

DECENTRALIZED COASTAL MANAGEMENT

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Introduction

One of the most sobering realities about contemporary environmental management is how difficult it is to translate environmental goals into effective action. The result is what might be called an 'implementation gap'. This 'implementation gap' refers to inconsistencies between policy goals conceived at one level or branch of government and the translation of those goals into specific resource management activities at another level or by other agencies (Lowry, 1985). It also refers to the gap between management actions at all levels of government and actual improvement in environmental conditions.

These 'implementation gaps' are not a new concern, but they have not figured prominently in international deliberations on environmental management. At the major international conferences on the environment—Stockholm in 1972 and Rio in 1992---the emphasis was on raising awareness of global environmental issues and mobilizing governments to take action to improve environmental conditions. The Rio Declaration on Environment and Development adopted in June, 1992, identified twenty-seven principles to guide national and international actions on environment, development and social issues (Cicin-Sain and Knecht, 1998, 74). While the principles call upon nations to "promote participation of all concerned citizens" and to "enact effective environmental legislation" there is little reference to the practical issues nations and their political subdivisions face in seeking to translate general principles into effective environmental management actions.

One of these practical political realities is that successful implementation of environmental management programs requires coordinated actions among a number of agencies at different levels of government. Hence, inter-governmental relations are a core consideration in addressing the implementation gap. While national governments can undertake some environmental management efforts, the practical and political reality of multi-tiered governmental systems is that effective management requires mechanisms for shared governance responsibility. In federalist systems of governance, state and local governments share these responsibilities. In unitary systems, these functions are shared by national and local government (May, et al, 1996, 3). Designing intergovernmental systems requires allocating responsibility, creating understanding and agreement about management roles and responsibilities, insuring adequate resources for management at all levels, creating required skills and capacities among implementing officials and creating systems for monitoring agency performance and insuring accountability.

Many of the tasks associated with designing systems for inter-governmental systems of environmental management have to do with allocating some authority and responsibility between central government agencies and provincial and local agencies.

'Decentralization' has become a convenient way of characterizing this process. It has also come to be regarded as a key governmental reform. According to a recent World Bank study, "out of 75 developing and transitional countries with populations greater than 5 million, all but 12 claim to have embarked on some form of transfer of power to local units of government" (Agrawal, 23).

A careful examination of the decentralization experiences in these 75 countries would show that decentralization has multiple meanings and practices and is undertaken for a wide variety of motives. Attempts to decentralize may be comprehensive, involving a wide range of services or activities narrowly focused on a specific governmental activity. Relationships between central government and local authorities may range from coercive to cooperative. Authority and responsibility may also be distributed in a variety of ways. Availability of resources for management, technical assistance and administrative support can vary enormously in different decentralized relationships. Moreover, there is a dynamic quality to efforts to decentralize that is often not reflected in textbook treatments of the process. Central government agencies (or officials) may decide to recapture authority transferred to subordinate units, such that over time authority may ebb and flow among agencies and between levels of government.

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This paper addresses some of the conceptual and practical issues associated with decentralization generally and efforts to decentralize coastal management, in particular. Four broad questions are examined:

- What is meant by decentralization? What forms does administrative decentralization take?
- What is the context in which decentralization is seen as administrative reform?
- What are the rationales for decentralization in environmental management?
- What practical dilemmas are involved in decentralized arrangements for coastal management?
- What types decentralized coastal management arrangements have been created?

What is meant by decentralization?

The concept of decentralization describes a variety of relationships between central government agencies and sub-national or local government authorities.¹ Administrative decentralization of environmental governance is a means of redistributing some authority for the management of human uses and activities affecting resources from central government authorities to subordinate units of government or semi-autonomous public authorities, corporations or functional authorities. Three major types of decentralization are usually distinguished: de-concentration; delegation; and devolution.

- *De-concentration* involves shifting some management responsibilities from central government ministries to sub-national units of the same ministry. It is generally regarded as the weakest form of decentralization.
- *Delegation* occurs when central government authorities transfer responsibility to semi-autonomous sub-national agencies or authorities not wholly controlled by central government, but accountable to it in some fashion.
- *Devolution* involves the transfer of authority to local units of government with defined geographic boundaries. Devolution typically leaves the local government authority with substantial autonomy regarding how the devolved functions are implemented. (www1.worldbank.org/publicsector/decentralization/; Agrawal and Ribot, 2000)

These three general types of decentralization provide a starting point for a more detailed elaboration of central-local governmental relationships.

The context of reform: From centralized to decentralized approaches to environmental governance

In any nation, the laws, policies, plans and projects that together constitute its environmental management effort—including coastal management—are a mix of governmental and non-governmental activities occurring at different jurisdictional scales. While many governmental environmental management activities have become increasingly centralized in the last forty years, particularly in industrialized nations, it is worth remembering that historically, environmental management was almost exclusively a local responsibility. The polluted air and water that accompanied the

¹ The primary emphasis in this paper is administrative decentralization. Other types of decentralization including political, market and fiscal should also be noted. Political decentralization refers to legal or constitutional efforts to give citizens or their local representatives more influence in the formulation and implementation of policies. Fiscal decentralization refers to a variety of strategies to transfer authority to local units of government to generate revenues through taxes, user fees or other mechanisms in order to fund local projects. Economic or market decentralization is sometimes used to describe privatization or deregulation activities that shift responsibility for some services to businesses, non-profit organizations, community associations, cooperatives and other groups (www1.worldbank.org/publicsector/decentralization/).

industrial revolution, poor urban sanitation and waste disposal systems, poverty and malnutrition contributed to squalor and appalling health conditions, particularly in cities. What we think of as environmental management grew out of the public health movement to improve these urban conditions. Sewers and water systems, ordinances governing the proximity of wells to cesspits, building and ventilation requirements and zoning ordinances that sought to separate 'noxious' land use activities from residential districts were among the first environmental management efforts. In the last two decades of the 19th century and the first half of the 20th, these public health concerns be the responsibility of local governments.

How, then, did so many environmental management functions come to be regarded as the responsibility of central governments in the second half of the 20th century? How did central governments become such dominant players in environmental management? Before examining rationales for decentralization, it is important to outline why so many management functions were nationalized in the four decades beginning in the mid-50s.

How, then, did so many environmental management functions come to be regarded as the responsibility of central governments in the second half of the 20th century?

Politics was a key factor. A growing international awareness of environmental issues culminated in the first 'Earth Day' in 1970. In 1972, the United Nations Conference on the Human Environment was held in Stockholm. As part of the preparation for the conference, representatives of the more than 100 nations attending prepared 'national reports' on environmental conditions in their country. After the conference some countries established permanent environmental departments or ministries. The Stockholm conference was also a catalyst in the development of the United Nations Environment Program and to several national international agreements including the Convention on the Prevention of Marine Pollution by Dumping Wastes and Other Matter (Cicin-Sain and Knecht, 73).

Nationalization of environmental management followed different paths in different countries. Most industrial countries faced mounting political pressure to improve environmental conditions. In most industrialized countries new national programs supplemented local efforts rather than replacing them. In some countries, such as the U.S., the primary efforts were directed toward creating new national programs, such as the management of wetlands and marine mammal protection, to address environmental issues not dealt with by local programs and to set national standards for air and water quality to be implemented primarily by state or local agencies.

The political imperative for a stronger national role in environmental management was grounded in four basic arguments:

a. 'Race to the bottom' rationale. Without significant national standards, some argued that state and local governments would adopt relatively lower environmental standards as a means of attracting economic investment and jobs. According to this argument, many state and local officials would opt for the tangible benefits of economic development rather than the more diffuse benefits of environmental protection. Scholars

and policy analysts argued that only national standards could prevent inter-state competition to tailor environmental standards to meet the preferences of industry (Stewart; Esty).

b. Political 'capture' of local government officials by industry. A second rationale for centralization was political. The prevailing political assumption was that the political power of industry would overwhelm state and local officials leading to lower air and water quality standards. National officials, it was assumed, would be better able to resist the influence of industry lobbyists (Esty).

c. Trans-boundary externalities. Trans-boundary externalities occur when noxious smoke or other industrial discharges spill across jurisdictional boundaries and adversely affect health and well being beyond the boundaries in which they occurred. According to this argument, national standards and enforcement is required because a city, state or province cannot effectively regulate industrial effluents or other land or resource use activities generating environmental impacts that cross jurisdictional boundaries (Stewart). Of course, this argument assumes that state or other jurisdictions cannot or do not cooperate to manage trans-boundary externalities.

d. Moral responsibilities. Finally, mid-century arguments for centralized management had a moral dimension. Some scholars argued that environmental protection is a moral obligation of citizens to each other and to future generations (Stewart).

