chains of command involved among the legitimate participants, whichever is higher.

Once the lead agency identifiction and designation has been made, the next step is the organization of the forum that represents the partnership for decision making. The key to organization of this partnership is the unique process of mobilization of support -- voluntary cooperation. The key to cooperation is a method of persuasion whereby the participants to be involved in the forum are informed of the fact that they have a stake in the decision being made and that they may influence the decision by negotiation and participation at the forum. The participants are offerred the opportunity to protect and safeguard their interests and negotiate compatible decisions which may have

only minimal negative impacts on their activities and functions. The opportunity offerred to protect their own interests offers the incentive and motivation for voluntary participation.

A three tiered system of forums is suggested in order to organize the process and sequence of decisions at the three levels of decision making and to distinguish among the participants represented at different levels from different chains of command. The forums will be established at the strategic, managerial and operational levels, to be linked by two-way communication and information flow. The upper tier forums may serve the coordinating function for the forums at the lower levels, while the lower level forums may serve as information feeders to the upper level forums.

In order to sort out the participants that may be represented at each of the respective forums, a distinction has to be made between collaborative, cooperative and coordinative relationships among participants. The scope of the problem at hand may determine the appropriate agency, departmental level,and sectional slot which may be relevant to the decision. The range of decisions involved in a multijurisdictional setting may be:

1. Operational decisions by one section which affect those in another;

2. Management decisions by one department which affect operations of another section or programs of another department;

3. Strategic decisions by one agency which affect the plans and strategies of another, the programs of another department or the operations of another section.

Three types of relationships -- cooperative, collaborative and coordinative -- must be distinguished from one another in organizing the interactive forum. Cooperative interactions are to be brought about where there is inequality of authority among the participants who are assembled from different jurisdictions. Collaborative interactions are to be brought about where there is equality of authority among the participants who are assembled within the same jurisdictional level. Coordinative interactions are to be brought about where there is inequality of authority among the participants within the same agency.

Alternative scenarios of participant types may be classified under jurisdictional levels, and chain-of-command using a matrix format and the three types of interactions identified above may be sorted out for each scenario. Preemptive relationships may also be identified in each scenario.

By sorting out these interactions, active roles in decision making at each forum may be distinguished from passive and supportive relationships. Control characteristics inherent in departmentation and authority delegation at different levels may also be differentiated.

Different techniques for mobilizing cooperation are brought to bear to ensure that decisions may be made through a process of representative interaction in which none of the legitimate participants are likely to be excluded. It may not always be possible to guarantee a 100% representation in all cases. Where non-cooperation of some parties persists, the proceedings of the forum may have to continue without such cooperation. This may, however, reduce the full effectiveness of cooperative management.

Once the forums have been organized, the next step is to initiate the interactions at the forum. These proceedings are to be conducted by employing workshops which punctuate the on-going function of the forum. A workshop format is considered to be an appropriate mechanism that may facilitate the activities of the forum. Agendas for the workshops have to be formulated, materials have to be prepared and circulated, and invitations delivered to the different

participants. A suitable venue has to be determined and the duration of the workshops and arrangements for the accomodation of participants has to be finalized. Appropriate measures for leading, coordinating and directing the workshops and distribution of minutes among participants should be made. Arrangements for recording the proceedings at the workshops are also needed.

The next procedural step involved is the search for the solution to the problem. The initial step is to ascertain and establish confirmed acceptance of the problem by all participants. This is to be followed by a reclarification of issues, roles and responsibilities together with goals, objectives and priorities of each individual agency. The layout of problems, issues, goals, and objectives may enable the formulation of a conceptual model of the management system to obtain a more comprehensive understanding of the overall complexity of the problem setting. The model provides a basis for attempting a comprehensive solution to the problem by negotiating all the issues and giving due consideration to the interrelatedness of the issues and likely impacts of decisions.

A first generation of alternatives are then to be formulated which may address each of the issues and be sensitive

to each objective or combination of objectives that need to be fulfilled. Each alternative must be tested on the conceptual model to determine likely consequences, byproducts and side effects. The alternative formulation should be reiterated so that the consequences may not adversely affect functional, geographic or jurisdictional areas beyond the confines of the problem boundary; nor may they contribute to undesirable consequences. Once both these may be ensured, the alternatives should be refined and fine tuned for workability and feasibility as the prelude to the final specification of the range of alternatives.

An attempt should be made to secure integration of alternatives rather than have them as aggregations. This synthesis of alternatives may be effected when the alternatives are evaluated. The integration of alternatives may represent the alternative strategies which may contribute to the attainment of desirable alternative end states of the management system.

Each strategy is then subjected to comparative evaluation in relation to physical feasibility, effectiveness, economy, efficiency, timing, benefits, opportunity costs and risks. Measurements must be conducted for each of these factors for each strategy and compared with minimum

acceptable tolerance limits established for each such criterion. These measurments may enable a ranking of alternatives in respect to these criteria. It may be observed, however, that since the evaluation, measurement, and comparisons may be performed by different participants it is very likely that the outcomes of the evaluation may not be uniformly matched. It is essential, therefore, that convergence in the ranking of alternatives has to be forged.

The variation in the sponsorship of alternative packages of integrated strategies may be identified as the trigger of conflicts. The alternative strategies are likely to elicit very different types of responses from the participants. These are opposition, indecision, neutrality, no response, or support.

The process of conflict management attempts to forge a convergence by all parties on one compatible choice among the alternative strategies, on the one hand, and also to secure support for the selected alternative, on the other. Different approaches may be required to bring about this convergence and to generate uninhibited support. The initial step in conflict management is to classify the different responses into three categories. Category A includes those alternatives which are unopposed. Category B

includes those which are opposed by at least one party. Category C includes those which are experiencing ambivalence by one or more parties. The objective of conflict management is to redirect all responses in Categories B and C to Category A. By dividing the body of participants into "in groups" and "out groups" and by applying appropriate conflict management techniques, a status of compatibility is likely to be derived for a number of management strategies. These strategies may become the subjects for final selection to climax the decision making process.

The conflict management process principally focuses on the resolution of conflicts that create opposition to alternative management strategies. Once this is achieved, there is still a requirement to bring about a convergence of opinions on one of the alternative strategies so that the ultimate question of choice can be resolved by narrowing down the array of strategies to one. Appropriate techniques, such as brainstorming or Delphi processes, among others, may help in narrowing down the array. If this can be achieved, the decision making process may be deemed to have come to a satisfactory conclusion.

For management to be effective the selected strategy must be implemented. It is essential that the parties

involved in decision making commit themselves to the implementation process. The decision has several component elements and entailments which have to be carried out by different agencies. These components, therefore, must be identified and translated into tasks. This composition becomes part of an action plan, to which the participants agree. Individuals responsible for each selected step should be identified and commitments to carry them out secured and accountability designated. Appropriate styles of leadership should be identified, and suitable approaches to motivation should be applied to bring about increased commitments to implement the action plan. A schedule of tasks should be drawn up to determine the sequence of tasks, their duration, and times of completion. A schedule of reviews should also be formulated to monitor performance and progress.

Commitments to the action plan may be formalized through task forces, implementation structures, matrix organizations or other appropriate approaches. Scheduling of tasks should be backed by commitments of resources including time, financial resources, equipment and manpower. Specific targets and milestones should be established for purposes of reviewing the costs, expenditure of resources, etc. against such criteria as output, productivity, effi-

ciency, etc. The reviews should be so scheduled as to permit correction of undesirable trends of implementation while also alerting the participants in the action program to meet predetermined deadlines.

The above process of decision making, commencing with the problem identification and terminating with the action plan and review procedure, should be embedded in each decision location in the management process. This is so that succeeding decisions in the sequence may be based on the compatibility that may be achieved in preceding decisions. Conflicts that may have their origins in earlier decisions, but which surface only at a later stage of decisions in the sequence, are likely to be negotiated at the originating point itself. The iterative process makes it possible to revert to a review of an earlier stage, if it can be determined that the conflict had its source at that stage, and had not been identified and negotiated at that time.

Conclusion

The cooperative management process appears to have a number of applications in any multijurisdictional management problem involving public agencies having different goals and objectives. It offers an alternative to the range of interjurisdictional arrangements that may require

considerable legislative manuvering and political lobbying for their establishment and institutionalization. It also may serve as a less cumbersome and time consuming alternative to judicial and legislative intervention where the validity of decisions may be clarified or rejected after the decision is made or the game rules of the decision making process vis-a-vis responsibility, authority and jurisdiction are to be reorganized. It could provide a pre-emptive mechanism for sensing and overcoming interjurisdictional conflicts during the process of decision making itself, by facilitating interaction among all decision makers or parties who may influence or be affected by the decision. It offers the prospect of having a temporary and neutral setting where interjurisdictional problems may be discussed and negotiated and a decision which is compatible to all the participants may be worked out through constructive dialogue, exchange of information, and reiterative negotiation and bargaining. It appears to be suitable for a wide range of problems requiring continuous interagency involvement and interaction where a forum may be established for making strategic, managerial, and operational decisions and securing needed commitments. By virtue of its issue-by-issue orientation, continuous costs for permanent establishments and time involved may be kept at

the minimum by adopting the process. Finally, cooperative management tends to improve interagency interaction, understanding and communication. It seeks to maintain continuous liaison among those agencies which may be frequently called upon to work together to manage environmental resources which fall within their functional or geographic domain. A good repertoire, once established among parties, may provide the incentive and motivation to maintain and continue the associations that are initiated. Once these are developed the continued application of the cooperative management process may be prolonged.

It must be noted that whereas cooperative management appears to have universal applications, it may not be guaranteed to work in all circumstances. At each stage in the decision making component of cooperative management, there are risks that the process may break down.

A breakdown of the interactive decision making process may occur due to the failure to mobilize cooperation of all legitimate participants, who may abstain from participating in the forum. Since voluntary participation, rather than coercive mobilization of participants, is the keynote of cooperative management, a failure in the former tends to put the entire process of reaching compatible and conflict-

free decisions in jeopardy. In these circumstances, cooperative management may not always be able to coordinate decisions by different agencies across jurisdictional divisions.

Another shortcoming is that cooperative management may not always be able to achieve compatible decisions even if all participants do agree to cooperate with one another. This breakdown may occur at any point in the decision-making process and unresolved conflicts at an early phase may be compounded as each succeeding step is completed. Finally, when choices are to be made, the alternatives may be so incompatible to the decision makers, that they may have to be discarded, and the whole process reiterated, resulting in considerable losses of time, effort, and resources.

Yet another limitation is that it may be difficult to secure commitments after the decision has been made. Several authors have observed this likelihood in other approaches where agencies agree upon plans only to renege on their execution, at the time of implementation.

In overall summary, it may be observed that the shortcomings listed above are likely to be discounted because the same breakdowns may occur in almost all other alterna-

tives to cooperative management as well. Breakdown of mobilization of cooperative participation has been reported to have occurred in such joint efforts as Advisory Boards, voluntary commissions, public hearings and joint task forces. Further, it may not be contended that a noncooperative approach is likely to culminate in greater incidence of compatible decisions. This suggests that the cooperative management approach is not likely to be inferior to any of the other alternatives for multijurisdictional management, even in a "worst case" scenario. It is designed with greater manuverability, leverage, and flexibility to cope with human behavioral factors and offers better potentials for negotiating conflicts before, and when they are likely to occur. Finally, the approach attempts to secure compatibile decision outcomes which is a response of lower expectation than one which is "fully acceptable". Yet both of them may still possess the same degree of effectiveness.

Scope for Further Research

In concluding this research, the author wishes to acknowledge that the study only represents the initial step in a comprehensive study on multijurisdictional management of the environment. The study has been restricted in scope and content by focussing primarily on interagency coopera-

tion as a principal factor for compatible decision making. A more comprehensive study may examine cooperation among groups, and between groups and agencies to complement the work conducted in this study.

Again, the study has emphasized the rational decision making framework for the design and development of the cooperative management process. The paradigm in the incremental approach is also deserving of equal consideration for the design and development of the proposed management process and warrants a detailed study. Once such a study is completed, the next step may be to synthesize and integrate a "middle ground" strategy incorporating the findings of both studies.

It is also appropriate to test the design of the concept of cooperative management in a series of real world applications and diverse settings. These studies may provide the needed empirical evidence of the real effectiveness of the process, and to show up the strengths and weaknesses of the paradigm in actual application. Such tests may also enhance the promise and credibility of the concept in such diverse areas as coastal zone management, offshore management, management of multistate wilderness areas, ground water management and a host of other areas involving frag-

mented jurisdictions, multiple agencies, diverse objectives and missions.

Finally, more detailed investigations on the individual components of the concept may be conducted to provide the working details, procedures, and rules for the ready application of cooperative management as an alternative for multijurisdictional management practice in a variety of settings.

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Appendix A

REVIEW OF THE FRAGMENTED ORGANIZATION OF ENVIRONMENTAL MANAGEMENT

Responsibilities for environmental management are usually distributed at three jurisdictional levels -- federal, state and local. The programs at each jurisdictional level collectively may be said to represent the management process. But such process is not always integrated, comprehensive or organized for overall effectiveness. The following detailed literature review of the organization of environmental management at the three jurisdictional levels illustrates this shortcoming in current practices.

Federal Organization for Environmental Management

To summarize from Edmunds and Letey[1], the Council on Environmental Quality (CEQ) is the principal policy making body in the federal executive branch dealing with environmental matters. Its primary goal is to develop and recommend national policies to foster and promote the improvement of environmental quality to meet the conservation, social, economic, health and other requirements and goals of the nation. The CEQ is authorized to conduct investigations, studies, surveys, research and analysis relating to

ecological systems and environmental quality, and to identify and report the changes and causes of such changes in the environment. As such, the CEQ is authorized to review all new legislation and programs of federal agencies, determine their impacts on the environment, initiate policies to improve or ensure environmental quality, and correlate environmental quality maintenance with the growth and development of the economy. The CEQ is part of the Executive Office of the President and derives its policy making role from its authority for review of all new legislation and programs of federal agencies prior to their submission to the Bureau of the Budget or to Congress.

The Environmental Protection Agency (EPA) is the principal federal agency concerned with implementing the regulations or controls needed for environmental improvement. Its primary purpose is to determine and enforce goals for environmental quality, in addition to monitoring the state of the environment. Its activities are organized under three functional areas: (1) planning and management; (2) enforcement and general counsel; and (3) research and monitoring.

The substantive programs of the EPA are:

(1) Media programs, comprising the Offices of Air Programs and Water Programs,

(2) Categorical programs, comprising the Offices of Pesticides Programs, Radiation Programs, and Solid Waste Management Programs.

In examining, in greater detail, the substantive programs of EPA Edmunds and Letey[2] state that the: (1)Office of Air Programs administers air pollution control by setting standards of air quality applicable to all sources of air pollution, and by establishing the framework for the states to realize these standards. (2)Office of Water Quality sets standards for water quality and implements its programs by providing financial assistance to municipalities and approval of permits for effluent discharge. (3) Office of Pesticide Programs administers legislation which requires all pesticides, shipped in interstate commerce, to be registered with EPA. Registration of some pesticides have since been cancelled by EPA. (4) Office of Radiation Programs sets radio activity standards on nuclear reactor effluents. (5) Office of Solid Waste Management Programs regulates the recycling of materials, issues guidelines for the construction and operation of acceptable solid waste disposal systems, authorizes funds for demonstration grants for recycling systems.

