

Disaster Management and the Inter-Organizational Imperative: The Hong Kong Disaster Plan

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While rapid economic development in East Asia has led to affluent societies, progress in the area of disaster management has lagged. Several recent disasters in China, Hong Kong, Taiwan, and Korea indicate that it is necessary to devise comprehensive plans for disaster management in the region. A review of disaster plans in general and the Hong Kong Disaster Plan (HKDP) in particular reveals a number of weaknesses in such endeavors from the organizational point of view. This paper argues that disaster management plans have usually been unable to provide an adequate framework due to the unique nature of decision-making, communication, and coordination under extraordinary circumstances. The issue of inter-organizational cooperation could be dealt with by using small task-based groups and involving nongovernmental organizations, so as to take advantage of their flexible structure and diverse expertise in complementing public agency efforts in disaster management.

Keywords: disaster management; inter-organizational relationships; plan; Hong Kong

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East Asia has benefitted immensely from an economic boom over the past two decades, although social and political developments have been slow. Most countries in the region—including China, Taiwan, Japan, and

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Korea—have been frequently affected by disasters, and loss of life and property as well as damage to the environment has been commonplace. Following the achievements of economic development, it is essential for the region's governments to ensure progress in other aspects of life. Given East Asia's geographical and meteorological realities, the need for comprehensive disaster management plans cannot be overemphasized. As Hong Kong has recently been reintegrated with the People's Republic of China, this is an opportune moment to review its existing system of disaster management. In recent years, the actions and energies of the Hong Kong government have been concentrated on issues related to the transition; hence, the crucial task of disaster management has not received appropriate attention.

Organizations are designed with specific purposes in mind. They are composed of a number of working groups whose tasks are determined on the basis of certain principles. The need for coordinating the activities of various groups makes the pyramidal structure of organizations inevitable, particularly since there is a limit to the number of people that can be effectively supervised and coordinated. Such methods of allocating work and organizing activities can encounter a strong challenge in the event of disasters, as new and diverse tasks must be undertaken with very little time for consultation and preparation. In addition, a number of decisions must be made and actions taken without the advantage of regular administrative procedures.

Management in the public sector is a complicated process, and can be compounded in the case of disasters. A large number of public agencies are brought together to deal with emergencies and provide a vast number of services ranging from maintenance of order and security (restrictive role) to search and rescue missions (proactive role) to provision of shelter, comfort, and rehabilitation (compassionate/encouraging role). In short, disasters require officials to perform a wide range of services within a short period of time under extremely difficult circumstances. The tasks must often be accomplished without the usual support available from official agencies.

Organization theories explore some of the complications encountered in regular jobs, but do not address the complicated circumstances faced in

disaster management. Organizations oriented in routine and regular patterns of operation may not be able to cope with the complex and challenging tasks of disaster management, and the need to secure cooperation from a number of diverse agencies and work together toward a specific objective remains a formidable problem. This article will seek to examine the planning process in general and the case of Hong Kong in particular to shed light on this aspect of organizations and suggest alternatives for providing essential services in the event of disasters. This is an area of importance not only for Hong Kong, which is frequently hit by disasters, but a number of its neighbors who suffer similar fates. It should thus be possible to draw lessons from the common experiences of Hong Kong, Macau, Taiwan, and China.

Modern states can be exposed to devastation from a wide variety of sources. Hong Kong is no exception, as the territory experiences a substantial amount of rainfall, and is frequently hit by tornadoes and thunderstorms. In June 1972, for example, 147 people were killed and 102 injured during a rainstorm.¹ Reports by the Geotechnical Engineering Office indicate numerous cases of heavy rainfall, landslides, and flooding over the years. Hong Kong's small land area, which features hills and slopes, limited road space, and overcrowding of vehicles, and the limited capacity of the public transportation system combine to present a formidable challenge to citizens' safety during natural disasters. Moreover, the density of its population and high-rise buildings has grave implications for fire safety and crowd control, and the establishment of a nuclear power plant in an adjacent province of China has given rise to further concerns about the potential for disasters.