By the end of the 1970s, centralized approaches to environmental management were predominate in many countries. Centralized management had come to be regarded as more effective, more modern and more responsive to increasing concern about how to manage the environment.

Rationales for Decentralization

By the 1980s, the pendulum was beginning to swing the other way: Academic specialists, international agencies and other specialists began to promote decentralization as a key governmental reform. These experts offered a variety of arguments for greater decentralization in environmental management. Generally, it is said to promote:

- Design of management programs that better reflect local needs and conditions;
- Greater sensitivity to local preferences;
- Improved administrative efficiency and capacity.

a. Improved program management design. One of the primary arguments sometimes offered for decentralized approaches to environmental management is that the variability of local conditions requires management approaches that are more closely tailored to the environmental, social, political and economic conditions at the local level.

The basic assumption is that provincial or district administrative units “may have greater opportunities to test innovations and to experiment with new policies and programs in selected areas without having to justify them for the whole country” (Cheema and Rondinelli, p. 16; Scott). Sub-national governments can become “little laboratories” for testing policy experiments which, if successful, might be replicated elsewhere in the country (Rondinelli).

In general, the more that ‘local knowledge’ is critical to program success, the greater the justification for local program design and implementation. Testing alternative approaches to local over-fishing problems provides one example of a situation in which the conditions of local design and implementation are advantageous. Knowledge of local environmental conditions, fishing patterns, and community norms and structures matter greatly in these contexts.

Local program design works best when the management issues do not require complex chemical, biological or engineering analysis. The technical analysis associated with assessing the risks of particular pesticides, designing pollution abatement programs or conducting epidemiological studies are often done centrally where economics of scale can be realized. There is no necessary reason why states, provinces or districts need replicate complex and expensive studies. The theoretical argument for diversity and decentralization runs very quickly into practical questions about local technical capacity.

b. Greater sensitivity to local preferences. Another argument for decentralization is that it allows for greater sensitivity to ‘local’ preferences. Decentralization, it is often argued, can allow for greater official awareness of local problems and needs. It could provide for “better information with which to formulate more realistic and effective plans for government projects and programs” (Cheema and Rondinelli, 15).

Seeking local participation as a means to incorporate local knowledge and local priorities is a seemingly unassailable justification for greater decentralization. In theory, who better to decide whether strict fishing regulations should be imposed to reduce over-fishing or whether mangroves should be converted to shrimp ponds than those most immediately affected by those decisions?

In practice, however, decentralized approaches can be undermined in three ways: lack of an effective means for local political participation; technical complexity; and the influence of local elites. Local participation may be hampered by general lack of knowledge of the bureaucratic apparatus and procedures of environmental management, lack of information about the causes and consequences of specific land and water use activities and lack of organizations through which to express discontent about environmental conditions. Even when citizens are highly motivated and have a better understanding of the environmental management framework, participation is often limited to protests against specific projects that have already gained momentum in proceeding through the regulatory process. Public protests at this stage are frequently too late in the review process to be effective. Encouraging effective local participation in community

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environmental management requires careful design of participatory processes. It involves developing strategies for encouraging broad participation throughout the design and implementation processes.

The technical complexity of environmental issues can also subvert decentralized approaches to environmental management. Local citizens (and local officials) may recognize environmental problems, such as fish kills in near shore waters, but be unaware of how excessive runoff of fertilizers is contributing to the problem. It is frequently difficult for local officials to adequately understand and analyze the relationships among land and water use activities, impacts of those activities, underlying causes and remedial actions. The capacity to plan and implement responses to environmental conditions and the ability to build a political consensus is also hampered by insufficient knowledge of both the problems and processes of environmental degradation (Bartone, 6)

c. Improved administrative efficiency and capacity. Decentralization, it is sometimes argued, can improve administrative efficiency ((Cheema and Rondinelli, 15). The key assumption is that central government authorities will be freed from routine implementation tasks that can be delegated to lower level officials. Theoretically, this frees them to plan more carefully and supervise more effectively. However, such efficiencies can only be achieved if the time and energy costs of supervising lower level officials are low. If the tasks assigned to lower level officials are too complex or subordinates are perceived as misusing the authority they have been assigned gains in efficiency are likely to be low.

There are other potential efficiencies in delegating responsibility to local administrators. Increased familiarity with local conditions could make it possible for subordinate officials to make management decisions more quickly and with lower information costs.

Decentralized approaches can also lead to increased local administrative capacity. The knowledge, skills and other resources required for effective local implementation vary enormously with the types of resource management (or service delivery) assignments they are given. Effective decentralization requires great attention to the types of administrative capacities that local implementation requires---and an explicit strategy to transfer or develop those capacities.

While there are both philosophical and practical arguments for decentralization, such approaches can be subverted in a variety of ways. In next section some of the practical dilemmas of decentralization are examined.

Practical dilemmas in the design of decentralized management

National governments are experimenting with a wide variety of decentralized 'reforms'. Local governments are being offered---or assigned---new responsibilities. They are expected to take on larger planning, regulatory and service delivery responsibilities. At the core of decentralization efforts are a new division of authority and responsibility

among levels of government. Creating these altered relationships is the central challenge of decentralization.

Designing effective inter-agency relationships in environmental management requires policy makers to address a number of practical questions and issues. This section outlines four of the most critical questions:

- What mix of coercion and cooperation should characterize the relationships between levels of government?
- How should issues of management capacity be addressed?
- What forms does accountability take in decentralized systems?
- What can be done to increase the commitment of implementing officials to management objectives?

a. Designing Intergovernmental Relationships. Decentralizing policies and programs is generally undertaken to make local offices of national ministries or local governments the agents of central government objectives. Central governments frequently rely on different mixes of inducements (e.g. increased funding) and sanctions (e.g. fines or other penalties) to achieve policy goals (May, *et al*, 173). From the perspective of central government agencies, one of the key dilemmas in designing inter-governmental approaches is how to achieve national objectives through sub-national agencies and staff. Should central government authorities rely primarily on coercion or emphasize cooperation? What is the right mix of sanctions and inducements in dealing with local offices of national ministries or local government agencies?

Central-local relationships that are primarily coercive treat local ministry offices or local government as management agents charged with following rules prescribed by higher level government (May, *et al*, 173). Coercive policies are implemented through detailed guidance to local government either in the form of standards for decisions or procedures to be followed in plan development or other management activities. Coercive relationships are highly paternalistic. They are based on the assumption that central government authorities have a clear image of the management actions local governments should take. Coercive policies assume some resistance on the part of local governments, and therefore build monitoring for non-compliance into the relationship.

Efforts to design inter-governmental structures that are primarily cooperative are based on a different set of assumptions. First, they assume that while local governments may not be 'partners' they can be counted on to be faithful trustees of central government intentions. Cooperative arrangements may require local governments to prepare a plan, design a regulatory program, carry out a public awareness program or other management activity, but leave the details of how to accomplish these ends to local

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government (or local offices of national ministries). Such arrangements are also based on the assumption that local government officials have a more complete understanding of local condition and are therefore able to tailor central government objectives to local conditions. Cooperative arrangements are also based on the assumption that local government officials understand and agree with central government objectives, a critical variable for increasing the probability of successful implementation (Sabatier and Mazmanian).

Research on the relative effectiveness of coercive and cooperative structures of intergovernmental relationships suggests that they both have their strengths and limitations. One significant study involved a comparison of two coercive approaches, one requiring local planning in Florida and the other mandating local governments to impose development restrictions in hazardous areas in New South Wales, with a cooperative initiative to encourage local environmental planning in New Zealand (May and Burby, 1996; May, *et al*, 1996).

These researchers found:

- In situations in which coercive arrangements were used to induce procedural compliance by local governments, such coercive arrangements may encourage token, formula-based compliance with central government objectives and deadlines. Such compliance is important, but it may not result in sustainable commitments to effective environmental management (May, *et al*, 218).
- Coercive arrangements may also be undermined by increasing political resistance by local officials (May, *et al*, 218).
- Although cooperative arrangements tend to foster greater local 'ownership' of central government programs, not all local authorities comply. The reluctance, unwillingness or indifference of local officials creates gaps in the management regime (May, *et al*, 218).
- Because of their emphasis on cooperation, it is difficult for central government authorities to impose sanctions to encourage compliance.
- Cooperative arrangements provide local officials with substantial discretion. This discretion may lead to more 'locally acceptable' development regulations. More local discretion may also lead to relaxation of strict building standards in flood hazard zones in some cases (May, *et al*, 219).
- Both coercive and cooperative regimes can unravel over time. Under coercive arrangements commitment of local officials may erode as monitoring and enforcement is relaxed.
- Under cooperative arrangements, one of the primary conditions for sustained cooperation is shared commitment to environmental goals. As the researchers note, "when there is fundamental disagreement over policy objectives or the

allowable range of means for meeting them, the cooperative nature of the intergovernmental partnership will be doomed from the start" (May, *et al*, 223).