The CEQ and the EPA are the principal federal agencies involved directly in environmental management. In addition to these federal agencies, there are several executive departments, independent agencies and commissions at the federal level which undertake activities and are responsible for programs affecting the environment. These are listed in part by Caldwell and Siddiqi[3] as follows:

(1) Department of Agriculture:
   (a) Forest Service managing 186 million acres of national forests and grass lands;
   (b) Soil Conservation Service which provides surveys and other technical services to locally organized districts.

(2) Department of Commerce:
   (a) Economic and Development Administration which plans development of areas which suffer from persistent problems of unemployment;
   (b) National Oceanic and Atmospheric Administration.

(3) Department of the Interior:
   (a) Fish and Wildlife Service involved with programs concerning both commercial and sports fisheries;
   (b) Bureau of Mines concerned with programs for conservation and development of mineral resources and promotion of health and safety in mineral industries;
   (c) Geological Survey concerned with collection, documentation and distribution of generalized topographic, surface utilization, planimetric, hydrological and geological information;
   (d) Bureau of Land Management responsible for mineral resources on public lands;
   (e) National Park Service;
   (f) Bureau of Outdoor Recreation (since renamed Heritage Conservation and Outdoor

Recreation Service);
(g) Bureau of Reclamation which develops and manages water resources in arid lands;
(h) Bureau of Public Lands.

(4) Department of Housing and Urban Development

(5) Department of Transportation:
(a) Federal Aviation Agency;
(b) Bureau of Public Roads;
(c) Federal Railroad Administration;
(d) Federal Highway Administration.

(6) Department of Health, Education and Welfare:
(a) Food and Drug Administration;
(b) National Institutes of Health;
(c) Office of Education.

(7) Department of Defense:
(a) Corps of Engineers.

(8) Department of Energy:
(a) Energy Research and Development Administration;
(b) Federal Power Commission;
(c) Atomic Energy Commission.

(9) Independent agencies and commissions:
(a) National Aeronautics and Space Administration;
(b) Tennessee Valley Authority;
(c) Appalachian Regional Commission.

The programs of all these agencies are subject to the regulation of the EPA and the CEQ.

State Organization for Environmental Management

Since 1970, nearly every state has passed environmental legislation and has made several organizational changes for its enforcement. There is no standard pattern of organiza-

tion for environmental management applicable for all states. This is evident from the list of state organizations, as compiled by Haskell and Price[4], included as Appendix B.

In summary, Haskell and Price have identified five models of organization:

(1) Separate agency for major pollution control programs in eleven states;

(2) Separate agency for major pollution control, combined with water use programs in two states;

(3) Superdepartment for major pollution control combined with conservation/resource management programs in nine states;

(4) State agencies or commissions specializing predominantly in water pollution control and combined in some cases with water resource management and other resource programs. Other pollution controls are administered by the State Health Department in nine states;

(5) State agencies combining water pollution control and other pollution control programs in State Health Departments in nineteen states.[5]

These state agencies are responsible for policy formulation, standard setting, implementation of standards through permit processes, surveillance, and enforcement under specific programs. The range of programs may include land use planning, growth controls, wetlands protection, coastal

zoning, environmental facility financing, environmental impact assessment, surcharge on non-returnable containers, restrictions on chemicals and pesticides, air and water pollution control, and solid waste disposal.

In those states where consideration of pollution control and resource management may not have taken place, separate agencies may have responsibilities for regulatory and promotional programs. These programs may cover such activities as soil and water conservation, agriculture, forestry, fish and game conservation and protection, state parks, natural resources, water resources, mines and geology and extension services. Edmunds and Letey indicate that the organizational arrangements that have evolved in states represent "some kind of balancing and compromise among the constituencies based on their relative strengths and upon prior conditions or history in the state."[6]

States usually have the pivotal position in environmental management. They may define their own role in such programs as pollution controls of air and water. States may dictate the roles and functions of both regional bodies and local governments by virtue of their legal dependence on state government. Federal legislation further emphasizes the implementation of air pollution control, water

pollution control, and land use planning at the state level. In water pollution control, for example, states may have responsibility for such activities as standard setting (consistent with minimum federal standards), administering permit programs, developing state water plans, placing construction priorities and designating areawide planning and management agencies. The federal government may assume responsibilities to act on these programs in the event of state nonconformity or inaction.

Another major influence that the state may exert may be in establishing local and regional jurisdictions under the legal framework of state law. For example, regional planning commissions, councils of government, and special districts for certain functions may be permitted/encouraged, or even mandated by the state. Areas of jurisdiction, sources of revenue, and scope of programs may be prescribed by the state under the legal framework of state statutes. The state may also define responsibilities of local government for environmental functions within the state. Considerable variation of autonomy given to local and regional governments may be observed from one state to another, however. The states may grant home rule to only some local governments. In other cases, the local governments may have to obtain state enabling legislation for new programs.

Local Organization for Environmental Management

Local governments have traditionally been the principal administrators of environmental affairs. The main programs under local jurisdiction have usually been water supply, sewage disposal, solid waste collection and disposal, parks, etc. New local programs are now emerging which include new organizational arrangements greater citizen participation environmental planning; additional land use controls, including zoning, marshland controls, growth controls, etc., adoption of environmental standards, (e.g., noise or performance standards), environmental impact assessment, and construction of improved facilities.

Currently, environmental activities tend to remain fragmented among several local agencies. Fragmentation may be observed within municipal governments, as well as among municipal governments and other local jurisdictions, such as counties and regional bodies. Some local governments may have consolidated environmental programs within municipal government. These may include separate "line" agencies, separate "staff" agencies, expansion of existing "line" agencies, expansion of existing "staff" agencies, and "team" management agencies. The approach selected usually depends upon state enabling legislation and/or local charter, the size of the entire organization, nature and

extent of environmental problems, political interest, staff expertise and a number of other factors.[9] Examples of local governments organization for environmental management are shown in Appendix C.

Citizen Participation in Environmental Management

Public agencies are frequently the principal active participants having the responsibility and the authority to make management decisions affecting the environment. Recent federal legislation, such as the 1972 Amendments to the Federal Water Pollution Control Act, mandate the development of citizen inputs as a practical necessity for decision making at all levels of government. Citizen groups have begun to organize to represent specific environmental interests, as well as other broader concerns. The Sierra Club, the Isaak Walton League, and the League of Women Voters are typical groups involved in influencing management decisions.

Citizen inputs may be observed in several forms. Voting, as a means to approve or disapprove bond programs or specific community issues raised in referenda, may be one such mechanism. Public hearings are also frequently used to brief citizen groups about future programs and projects and obtain their positive or negative responses.

Two forms of citizen advisory boards are frequently used as popular mechanisms to obtain citizens' viewpoints. One form selects its members from the general public to obtain general opinions on proposals for public programs and projects. The other form enlists members on the basis of their expertise in specialized fields; this latter approach may be useful for performing studies and making recommendations to the local administration. Task forces and citizen committees are other typical examples of such advisory boards.

The Conservation Commissions or Environmental Commissions are special types of citizen boards deriving their legitimacy from state enabling legislation and municipal ordinances. These commissions are authorized to acquire and control land, to coordinate the work of commissions with local environmental groups, and to prepare plans for the protection of the environment. The important differences between advisory boards and Conservation Commissions may include state sponsorship; eligibility for state funding; and the capacity of commissions to acquire and control land.[7] Typical examples of local citizen environmental commissions are shown in Appendix D.

The Role of the Judiciary and the Legislature in Environmental Management

The courts and the legislature are playing an increasing role in adjudicating the outcomes of the decision-making process by public agencies in environmental management. Traditionally, the courts have served as judicial enforcers of decisions made by public agencies in the context of land use, water use, and air use regulation. In recent times, the role of the judiciary has widened considerably. Caldwell identifies the following conflicting interests in environmental issues and controversies as the grounds for activating judicial intervention in environmental management:

1. Public versus private interests:
   (a) Legal semantics of publicly involved "private" enterprise;
   (b) Ex post facto limitations on government action;
   (c) Substantive "due process" as a defense against public action;
   (d) Problems of prevention and protection for the future.

2. Federal versus state-local interests:
   (a) Doctrine of pre-emption;
   (b) Federal guidelines and standards;
   (c) Intergovernmental agreements;
   (d) Fixation of responsibility.

3. Ecological versus economic interests:
   (a) Pre-ecology biases of present-day law;
   (b) The meanings of "use" in judicial interpretation;
   (c) Difficulties in determining the boundaries of a case or of parties concerned in economic-ecological issues;

(d) Redefining the concept and test of "interest" in legal controversies.

(4) Balancing the equities: what weights should be given to scientific knowledge and societies' future.[8]

Judicial enforcement of environmental policy is authorized under different "legal instruments," cited by Caldwell as follows:

(a) Constitutional guarantees;
(b) Treaties and other international agreements;
(c) Statutory law;
(d) Ordinances and administrative regulations;
(e) Voluntary covenants and easements;
(f) Court orders and writs leading to
    (i) Damages
    (ii) Criminal penalties
    (iii) Declaratory judgment
    (iv) Injunctions
    (v) Mandamus
    (vi) Extra-legal direct action
(g) Environmental lawyers.[9]

The judiciary also implements "environmental rights" through civil procedures. These rights are authorized at the federal level under different provisions of the U.S. Constitution, and under the National Environmental Policy Act of 1969 (PL 91-190). At the state level, these rights are contained in the constitutional and/or statutory provisions of each state. At the local level, these are contained in local ordinances and controls.

Suits have been filed by citizens, corporations, and governments. They are usually filed by those acting in the name of environmental protection and by those acting in the name of economic freedom or other values. The suits may be filed to take action against pollutors, or to prevent pollution by halting such projects. Suits are filed to force other governmental agencies to apply existing law. There are instances where suits are filed in an attempt to gain authority needed to safeguard the environment in the future.[10]

Commenting on the increasing role of the judiciary in environmental affairs, Sax states:

> The citizen-initiated lawsuit is thus principally an effort to open the decision-making process to a wider constituency and to force decision-making into a more open and responsive forum. The aid of courts is not sought so that judges will substitute their judgment for that of administrators either on engineering questions or on broad policy issues. Rather, the courts are sought out as an instrumentality whereby complaining citizens can obtain access to a more appropriate forum for decision-making.[11]

What may be indicated is that the decisions of public agencies should be made more responsive to citizen pressures, and that the decision-making process as it may affect issues of environmental quality, should be "democratized." The "democratization" may envisage the transfer of the contested issue to the legislature, where it may be

confronted and resolved in the full light of public attention, by legislators who must assess the political consequences of taking one position over another. Judicial and legislative intervention may ensure a more democratic process of decision making prior to any actions to implement the decisions being taken.

Inferences and Conclusions

The preceding discussion indicates that the responsibilities for environmental management are distributed at three jurisdictional levels -- federal, state and local. The National Environmental Protection Act of 1969 contains numerous provisions requiring interagency coordination and review in terms of environmental quality. Wengert observes

> In many cases little or no coordination is apparent, separate programs going their separate ways. In other cases coordination is only pro forma and superficial. Given those planning and conducting particular programs with obvious interrelationships have not consulted together, and in many cases programs dealing with similar or related problems may be seeking different and even conflicting goals or objectives, the pluralism of our society has been projected to government activities.[12]

Henning picks up on this statement to add

> Yet, with tolerance of pluralism, environmental agencies have evolved policies, programs and missions that automatically resist coordination of environmental responsibility. This resistance is very much involved in the political process through clientele pressures for survival of the specific agency and expansion of its role.[13]

Henning continues by noting that

> Resistance also takes the form of an agency's static adherance to lines of responsibility in given environmental situations. Under restrictive guidelines (stated or implied), personnel are frustrated and kept from effective interagency cooperation in a total approach to the environment. In this sense, overlapping and duplication may not be so much the problem as is the lack of authorization to take unified action, or "underlapping."[14]

Henning further observes that resistance to interagency coordination often exists within a given department. He attributes interagency conflict to "historical time lapse regarding the narrow value bases for mission agencies, which has taken on political connotations."[15] Another cause for conflict was identified as the "territorial compulsion that results in defensiveness and empire building."[16] Henning points out that competition cannot form a basis for interagency cooperation under a "territorial dictum."[17] He adds:

> Territorial jealousy is particularly true of resource agencies that offer a fragmented approach to their particular responsibilities, without consideration of environmental unity; thus a total environmental orientation is seldom attained.[18]

Wengert summarizes the contributing factors for interagency conflict as:

(1) Ideology and values (differing within a unit as well as between units);
(2) Costs and benefits;
(3) Time;

(4) Bureaucratic self-preservation;
(5) Technological biases (with technicians adhering to programmatic values and with conflicts over the best type of technicians); and
(6) Leadership and personality factors.[19]

In the face of conflicts, there appears to be a continuous need for their resolution. For want of any other administrative alternative, the courts and the legislature are increasingly required to intervene in adjudicating, upholding, or rejecting public decisions made by agencies. Henning observes in this context that: "Given this potential for conflict, there appears to be a growing effort on the part of many agency personnel toward interagency relations based on environmental considerations."[20]

Endnotes to Appendix A

1. Stahrl Edmunds, and John Letey, Environmental Administration (New York, McGraw Hill Book Company, 1973), pp. 368-374.

2. Ibid.

3. Lynton K. Caldwell, and Toufiq A. Siddiqi, Environmental Policy, Law and Administration, A Guide to Advanced Study (Bloomington, School of Public and Environmental Affairs, Indiana University, June 1974), pp. 492-494.

4. Elizabeth H. Haskell, and Victoria S. Price, State Environmental Management: Case Studies of Nine States (New York, Praeger Publishers, 197), pp. 268-271.

5. Ibid.

6. Edmunds and Letey, op.cit., p.382.

7. Steve Carter, Murray Frost, Claire Rubin, and LYle Sumek, Environmental Management and Local Government (Washington, D.C., Office of Research and Development, U.S. Environmental Protection Agency, February 1974), pp. 224-236.

8. Caldwell and Siddiqi, op. cit., pp.461-462.

9. Ibid., p.460.

10. Carter et al., op. cit., p. 50.

11. Joseph L. Sax, "Emerging Legal Strategies: Judicial Intervention," The Annals, Vol. 389 (May 1970), pp.71-76.

12. Norman Wengert, "Perennial Problems of Federal Coordination," Political Dynamics of Environmental Control, ed. Lynton K. Caldwell (Bloomington, Indiana University Institute of Public Administration, 1967), p. 42.

13. Daniel H. Henning, Environmental Policy and Administration (New York, American Elsevier Publishing Co., Inc., 1974), p. 49.

14. Ibid., p. 50.

15. Ibid., p. 50.

16. Ibid., p. 50.

17. Ibid., p. 50.

18. Ibid., p. 50.

19. Wengert, op. cit., p. 42.

20. Henning, op.cit., p.51.

Appendix B

STATE ORGANIZATION FOR ENVIRONMENTAL MANAGEMENT

A. ADMINISTRATIVE LOCATION OF POLLUTION CONTROL PROGRAMS

Model I: Separate agency for major pollution control programs (11 states)

Alaska	Department of Environmental Conservation (water and air pollution, solid waste, land use and coastal zone management)
Arkansas	Department of Pollution Control and Ecology (pollution control and strip mine regulation)
Florida	Department of Pollution Control
Illinois	Pollution Control Board, Environmental Protection Agency, and Institute for Environmental Quality
Maine	Environmental Improvement Commission (air and water pollution, land use control, and water development regulation)
Minnesota	Pollution Control Agency
Mississippi	Air and Water Pollution Control Commission (no solid waste)
Nebraska	Department of Environmental Control (air and water pollution and land use regulation)
North Carolina	Department of Water and Air Resources
Oregon	Department of Environmental Quality
South Carolina	Pollution Control Authority

Model II: Separate agency for major pollution control and water use program (2 states)

Washington	Department of Ecology
New Mexico	Environmental Improvement

Agency (all pollution controls and also administers consumer protection and occupational and migrant health)

Model III: Superdepartment for major pollution control and conservation/resource management programs (9 states)

California	Resources Agency
Connecticut	Department of Environmental Protection
Delaware	Department of Natural Resources and Environmental Control
New Jersey	Department of Environmental Protection
New York	Department of Environmental Conservation
Massachusetts	Executive Office of Environmental Affairs*
Pennsylvania	Department of Environmental Resources
Vermont	Agency of Environmental Conservation
Wisconsin	Department of Natural Resources

Model IV: State agencies or commissions specializing predominantly in water pollution control and possibly some water resources management and other resource programs. Remaining pollution controls are usually administered by the State Health Department (9 states)

Alabama	Water Improvement Commission (water pollution only)
California	Resources Agency (both water pollution and management). (Reorganized. If an integrated pollution division, this should be moved to Model III.)
Louisiana	Stream Control Commission;

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*A cabinet-level office administering the Departments of Natural Resources, and Metropolitan District Commission. An "open planning" approach involving participation of private citizens was studying the reorganization of these departments and was expected to recommend changes by early 1973.

	Wildlife and Fish Commission
Maryland	Department of Natural Resources (both water pollution control and management)
Michigan	Department of Natural Resources (both water pollution and management)
New Hampshire	Water Supply and Pollution Control Commission (both water pollution and management)
Texas	Water Control Board (water pollution only)
West Virginia	Department of Natural Resources (both water pollution and management)
Virginia	Water Control Board (water pollution only)

Model V: State agencies locating water pollution control, and possibly other pollution control programs, in State Health Department (remaining 19 states)

B. TYPE OF POLICY LEADERSHIP FOR POLLUTION CONTROL

Model I: Single departmental director, appointed by the governor, with advisory board or no board (9 states)

Alaska	Board advises only
Connecticut	Board advises only
Maryland	Board advises only
New Jersey	Advisory boards
New York	Environmental Board approves pollution control standards but in practice is mostly advisory
Pennsylvania	Board advises only
Rhode Island	
Washington	Ecological Commission may veto standards of Department of Ecology but in practice is mostly advisory
Wyoming	Board advises only

Model II: Full-time board for policy-making (1 state)

Illinois	Full-time board, with funds and staff, sets environmental

standards and regulates and adjudicates pollution cases

Model III: Part-time, citizen or interagency board to set policy (40 states)

a. Board governs pollution control agency

Arkansas	Nebraska
Florida	New Mexico
Maine	North Carolina
Minnesota	Oregon
Mississippi	South Carolina

b. Board governs environmental super-department

Delaware
Vermont
Wisconsin

c. Board governs the water pollution control program, which may be located in larger resources department

Alabama	New Hampshire
California	Texas
Louisiana	Virginia
Massachusetts	West Virginia
Michigan	

d. State board of health and/or one or more special boards govern all pollution control programs, located in state health department (18 other states)

C. STATES ALSO HAVING SPECIAL POLLUTION CONTROL ADJUDICATIVE BODIES IN EXECUTIVE BRANCH (either an administrative court or an appeals forum)

Arizona	State board of health hears appeals from state agency
Delaware	Hearing appeals council
Illinois	The Pollution Control Board acts as an administrative court, adjudicating antipollution enforcement cases; sets fines and substitutes for lower Illinois court, with appeals from the board going to the appellate courts

Nebraska	Hearing appeals council
Pennsylvania	Hearing appeals council
Washington	Hearings Appeals Board hears appeals from decisions of Department of Ecology and regional air pollution control agencies

Endnotes to Appendix B

1. Elizabeth H. Haskell, and Victoria S. Price, State Environmental Management: Case Studies of Nine States (New York, Praeger Publishers, 1973), pp. 268-271.

APPENDIX C

Environmental Coordinator

Addison, Illinois
University City, Missouri
Manhattan Beach, California
San Jose, California

Environmental Planner

Phoenix, Arizona
Lakeland, Colorado
Norman, Oklahoma
Waco, Texas

Environmental Section

Austin, Texas	Office of Environmental Resource Management
Inglewood, California	Environmental Standards Division
Palo Alto, California	Environmental Planning Office
Montgomery County, Md.	Environmental Planning Office
Fairfax County, Virginia	Office of Environmental Affairs

Environmental Department

New York City, N. Y.	Environmental Protection Agency
Huntington, N. Y.	Environmental Protection Agency
Simi Valley, California	Environmental Services Department
Chicago, Illinois	Department of Environmental Control
Washington, D. C.	Department of Environmental Services
San Diego County, California	Environmental Development Agency
Los Angeles, California	Environmental Quality

Environmental Task Force or Committee

Ann Arbor, Michigan
Nashville/Davidson County, Tennessee
Volusia County, Florida

Source: Carter, Steve, et al.; Environmental Management and Local Government, EPA-600/5-73-016, Washington, D. C., Washington Environmental Research Center, February 1974, p. 232.

EXAMPLES OF LOCAL GOVERNMENTS ORGANIZATION FOR ENVIRONMENTAL MANAGEMENT

APPENDIX D

TABLE D-1: EXAMPLES OF LOCAL CITIZEN ENVIRONMENTAL COMMISSIONS*

City	Temporary (T) Permanent (P)	Commission	General	Air	Waste	Solid Waste	Noise	Visual	Land	Recreation	Beautification	Environmental Health	Environmental Clean-up	Reporting Requirements
Annapolis, Md.	P	Annapolis Environmental Commission		+	+	+	+		+					Not Specified
Bethany, Okla.	P	Environmental Control Advisory Board		+	+	+	+							Minutes of Meeting
Duarte, Calif.	P	Environmental Control and Civic Beautification Commission	+								+			Not Specified
Westland, Mi.	P	Environmental Quality Commission	+								+		+	Not Specified
La Grange, Ill.	P	Environmental Quality Control Commission	+											Annual
Austin, Texas	P	Citizens' Board of National Resources and Environmental Quality	+							+	+	+		Not Specified
Manhatten, Kansas	P	City Environmental Board	+	+	+		+	+						Annual
Phoenix, Ariz.	P	Environmental Quality Commission	+											Not Specified
Bowie, Md.	P	Commission for Environmental Quality	+	+	+				+					Quarterly
Edina, Minn.	P	Environmental Quality Commission	+											Not Specified

* Information obtained from the municipal ordinances establishing the commissions.
Source: Carter, Steve, et al; Environmental Management and Local Government. Washington, D.C., Washington Environmental Research Center, February 1974, p. 237.

Appendix E

INTERGOVERNMENTAL ORGANIZATION FOR ENVIRONMENTAL MANAGEMENT

Environmental management is fragmented among different public agencies, having different jurisdictions and different interests, goals, and objectives. A complex network of guidance institutions exists, none of which independently appear to have complete control over such events in their own areas of jurisdictions, nor the knowledge or ability to make such control effective. Henning observes that:

> Informal cooperation may occur among specialists, particularly at field levels, but it may also lack the sanction of the agencies involved. Hence such informal activity may lack real power for concentrated action on a long term basis.[1]

The regional organization has perhaps emerged as the natural response to overcome this major shortfall in environmental management. The literature on regional organizations and their efficacy as a medium for multijurisdictional management is reviewed in this Appendix.

Regional Organization for Environmental Management

Different regional organizations have been established for coherent environmental entities, such as flood plains, river basins, air basins, etc., which are usually considered as homogenous regions. The Tennessee Valley Authority (TVA) was the forerunner of the multistate regional organi-

zations which were to follow. The TVA was not truly federal-state in nature.

The first federal-state entity created by multi-state regionalism was the Delaware River Basin Commission established in 1961, and is a typical River Basin Compact. It is perhaps the most powerful of the federal-state entities. In 1970, the Susquehanna River Basin Compact created an essentially identical commission. These commissions were established as regional administrative agencies of the signatory parties for water resource management in their respective river basins. They have broad planning, regulatory, and coordinating powers within their regions. The mandate of these commissions is to develop and effectuate plans, policies, and projects relating to the water resources of the basin. It also permits the adoption of uniform policies for water conservation, control, use and management and encourages the planning development and financing of water resources projects according to such plans and policies. The commissions are also empowered to allocate water resources and to control pollution. The Delaware River Basin Commission, in particular, has facilitated significant cooperation with both federal and state agencies.

Following upon the experience in the Delaware River Basin, seven other river basin commissions were created under Title II of the Water Resources Planning Act in 1965. These commissions came about owing to the need for formal state and federal cooperation in water management on a river basin basis, where most of the federal water resources planning was being done. These include the Pacific Northwest, the Upper Mississippi, the Missouri, the Ohio, the New England, the Great Lakes, and the Souris-Red-Rainy Commissions. The mandate of these comissions is to serve as the principal agency for the coordination of federal, state, interstate, local, and nongovernmental plans for the respective river basins. The mandate further permits the preparation of comprehensive, coordinated, joint plans for development of water and related resources and the recommendation of long-range schedules of priorities for the collection and analysis of data. Studies may also be undertaken under this andate. International representation is involved in the Pacific Northwest and the Great Lakes Commissions. It is difficult to compare the performance of the Delaware River Basin Commission with the Title II Commissions, owing to the differences in legislative mandates. Both types are coordinating agencies, but the former is endowed with regulating authority as well.

Another well known federal-state entity is the Appalachian Regional Commission, created in 1965 by the Appalachian Regional Development Act. Its mandate is to promote the economic development of the Appalachian Region by developing comprehensive plans, sponsoring research and projects, reviewing federal, state and local programs and providing a forum for consideration of regional problems, among other functions. Strong federal and state ties, frequent meetings, and an efficient executive committee help make the Appalachian Regional Commission one of the most active federal-state entities in the nation. This Commission may also be classified as a cooperative intergovernmental arrangement.

There are seven other regional commissions similar to the Appalachian Regional Commission. These are the Coastal Plains, the New England, Four Corners, Upper Great Lakes, Ozarks, Old West, and Pacific Northwest Commissions. These were created under Title V of the Public Works and Economic Development Act of 1965.

A unique federal state entity was the Joint Federal-State Land Use Planning Commission in Alaska. Since Alaska is, in many respects, a one-state region, it had the only joint federal-single state commissions. This structure,

therefore, avoided some of the complexities with which multi-state commissions have to deal, but the basic pattern was the same as the other regional commission.

Regional organizations were also formed at lesser jurisdictional levels than the federal-state level. Regional Planning Commissions and Councils of Government have been developed as products of federal planning legislation, stemming from the A-95 review process under Section 204 of the Metropolitan Development Act of 1966, and the Intergovernmental Cooperation Act of 1968. In fact, these may also be classified as cooperative arrangements.

There are six models of such cooperative arrangements:

1. The Ecumenical Model
2. The Twin Cities Model
3. The Special District Model
4. The Metropolitan County Model
5. The Metropolitan Toronto Model
6. The Consolidation Model[2]

The following brief description of each type is summarized from Zimmerman.

Examples of the Ecumenical Model are the Councils of Governments and the Intergovernmental Service agreements. The Councils of Government were voluntary associations of local governments in each region, brought together to faci-

litate the solution of areawide problems without changing the structure of the local government system. An example of this approach is the Miami Valley Regional Planning Commission, located in Dayton, Ohio, which includes five counties and 31 municipalities. Its role is basically one of planning and coordination. Plans are usually implemented by the A-95 review process.

The other category under the Ecumenical model is the Intergovernmental service agreement. Formal and informal intergovernmental service agreements have been used by local governments for a considerable period of time. Forty-two states have enacted a general interlocal contracting act. In twenty-nine states, local governments are authorized to cooperate with local governments in other states. Michigan has authorized its local governments to cooperate with Canadian local governments to perform certain specified tasks. These agreements may facilitate the solution of local and areawide problems within the framework of the existing local governmental system. Municipalities frequently enter into such agreements with counties and other municipalities. Usually only two governments and only one service are involved in such agreements (though there are exceptions). Most agreements are bilateral, and may be terminated on short notice.

The federal government has also sponsored areawide planning through grants-in-aid, and thereby created several regional planning agencies. The most recent areawide planning agencies created by federal legislation are the regional agencies initiated under Section 208 of the Water Pollution Control Act of 1972, as amended.

The best example of the Twin Cities Model is the original seven-county area around St. Paul and Minneapolis, Minnesota. No local governments were consolidated but a gubernatorially-appointed Metropolitan Council, containing fifteen members, was established by the state legislature. The Twin Cities Model separates policy making from policy implementation. Regional policies are usually made by the Council but may be implemented by service boards appointed by the Council.

The organization of Special Districts to solve critical areawide problems may have been the result of the failure of comprehensive metropolitan reorganization plans to win voter approval. Special Districts are created under state enabling legislation and are usually assigned responsibilities for single functions including facilities and services, such as air pollution, airports, bridges, tunnels, terminals, sewerage, parks and recreation, public transport

and water supply. The only two multifunctional special districts are the Metropolitan District Commission in the Boston area and the Metropolitan Service District in Portland, Oregon.

The best examples of the Metropolitan County model are the Los Angeles County and the Dade County in Florida. In this model, an upper tier of local government is established with sufficient powers to solve major regional problems.

The Metropolitan Toronto Model is a metropolitan federation. It is a compromise between the existing fragmented political system and the total amalgamation of the units of local government. Such federations usually involve the creation of a new areawide government. The State of Colorado has recently established procedures to set up urban service authorities consistent with this model.

The Consolidation Model is based on the annexation of the central city and contiguous local governments to form a single local government for a metropolitan area. There are complete consolidations, as well as partial consolidations. The first approach may result in a new government; the second may result in one of two forms. In one case, the county functions may merge with those of the central city

and/or municipalities to form a consolidated government, but the county government may continue to exist, performing a limited number of functions mandated by the state constitution. The second form may involve several but not all municipalities with the county. The City of Nashville and Davidson County is an example of the latter.

It may be surmised from the preceding description that there may be no uniform description of the functions of these regional organizations. As Lamm has observed:

> Some are omni-governmental, some merely have general planning and review responsibilities, and others may have responsibility only in a single functional area of concern. Some operate under specific legislative mandate, while others are more free to function in those areas chosen by their governing body .... In some instances the state executive role is so strong and well defined regarding regional concerns that the responsibilities of the regional organization are drastically limited, while in other instances the regional organization may be stepping into a governmental vacuum where no such well defined state responsibility exists. Also, the amount of cooperation and coordination received from local units of government and citizens at large can vary greatly.[3]

In general, however, it may be concluded that these regional organizations are principally involved in formulating policy, and have little or no responsibility for management.

Review and Conclusion

The regional organization first emerged as an alternative structural arrangement which attempted to transcend municipal, county, and state boundaries for tackling environmental problems requiring area wide planning and jurisdiction. In this way, problems which may not be solved by individual governmental action may be solved by joint action. This new structural arrangement, however, appeared to be a threat to home rule and a loss of independence of involved local governments. Problems of leadership began to emerge as to who would represent the key agency in the regional arrangement. These problems tend to be most pronounced in the metropolitan regional entities. Individual authorities also may show a tendency towards preoccupation with their own programs and territorial integrity and may be only desirous of preserving their own traditional values and processes -- as they perceived them. New proposals often are considered to be threats to specialized points of view, unique to each jurisdictional entity. Individual agencies may not feel the need to sacrifice their own priorities and programs for the general well-being of a region to which there may be no commitment.