This research suggests that whether inter-governmental relationships are primarily cooperative or primarily coercive cannot be decided independent of dealing with other dilemmas. These dilemmas include determining what authority will be delegated, how local officials will be held accountable and what will be done to develop and maintain commitment of local officials.

b. Management capacity. One of the most frequently cited reasons for not implementing policies through subordinate units of government at provincial and local levels is that they lack the 'capacity' to carry out the required tasks. Capacity, as used in this context, usually refers to technical capacity. If implementing a policy or plan requires a particular technical skill the organization will need personnel with that skill or the means to train people to develop it. Providing that training is the narrowest and most obvious meaning of capacity building.

Technical capacity---and the personnel training and education required to develop it---is just one dimension of local capacity. A second important dimension is organizational strengthening. Organizational strengthening refers to strategies to strengthen management systems in ways that improve performance of specific tasks. Strategies for strengthening organizations includes "improving recruitment and utilization of staff, introducing better management practices, restructuring work and authority relationships, improving information and communication flows, upgrading physical resources, introducing better management practices, and decentralizing and opening decision-making processes" (Grindle, 1997).

A third dimension of capacity building is institutional reform. Institutional reform means altering the rules by which organizations make decisions and carry out activities (Grindle, 1997). Institutional reform may include legal reform or development of new accountability systems. In natural resource management, a greater emphasis on collective self-management by users groups and the development of locally developed 'rules' to govern resource users is an example of institutional reform.

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An organization's effectiveness is obviously shaped by the types of personnel it can attract, the resources it can command and leadership. It is also molded in more subtle ways by its institutional heritage and organization 'culture'. Over time organizations developing linkages with the people and organizations with whom they interact. Decentralizing new responsibilities to subordinate agencies that require it to change its relationships with the people with whom it interacts may be resisted. Fishing ministry staff who have a history of administering small loans to encourage the development of a fishing industry may resist mandates to impose gear regulations or other requirements that impose limits on fishing.

In addition, patterns of personnel recruitment shape the professional culture of the organization. Civil engineers who have been trained to design large, capital intensive projects may find it professionally demeaning to shift their work to labor-intensive, low technology sanitation projects needed by the poor. The professional norms and expectations of professional staff affect their orientation toward policy mandates from central government agencies in ways that can undermine or enhance policy implementation.

Designing inter-governmental arrangements for implementing policies requires both an assessment of the technical capacities for implementing mandates and the ways in which organizational culture, leadership and professional norms of staff subvert or reinforce the implementation activities subordinate agencies are expected to assume.

c. Accountability issues. Reallocating authority and responsibility from central government ministries to local ministry officials or local authorities carries with it the assumption that those to whom responsibility is transferred will somehow be held accountable for their administrative actions. Hence, in its narrowest conception, accountability refers then to procedures for officials in central government to scrutinize the management activities of local authorities. This concept of accountability also connotes that 'errors' or instances of 'non-compliance' by local officials will be identified and 'remedied' in some fashion.

While administrative accountability is important, most contemporary observers regard it as just one dimension of a more inclusive system of accountability.

Designing procedures for assessing administrative accountability requires answering several questions:

- For what activities/decisions or behaviors will local authorities be held accountable?
- What information about program milestones, program activities or coastal conditions is needed?
- What procedures are required for gathering, storing, and retrieving monitoring information (Olsen, *et al*, 46)?
- How will judgments be made about the appropriateness of administrative behavior?
- How will instances of non-compliance or inappropriate subordinate behavior be addressed?

Florida legislation requiring preparation of local plans provides an example of upward administrative accountability (May, *et al.*). State government officials prescribed both the content of local plans, procedures by which they were to be prepared and preparation timetables. Local plans were submitted to state officials and reviewed for compliance. Instances of perceived non-compliance were punished. Five cities had financial

sanctions imposed for late submission of the comprehensive plans and two counties were sanctioned because they did not comply with state planning standards (May, *et al.*).

Designing systems for administrative and fiscal accountability poses a number of practical and political dilemmas. Beyond the sometimes difficult practical questions of how to provide for continual monitoring of local agencies, there are political issues as well. Administrative monitoring is often seen by subordinate agencies as a labor intensive and intrusive process that doesn't adequately gauge either the level of effort or the quality of what they do. The indicators of effectiveness used by central government agencies are often regarded as invalid, incomplete or irrelevant by local officials. Questions about the validity of an accountability process can turn to a more general critique of the legitimacy of central government scrutiny--and local government resistance to continued scrutiny by central government officials.

While administrative accountability is important, most contemporary observers regard it as just one dimension of a more inclusive system of accountability (Agrawal and Ribot, Turner and Hulme). Beyond formal legal conceptions of accountability, public officials, non-government organizations, community user groups and others with authority to implement environmental programs generally and coastal management programs in particular should also be held accountable. This suggests a broader conception of political accountability. But to whom should implementing officials be accountable? And what are the means of achieving such an accountability?

The most obvious form of political accountability is scrutiny by elected officials at all levels. Legislative bodies hold hearings, review reports, and consider new legislation. Legislative forums are an opportunity to identify problems, including those related to intergovernmental structures or processes. The notion of political accountability is based on the assumption that administrative officials are responsible not just to elected and appointed officials but to the multitude of stakeholders whose lives are affected by the implementation of environmental programs. A broader conception of political accountability raises several questions:

- How open are agency planning and decision making processes?
- What opportunities for community or interest group participation does the agency offer?
- How much authority does the agency share?

Transparency of agency planning and management activities is one obvious dimension of political accountability. Many agencies hold occasional public hearings and publish annual reports that provide a limited basis for public scrutiny. Others publish newsletters, establish procedures for assessing information systems, make maps readily available and maintain sophisticated websites that provide detailed information about what the agency is doing.

Creating opportunities for community consultation is another mechanism that has the potential for increasing accountability. Some agencies maintain advisory groups composed of resources users, government officials and representatives of non-governmental organizations. Agencies also consult with community groups on a periodic basis to get assistance in identifying resource use problems in specific areas, management issues or review of agency actions or plans.

In community consultation a key question about the degree of political accountability is how much authority agencies share with the community groups or advisory groups with which they meet. Some agencies organize processes in which public groups are encouraged to set priorities regarding which management issues should be addressed, select criteria for evaluating planning proposals, or identify problems. In most such cases it is understood that such assistance is advisory to the agency. (It is not uncommon, however, for advisory groups to regard their advice to the agency as definitive and to seek to insure that the agency follows their advice. In a few cases, citizen groups have the legal right to hold management officials legally accountable. Hawaii's coastal management law, for example, has a 'cause of action' provision that allows individuals affected by a coastal regulatory decision to bring legal action against the regulatory authority if the decision is perceived to have violated one or more of the state's coastal management guidelines (Hawaii Revised Statutes 205A).

d. Uncertain commitment. Research focusing on factors affecting the implementation of plans and programs have consistently identified the commitment of implementing officials as a key factor in determining successful implementation (Van Meter and Van Horn; Sabatier and Mazmanian). Research also indicates that acquiring and maintaining commitment from lower level officials in a decentralized system is a continuing issue. Reflecting on this analysis of efforts to decentralize in Florida, New South Wales and New Zealand, May and Burby report that variability in local government efforts to either manage development in hazard prone areas or otherwise address risks posed by natural hazards is: "a serious problem that results in half-hearted efforts and, in some instances, outright failure to comply with higher level mandates. In either case, lack of such commitment serves as a key obstacle to achieving sustainability with respect to natural hazards" (May, et al, 1996).

Of course, what is perceived as 'lack of commitment' by central government authorities may be viewed as strategic political resistance by some local officials. Political resistance accounts for some of the variability in responses by local officials to central government mandates. Local political resistance has several possible several sources. One is bureaucratic: Local administrators may not understand the need for programs mandated by central government or, to the extent that they understand them, may assign them lower priority relative to other local government activities. Getting local government assistance in enforcing coastal building setback requirements is a continuing problem in some countries in part because some

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local officials regard coastal erosion resulting from improperly located coastal structures to be a minor problem unrelated to coastal regulation.

A second source of resistance on the part of local officials is to the means of program implementation. Local government officials may recognize the need for improved management of areas exposed to coastal flooding, for example, but object to administering a permit system or other regulatory program that imposes significant development restrictions on local residents. Finally, the political influence of local resource groups or political coalitions, such as aquaculture interests, may inhibit local government officials from implementing environmental management initiatives. The authority of central government officials may not be sufficient to overcome the influence of the local coalitions.

A second major set of factors affecting local commitment are several practical considerations such as adequacy of local implementation skills, technical and financial resources and technical needs. Some central government mandates are not accompanied by sufficient resources for carrying out the required tasks effectively. Other environmental management responsibilities may require cartographic or data management tasks requiring access to advanced computer equipment or software. Lacking hardware, software or qualified staff to use them, local officials may decide to ignore program implementation requirements.

If the implementation gap between central government goals and decentralized action is to be narrowed, clearly finding ways to address limited commitment (or political resistance) of local authorities is a key issue to be addressed. Some of the practical issues are easy to identify, although not necessarily easy to resolve. In principal, computer hardware and software can be purchased and transferred to appropriate government authorities. Organizing training courses to increase local capacity is another obvious way to overcome resistance associated with lack of capacity.

Most issues of inadequate commitment are not easily remedied by simple technical fixes, however. Most require attention to local sources of resistance. Lack of commitment can be treated as a compliance problem. Central government authorities can treat local resistance and lack of commitment by increasing coercion on local authorities. Increasing monitoring of local authorities, reduced government transfers, fines and other penalties can be instituted. Such coercive initiatives sometimes reduce political resistance in the short run, but the presumption is that they are unlikely to be sustainable, both because monitoring and coercion is difficult to maintain and because local resistance may increase.

Although coercion may be regarded as an option, most strategies aimed at increasing commitment focus on more positive strategies. Three main types of strategies are most prominent: creating greater awareness and understanding of central government objectives; greater local constituency building; and development of collaborative planning and management strategies involving staff at all levels. Implementation research suggests that implementation is enhanced to the extent that staff understand and agree with the aims of policy (Sabatier and Mazmanian). Workshops and training

courses can be an effective way of helping local officials understand the environmental issues as seen from the perspective of central government and strategies that have been developed in addressing these issues. Of course, merely explaining central government perspectives is not like to increase local government commitment unless a persuasive case is made about what the issue is and how government has chose to address it.

Constituency building strategies are based on the recognition that local government authorities are subject to political influence from local resource user groups and other interest groups. Increasing local commitment involves changing local politics. Central government can help bolster local commitment by helping to organize political support for environmental initiatives at the local level. Public awareness campaigns organized by central government aimed at mangrove protection or reef conservation, for example, can help mobilize local user groups and NGOs to assist in conservation strategies.

Finally, genuine collaborative planning among agencies at different levels of government can help bolster local commitment. When local officials who are likely to be deeply involved in identifying key environmental management problems and involved in the design of strategies to address these issues, their understanding of and commitment to the implementation of those strategies is likely to be strengthened.

The commitment of local administrative officials is a key factor in effective decentralized approaches to environmental management. Once developed, local commitment is not necessarily constant. Effective decentralized approaches to management requires strategies for building and reinforcing local commitment.

Types of Decentralized Administrative Arrangements for Coastal Management

Many of the prominent examples of decentralized approaches to environmental management involve coastal management. The U.S. coastal management program in particular is based on a key assumption that the wide variety of natural coastal conditions, management issues and administrative and legal contexts requires carefully developed state programs. A review of the international experience with coastal management suggests that there are at least five general types of national-local relationships. In this section, these five types are outlined:

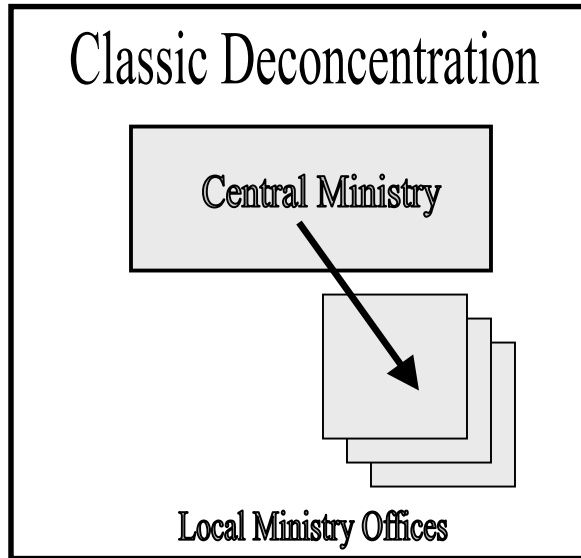
- Classic de-concentration
- Coercive devolution
- Cooperative devolution
- Devolved experimentation
- Local entrepreneurship

Each of these types is briefly explained and an example is provided. The implications of each for capacity building, accountability and creating commitment is also discussed.

Classic De-concentration

In the classic de-concentration model of intergovernmental relations, implementation authority is vested in the local or provincial officers of central government ministries. These officers are technically part of the same organization as the central government officers from whom they receive directions.

In the U.S., system of coastal wetland protection comes under the jurisdiction of the U.S. Army Corps of Engineers. Anyone seeking to convert wetlands to other uses must get a permit from the Army Corps. The Corps has standard national application procedures, but the permit review and decision-making process is delegated to the office of the district engineer in the district in which the wetland is located. The staff of the district engineer reviews the permit application, receives public testimony and makes a recommendation.



Coastal Wetland Management in the U.S.

The principal federal statute regulating activities in wetland areas is the Federal Water Pollution Control Act, commonly referred to as the Clean Water Act. Section 404 of the Act is the primary authority for protecting the Nation's wetlands.

Under the Section 404 program, the Corps of Engineers and the Environmental Protection Agency have concurrent jurisdictional authority over the dredging and filling of waters of the U.S., including wetlands. The Secretary of the Army, acting through the Chief of Engineers, is authorized to issue individual permits for the discharge of dredged or fill material into the waters of the United States which includes wetlands. In some circumstances, the Corps may issue 'nationwide permits' for certain activities that are deemed to have minimal environmental impacts.

Army Corps field personnel are responsible for making the initial decision to grant or deny permits. The Environmental Protection Agency (EPA) is responsible for formulating the Section 404 guidelines used by the Corps to make permit decisions. The EPA is also empowered to veto or overrule the granting of permits by the Corps. Despite the veto authority, however, EPA has rarely overruled a Corps decision to issue a permit.

The Corps regulations set forth extensive procedures for the permit process. The application form must describe the purpose, scope and need for the proposed activity, its location and the names and address of adjoining property owners. Following submission of a permit application for activity in a wetland area, the Corps must decide whether to grant the permit and, if granted, whether any conditions should be placed on the permit. In evaluating a permit application, the Corps is required to consider the recommendations of the U.S. Fish and Wildlife Service and the National Marine Fisheries Service. Comments and objections from certain state agencies, including the Coastal Zone Management Program, must also be considered. If the state coastal authority deems the application inconsistent with its coastal plan, the permit cannot be issued until the conflict is resolved.

Source: adapted from Mark Dennison and James F. Berry. 1993. "The Regulatory Framework" in *Wetlands*.

Management Capacities. The knowledge and skills required for management under this model depend on the complexity of the resource management issue and the amount of administrative discretion granted to lower level officials. This model assumes that officials from national agencies assigned to provincial or local offices of that agency have the requisite capacities or will be trained in those capacities prior to assignment.

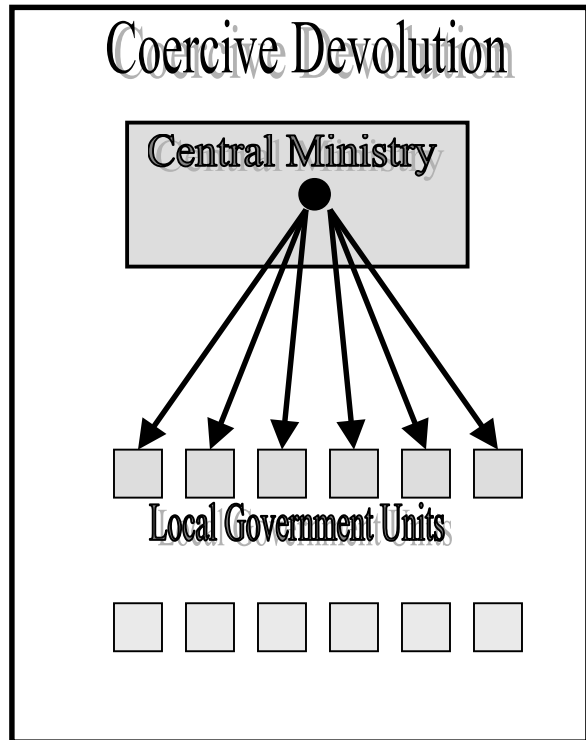
Accountability. Local ministry officials are accountable upward in the organization. Reporting and review by central government officials is the norm. In a rather transparent review process, such as the Corp of Engineers wetland permit review process, district engineers are also accountable to published decision-making criteria and to professional standards. Wetlands protection advocates (and opponents) can be expected to scrutinize permit decisions carefully for instance of non-compliance with published criteria or professional norms. In general, however, the degree of political

accountability can vary enormously among when classic de-concentration is the model of inter-governmental arrangements.