At the level of the state, different states are frequently subjected to different environmental pressures, and

may have different commitments and philosophies for revenue and expenditure, and may have varying policies with respect to the local governments within their borders. Their concerns are usually dominated by functional considerations rather than areal considerations.

In view of the above limitations, only very few structural reorganizations have taken place, and a voluntary cooperative approach appears to be more attractive. This alternative envisages better coordination in dealing with area wide problems without disturbing the individual identities of the cooperating local governments. The Councils and Committees, which have been set up, are subject to voluntary participation without compulsion, and the arrangement foresaw a process of negotiation of agreement for common action, within the framework of existing governmental structures.

Aron identifies the attributes of these nonstructural arrangements as "pragmatic" which tends to capitalize on existing values and eliminate the needs of creation of a new governmental entity. It is considered easy for imitation, politically palatable, likely to facilitate grass roots contact; it may involve a broad geographic base of representation having flexible boundaries; it may have lim-

ited partisan contact; it may be devoid of legal compulsion and may permit locally controlled policy.[4]

The emphasis appears to have shifted from coordination, involving a coordinator which directed the actions of the participating bodies, to coordination through voluntary cooperation involving harmonization of activities of participating bodies. Such mutual cooperation was expected to enable local officials to relate to regional needs, identify problems of mutual concern, and work out alternative solutions through local action. In the process, it was hoped that mutual trust and understanding in pursuit of common objectives could be created.

These arrangements, however, did not overcome the major problems that beset the structural arrangement. Commenting on this shortcoming, Henning reports that: "It is further obvious that a given governmental unit will automatically safeguard and advance its own interests and territory in any overall regional policy."[5]

Many communities and local governments have been unwilling to share in the administrative or financial responsibilities unless they perceived direct benefits to themselves. They tend to be reluctant to participate in decision making if they feel they are less adversely affected by environmental problems than others.

Aron points out that, since a central governing body was lacking power to sanction and enforce decisions, there appeared to be no central forum for negotiation and compromise. Many officials and governments may never have communicated effectively before, and it might take a long time for initial confidence to develop and accommodation to be reached.[6]

William et al. indicate that, whereas unanimity of action is not necessarily a prerequisite, a reasonable consensus must emerge for positive action to follow. Prolonged study or avoidance of sensitive or controversial issues might be the eventual outcomes in the search for consensus.[7]

Scheiber observes that:

> Many of these multipurpose regional governmental organizations have little power to compel adherance to their policies. Many are of a voluntary nature and are financially dependent on local governments with grant supplements from a variety of federal and state governments.[8]

Financing by voluntary contribution may be another major drawback to voluntary cooperation. In the absence of legal authority, member governments may not be assessed or be expected to guarantee necessary funds to perform the works required or to staff the organization adequately. The alternative was federal grants. A major shortcoming of

such cooperative arrangements was likely to be their inability to implement recommendations.

An adequate administrative process for assuring effective implementation of decisions does not appear to exist. Commenting on this aspect Aron writes:

> While the action required varies with the nature of the particular problem, voluntary organizations generally depend on cooperative action among themselves, or on action by another governmental level for implementation. Any local group can refuse to be bound by decisions if it does not agree with majority considerations. Without substantial unanimity of opinion among its members, a council's recommendation for action by other governments carry little weight.[9]

As such, there appears to be little prospect of providing immediate action in dealing with critical environmental problems. No action can be compelled. Meetings to discuss recommendations may have occurred, but no member has any binding commitment for action. Also, no member may be compelled to retain membership in the cooperative arrangement and membership may easily be terminated by denying annual contributions.

Grosenick sums up the ultimate achievements of all intergovernmental arrangements involving structural changes or cooperative agreements as follows:

> . . . these turn out be be mostly limited to research, plan formulation and advisory services. In other words, the individual area governments have not given up their pluralistic control of

> action; they have merely gone along with jointness of effort at the pre-action stage and remain relatively free to act without regard to the research plans or the advice.[10]

In effect, this means that, even if cooperation exists in planning the intended actions, such cooperation does not appear to extend into management. Such cooperation appears to be essential since any environmental problem is likely to involve areas comprising several jurisdictions and agencies performing different functions. Decisions made by one agency within its own jurisdiction and specialized function may have impacts on the jurisdictions and functions of several other agencies. At the planning stage, these impacts may represent major considerations in decision making. However, as pointed out by Grosenick and others, such considerations may be reflected only in decisions relating to research questions, planning detail, and advisory services. No further commitment is intended or made.

Grosenick also spells out certain other observations regarding the level of cooperation. The level of cooperation in governmental decision making activities is usually restricted to a "threshold level" determined by the least cooperative actor. This actor may be also obliged to obtain "central approval" before any commitment can be made, thereby rendering considerable tentativeness to the

eventual effectiveness of the decision being made. Again, an intergovernmental or interagency commission, which commences with the highest level of representation of the participating agencies, may gradually find its attendance relegated to second and third string subordinates who may not possess the capacity to negotiate authoritatively, and/or may not have the broader perceptions, interests, or willingness for mutual accommodation.

Finally, there emerges the conflict between the generalist and the specialist. The general understanding appears to be that the apex of each organization may represent the generalist, and the lower echelons may represent the specialist whose interests and activities may be coordinated by the generalist. In decision making in intergovernmental or interagency commissions, an assembly of generalists may lack the specialized competency to relate to specific functional detail. By the same token, an assembly of specialists may not possess competencies across-the-board to be able to relate to other specialized functions or activities at or beyond the interfaces of their own specialized functions and activities.[11]

In conclusion, Grosenick debates the efficacy of two models of administrative systems -- the prefectoral model

and the functional model -- which represents the area base and the functional bases, respectively, as the criterion for operations. Grosenick concedes that most administrative organizations especially at the regional level may be a mix of the two and may inevitably involve duality of supervision. Decision making, however, may become a point of friction in a clash between area and function. One emphasis may dominate over the other, but the distinction may be very diffused and often confusing. Decisions tend to be effective if consensus emerges through a process of good will and reasoning together. If consensus does not emerge, no one has the power to make something happen.[12]

It may be concluded from the above that the prerequisite for action in overcoming environmental problems may be consensus among parties concerned for coordinated action, followed by commitment to do it. Structural arrangements and cooperative agreements at the management stage either may not exist, or may have proven to be inadequate to achieve such consensus and commitment. It is inferred that the key to reaching a compatible decision and following it up by coordinated action may depend on mutual consensus among participants. Such consensus, therefore, may have to be brought about by a decision process which may result from the cooperation among the participating agencies; which may

lead to coordinated action and commitment by these agencies to enforce these decisions. The process which is visualized is cooperative management.

Endnotes to Appendix E

1. Daniel H. Henning, "National Park Wildlife Management Policy: A Field Administration and Political Study at Rocky Mountain National Park," Ph.D. Dissertation, Syracuse University, 1965.

2. Joseph F. Zimmermann, "Pollution Abatement by Regional Action" in An Anthology of Selected Readings for the National Conference on Managing the Environment. (Washington, D.C., International City Management Association, 1973), pp. iii, pp. 44-56.

3. Frank T. Lamm, "How a Regional Organization Assures Environmental Responsibility," in Managing the Environment, (Washington, D.C., U.S. Environmental Protection Agency, 1973), p.354.

4. Joan, B. Aron, The Quest for Regional Cooperation: A Study of the New York Metropolitan Regional Council (Berkeley, Ca., Yniversity of California Press, 1969), p.5.

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6. Joan B. Aron, The Quest for Regional Cooperation: A Study of the New York Metropolitan Regional Council (Berkeley, Ca., University of California Press, 1969), p.5.

7. Oliver P. Williams, et. al., us Suburban Differences and Metropolitan Policies, A Philadelphia Story. (Philadelphia, University of Pennsylvania Press, 1965), pp. 299-305.

8. Waller Scheiber, "Regionalism: Its Implications for the Urban Manager," Public Administration Review, 31 No. 1 (Jan.-Feb. 1971) p. 43.

9. Aron, op. cit., p. 26.

10. Leigh E. Grosenick, ed., The Administration of the New Federalism: Objectives and Issues (Washington, D.C., American Society for Public Administration, 1973), p.9.

11. Ibid.

12. Ibid.

13. Ibid

Appendix F

TABLE F-1: COMPARISON BETWEEN THE PLANNING SYSTEM AND THE POLITICAL SYSTEM

The Planning System (PS)	The electoral democratic system
Program I: Legitimacy Relationship between the planning system (PS) and the decisionmakers. (a) Justification (why the PS should exist and its role). (b) Staffing the PS and establishing responsibility and authority. (c) The communication subsystem (1) Persuasion (selling the PS) (2) Mutual education (3) Politics identifying and changing the power structure of the organization (d) Implementation (installing the plan).	Program 1: Legitimacy Relationship between the constitution, etc. and the electorate. (a) Justification (why democracy should exist and its role). (b) Designing the institutions of democracy and establishing responsibility and authority. (c) The communication subsystem (1) Persuasion (e.g., the Federalist, etc.) (2) Public schools and media. (3) Politics (constitutional amendments, judiciary). (d) Implementation (setting up the institutions and operating them).
Program 2: Analysis Measurement (identification, classification, prediction, etc.) (a) Identifying the decision-makers, and customers of the larger system. (b) Discovering and inventing the alternatives. (c) Identifying the first-stage goals. (d) Identifying the ultimate objectives. (e) Measuring the effectiveness of each alternative for each first stage goal.	Program 2: Analysis Measurement (identification, classification, prediction, etc.) (a) Identifying interest groups, setting the franchise, etc. (b) Selecting candidates for office (c) Identifying and lobbying for first-stage goals and policies (f) Measuring the effectiveness of each

first-stage goal for the ultimate objectives.
(g) Estimating the optimal alternative

Program 3: Testing (verifying the plan)

(a) Simulation and parallel testing.
(b) Controlling the plan once implemented.

(d) Identifying the ultimate aims of society (e.g., Goal for Americans, Bill of Rights, etc.)
(e) Assessing the candidate and his policy platform.
(f) Assessing the effectiveness of policies for ultimate objectives (e.g., the Vietnam war as protecting democracy).
(g) Voting for the candidates of one's choice.

Program 3: Testing (does the democracy work?)

(a) Comparison with other nations, self-appraisal by the citizenry.
(b) Checks and balances, news media, public debate, the opposition.

Source: Student paper by Owen McShane published in Aaron Wildavsky. Speaking Truth to Power: The Art and Craft of Policy Analysis. Boston: Little, Brown and Company, 1979. p. 129.

Appendix G

STUDY OF CONFLICT

A better understanding of conflict is needed in order to devise a conflict free decision making process. Conflict is a pervasive phenomenon which may emerge in any interaction among two or more parties. It may emerge in different manifestations and may attain different degrees of significance depending on the scale and frequency of its occurrence. Conflict usually has a negative connotation, even though it may possess certain inherent positive characteristics that are conducive to development decisions. This appendix attempts to review this phenomenon and its treatment in a variety of disciplines.

Review of Definitions

Much of the theoretical work on the theme of conflict has been carried out in the Social Sciences and Business Management. Conflict has been studied in relation to interpersonal, intrapersonal, interorganizational and intergroup interaction.

It is not the intent of this appendix to spell out or distinguish between the different expressions and explanations of conflict. One intent is to identify the insights

that have underlined the statement of such definitions and from these insights to derive a definition, applicable for the study of intergovernmental management.

Many definitions of conflict tend to clarify the antithesis of conflict -- that is, consensus -- rather than provide a clear understanding of conflict as a universal phenomenon. The following examples illustrate this approach.

> A situation of competition in which the parties are aware of the incompatibilities of future positions and in which each party wishes to occupy a position that is incompatible with the wishes of the other.[1]

> A struggle over values and desires to secure status, power and resources in which the aims of the opponents are used to neutralize, injure or eliminate their rivals.[2]

> A particular kind of social interaction process or interaction relationship between parties who have mutually exclusive or incompatible values.[3]

> All relationships between sets of individuals that involve an incompatible difference of objective.[4]

From the definitions above, it is easy to identify the following key elements that collectively constitute the conflict phenomenon: (1) interaction between two or more forces; (2) incompatibility; (3) means to an end; (4) ends that justify the means; (5) value systems; (6) a time perspective; (7) an interruption in the continuity of a process; (8) a context; and (9) a consequence.

Integrating and synthesizing the above elements, for purposes of this study, conflict is defined as follows:

> Conflict in a specified context is defined as the incompatible interaction between two or more forces, operating within unitary or multiple value systems, that interrupts or tends to interrupt the continuity of a process, in achieving a desired end, and thereby culminates in the alteration of the process and/or the desired end or neither of them.

The Pervasive Nature of Conflict

An imaginary environmental entity, such as a watershed, is selected as the subject to be managed for purposes of illustration. Three management programs are assumed to be applicable to the entity. These may be, say, water quality management, water supply management and shoreline management, to be abstracted as programs A, B and C, respectively. Each program may involve regulation by federal, state, and local management agencies. Assuming one agency at each jurisdictional level, the management organization may be schematically represented in the following matrix diagram (Table G-1)

The complexity of organization of programs is reflected by the multiplicity of interfaces that exist among different programs at different jurisdictional levels. For example, Program A at the federal level may have interfaces

TABLE G-1: SIMPLIFIED ORGANIZATION OF ENVIRONMENTAL MANAGEMENT

Jurisdictions	Program Organization			
	Program A	Program B	Program C	.....
Federal	AF	BF	CF	
State	AS	BS	CS	
Local	AL	BL	CL	

with other programs at the federal level itself; it may also have interfaces with Program A at state and local levels; and it may have interfaces with Programs B and C at state as well as local levels. This complexity has been graphically represented in Table G-2. It may be observed that each program has eight interfaces with other programs, and that there are 36 unique interfaces with the simple organization of three jurisdictions and three programs.

It is along these interfaces that interagency interaction is likely to be involved and interagency conflict is likely to emerge. These interfaces represent the different planes along which interagency and intergovernmental relations may have to be established to negotiate these conflicts.

However, these programs have interfaces with interests of organizations other than public agencies. These may include public and private interest groups operating at national, state, and local levels. For purposes of illustration, one public and private interest group at each jurisdictional level are assumed. This intensifies the level of complexity as illustrated in Table G-3.

It may be observed that there are at least 90 interfaces along which conflict is likely to emerge, independently or

TABLE G-2: COMPLEXITY OF INTERFACES OF PROGRAMS

		Program Organization								
		Federal Programs			State Programs			Local Programs		
		AF	BF	CF	AS	BS	CS	AL	BL	CL
Federal Programs	AF		1	2	3	4	5	6	7	8
	BF			9	10	11	12	13	14	15
	CF				16	17	18	19	20	21
State Programs	AS					22	23	24	25	26
	BS						27	28	29	30
	CS							31	32	33
Local Programs	AL								34	35
	BL									36
	CL									

TABLE G-3: TOTALITY OF INTERFACES

		Program Organization									Organization of Interest Groups					
		Federal Program			State Program			Local Program			National		State		Local	
		AF	BF	CF	AS	BS	CS	AL	BL	CL	Pub.	Pvt.	Pub.	Pvt.	Pub.	Pvt.
Federal	AF		1	2	3	4	5	6	7	8	37	38	39	40	41	42
	BF			9	10	11	12	13	14	15	43	44	45	46	47	48
	CF				16	17	18	19	20	21	49	50	51	52	53	54
State	AS					22	23	24	25	26	55	56	57	58	59	60
	BS						27	28	29	30	61	62	63	64	65	66
	CS							31	32	33	67	68	69	70	71	72
Local	AL								34	35	73	74	75	76	77	78
	BL									36	79	80	81	82	83	84
	CL										85	86	87	88	89	90

simultaneously. If decisions made by public agencies at any jurisdictional level have to be made compatibly, it is essential that conflicts at the appropriate interfaces need to be negotiated and resolved amicably. In the absence of such conflict resolution across the board, the conflicts may emerge as disputes which may delay the implementation of decisions by the respective agencies, and may have to be resolved by judicial or legislative intervention.