Commitment. Local representatives of national agencies are likely to be generally responsive to the same incentives and sanctions that shape the behavior of professionals in large organizations. They are likely to behave in ways intended to elicit the esteem of colleagues and superiors (especially superiors), to seek to further their chances for promotion and assignment to more desirable posts and to avoid, if possible, acting in ways that depart from perceived organizational norms. In general, commitment is to the organization rather than the task if there is a perceived conflict between the two.

Coercive Devolution

In the coercive devolution model of decentralization, provisional or local governments are treated as regulatory agents of central government. They are expected to comply with regulatory and/or procedural requirements imposed by central government ministries. Laws or administrative rules spell out detailed standards and procedures for achieving policy objectives thereby reducing the discretion of local authorities (May, *et al*, 3). Failure to follow these standards or procedures may result in sanctions such as fines, loss of funding for local projects or other penalties. The coercive devolution model assumes that local units of government lack the political will, capacity or sufficient understanding of the management issue.



Florida's approach to environmental management and comprehensive planning exemplifies coercive devolution. Florida's approach (see box) prescribes the content of local land use plans. It also establishes standards for review of local plans for consistency with state standards and imposes tough sanctions for local governments that fail to comply with the substantive or procedural standards.

Florida's Growth Management Plan

Florida's Local Government Comprehensive Planning and Land Development Regulation Act mandated new local comprehensive plans and required that they be consistent with the goals of the state plan, the comprehensive regional policy plans, and other applicable statutes. It authorized the state to establish minimum criteria for local plans, which the Department of Community Affairs subsequently acted on through rules in the Florida Administrative Code. The vertical consistency is complemented by the requirement for horizontal and internal consistency. Each local plan must include an intergovernmental element so that all local plans in a region are compatible with each other, a requirement that is important for hazard mitigation, since hurricane evacuation routes can be protected from over development by the requirement that the traffic circulation, coastal and future land-use elements of local plans be coordinated with each other.

Administrative rules set minimum standards for judging the adequacy of local plans for state approval. Element by element, the rules list the types of data, issues, and goals and objectives that must be addressed by local governments in order to meet state goals. Administrative rules also established an enforceable schedule of completion dates for all local plans. Amendments to adopted plans cannot occur more frequently than twice per year and each amendment is subject to review by the state for consistency with state policy.

The Florida legislature authorized sanctions for local governments that did not submit plans on time and for plans found not to be in compliance with the growth management act. The state can withhold 1/365 of the state revenue-sharing funds for each day a local government's plan is late or held not to be in compliance. In addition to authorizing sanctions to induce compliance, the Florida growth management contains incentives to build the capacity of local governments to plan for and manage development.

Adapted from Peter J. May, et al. *Environmental Management and Governance*. Routledge.

Management Capacity. The pure form of coercive devolution treats planning and management by local units of government as a matter of following detailed instructions for developing plans or projects, reviewing permit applications and other implementation activities. It creates a blueprint approach to planning and management. Because it treats local government as mere agents of central government, it does not require the development of particular capacities on the part of local government authorities, other than those associated with following detailed standards and procedures. It does, however, require substantial knowledge and skills on the part of central government authorities. Central government authorities need:

- Detailed understanding of resource systems being managed, including the causes and consequences of specific resource uses and activities;
- Sophisticated design skills for creating a management system that is both simple enough to be implemented by local government and sufficiently rigorous to improve resource conditions, if implemented correctly.
- Sufficient knowledge of the local administrative context to be able to identify the strengths and limits of local implementation of national standards and procedures.
- The design of accountability systems that imposes manageable and understandable reporting requirements.

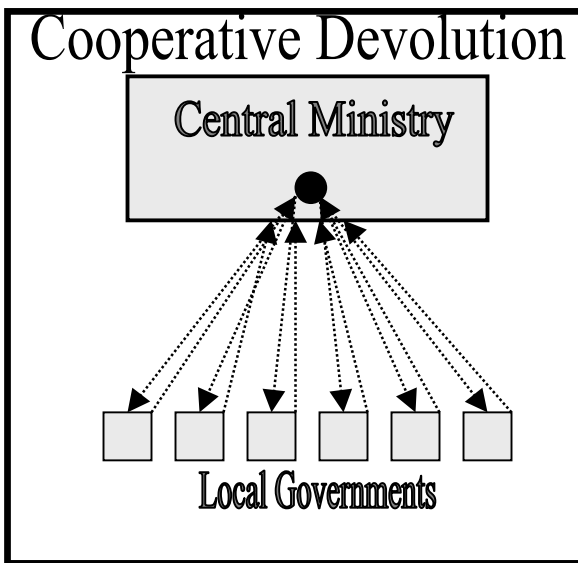
Accountability. In pure coercive devolution, accountability is upward to central government authorities. Central government authorities design detailed reporting requirements. Such reporting requirements usually include procedural requirements (e.g. dates for completing specific plan elements) and substantive requirements (e.g. how the plan addresses floodplain standards).

In addition to these formal accountability requirements, there may be broader political accountability issues. Local elected or administrative official may feel that central government procedural standards are unrealistic or regard substantive standards as too restrictive or inappropriate for local officials. Their formal accountability responsibilities may conflict with the interests of some local constituents. Feelings of local political accountability may create resistance to central government standards.

Commitment. In the coercive devolution model the commitment of local officials is primarily the result of coercion. Local officials calculate the costs of non-compliance and the likelihood that sanctions for non-compliance will be imposed. Commitment of local officials can be further undermined by political opposition by local political elites. Coercion is unlikely to be effective as a long term strategy unless local officials understand the rationale for central government mandates and agree with them.

Cooperative Devolution

The 'cooperative devolution' approach to inter-governmental structures treats states, provinces or other sub-national units of government as partners, albeit junior ones, with national government. It assumes that there is substantial agreement among national and sub-national agency staff about the substance of policy or, lacking such agreement, sufficient incentives can be provided lower-level officials to encourage their commitment.



The U.S. Coastal Zone Management (CZMA) program of 1972 is an example of 'cooperative devolution'. The CZMA was based on four premises. First, state governments should play a major role in coastal resource management because they have the resources, administrative machinery, enforcement powers and Constitutional authority on which to build a sound program. This was an implicit critique of the prevailing pattern of coastal land use management by local governments. Second, each state should develop its own coastal management program around its own needs and

objectives, subject to broad federal guidelines. Third, unlike federal air and water regulatory efforts, state participation in the CZMA is voluntary. Congress did construct a set of incentives to encourage state participation, including substantial matching grants for planning and implementation. Fourth, under the terms of the CZMA approved state coastal programs exercise some control of federal construction, regulatory, licensing and funding activities in the coastal zone (Lowry, 1993).

US Coastal Zone Management Act

The Coastal Zone Management Act (CZMA) represents a unique federal-state collaboration. Specifically, the CZMA sought to provide incentives for coastal states to prepare and implement management plans, largely through the provision of financial and technical assistance. Under Section 305 of the CZMA, federal monies are made available to states for the preparation of management plans; and under Section 306, funds are available for the implementation of these plans when approved. Monies are provided on a cost-share basis. Initial grants provided by Section 305 have covered up to two-thirds of the costs of program development. Section 306 grants have also covered up to two-thirds of the costs of administering a state's coastal program. Presently, however, the cost-share is 50-50 federal/state.

The CZMA specifies certain things that must be in state coastal management plans. Specifically, plans must include the following:

- Identification of boundaries of the coastal zone
- Definition of permissible land and water uses within the coastal zone
- Inventory and designation of areas of particular concern
- Identification of means by which states propose to exert control over land and water uses, including list of relevant constitutional provisions, legislative enactments, regulations, etc.
- Broad guidelines on priority uses in particular areas, including specifically those uses of lowest priority
- Description of organizational structure proposed to implement the management program, including responsibilities and interrelationships of local, area-wide, state, regional, and interstate agencies in the management process.

State plans must be reviewed and approved by the federal Office of Ocean and Coastal Resources Management (OCRM), in the Department of Commerce. The Secretary of Commerce has the authority to withdraw funding if the coastal state fails to adhere to "the terms of any grant, or cooperative agreement."