Role of Conflict in an Interaction

The term 'conflict', more often than not, conjures up a negative connotation, indicative of an inhibition that holds up the continuity, regularity and harmony of a process. Also this term tends to suggest a discrete phenomenon rather than a continuing variable.

Coser [5], Kerr[6], Simpson[7] and Sorensen[8], among others, have indicated that conflict may have a number of useful roles to play in any interactive situation. Conflict may be the initiator of change in any fundamental institutionalized social process. It may set up group cohesion. Group resilience may be strengthened by conflict. It may provide a means for reducing tension. It may also permit maintenance of social interaction under stress. Conflict may lead to the clarification of goals and objectives. It

may result in the establishment of group norms and goals. In the absence of conflict, accommodative relations may result in subordination rather than in agreement.

It appears to be evident from the above that conflict may have a positive role and function in any interactive process. Under the circumstances, suppression or resolution of conflict on a terminal basis may not be desirable. The management of conflict, therefore, may require that the negative, dysfunctional and destructive elements of conflict be checked, while the positive features are accommodated and negotiated compatibly.

Review of Classifications of Conflict

The study of conflict has emerged in different disciplines. Therefore, there are a number of classifications of conflict depending on the perceptions of the inherent characteristics of the manifestation of the phenomenon.

Coser[9] classifies conflict as Realistic and Nonrealistic conflict in relation to the identity of the main cause and its degree of diffusion. Kerr[10] draws a distinction between conflict types as Real and Induced conflict, oriented to the ends to be gained by the representatives of the conflicting groups.

Other classifications of conflict are:

1. Institutionalized and Non-institutionalized conflict, reflecting the formality and organization of the manifestation.

2. Extreme, aggressive and violent conflict, as distinct from non-violent, 'diplomatic' conflict, reflecting the degree and expression of coercion/persuasion to attain an end.

3. Primary and secondary conflict, reflecting the medium in which, and the directness with which conflict is expressed.

4. Personal Subjective and Impersonal Objective conflict, reflecting the directness and objectivity of representation for expression.

5. Conflict of Right and Conflict of Interest, relating to the rigidity and adaptability of the conflicting issue.

6. Ideological, Religious and Cultural Conflicts, relating to the theme in which the manifestation of conflict is identified, interpreted and exposed.

The classification of conflict manifestation is not merely a pedagogic exercise. The classification may provide a base for aggregating manifestations with common characteristics under a single typology as a means to develop common responses to appropriately negotiate and manage the conflicting situation. The application of classification systems in conflict analysis may need to take the following criteria into account:

(i) Validity of classification to the analysis.

(ii) Relevance of appropriate sets of typologies to the analysis.

(iii) Sequencing of classification to be meaningful to the analysis.

The application of the classification systems to conflict analysis may depend on the conflict situation itself, and it may be unjustifiable and invalid to attempt a generic model methodology for such diverse phenomena.

The Elements of Conflict Analysis

While conflict may be manifested in different forms, the phenomenon may possess an inherent basic structure. For analytical purposes this basic structure may constitute the following:

1. Source of Conflict:	elements that contribute to the creation of a conflict situation;
2. Origin of Conflict:	interaction between sources which lead to the emergence of the conflict situation;
3. Parties of Conflict:	the physical units, individuals or groups which express the conflict (parties are not necessarily synonymous to sources);
4. Duration of Conflict:	the time frame over which the conflict situation emerged;
5. Form of Conflict:	characteristics of the manifestations in which conflict emerges;
6. Intensity of Conflict:	significance of the situation in terms of generated importance, priority and urgency;

7. Manageability of Conflict: the affinity and readiness of the conflict situation to be influenced;

8. Terminability of Conflict: the terminal/continuing nature of the conflict situation; and

9. The Conflict Environment: the environment in which the conflict situation emerges.

The structure of a conflict situation may be expressed schematically as shown in Figure G-1.

A systematic analysis of conflict situations should involve the analysis of the above structural elements, individually and in aggregate. This analysis might provide the understanding of the problem situation and the basis for developing suitable measures to ameliorate them.

Institutionalized Approaches for Resolution of Interjurisdictional Interagency Conflict

In a federal system, five relationships may have been attempted and institutionalized in the area of intergovernmental relations. These relate to interfaces 1 through 36, as shown in Table G-2. These may be:

1. uniformity in state laws and regulations;

2. law suits between states with the Supreme Court as arbiter;

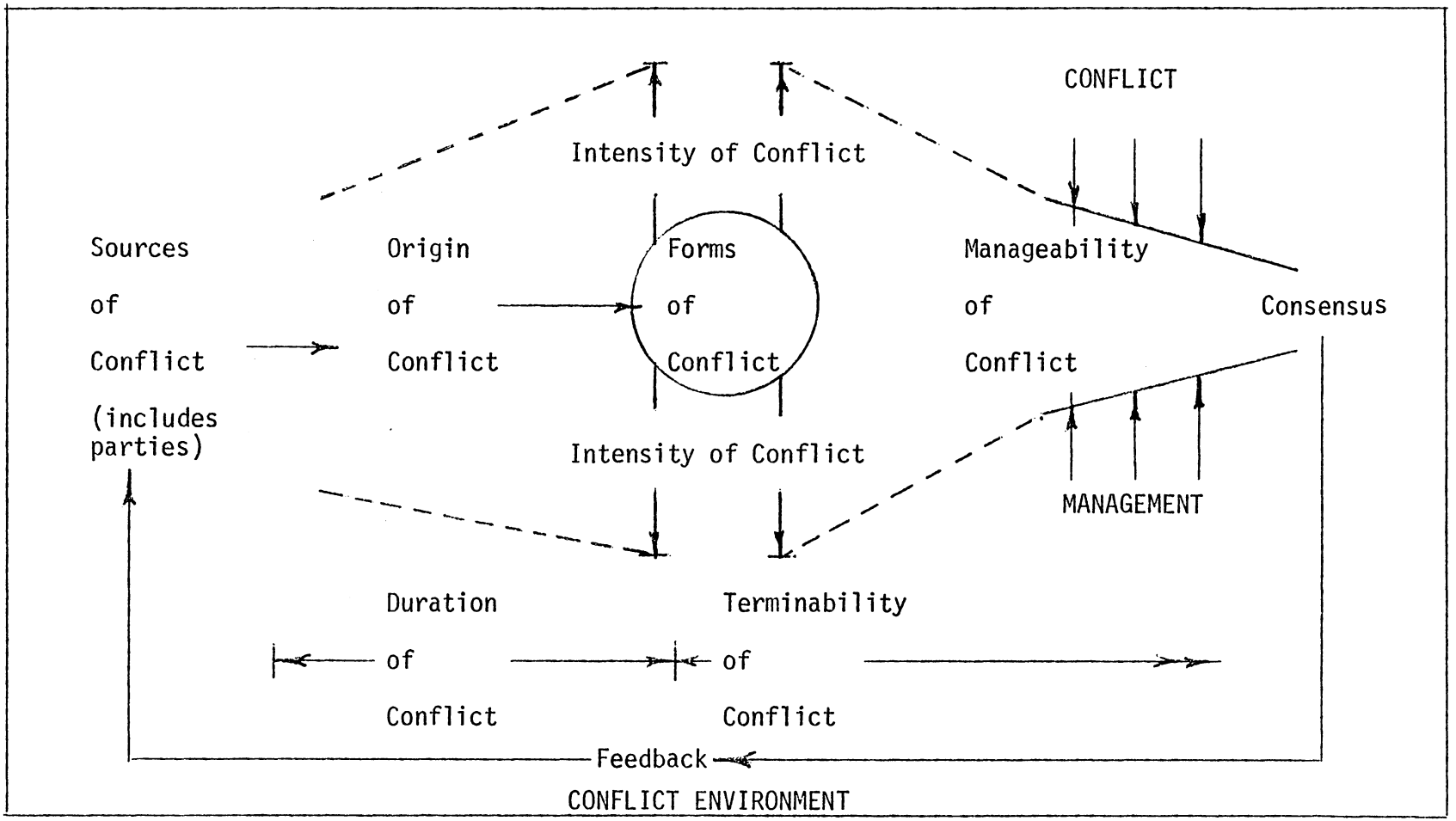


FIGURE G-1: SCHEMATIC REPRESENTATION OF A CONFLICT SITUATION USING THE SYSTEMS APPROACH

3. interstate compacts made with Congressional approval (and sometimes with administrative participation of the central government), and agreements or memoranda of undersatanding between adjacent states without submission to congress;

4. regional bodies like river basin authorities; and

5. associations of state officials, with or without national and local officials and public and private persons.

These are considered horizontal relationships. MacMahon observes that the vertical factor of national participation may also be present in various ways:

> as the source of a statury model for imitation; in the role of the Supreme Court; in the approval of compacts; in encouraging and participating in regional structures; and as partners in many of the associations.[11]

Thus, formal avenues for interaction may operate both "horizontally" and "vertically" in the overall organization structure. It may also be inferred that these avenues of interaction are likely to offer mechanisms to arrive at compatible public decisions in multijurisdictional management. It appears to be evident, however, that the intervention of the courts and/or the legislature may be required before these arrangements fall into place and

facilitate the formulation of compatible decisions. The courts and the legislature are also being approached with increasing frequency by public and private interest groups as avenues of access to the public decision making process.

If these are the only means for arriving at compatible decisions in multijurisdictional management, it appears that preemption and resolution of interagency conflicts, as well as conflicts among public agencies and interest groups, may be a long and cumbersome process. It is increasingly apparent that a distinct need may exist for a formal process for multijurisdictional management as an alternative to the aggregation of current management practices. Such a process may incorporate means for negotiating and resolving conflicts as an integral part of the decision making process. By doing so, the need for cumbersome and time consuming alternatives for conflict resolution through extensive litigation or legislative action may be reduced. In this way delays in implementing urgent management programs might also be reduced, and the credibility of public agencies involved in the management of the environment may be restored.

Dimensions for the Emergence of Conflict

There are at least six dimensions under which conflict is likely to emerge. These are:

1. Values and ideologies.
2. Problem perception.
3. Goal specification.
4. Timing and prioritization.
5. Program/project formulation.
6. Program/project implementation and review.

These dimensions need to be visualized in a sequential order. Conflict arising at an earlier level may inevitably precipitate conflicts at subsequent levels, resulting in a likely process of continous compounding of conflicts. As such, resolution of conflicts at any particular level may require that it be traced back to its origin at an earlier level in the sequence and negotiated at all the appropriate levels as well. An elaboration of the characteristics of conflict are outlined in the following table (Table G-4)

Techniques of Conflict Resolution

There are a large number of methods used for conflict resolution, broadly categorized as follows:

1. Avoidance: In this method the parties may dissociate themselves from one another, physically, and socially and conflict may die out due to lack of opportunity for interaction. Boulding identi-

TABLE C-4: CHARACTERISTICS OF CONFLICT

Dimension	Sources of Conflict	Form of Conflict
*Ideologies & Values	Values Norms, mores, standards Ideologies Attitudes Biases, responses	Controversy of deciding between desirable and undesirable, good and bad, need and want
*Problem Perception	Social Elements Economic Elements Political Elements Behavioral Elements Physical Elements Environmental Elements	Conflicting Interpretations of the scope of the problem
*Goal Specification	Goals Objectives Targets Milestones Indices of Achievement	Policy Conflicts
*Program Formulation	Methods Techniques Practices Procedures Operations	Diversity, Multiplicity, and appropriateness of alternatives
*Timing	Priorities Stages Phases	Conflict in the Degree of Urgency
*Implementation	Responsibilities Authorities	Conflicting Functional Assignments and Delegation of Authority

fies three forms of avoidance: (a) self avoidance, which may be unilateral, by one party; (b) mutual avoidance which may be multilateral by all parties; and (c) forcible avoidance when one party may be removed forcibly by the other(s). Racial segregation may be a typical example of avoidance.[12]

2. Procedural Resolution: Boulding identifies three types of procedural resolution: reconciliation, compromise and awards.[13]

Reconciliation is a method by which one or more of the parties may change their respective values to accommodate those of others, thereby gradually reducing and eliminating conflict. Compromise may not involve a change in values. Parties may bargain with each other voluntarily or with external assistance from a third party and may settle upon an acceptable intermediate position which may be a compromise between the two conflicting stands. The third party may not have authority over the conflicting parties to force acceptance of the compromise settlement and may only serve as an influence to bring it about. Awards may involve an outside party in addition to the conflicting parties. The outside party may have the authority for passing and enforcing a verdict which may then have to be accepted by the conflicting parties.

Reconciliation may be brought about by a shift in values and is usually dependent on the flexibility of attitudes of the conflicting parties. It is more likely that reconcili-

ation may take place if the parties have more accommodating personalities. Reconciliation may be brought about through mediation.

There are two commonly practiced techniques of compromise -- mediation and partisan mutual adjustment. In the former, a mediator, who may be commonly acceptable to the conflicting parties, may be brought into the scenario of conflict to facilitate communication among the parties, to conduct debates among them, to express alternative opinions not raised by the conflicting parties, and to persuade the acceptance of a compromising settlement. A mutually acceptable agreement is the anticipated optimistic outcome of mediation.

Partisan Mutual Adjustment is a process by which the conflicting parties may confront each other with polarized stands which may be in conflict. They may gradually give a little ground on their respective standpoints until they reach a compromise which all parties may find acceptable.

Arbitration is a typical technique of awards. There are three levels of arbitration:

1. The appointment of an arbitrator by the conflicting parties who may agree to abide by the verdict handed down by the arbitrator. In this case the arbitrator may be delegated with authority to enforce the decision by the conflicting parties.

2. The recourse to adjudication, where the Courts have the role of the arbitrator, and verdicts are enforceable through police power.

3. Legislative intervention, where the existing laws may be amended to legitimize the stance of one party or the other. Enforcement may be through the Courts and police power.

In current practice, the award has become the institutionalized approach of conflict management. Cooperative management attempts to find a less cumbersome alternative to the award which is considered outside its scope.

Conflict resolution has been dealt with elaborately in the literature in the social context, identified under the title "group dynamics". Holloway and Wolf provide a list of methods for conflict resolution through group methods for problem solving in the following table.[14] (Table G-5) These methods may be aligned along a continuum, with a leader centered orientation at one extremity and the group centered orientation at the other.

Smith, Stuart and Hansen present the procedures that may be applied for carrying out conflict resolution through group dynamics. These include: (1) Conducting a public meeting, small group meeting, or workshop; (2) establishing task forces or citizen advisory committees; (3) presenting issue ballots in local newspapers; (4) conducting media-

TABLE G-5: GROUP METHODS FOR PROBLEM SOLVING

GROUP ← → LEADER

DIRECTION GIVING	Leadership gives orders or instructions. Members can ask questions for clarification. They cannot change the decision.
INFORMATION GIVING	Leadership: Information is given or received by leader or members. Questions and additional information can be used. This may be the first phase of a discussion leading to a decision.
GUIDED DISCUSSION	Leadership is directive in nature. Leader presents ideas, conclusions, or suggestions. Group is encouraged to discuss these and accept them. A decision may or may not be involved.
CASE METHOD	Leader presents situation and known facts to group by any one of several methods. Group discusses, analyses, and may propose solutions or recommendations.
INCIDENT METHOD	A specific incident is presented to the group. Group asks question of a resource person to gain data which will help them decide the problem and the solution.
ROLE PLAYING	A problem or situation is set up. Members assume roles and enact the situation using their own experience as resource. Problems may be solved or interpersonal conflicts resolved.
EXPLORATORY CONFERENCE	Leadership: Leader presents problem or solution. Discussion, questions, or criticism are encouraged. Leader, and possibly members, probably make a decision based on discussions.
RISK TECHNIQUE	Leadership: Leader makes a specific proposal. Then he asks members what they see as being problems or concerns. Next he asks group to consider needs the proposal meets, and then group decides, leader accepts.
PROBLEM CENSUS	Leadership: Leader lists all problems proposed by members without evaluating them. Group may be asked to set priorities. Leader is the recorder.
BRAINSTORMING	Leaders and members make a special effort to free themselves of evaluating contributions. Leader lists every and all suggestions on how to solve a specific problem. Evaluation may come later.
BUZZ GROUPS CONFER METHOD	Group is divided into sub-groups for discussion or suggestions. Sub-group selects recorder and reports back. Leader gives the assignment of subjects.
TASK FORCES	Committees or sub-groups are set up for continued study and reporting back to the parent group. Objectives and time schedule are set.
PROBLEM SOLVING	Leader presents a specific problem to the group with request for their help to solve it. He is prepared to accept their solution and serves to facilitate their efforts.
FREE DISCUSSION	Leader facilitates free and full discussion by group of their feelings and concerns. Values may be revealed and explored. No "direction" exercised by leader.

Source: W. Holloway and H. Wolf, "The Realm of Social Conflict," Class paper for School of Public Administration, University of Southern California, (1972), p. 38. (Mimeographed.)

tions through third parties; (5) employing an ombudsman; (6) conducting role playing sessions; (7) reviewing videotape of meetings; (8) conducting Delphi or citizen referenda; (9) using an arbitrator; (10) conducting a design-in, community seminars, or public education programs; (11) involving the community in establishing work agendas; (12) establishing a citizen review board; (13) employing residents on the citizen involvement team; (14) conducting simulation exercises, experiments or demonstration projects; (15) conducting a working session retreat, charette, or fishbowl planning sessions; and (16) presenting publics with a range of alternatives.[15] Many of these procedures may require a skilled facilitator to ensure their successful application.

Five other approaches are identified by McGarry. These include: (1) Education - therapy strategy; (2) Staff supplement strategy; (3) Cooptation; (4) The conflict grid; and (5) Value clarification.[16]

Education therapy is a process of training in which the groups subjected to this "therapy" may learn to value, accept and appreciate cooperative means for problem solving. Groups may learn about the roles, responsibilities, functions, authority, and capabilities of other groups and

thereby, begin to accept the view of shared responsibility and cooperative efforts.

The staff supplement strategy may involve the recruitment of members from one conflicting group to carry out tasks required to be performed by the other. This approach also may be expanded as a general organization method through the techniques of matrix management and co-staff, which are discussed elsewhere in this report.

Cooptation is defined as "the process of absorbing new elements into the leadership of policy-determining structure of an organization as a means of averting threats to its stability of existence."[17] There may be two forms of cooptation. In one form, the organization may absorb those influential parties into its orbit; the influence of those absorbed or coopted parties, in turn, may provide channels of communication between, and generation of support from, constituent groups for the organization. In the other form, forces which possess enough resources or influence (power) to affect the operation of an organization may be brought into the organization to help neutralize this influence or to gain it for the organization.

The Blake-Mouton Conflict Grid is an approach for analyzing conflict in the context of value differences and for

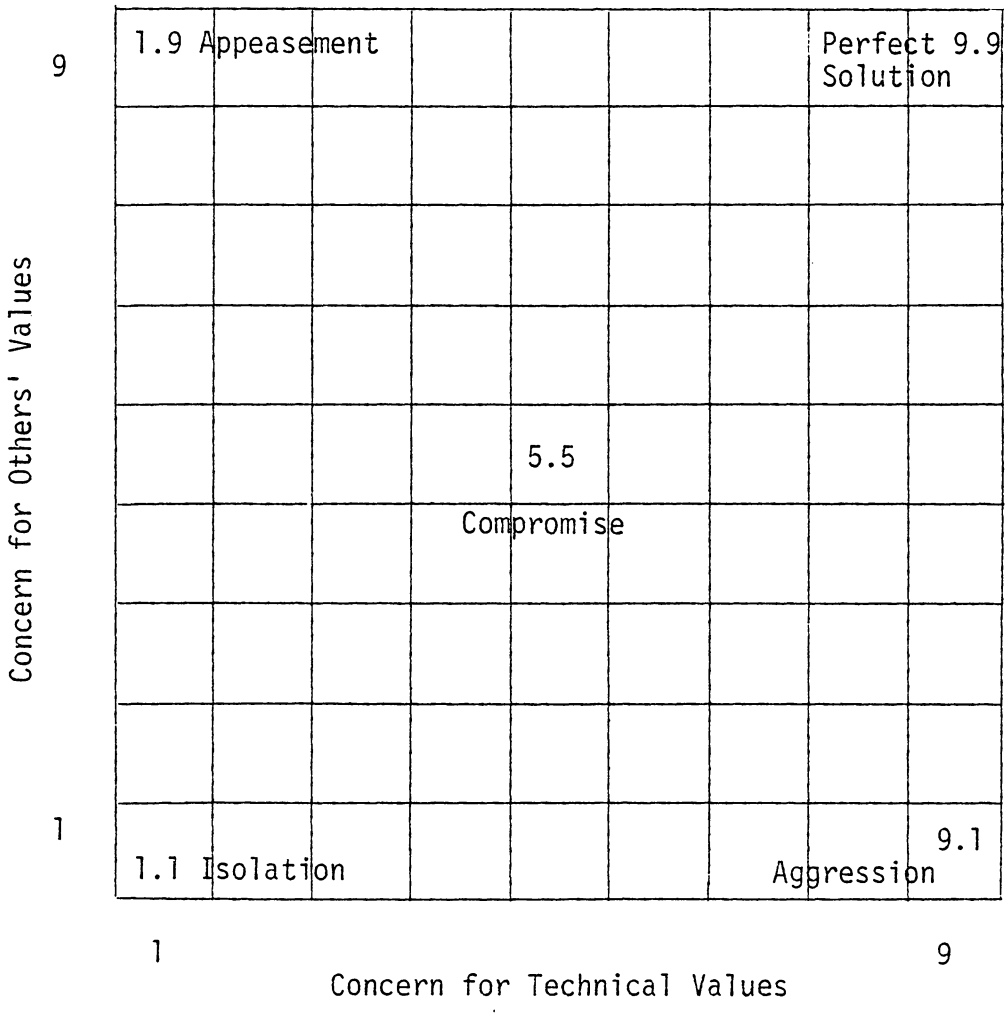
responding to these value differences appropriately. Blake and Mouton hypothesize that in any conflict situation, each participant may be influenced by "concern for others'" and "concern for results", with differing emphases on each concern. Based on how much emphasis is placed on each of these concerns, relative to one another, it may be possible to predict how the party may respond to the conflict situation. The theory is represented in a "concern matrix" as shown in Figure G-2.

The main positions of the Blake and Mouton scheme (1.1, 1.9, 9.1, 9.9, and 5.5), as shown in the diagram, represent "pure" types of actions or positions. They are described below:

1.1 Isolation, Neutrality. Staying out of situations that provoke controversy. Turning away from topics that promote disagreement represents a complete withdrawal from all potential conflict.

1.9 Appeasement. Conflict is resolved by cajolery, by letting a man know that with a little patience he will find that all is right. The assumption of sweetness and right often leads to resolution by people retracting from previously held positions -- preferring personal acceptance to solution validity. This can promote accord and harmony, but it sacrifices conviction and insight into differences while decreasing the likelihood of achieving a valid solution.

5.5 Compromise. Compromise and middle ground positions are accepted so that no one wins -- nor does anyone lose. The application of accommodation and adjustment must lead to "workable" rather than best solutions.



Source: R. R. Blake and Jane S. Mouton, "The Fifth Amendment," The Journal of Applied Behavioral Science, (June, 1970), p. 413.

FIGURE G-2: CONCERN MATRIX

9.1 Aggression. Conflict is resolved by overpowering it and suppressing one's adversary. An ultimate expression of 9.1 conflict resolution is found in the extremes of police power moves and military action. Authoritarian techniques are used where rank is present. When rank is not available a win-lose philosophy expresses the same set of assumptions. Winning for one's own position predominates over seeking valid solutions.

9.9 Perfect Solution. Disagreement is valued as an inevitable result of interpersonal relations, and people's differing beliefs and opinions. Reservations and emotions that interrupt agreement based on logic and data are confronted through open discussion. Valid problem solving takes place with varying points of view objectively evaluated against facts.[18]

The response of any participant may be predicted based on the position in the concern matrix. For example, conflict in the 9.1 location is likely to be countered by total aggression in which the adversary is overpowered and suppressed. Conflict in the 1.1 location may be overcome by voluntary avoidance. The 5.5 location is typical of a compromise solution; the 1.1 location is typical of overconcern for others at the expense of results. The 9.9 location may be identified as the perfect solution, where the conflict may be objectively assessed and evaluated in an atmosphere of mutual respect and harmony for others and other points of view.

Finally, value clarification is one of the methods borrowed from the field of education. This approach attempts to determine the processes by which parties demonstrate their allegiance to certain goals consistent with their value system. These processes are identified by Raths, Merrill and Sidney as follows: (1) prizing and cherishing, (2) public affirmation, (3) choosing among alternatives, (4) choosing after considering consequences, (5) choosing freely, (6) acting and (7) acting with a pattern, consistency or repetitiveness.[19] The response may be indicative of the emphasis of the value system and may provide a basis and background from which the appropriate technique of conflict resolution may be selected.

Conclusion

The phenomenon of conflict has been examined analytically in the preceding discussion. It has been concluded that conflict may not solely be a phenomenon with only negative connotations; it also may provide the auspices for the representation of alternative points of view and diverse means for problem solving. In a management process, conflict may occur at several points in the sequence of events and activities. Conflicts early on in the sequence are likely to compound additional conflicts later in the

sequence. As such, the resolution of conflict may be effective only by tracing its origin, evolution, duration, sources and motivation, and progressively sorting out these factors. Several approaches have been innovated in different disciplines, and each approach may have inherent advantages, disadvantages, and unique capabilities for resolving conflict in unique contingencies. As such, there may be no universal formula for conflict resolution. The more rapidly that conflict may be resolved, the greater the likelihood for consensus to develop and become the initiator for more effective implementation of decisions that are not unacceptable to the parties affected or influenced by such decisions.

Endnotes to Appendix G

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2. Lewis A. Coser, The Functions of Social Conflict, (Glencoe, Illinois, The Free Press, 1956), p. 134.

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14. D.C. Smith, R.C. Stuart, Robert Hansen, Manual for Community Involvement in Highway Planning and Design (Blacksburg, Va., Virginia Polytechnic Institute and State University, May 1975).

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Appendix H

THE ROLE OF COOPERATION IN MULTIJURISDICTIONAL MANAGEMENT

In Appendix G conflict was discussed in a typical setting of multijurisdictional management. In such a setting, it was observed that there are numerous interfaces along which conflict between agencies, or between agencies and the public, may occur. It was observed that these interfaces may also be the planes along which cooperation may take place. This appendix examines and assesses cooperation in any context in interorganizational relations.

The Theory of Cooperation

The need for cooperation among agencies increases as specialization among their activities develops. Since most problems consist of elements which are interrelated, and since the elements are distributed among various jurisdictions, the only way that the elements of the problem may be dealt with collectively is through the medium of cooperation among the different agencies.

Litwak and Hilton represent cooperation as a type of linkage between organizations.[1] Two prerequisites are identified for such a linkage to exist: (1) a need for organizational interdependence and (2) acknowledgement by

one, of its state of interdependence with another. Cooperation may have to take place through voluntary action by each agency, with such action being unilateral, joint, or reciprocal.

Levine and White[2] examine interagency/interorganizational relations in the context of reciprocity and exhange theory. Cooperation is said to involve a flow of elements between the respective agencies and organizations. At best, it may consist of an exchange of information, compliments, gifts, funds, equipment, and so forth, which may be mutually satisfactory to all parties involved, and where the needs of both parties may be met. It may not always be essential that satisfaction is mutual - unilateral exchanges do occur - nor that mutual needs are always met. Over the long run, Thompson confirms that the reciprocal flow of elements between agencies and organizations may balance out over time, and this balancing eventually may result in the emergence of organizational interdependence.[3]

Evan uses role-set theory as the premises of his study on cooperation and emphasizes the role of the individual actor as a key ingredient for interorganizational cooperation.[4] Every action by an organization may be dependent on

the action of individuals who may have specific roles. The individual may recognize his roles in the organization and may develop attitudes and skills to obtain, develop, or elicit responses from others in his environment to fulfill his own role. This development may contribute towards cooperation geared towards role fulfillment.

A third orientation for the review of cooperation may be obtained in the context of the systems approach. Beall and Foye visualize the survival and functioning of an agency as a dynamic process, involving a continuous flow of inputs into the organization from other organizations, followed by a continuous flow of outputs to other organizations within a systems network.[5] As such, an individual working within an agency may perceive himself and his agency working within a network. Interagency contact may be interpretted as a joint effort among agencies to provide a service or undertake a task. The network linkages may serve as the mechanism for exchange in the system.

Levine, White and Paul examine the flow of elements and processes of agreement (both formal and informal) involved in the interaction among organizations.[6] They identify three factors as likely determinants of interaction:

1. The function of the organization, and therefore, the elements of the inputs needed.

2. Access of the organization to exogenous elements;

3. Degree of acceptance to the claims to a specific function (consensus domain).

Organizational goals may have a major influence on interorganizational cooperation. Litwak and Hilton contended that goal similarity between organizations may be a major factor which facilitates cooperation.[7] This view may be endorsed by Levine and White, who state that goal similarity may be a vital ingredient for cooperation.[8] Evan on the other hand, differs in his opinion and suggests that goal similarity among organizations may become a condition which might motivate competition rather than cooperation.[9]

It may be observed from the above that the goal of cooperation may be to establish a mutually-satisfying, recriprocal relationship among different agencies. Through this medium, the needs of the respective organizations may be met.

Difficulties in Establishing Cooperation

Cooperation between individuals or agencies/organizations may hinge on the establishment of satisfying reciprocal relationships and fulfilling mutual needs. Beall and Foye point out that the most difficult task may be to establish such a relationship.[10] There are few

instances where there may be mutual willingness of the participants of two or more agencies to cooperate with one another and establish a reciprocal relationship. The unwillingness may emerge as a consequence of several factors:

1. A history of unsatisfactory interactions;
2. An isolationist view of the individual's roles or roles of the agencies;
3. Lack of awareness of the necessity or value of cooperation;
4. The tendency towards "turf protection" and fear of external intervention in the initial affairs of the agency;
5. The defensive attitudes of participants;
6. Confidence of being able to "go it alone";
7. Insufficient precedence of successful cooperative relationships;
8. Fear of antagonizing superiors or endangering other relationships;
9. The absence of incentives or rewards to motivate cooperative interaction.[11]

Thus many barriers and obstacles may have to be confronted and overcome before cooperation can be effectuated. This task, in Beall and Foye's words, may be both "difficult and frustrating".[12] Yet there appears to be a need to engage in such interaction between agencies and participants at least for a duration during which common platforms and understandings may be established, values may be clarified, and roles may be identified.