The CZMA did not specify what coastal resource issues were to be addressed by state management programs or what coastal management outcomes were desired. What it established was a set of planning procedures for each state to follow in designing a coastal management program tailored to each state's coastal issues. This particular example of cooperative devolution created a number of difficult dilemmas for state officials. They had to determine what coastal resources and development activities were to be managed. They had to determine where management was to occur (i.e. the geographic scope of the program). They had to determine who was to be responsible for management (i.e. how authority was to be distributed between state and local agencies and among agencies at either level of government). They also had to determine how management was to be exercised, both by selecting management tools (e.g. permit systems) basis for management. Moreover, their state programs had to integrate the legal requirements of the CZMA, the technical requirements of 'good' management, and the political reality of well-established state and local planning and regulatory systems (Lowry, 1985).

Adapted from Beatley, *et al*, **An Introduction to Coastal Zone Management**.

Management capacities. This model of inter-governmental relations assumes that local officials have the full range of planning, design and implementation skills or can acquire them. In the CZMA case, generous federal grants allowed the states to hire technical assistance to assist in developing their programs. Many states also used these funds for staff development. One of the primary 'capacities' federal officials insisted upon before approving state programs was assurance that states had adequate legal authority to implement their programs.

Accountability. In the case of the U.S. coastal management program, mechanisms exist for federal officials to hold states accountable and for the states to hold federal officials accountable. Federal officials have two primary mechanisms for insuring state accountability to federal procedural and substantive requirements. First, state programs are not eligible for federal implementation grants unless the Office of Coastal Resource Management approves the state comprehensive program. This review occurs when the state submits its program. In practice, the state program submission was typically the occasion for bargaining among state and federal officials over specific elements in state programs. The Act also provides for annual federal reviews of state programs based on criteria negotiated between federal and state officials.

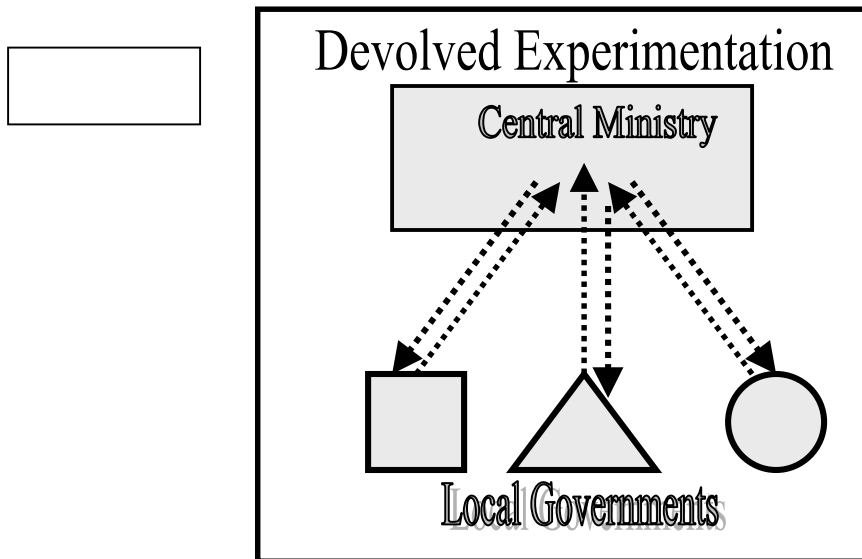
The CZMA also contains a provision that requires federal agencies to be consistent (and accountable) to approved state coastal plans. The U.S. Congress recognized that federal agencies exert an enormous influence over land and water uses in coastal areas, including the construction of facilities in coastal areas and the regulation of activities such as offshore mineral development, ocean incineration, and dredging and filling projects. In addition, they issue licenses for coastal energy facilities and own vast tracts of land. In view of this potential to affect coastal areas, Congress added the 'federal consistency' provision to the CZMA. These 'consistency provisions' allow states to review proposed federal agency activities. The permit or license may not be issued if the state objects. If a dispute develops between a state and federal agency that cannot be resolved informally, applicants may appeal to the Secretary of Commerce. Studies of state review of federal activities found that state concurred with about 99% of all federal consistency applications in 1983 and 97% in 1987 (U.S. Department of Commerce, 1985; Lowry, *et al*, 1993). Data from two surveys revealed that the greatest number of state objections involved dredge and fill permits issued by the Army Corps of Engineers. However, these objections involved only 1% of all dredge and fill permits reviewed in 1983 and 2% of those reviewed in 1987 (U.S. Department of Commerce, 1985; Lowry, *et al*, 1993).

Commitment. The cooperative devolution model assumes that national and local officials share common view of the causes and consequences resource management issues in the locality or that consensus views can be developed through collaborative planning and problem-solving. This approach seeks to build local commitment through on-going interaction with national officials and incentives to local officials such as funds and increased authority for management.

Devolved Experimentation

The devolved experimentation model of inter-governmental relations refers to situations in which central authorities identify general goals and objectives and mandate or encourage sub-national units (such as provinces or local governments) to develop projects that address these general goals. The devolved experimentation model is based on the premise that sub-national units have more knowledge about local resource issues and are therefore better able to design projects to address those issues. This model also assumes that local governments have or can acquire the capacity and resources to develop these experimental or pilot projects that tailor national objectives to local conditions.

Sri Lanka's Special Area Management Plans (SAMP) are an example of devolved experimentation. The two pilot projects initiated in 1994 are part of a comprehensive approach to coastal management that had been evolving since the early 1980s. The Coast Conservation Act, enacted in 1981, was both a response to severe problems of coastal erosion and recognition that a broader approach to coastal management was needed that included habitat degradation and depletion, reduction of conflicts among uses and users and other problems. The Act established a 300 m coastal zone within each development was to be regulated by permit, required a variety of coastal planning studies and the preparation of a coastal plan. A review of the Sri Lanka program in the early 1990s led to consideration of a 'bottom-up' community-level strategy that would allow for intensive, comprehensive management of coastal resources in a well-geographic setting. The strategy was tested at two pilot sites.



Special Area Management in Sri Lanka

The basic premise of the SAM process is that it is possible to organize local communities to manage their natural resources and that they will continue to do so if they perceive that they derive tangible benefits from better management. The planner, the planning agency or the organizational group play only a catalytic role in organizing the local community. They can provide technical and financial support for the management effort which I formulated and implemented as a local community and/or local government effort. Hence, the planning agency takes the role of facilitator rather than that of superior authority that imposes its will on the local community. Important aspects of such facilitation are technical inputs which provide a sound scientific understanding of the nature, scope and potential of the resources when managed sustainably and financial support for project activities. Also the mediator is important when competing demands are balanced in a manner that ensures the sustainability of resource use.

Community participation is possible in SAM planning and implementation to a degree not possible in broader area planning. Whether SAM planning is initiated by an outside national or local government or private organization it much inherently involves people living within the SAM site. It looks at and considers the total ecosystem including the human elements and communities and their potential role in the process of planning and implementation. For successful management of natural resources within the context of a SAM site, implementation and monitoring becomes a local responsibility and reduces the need for outside support in the long run.

Developing a special area management plan involves several steps:

- Get agreement on the need for a SAM process at the national level.
- Compile an Environmental Profile of the area.
- Enter the community with full-time professional facilitators and community organizers.
- Conduct planning-cum training workshops at the SAM sites.
- Organize resource management core groups.
- Draft management plan through community involvement and determination of indicators for monitoring.
- Implement pilot projects while planning continues.
- Refine management plan form experience and broaden implementation.
- Review and refine institutional arrangements for implementation.

Source: Alan White and J.L. Samarakoon. 1994. Special Area Management for Sri Lanka. *Tropical Area Coastal Management*

Management Capacities. Several 'capacities' are essential to devolved experimentation:

- 'Local knowledge'. Detailed knowledge of resource conditions at the site, of changes in resource conditions over time, of the causes of changes in resource conditions are examples of essential 'time and place' information that is essential for management.

- Leadership. The ability to recognize resource problems and effectively mobilize community residents is essential.
- Community appraisal and analysis. The skills and knowledge required to assess community conditions and determine readiness for extended self-management are required.
- Planning and implementation. Knowledge and skills associated with planning and implementation are essential.
- Enforcement. The political and legal authority to encourage compliance with both laws and resource user group rules of self-governance and to identify and sanction non-compliance are requisite capacities.

Some of these capacities exist in the community. Some are developed or contributed by outside community organizers or facilitators.

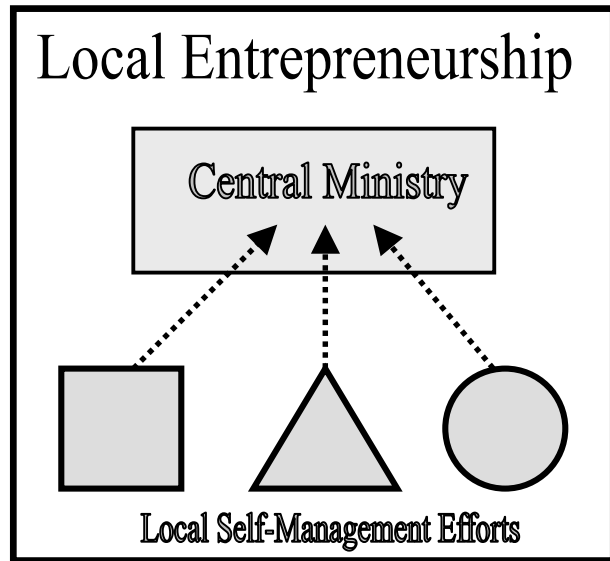
Accountability. By design, devolved experimentation projects are accountable upward to the central authorities that encouraged them. Pilot projects, such as Rekawa, are experiments designed to test some management strategy. Project designers are usually expected to be accountable for describing project activities and outcomes. They are also expected to provide judgments about the degree to which pilot project strategies are likely to be successful in other, similar contexts.

Participation in project-level coordinating committees meeting regularly over months (or years) may result in real, but less formal accountability expectations. The plans developed by the Sri Lanka SAMP coordinating committees contained scores of specific actions to be undertaken by specific government agencies, user groups or non-governmental organizations. For some of the committee members, these initiatives reflect no more than their hopes about what the agencies they represent might be able to accomplish under ideal conditions. For others on the committee, the identification of specific actions in the plan represents an implicit contract for which specific agencies are accountable.

Commitment. Collective self-management is central to most local experiments. For example, local fishers may join together to impose fishing restrictions of various kinds on themselves in order to restore the local fishery. Developing and maintaining self-sacrifice requires continuing commitment on the part of participants. That commitment can be created through coercive measures, such as various forms of punishment to those who do not comply, or by earning their support and commitment through education and incentives of various sorts. Many community level collaborations are organized to create benefits, such as a new pier, early in the project. These early benefits can help persuade participants that continuing communal efforts will have benefits sufficient to make participation worthwhile.

Local Entrepreneurship

The 'local entrepreneurship' approach to intergovernmental relations recognizes that resource management projects do not necessarily depend on central government mandates or encouragement. Provincial or local governments—and even communities—may respond to local resource use issues by organizing and implementing management initiatives. Purely local projects may be established outside existing legal and administrative frameworks. They may be organized by community leaders or by outside community organizers, including university extension agents.



Apo Island, Philippines

Apo Island is a 74 ha volcanic island located at the southern coast of Negros Oriental in the middle of the Mindanao Sea. The island is approximately 25 km south of Dumaguete City.

The most significant coastal resource of the island is its beautiful and abundant fringing coastal reef.

The island has about 250 households. In the late '70's fishing was the principal source of income for more than 75% of the households at that time, illegal fishing techniques such dynamite fishing and *muro-ami* were observed.

Because of the beauty and richness of the reef and the apparent increases in illegal and destructive fishing practices, Apo Island began to attract attention from Silliman University extension workers. Between 1979 and 1980, extension workers conducted informal marine conservation and educational programs with the Apo Island residents. In 1982, an agreement was reached between the island village, Silliman University and the Dauin municipal council regarding the establishment of a marine sanctuary and guidelines for use of the sanctuary.

In 1984, the Marine Conservation and Development Program (MCDP) of Silliman University implemented a comprehensive marine reserve in the island in collaboration with the residents and the Local Government Unit. The entire marine habitat surrounding Apo Island to 500m offshore was declared a municipal reserve. The marine sanctuary was established on the southeast side covering an area of 11.2 ha to 250m offshore or 284 ha to 500 m offshore and bordering 450 m of shoreline. The sanctuary was marked by buoys.

In 1985, the community education center, which provided a venue for community meetings, workshops, seminars and lectures, and which sheltered tourists and visitors was established. A core group called the marine management committee, which is responsible for the upkeep and

enforcement of the marine reserve, was also formed. In 1986, a consumer's cooperative was started (Calumpang, 1977; Silliman University Marine Laboratory Site Description Report, n.d.)

The Apo Island experience was one of the first coastal management initiatives in the country that used the community-based approach. Extension agents from Silliman University, initially the major agents in this experience, had originally intended to conduct academic research at the site. However, their involvement in the island's management of its resources eventually took a radical turn. According to Suan, at the very start the university's extension agents laid down a basic information campaign that would eventually pave the way for the establishment of a marine reserve. Workshops and meetings were held using a variety of non-formal techniques to cultivate environmental awareness.

Opposition to the establishment of the sanctuary came from the community itself. They were told that the sanctuary can be disestablished after some time if it did not benefit the community. Information and education activities were also held in order to make the community aware of the benefits of establishing the sanctuary.

With the establishment of the marine reserve, the felt need for an organized community to sustain the management efforts coincided with the initiation of the MCDP of the university. This program aimed to strengthen the Apo Island Marine Reserve by empower the community to take responsibility for managing the natural resources of the whole island. Two community workers were assigned in Apo. They were responsible for organizing and sustaining community participation. By developing relationships and strengthening local institutions, they built trust in the community, introduced new ideas, an increased the capacity of the people to make management decisions. The organizers also learned much from the indigenous knowledge of the community such as the best fishing grounds and methods.

The reef condition in the sanctuary side significantly changed over a 13 year period with a total coral cover of 68% in 1983 to 78% in 1995. From 1992 to 1995, cover of hard corals increased from 41.3% to 53% while cover to total sediment decreased from 32% to 16%.

Source: adapted from Antonio G. M. La Vina. 1999. *Management of Fisheries, Coastal Resources and the Coastal Environment in the Philippines: Policy, Legal and Institutional Framework*.

Management Capacities. Several 'capacities' are essential to local entrepreneurship are the same as those of devolved experimentation:

- 'Local knowledge'. Detailed knowledge of resource conditions at the site, of changes in resource conditions over time, of the causes of changes in resource conditions are examples of essential 'time and place' information that is essential for management.
- Leadership. The ability to recognize resource problems and effectively mobilize community residents is essential.
- Community appraisal and analysis. The skills and knowledge required to assess community conditions and determine readiness for extended self-management are required.

- Planning and implementation. Knowledge and skills associated with planning and implementation are essential.
- Enforcement. The political and legal authority to encourage compliance with local mechanisms of self-governance and to identify and sanction non-compliance are requisite capacities.

Accountability. In the local entrepreneurship model, members of the community or resource users group engaged in developing a local action plan are accountable primarily to each other and to the larger community of which they are a part. The primary impacts of their success or failure will be felt locally.

Commitment. Local entrepreneurship requires local residents to persuade each other of the value of some self-sacrifice for the greater good. Strong leadership can often persuade residents of a homogeneous community to develop self-governing rules to reduce fishing effort, for example, or use less destructive gear. Resource use practices that require self-sacrifice and discipline are only likely to be sustained if all members of the resource users group are perceived to comply (or are punished for non-compliance) and if the perceived benefits of participation outweigh the costs over time.

Some of the key features of each of these five approaches to decentralization are summarized in Table 1.

Table 1: MODELS OF DECENTRALIZATION: SOME KEY ASSUMPTIONS

Management Challenge	Classic Deconcentration	Coercive Devolution	Cooperative Devolution	Devolved Experimentation	Local Entrepreneurship
Distribution of Authority Among Levels of Government	<p>Local implementing officials are local staff of national agencies.</p> <p>Primary implementation authority remains in the national office.</p> <p>Local officials have minimal discretion in planning and implementation.</p>	<p>Local officials implement (plan, regulate, allocate, etc.) but central government officials review local actions for consistency with national guidelines.</p> <p>Potential for constant tension between national officials and local officials about who is in charge.</p>	<p>General policy directives are set by national agencies, but local officials work out implementation details.</p> <p>Local officials are in substantial agreement with policy goals.</p> <p>National agencies may review local plans or implementation strategies for consistency with national policy goals.</p>	<p>National agencies set general policy agenda, but leave implementation details to local government.</p> <p>Implementation authority is primarily at local level.</p> <p>Local officials have authority to design and test implementation strategies tailored to local conditions.</p>	<p>Local officials design and implement management strategies.</p> <p>National officials may or may not be aware of local efforts.</p>
Planning and Management Capacity	<p>Implementation requires knowledge of national guidelines and expectations and the skill to apply them in specific cases.</p>	<p>Implementation requires knowledge of national guidelines and expectations and the skill to tailor them to local conditions if possible.</p>	<p>Local officials have the full range of planning, design and implementation skills or can acquire them through staff development programs.</p>	<p>Local officials have detailed knowledge of local conditions (or access to people who do), strong leadership skills, specific skills in both community and resource appraisal and analysis, and planning and program design skills.</p>	<p>Local officials have detailed knowledge of local conditions (or access to people who do), strong leadership skills, specific skills in both community and resource appraisal and analysis, and planning and program design skills. Local officials have the political skills to take local initiatives.</p>
Commitment	<p>Commitment of local officials to national direction is high because local officials are agents of national ministries.</p>	<p>Commitment of local officials has to be gained through education and incentives OR penalties for non-compliance or both.</p>	<p>Commitment of local officials is gained through frequent interaction and negotiation.</p>	<p>Commitment is from central authorities to local officials.</p>	<p>Inter-governmental commitment is not an issue. Agency commitment is to local resource users and residents.</p>
Accountability	<p>Accountability is upward to national ministry superiors. It is accomplished through routine reporting.</p>	<p>National officials review local plans, regulatory decisions, etc. for compliance with national guidelines.</p> <p>National agencies will reward local consistency and punish non-compliance.</p>	<p>National agencies are accountable to local agencies and local agencies are accountable upward.</p>	<p>Local agencies are expected to report on strengths and weaknesses of local resource management 'experiments'.</p>	<p>Local managers are accountable to local resource users and community residents.</p>