Approaches to Initiate Cooperation

Borrowing from the literature on attitude change, negotiation, marketing, and behavior modification, Beall and Foye have summarized a range of alternative approaches for initiating interactive relationships among agencies and individuals.[13] Briefly these are:

1. A foot in the door: This approach may involve a process of making relatively nonthreatening requests to start with, as the initial step towards securing a satisfactory response to a subsequent larger request.

2. Obligate in advance: This may involve making a request well in advance of the time in which the actual compliance of the request is to take place. In other words, an attempt may be made to obligate the responding agency/individual at a time when such agency/individual is not threatened by immediate deadlines, appointments or tasks.

3. Get a public commitment: This may involve securing a commitment in the presence of others, so that the probability of honoring such commitments later, may be maximized.

4. Get agreement on a related issue: This approach may involve getting a person or an agency make a statement that may be consistent with granting a request, shortly before the actual request is made. This approach may be intended to increase the likelihood of compliance. A reversal of this technique may be used in situations where initial response to contacts has not been favorable. Here, the approach attempts to make the individual from another agency disagree with statements he might have originally endorsed. If the influence statements are carefully structured, a favorable statement may be elicited which may be really what the persuader wants.

5. Praise in advance: This approach focuses on building confidence through praise so as to create and maintain a favorable impression, and to

stimulate the individual to behave in a manner which may fulfill the expectations of the persuader.

6. Start by agreeing: This approach attempts persuasion through the expression and acknowledgment of areas of common agreement in related and unrelated matters to the forthcoming request. Common goals, beliefs, problems, and enemies may increase perceptions of similarity and may enhance the chances of compliance to later requests.

7. Compliment appropriate words and action: This approach is an attempt to reinforce specific statements or actions through appropriate gestures of assent or agreement, and compliments which portray an appreciation of the interaction, of the desired statements, and of the opinions, sensitivity, intelligence and the like.

8. Swinging the staff: This approach may involve a process of influencing a group of people in another agency through a progressive sequence of persuasive steps. The presentor may commence by focusing his attention and initiating responses from the member of the group who appears to be most favorable and then, shifting attention to other members of the group in sequential order from the most supportive to the least supportive. The use of such group pressure starting with the first person as a positive model may be the technique for persuasion.

9. Tell them anyway: This may involve a constant and repetitive submission of requests and interactions which gradually wears down the opposition. This may be a slow process which might be considered superior to maintaining silence.

10. Counter objections in advance: This process may involve the prediction of negative responses to requests and making advance statements which may help to pave the way for its acceptance. These statements may be made at a time when they are still superficially unrelated to the request.

11. Use disclaimers: This approach may use disclaimers in which a statement which the audience expects to hear because of the bias of the presenter may be endorsed even if it may not true. This disclaimer may appease hostile audiences by the expression of similarity between the presenter and the audience. By presenting alternative viewpoints, the audience may be led to infer that the speaker's judgment might not be clouded by emotional biases. Disclaimers, however, must be used judiciously so that new opposition is not aroused by the presentation of the disclaimer.

12. Use distractions: This approach may involve the use of diversions and digressions from the main message or request to divert the attention of the person being addressed. This approach attempts to shroud the opposition that the person may be having in mind. Distraction must be very carefully presented or else the thrust of the argument may be lost, comprehension may become confused, or an undesirable reaction may result. The effective use of distractors may be dependent on the individuals involved, the message, and the type of distractor used.

13. Plan the request: This approach focuses on planning the thrust of the request ideally suited for a congenial and non-threatening presentation. The actual request may be made to sound like a personal favor. The specificity or the generality of the request may be varied to suit the elicitation of a positive response.

The Process of Establishing Cooperation

Beall and Foye have recommended a sequential process of steps which may be utilized to initiate and develop cooperation, as follows:[14]

1. Establish the Contact

a) Make the preliminary impersonal contact as a starting point for the cooperative interaction. A very general statement of the need for a meeting may be presented which may not offer any semblance of threats nor reasons to reject the offer.

b) Assess the contact situation: A suitable contact situation may be carefully selected and the context established where the interaction may provide a setting of equality, familiarity of surroundings for the presenter and better situational control.

c) Establish similarity: In order to bring about better familiarity, liking and credibility with the audience, the presenter may identify himself with common grounds and gestures to bring the audience to a position of maximum ease and relaxation.

d) Develop credibility: Credibility of the presenter may be established by any of the following:

   1. Introduction by a reputed person.

   2. An agreeable statement being presented to the audience, which they may want to hear.

   3. Making an impressive opening on the understanding, concern, dedication and expertise of the presenter without being overbearing.

   4. Presenting alternative points of view and highlighting the sacrifices that have been made or are willing to be made, against the presenter's own interests.

   5. Using the foot in the door approach discussed earlier.

   6. Avoiding group situations where the majority of persons present are likely to be adversaries to the proposals contemplated by the presenter.

2. <u>Maintaining and Directing the Interaction</u>

a) Paying attention - This may involve developing an impression to the audience that the presenter may be open to the opinions of others. This may be achieved by listening attentively to what others have to say.

b) Reinforce behavior - This may involve the judicious use of compliments and gestures, and positive comments indicating appreciation of what is being expressed by members of the audience.

c) Individuation - This may involve the expression of appreciation and reaction to the uniqueness and individuality of the members of the audience and may distinguish him from an average stereotype. Similarly, opportunities may be created whereby the audience may visualize and develop a similar appreciation of the presenter's identify, uniqueness and individuality.

d) Organization of presentation: This may involve advance preparation and rehearsal of the actual presentation. This presentation may have adequate flexibility for modification depending on the contingencies that may arise during the interaction. The best arguments may be presented first in the event of attempting to get the audience involved. They may be reserved for last if the audience is already captivated. The main points of the requests may be repeated highlighting the points of common agreement. In order to encourage active participation the members of the audience may be given an opportunity to restate the ideas and conclusions made by the presenter in their own words. The presentation may be organized so as to avoid pitched arguments which may lead to unfavorable public commitments.

3. Getting the Commitment and Terminating the Contact

a) Timing: This may involve sensing the appropriate timing for the request, offering encouragement to consider the commitments made, requesting tentative commitments, and

quitting in the face of an unresponsive reaction before antagonism occurs.

b) Follow through: This may involve a process of establishing greater clarity of what actions are requested and agreed to. This may include a process of providing reassurances to the audience of how the decisions were made freely without external manipulation or influence. Attempts may be made to provide adequate insulation against counter persuasion. A final round of compliments and thanks may be made, highlighting the value of the participation and interaction of the audience and emphasizing the strides and advances that may have been achieved. Where responses have been negative, a parting statement of reconsideration by both presenter and audience may be in order.

c) Broaden the contact: In conclusion, a desire for continued contact and interaction may be expressed. Names of additional contacts who may be useful for future interactions may be secured and the availability of the presenter for future rounds of interaction may be clarified and expressed.

d) Post interaction review: After the interaction is concluded, the presenter may carefully conduct a reassessment of the conduct of the interaction, the gains and losses made, and the effectiveness of the interaction. Needs for future interaction may be assessed and their timing and agenda determined.

Conclusions

Cooperation is a key factor to initiate and maintain an interaction among agencies. Communications and exchanges may occur where the agencies and the personnel involved agree voluntarily to participate in the mutually fulfilling

exercise of working together rather than at cross purposes. Cooperation, therefore, may have to commence with the formal or informal establishment of a forum for communication and exchange to be followed by a process of negotiations and commitment to share responsibilities for making decisions and performing tasks. Such cooperation may help in clarifying values, exploring areas of common interest, areas of controversy, resolution of conflict, establishment of mutually compatible goals, objectives, policies and programs, and effective steps for implementation.

Endnotes to Appendix H

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7. Litwak, and Hilton, op. cit.,

8. Levine and White, op. cit.,

9. Evan, op. cit.,

10. Beall, and Foye, op. cit., p. 85.

11. Ibid., p. 85.

12. Ibid., p. 85.

13. Ibid., pp. 86-89.

14. Ibid., pp. 96-101.

Appendix I

THE CLASSIFICATION OF COOPERATION, COORDINATION AND COLLABORATION

The Role of Cooperation, Coordination and Collaboration

The structure of agencies and jurisdictions has to be examined in order to organize the forum. A distinction requires to be made among the legitimate participants in regard to their levels of involvement in cooperative, coordinative, or collaborative relationships. The process of making this distinction is best explained by illustration.

For purposes of illustration, a hypothetical scenario is visualized as follows. The scenario assumes three agencies A, B and C. It is assumed that A is a federal agency, B is a state agency and C is a local agency. Let a, b, and c represent the heads of the respective organizations. For purposes of simplicity, A is made up of two departments headed by a1 and a2; B is composed of two departments, headed by b1 and b2; and C is composed of two departments, headed by c1 and c2. Again, for purposes of simplicity, each department is further divided into two sections. a1' and a1", a2' and a2", b1' and b1", b2' and b2", c1' and c1" and c2' and c2" represent the respective section heads under department heads a1, a2, b1, b2, c1 and c2 respectively.

Given this multijurisdictional organizational setting, the following considerations become implicit. The agency heads a, b, and c have the authority to make strategic decisions regarding the agencies activities; a1, a2, b1, b2, c1, and c2 have the authority to make management decisions; and a1', a1", a2', a2", b1', b1", b2', b2", c1', c1", c2' and c2" have the authority to make operational decisions.

The scope of the problem at hand will determine the relevance of participation of agency heads,, department heads and section heads. For purposes of comprehensive analysis, all possible scenarios involving combinations of participants are examined. A matrix is used to simulate the different combinations that may exist. The range of decisions that are involved in the multijurisdictional setting are:

1. Operational decisions by one section which affect operations of another section
2. Management decisions by one department head which affect the operations of another section.
3. Management decisions by one department head which affect the programs of another department head.
4. Strategic decisions by one agency head which affect the operations of another section.
5. Strategic decisions by an agency head which affect the programs of another department.

6. Strategic decisions by an agency head which affect the plans and strategies of another agency.

The following matrices illustrate the relationships that are brought to bear on the different scenarios. (See Tables I-1 through I-6).

All reciprocal relationships are also taken into account in the matrices. These three types of relationships are brought to bear in the organization of the interactive forum for decision making. These are:

1. Cooperative relationships - involving simultaneous interagency interactions between section heads, department heads and agency heads.

2. Collaborative relationships - involving independent inter-agency or intra-agency interactions between only section heads, or only department heads or only agency heads.

3. Coordinative relationships - involving intra-agency interactions between section heads, department heads, and agency heads through the chain of command.

Cooperative interactions are necessitated where there is inequality of authority, among the participants, implicit in the relationship. Federal-state, state-local, and federal-local relationships would fall into this category.

Collaborative interactions are necessitated where equality of authority among participants is implicit in the relationships, and these relationships are intra-jurisdictional. Interdepartmental or intersectional relationships

TABLE I-1: MATRIX SHOWING THE CLASSIFICATION OF INTERACTIVE RELATIONSHIPS IN THE CONTEXT OF OPERATIONAL DECISIONS BY ONE SECTION WHICH AFFECT OPERATION OF ANOTHER

Agency	a				b				c			
Department	a_1		a_2		b_1		b_2		c_1		c_2	
Section	a'_1	a''_1	a'_2	a''_2	b'_1	b''_1	b'_2	b''_2	c'_1	c''_1	c'_2	c''_2
a'_1		Collab-oration	Collaboration		Cooperation				Cooperation			
a''_1	Collab-oration											
a'_2	Collaboration			Collab-oration								
a''_2			Collab-oration									
b'_1	Cooperation					Collab-oration	Collaboration		Cooperation			
b''_1					Collab-oration							
b'_2					Collaboration			Collab-oration				
b''_2							Collab-oration					
c'_1	Cooperation				Cooperation					Collab-oration	Collaboration	
c''_1									Collab-oration			
c'_2									Collaboration			Collab-oration
c''_2											Collab-oration	

TABLE I-2: MATRIX SHOWING THE CLASSIFICATION OF INTERACTIVE RELATIONSHIPS IN THE CONTEXT OF MANAGEMENT DECISIONS BY ONE DEPARTMENT HEAD WHICH AFFECT OPERATION OF A SECTION

<table>
<tr><th>Decision Making Agency / Affected Department Section</th><th colspan="2">a</th><th colspan="2">b</th><th colspan="2">c</th></tr>
<tr><td></td><td>a_1</td><td>a_2</td><td>b_1</td><td>b_2</td><td>c_1</td><td>c_2</td></tr>
<tr><td>a_1'</td><td rowspan="2">Coordination by a_1</td><td rowspan="2">Collaboration with a_1 + Coordination by a_1</td><td colspan="4" rowspan="2">Cooperation with a_1 + Coordination by a_1</td></tr>
<tr><td>a_1''</td></tr>
<tr><td>a_2'</td><td rowspan="2">Collaboration with a_2 + Coordination by a_2</td><td rowspan="2">Coordination by a_2</td><td colspan="4" rowspan="2">Cooperation with a_2 + Coordination by a_2</td></tr>
<tr><td>a_2''</td></tr>
<tr><td>b_1'</td><td colspan="2" rowspan="2">Cooperation with b_1 + Coordination by b_1</td><td rowspan="2">Coordination by b_1</td><td rowspan="2">Collaboration with b_1 + Coordination by b_1</td><td colspan="2" rowspan="2">Cooperation with b_1 + Coordination by b_1</td></tr>
<tr><td>b_1''</td></tr>
<tr><td>b_2'</td><td colspan="2" rowspan="2">Cooperation with b_2 + Coordination by b_2</td><td rowspan="2">Collaboration with b_2 + Coordination by b_2</td><td rowspan="2">Coordination by b_2</td><td colspan="2" rowspan="2">Cooperation by b_2 + Coordination by b_2</td></tr>
<tr><td>b_2''</td></tr>
<tr><td>c_1'</td><td colspan="3" rowspan="2">Cooperation with c_1 + Coordination by c_1</td><td colspan="2" rowspan="2">Coordination by c_1</td><td rowspan="2">Collaboration with c_1 + Coordination by c_1</td></tr>
<tr><td>c_1''</td></tr>
<tr><td>c_2'</td><td colspan="3" rowspan="2">Cooperation with c_2 + Coordination by c_2</td><td colspan="2" rowspan="2">Collaboration with c_2 + Coordination by c_2</td><td rowspan="2">Coordination by c_2</td></tr>
<tr><td>c_2''</td></tr>
</table>

TABLE I-3: MATRIX SHOWING THE CLASSIFICATION OF INTERACTIVE RELATIONSHIPS IN THE CONTEXT OF MANAGEMENT DECISIONS BY ONE DEPARTMENT HEAD WHICH AFFECT THE PROGRAMS OF ANOTHER DEPARTMENT HEAD

De-cision Making Department / Agency / Affected Department	a		b		c	
	a_1	a_2	b_1	b_2	c_1	c_2
a_1		Collaboration	Cooperation			
a_2	Collaboration					
b_1	Cooperation			Collaboration	Cooperation	
b_2			Collaboration			
c_1			Cooperation			Collaboration
c_2					Collaboration	

TABLE I-4: MATRIX SHOWING THE CLASSIFICATION OF INTERACTIVE RELATIONSHIPS IN THE CONTEXT OF STRATEGIC DECISIONS BY ONE AGENCY HEAD WHICH AFFECT THE OPERATIONS OF A SECTION

Affected Section \ Decision Making Agency	a	b	c
a_1'	Coordination through a_1	Cooperation with a + Coordination through a_1	
a_1''			
a_2'	Coordination through a_2	Cooperation with a + Coordination through a_2	
a_2''			
b_1'	Cooperation with b + Coordination through b_1	Coordination through b_1	Cooperation with b + Coordination through b_1
b_1''			
b_2'	Cooperation with b + Coordination through b_2	Coordination through b_2	Cooperation with b + Coordination through b_2
b_2''			
c_1'	Cooperation with c + Coordination through c_1		Coordination through c_1
c_1''			
c_2'	Cooperation with c + Coordination through c_2		Coordination through c_2
c_2''			

TABLE I-5: MATRIX SHOWING THE CLASSIFICATION OF INTERACTIVE RELATIONSHIPS IN THE CONTEXT OF STRATEGIC DECISIONS BY ONE AGENCY HEAD WHICH AFFECT PROGRAMS OF A DEPARTMENT

<table>
<tr><th>Decision Making Agency / Affected Department</th><th>a</th><th>b</th><th>c</th></tr>
<tr><td>a_1</td><td rowspan="2">Coordination by a</td><td colspan="2" rowspan="2">Cooperation with a +
Coordination by a</td></tr>
<tr><td>a_2</td></tr>
<tr><td>b_1</td><td rowspan="2">Cooperation with b

+ Coordination by b</td><td rowspan="2">Coordination by b</td><td rowspan="2">Cooperation with b

+ Coordination by b</td></tr>
<tr><td>b_2</td></tr>
<tr><td>c_1</td><td colspan="2" rowspan="2">Cooperation with c +

Coordination by c</td><td rowspan="2">Coordination by c</td></tr>
<tr><td>c_2</td></tr>
</table>

TABLE I-6: MATRIX SHOWING THE CLASSIFICATION OF INTERACTIVE RELATIONSHIPS IN THE CONTEXT OF STRATEGIC DECISIONS BY ONE AGENCY HEAD WHICH AFFECT THE PLANS AND STRATEGIES OF ANOTHER AGENCY

Decision Making Agency / Affected Agency	a	b	c
a		Cooperation with a	
b	Cooperation with b		Cooperation with b
c	Cooperation with c		

within federal, state, or local jurisdictions come under this category.