Implications for Decentralized Coastal Management

What are the implications of these dilemmas of decentralized approaches for designing new management structures for coastal management? What lessons can be drawn about how to create more effective intergovernmental relationships to support coastal management? Several general lessons are outlined below.

1. Determine whether a decentralized approach to coastal management is needed.

The global experience of natural resource management generally and coastal management in particular is that decentralized approaches are more likely to be needed when:

- The types and intensity of coastal management issues vary from place to place in the country;
- Resource degradation and depletion is the cumulative effect of the actions of many resource users (rather than a few key users);
- There is a tradition of local management; and
- Management capacity, in its many forms, is already adequate or can be developed where it is needed at the local level.

A key issue in designing an intergovernmental approach to management is what sorts of resource uses account for patterns of resource degradation and depletion. In situations in which the primary threats to coastal resources are associated with a few key uses, such as heavy manufacturing, a centralized regulatory approach to management is probably more efficient and effective. A few key staff can do the analytic work required for identifying potential impacts, analyzing potential mitigation strategies and making regulatory recommendations. However, in countries in which coastal issues vary from place to place, a more decentralized approach tailored to local conditions and the people who understand those conditions is likely to be preferable. Over-fishing, conversion of mangroves to other uses, and other forms of habitat destruction, for example, are all general coastal issues, but may be caused by different resource uses (and users) in different areas.

A second key consideration is the number and types of resource users whose behavior is to be managed. Centralized management works best when the number of users is small. When resource degradation and depletion is the cumulative result of the activities of numerous fishermen, coral miners or other users a more decentralized approach based on a detailed understanding of local conditions is likely to be more effective.

Management traditions are also important. Decentralized approaches work better when there is a tradition of local autonomy or where local institutions are already in place. In settings in which there is a history of local collective self-management, such as *sasi*, these traditions can often be effectively revived and strengthened for contemporary management needs.

Finally, local management capacity should be a factor in deciding how and whether to decentralize coastal management tasks. Management capacity refers to the skills and knowledge required for analyzing resource conditions, and planning, organizing and implementing resource management programs. A more inclusive conception of management capacity also includes organizational strengthening and institutional reform. The initial challenge is to determine whether local units have sufficient capacity and, if not, what the likelihood is that needed capacities can be developed or otherwise acquired.

2. Allocate management tasks, management authority and resources among levels of government in ways that respond to the coastal management challenges the country confronts.

Decentralization of coastal management involves more than just a general transfer of responsibility for management. Effective decentralization requires a specification of what resource management issues are to be addressed and a determination of what specific management tasks subordinate units of government are expected to perform. Will they be expected to design comprehensive planning processes? Regulate specific resource uses? Implement education programs? Establishing decentralized management tasks can be mandated by central authorities or negotiated among staff at different levels of government. Sometimes central government authorities provide general task guidance to subordinate units of government and encourage (or coerce) these agencies into preparing detailed plans indicating what management tasks will be performed by whom. The U.S. Coastal Zone Management Act, for example, required participating coastal states to prepare detailed management programs that responded to general federal guidance about what the programs should include.

Second, subordinate units of government should have sufficient authority to carry out assigned or assumed management tasks. . Local authorities may be mandated the authority to regulate the conversion of mangroves to aquaculture ponds. However, in order to effectively engage in such management activities they require both the legal authority to regulate, enforcement personnel and other tools, such as fines, to deter illegal conversions. Too often lower level agencies are assigned responsibility, but not given adequate authority to carry out mandates from national agencies.

Moreover, which agencies or organizations are to be granted increased authority is also an issue. Reassignment of authority can have important political implications at the local level by creating new elites. Legal authority may be established by law, executive order or administrative rule. More generally, subordinate units of government may lack the political authority or perceived legitimacy to carry out the necessary tasks of local resource management.

The most frequent complaint of lower level units in a decentralized system is that they are given management responsibilities without adequate resources to carry them out. Enforcement costs in particular—staff, vehicles or boats for site inspections, analysis costs---can be prohibitive. Inadequate implementation resources can subvert otherwise well-designed management strategies.

3. Tailor local government capacity building to management tasks.

Building administrative 'capacity' is conventionally understood as strengthening the knowledge and skills of local officials responsible for implementation. Training courses on specific skills such as environmental impact assessment, geographic information systems, and participatory rural assessment may be developed. Local officials may also be offered incentives to enroll in degree programs in local universities or abroad. Capacity building training and courses can be organized around specific skill or knowledge 'deficits' seen to exist at the local level.

As important as it is, treating local capacity as merely a problem of personnel development misses other important dimensions of capacity. A second important dimension of capacity building is organizational strengthening. Organizational strengthening refers to strategies to strengthen management systems in ways that improve performance of specific tasks. Strategies for strengthening organizations includes "improving recruitment and utilization of staff, introducing better management practices, restructuring work and authority relationships, improving information and communication flows, upgrading physical resources, introducing better management practices, and decentralizing and opening decision-making processes" (Grindle, 1997).

A third dimension of capacity building is institutional reform. Institutional reform involves "altering the rules of the game in which organizations and individuals make decisions and carry out activities" (Grindle, 1997). While legal and constitutional change is sometimes cited as strategies for institutional reform, for coastal managers establishing a legal or administrative context for collective self-management of resource users is perhaps a more relevant answer.

For those designing decentralized coastal management systems, the central point is that capacity building should be regarded as more than simple skill development.

4. Develop incentives to encourage effective management by subordinate units.

Effective management requires the understanding and support of those charged with implementing management tasks. Implementing officials need to understand why habitat destruction is harmful and costly, how disposing of dredged material can degrade resources and the like. Those management officials at every level are more likely to be supportive if they have participated in developing management strategies rather than just carrying out tasks delegated from above. Such involvement can occur in a variety of ways. Participation in identifying key management issues, identifying and evaluating management options or developing the details of local management plans are a few examples.

The on-going management of coastal uses and activities occurs in a larger socio-economic and political context. Converting mangroves, filling wetlands, discharging untreated wastes in coastal lagoons or mining sand may degrade or deplete coastal resources, but they also result in jobs and income for some coastal residents. Seeking to

manage these activities, to prohibit them outright or impose conditions that mitigate them in significant ways may result in political resistance in some parts of the community.

In the politically charged arena of local resource management, local managers need psychological, political and financial incentives to maintain a high level of effort. Some of the incentives are obvious: Resources are needed to hire staff, organize training, conduct analysis and engaging in all the other tasks associated with developing local management capacity. Inter-governmental grants to engage in management can be a substantial incentive. Political support from national and local political elites in the form of building awareness and support for the management of uses affecting local resources is important. In addition, recognition to local officials in the form of professional awards and acknowledgement can be a powerful incentive to support good management.

5. *Develop practical mechanisms for insuring accountability.*

Accountability has multiple mechanisms in a decentralized management system. The conventional emphasis is accountability upward in the system. Formal systems of upward accountability include such mechanisms such as central government review of local plans or compliance with national guidelines, regular reports on the extent to which local governments have met national 'benchmarks' and periodic program audits. Such accountability mechanisms are often imposed from above according to national guidelines, but they may also be negotiated among levels of government as is the case of the U.S. coastal management program.

Ideally, accountability should also be downward as well. National government agencies should be accountable to local governments to provide the legal authority and management resources necessary for effective management.

As a practical matter, local government agencies are also accountable in a variety of ways to local constituencies. Local officials know that they may be accountable to friends, colleagues, kin and local citizens. The subtle—and not so subtle demands and expectations of local constituencies can shape their management behavior.

In short, local officials operate in a web of formal and informal expectations about how and to whom they will be accountable.

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