Coordinative relationships are necessitated where there is inequality of authority among the participants in the relationships in accordance with the delegation of authority along the chain of command. These relationships also are intra-jurisdictional. Agency-Department, Agency-Section, or Department-Section relationships within federal, state, or local jurisdictions come under this category.

All collaborative and coordinative interactions are subject to preemption, by the higher level of authority, provided that the power for such preemption exists. As such, a departmental head may preempt the section head under his/her jurisdiction, or the agency head may pre-empt the departmental head and/or the section head under his/her jurisdiction.

Cooperative relationships, on the other hand, are inter-jurisdcitional in nature. The power of preemption may be exercised only by the jurisdictional authority authorized with such powers. For example, the federal agency head, department head, or section head who has the authority of preemption may preempt the head of a state or local agency, department or section. The head of a state

agency, department, or section who has the authority of preemption may also preempt the head of a local agency, department, or section.

The following matrices represent the preemptive interactions that are permissible subject to the authority to exercise such powers. (See Tables I-7, I-8 and I-9).

The interactive decision making forum as designed facilitates the participation of all parties whose activities, roles, functions, responsibility, and authority are influenced by, or can influence the decision, regardless of whether they are subject to cooperative, collaborative, or coordinative relationships. However, cooperating and collaborating partners have a more active role in the actual decision-making process, since they have the authority to coordinate units under their control. The units subject to coordination have a more subdued and passive role in the decision-making process. Therefore, they are expected to have advisory roles to the respective cooperating/collaborating partners who coordinate their activities.

TABLE I-7: INTRAJURISDICTIONAL PRE-EMPTION

		A G E N C I E S		
		a	b	c
Dept.	a_1	Pre-emption by a		
	a_2			
Sect.	a'_1			
	a''_1			
	a'_2			
	a''_2			
Dept.	b_1		Pre-emption by b	
	b_2			
Sect.	b'_1			
	b''_1			
	b'_2			
	b''_2			
Dept.	c_1			Pre-emption by C
	c_2			
Sect.	c'_1			
	c''_1			
	c'_2			
	c''_2			

TABLE I-8: INTRAJURISDICTIONAL PRE-EMPTION (Continued)

SECTIONS \ DEPARTMENT	a_1	a_2	b_1	b_2	c_1	c_2
a_1' a_1''	Pre-emption by a_1					
a_2' a_2''		Pre-emption by a_2				
b_1' b_1''			Pre-emption by b_1			
b_2' b_2''				Pre-emption by b_2		
c_1' c_1''					Pre-emption by c_1	
c_2' c_2''						Pre-emption by c_2

TABLE I-9: INTER-JURISDICTIONAL PREEMPTION

Agen.		a				b			
Dept.		a_1		a_2		b_1		b_2	
Sect.		a_1'	a_1''	a_2'	a_2''	b_1'	b_1''	b_2'	b_2''
Agen.	b	Pre-emption by any of the above, based on power and authority of pre-emption							
Dept.	b_1								
	b_2								
Sect.	b_1'								
	b_1''								
	b_2'								
	b_2''								
Agen.	c					Pre-emption by any of the above, based on power and authority of pre-emption			
Dept.	c_1								
	c_2								
Sect.	c_1'								
	c_1''								
	c_2'								
	c_2''								

Appendix J

ILLUSTRATIVE EXAMPLE OF SECURING COOPERATION

In order to illustrate the process of securing interagency cooperation, a simplistic hypothetical case is contrived and presented as follows. The case setting assumes a river basin, the upper reaches of which form part of a federal fish and game reserve under the jurisdiction of the U.S. Fish and Wildlife Service (The Service). The reserve is assumed to be managed as a fish and wildlife refuge with a specific management program for the protection of spawning grounds of a particular species of fish. The lower reaches are assumed to be under the jurisdiction of a State Department of Fisheries and Game (State agency). The hypothetical problem stems from the fact (assumed so, for purposes of this illustration) that the fish shoals that come up the river to their annual spawning grounds are being depleted owing to the extensive fishing activities downstream, authorized by the licensing system for commercial and recreational fishing adopted by the State agency. As such, the refuge is in jeopardy of losing its function as a haven for spawning fish unless some regulation of fishing activities downstream can be effected. Since the downstream reaches of the river are not under federal jurisdiction, there is no provision to coordinate the over-

all activities of fishing for the entire river basin, taken as a whole.

In this hypothetical context, the fish and wildlife refuge becomes the key agency which identifies the problem as a decline of fish shoals coming up the river for annual spawning. The key agency may alert the Service about this problem and facilitate the designation of the Service as the lead agency that may initiate cooperative management of the fishery resources in the river basin. The prime objective of cooperative management will be to work towards a compatible arrangement of fishery conservation and development which is compatible to both the Service and the State agency. The conflicting objectives that have to be negotiated are likely to be the protection of spawning shoals by the Service, versus the profit maximization and revenue generation objectives of the State agency.

The Service may secure the participation of the State agency by indicating to them that the impact of extensive fishing authorized by the all-year licensing system is gradually eroding the stocks of spawning fish that visit the refuge annually. The preservation effort of the Service is therefore endangered. The long term impact of such licensing policy may be that as a result of the decline of

spawning fish stock in the refuge, the potential for future fishing in the lower reaches is also severely endangered, and may gradually vanish. It may be indicated to the State agency, that unless this long term perspective is taken, and that the State agency cooperates with the Service to work out a compatible strategy for fisheries management, the Service may not be in a position to ensure sufficient supplies of fish to stock the fishing tracts in their jurisdiction. The Service may point out that if the agencies work at cross purposes with one another, the long term interests of both of them are in jeopardy. The Service may indicate that it may be possible to work out a compatible schedule of fishing and nonfishing seasons so that the short and long term interests of both agencies are not hampered.

By highlighting both the mutual gains that may be achieved, together with the threats to their respective functions, the Service may be able to persuade the State agency sufficiently to motivate voluntary participation in a dialogue with the Service and to work out compatible agreements on the exercise of fishing rights in the downstream reaches of the river.

Appendix K

LEADERSHIP

There are three styles of leadership - directive, participation and free-rein. The directive leader usually relies on his authority to accomplish the work of his organization. Authority tends to be centralized, and control over subordinates is usually vested with the leader. Most management and operating decisions are made by the leader, permitting little freedom of action for subordinates. The orientation of the leader tends to focus on productivity and on the successful accomplishment of tasks. The feelings and interests of subordinates tend to be secondary. Directive leadership is considered to be an effective method of supervision and motivation, depending upon the personal and inspirational qualities of the incumbent, and the delicate handling of subordinates.

Free-rein leadership is the antithesis of directive leadership. Subordinates are usually in full command; they may determine priorities, manage their own projects, and make decisions independent of supervision. The supervisor may provide only support resources and services necessary for individual activities. Emphasis tends to be on self control, self evaluation, and individual responsibilities.

Free-rein leadership may be highly motivational when the tasks of the organization are independently handled on an individual basis. Common examples where free-rein leadership may be effective are in research and development, universities, and specialized services. It tends to be less effective where group coordination is required for the performance of tasks which are either sequential or integrated.

The participative type of leadership represents middle ground. Major decisions of the organization are usually made by the leader. Subordinates may be involved to the degree that they can make positive contributions. The participative leader encourages suggestions from subordinates and considers their feelings. Operational decisions are usually the prerogative of subordinates. Strategic and managerial decisions tend to be the responsibility of the leader. The leader is also more open and adaptive than the directive leader, and frequently involves himself in group activities without losing the identity of his leadership position.

Carlisle identifies six factors which may determine the course of action or leadership styles that will be most effective. They are the purpose factor, the task factor,

the technology factor, the people factor, the structure factor, and the external factors.

The purpose factor affects leadership primarily in relationship to the degree to which the people in the organization accept the basic goals and missions of the organization. If subordinates accept these goals and missions, a free-rein leadership pattern appears to be appropriate. If not, a more directive form of leadership may be suitable. Again, participative leadership is more appropriate when the values of subordinates are likely to match those of the organization. If not, directive leadership becomes more appropriate.

The task factor is extremely critical to the determination of leadership. Routine, repetitive, production tasks and so forth tend to support centralized organization with task oriented leadership. Due to the lack of motivation in performing routine tasks, directive leadership is far more effective than participative leadership. Tasks which are varied, complex and challenging are more motivational, and participative leadership appears to be more suitable. This, however, will depend upon the individual concerned, to a good measure. Sequential interdependence is another key dimension of the task factor. Tasks requiring close

coordination benefit more from directive leadership. Tasks requiring a high degree of autonomy are better supervised by participative or free-rein leadership. People-oriented tasks are more suited to participative leadership.

The technology factor relates to the complex problem solving tasks requiring technical expertise of individuals. In this case, where the supervisor is less technically qualified than the subordinates, in the performance of such specialized tasks, a more permissive, supportive type of leadership style is appropriate. Low technology operations are better coordinated through directive leadership.

The people factor is a part of both task and technology factors. Training and skill of the workers are key dimensions of the people factor which will determine the prescription of leadership styles. Participative styles have been found to be more effective where the members of a group are relatively of equal caliber. Specific traits, emotional background, and temperament are factors which affect leadership. Strong willed people are more likely to accept directive leaders, while independent achievers function better under participative leaders. Leaders who consider it important to be liked and accepted are found to function better in the free-rein style. Expectations and

role perceptions are other important factors that must be considered, since "The subordinates reaction to the supervisor's behavior always depends upon the relationship between the supervisory act as percieved by the subordinate and the expectations, values and interpersonal skills of the subordinate".[3]

The structure factor relates to that of the organization. A formally structured organization encourages directive leadership; a decentralized structure is more conducive to participative leadership. The span of control is another dimension which affects leadership. The larger the span of control, the more participative that the leadership is likely to be. Smaller spans of control allow for more directive leadership. The same arguments apply for the leadership vis-a-vis size of organizations. Positions in the organization also determine the style of leadership. A line position is more likely to be directive, whereas, a staff position is more likely to be participative. Departmentation by functional, geographic, product, process or service are other structural factors which orient the styles of leadership. In environmental management, the matrix organization is quite common. Whereas, the leadership of different components of the matrix possess some degree of autonomy -- calling for directive leadership --

the overall leadership requires to be participative, for purposes of coordination.

External factors, which may be social, economic, political, behavioral or technological, constantly establish unique conditions to which leadership should be responsive. Certain styles are sometimes more effective than others. Political influence and change, which have far reaching consequences on the organization may require a forceful, yet adaptive leader to cope with the changes. Emergency situations may not facilitate the availability of time; the leader may have to be quick to respond to the emergency, and make decisions in a more directive manner. Cultural factors such as attitudes to women and minorities also affect leadership.

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COOPERATIVE MANAGEMENT - AN ALTERNATIVE APPROACH TO MULTI-JURISDICTIONAL MANAGEMENT OF ENVIRONMENTAL RESOURCES

by

Nirmal Brito Mutunayagam

(ABSTRACT)

Environmental Management has become a multijurisdictional responsibility, involving federal, state, and local agencies. Agencies formulate and direct programs towards the fulfillment of an assortment of objectives, based on their independent missions. These programs frequently are not integrated or coordinated across jurisdictional divisions. Policies, programs and projects developed by one agency or jurisdiction may, therefore, impact those of another. Interjurisdictional conflict may be triggered if these impacts are incompatible. These conflicts may interrupt and impede the implementation of program decisions and may delay the effective management of environmental resources.

Judicial action, legislative intervention, arbitration, and mediation are approaches which are increasingly being used for conflict resolution. All these approaches attempt to resolve conflict, after decisions are made. A regional

approach to multijurisdictional problems is another alternative to overcome interagency/interjurisdicational conflict through structural reorganization. The regional approach often is effective only at the pre-action stage, however, and frequently is considered a threat to home rule and local autonomy if extended to management. All these arrangements tend to be very time consuming and cumbersome.

Cooperative management offers an alternative approach for more effective multijurisdictional management of the environment. The objective of cooperative management is to facilitate the implementation of management programs, through a sequential process of compatible decision-making. The conventional process of decision making is adapted to incorporate mechanisms of interagency cooperation and collaboration, communication, and negotiation in the formulation and selection of decision choices. The cooperative management process attempts to secure decision compatibility at the strategic, managerial and operational levels. Compatible decisions set the stage for more effective implementation. While this study focuses on cooperative management among public agencies, the process described herein could have application as a mechanism to resolve/circumvent conflict among public interest groups, as well as between citizen groups and public agencies.

This study incorporates the design and evaluation of the cooperative management process. A likely application in the context of land and resource management problems in Alaska also is attempted.

Cooperative management may provide a workable and effective alternative for a wide range of multijurisdictional management problems. Whereas the process may not always culminate in compatible decisions, it might reduce the dependence of multijurisdictional management on external intervention for interagency conflict resolution. It may facilitate the accomplishment of a range of diverse objectives in a setting of greater harmony and cooperation.

The model of cooperative management described in this study draws upon and combines various component concepts that may be found in the literature of public administration, planning, policy analysis, conflict management, and so forth. The contribution of this study is not the "invention" of new concepts but the innovation of a unique combination of available concepts to facilitate the formulation of decisions which are compatible, i.e. <u>not unacceptable</u> to public agencies at various levels of government. The notion of compatible decisions is a key component in cooperative management. Cooperative manage-

ment does not seek (depend upon) full consensus but rather, the absence of unacceptance as the viability of a chosen course of action.