The above-mentioned factors underline the need for Hong Kong to have a definite plan for dealing with emergencies and disasters. This paper examines the existing system and procedures in Hong Kong for dealing with disasters and ensuring the safety of its citizens. The focus of inquiry will be the Hong Kong Disaster Plan (HKDP) prepared by the Security Branch of the Hong Kong Government and published in 1994. This document will be reviewed and analyzed in view of ideas prevalent in the general

¹Geotechnical Engineering Office, Civil Engineering Department, Hong Kong Government, *Report on the Rainstorm of May 1982*, GEO Report no. 25 (1982): 6.

literature on disaster management. The overall purpose will be to highlight the need for transforming the role of public agencies and strengthening the relationships between the government and nongovernmental organizations in dealing with disasters.

Disaster Plan and Management

Each type of disaster may require different kinds of preparation and response, as depending on location and physical features, their nature may vary. W. N. Carter identifies four prominent characteristics gleaned from definitions of disasters: severe disruption to normal patterns of life which may also be sudden, unexpected, and widespread; human effects such as loss of life, injury, hardship, and adverse effect on health; effects on social structure such as destruction of or damage to government systems, buildings, communications, and essential services; and community needs such as shelter, food, clothing, medical assistance, and social care.² Carter uses this base to define a disaster as "an event, natural or man-made, sudden or progressive, which impacts with such severity that the affected community has to respond by taking exceptional measures."³

Disasters can be categorized on the basis of their source, i.e., they may be caused by humans or nature. They are often localized, i.e., fire and overcrowding, as opposed to general cases in which the entire community is exposed to threat, i.e., in the event of a flood or typhoon. The first group of mishaps can be described as local "tragedies" which obviously require a different kind of response than the second.

The impact of a disaster can be contained with a high level of preparedness and an effective plan, although there is a difference of opinion on this issue. On the one hand, disasters cannot be prevented; therefore, planning cannot be effective in warding them off. On the other hand, it can be said

²W. N. Carter, *Disaster Management: A Disaster Manager's Handbook* (Manila: Asian Development Bank, 1991), xxiii.

³Ibid.

that numerous deaths and injuries can be related to deficiencies in or lack of a disaster plan. Carter lists a number of advantages in having a ready plan to deal with disasters, including a clear and coherent approach which provides a basis for coordinated action. Responsibilities should also be allocated clearly, with the agencies and departments involved having a common reference for their role in implementation.⁴

Since the nature of disasters and the style of administration may vary from one state to another, it is difficult to present an ideal disaster plan. Considering the circumstances under which plans must be implemented, it is imperative to formulate, legitimize, publicize, and even test the system before disaster strikes. H. D. Foster has developed a list of items that are important for formulating a plan;⁵ drawing upon his ideas, the following discussion attempts to present an outline of a model disaster plan.

First, the effectiveness of disaster plans is diminished if they are not backed up by the appropriate authority. Important and powerful personalities in the government should thus indicate their support and commitment to the plan by issuing a policy statement on their value and necessity. This should flow from the role and responsibilities of the government, and reflect the commitment to protect citizens and their properties as well as provide them with all possible assistance when disaster strikes.

A disaster plan should also clearly describe "the purpose of the document as well as the conditions under which it becomes operative."⁶ There should be a sound assessment of the hazards that may affect the community, which points to the need for extensive research and technological support. A number of agencies and organizations could be involved in these tasks. The most likely sources of disaster also should be identified and preparations made for tackling them.

Moreover, it is necessary to obtain detailed information about the probable locations and scale of expected damage and casualties "if the demands likely to be placed on personnel and equipment are to be predicted

⁴Ibid., 41.

⁵H. D. Foster, *Disaster Planning: The Preservation of Life and Property* (New York: Springer-Verlag, 1980), 213-34.

⁶Ibid., 217.

and accommodated."⁷ In countries where many levels of governments exist, relationships among the different levels assume importance if duplication and overlapping of efforts is to be avoided, while seeking optimum coordination among the participating agencies. It is also important to "designate a legitimate source of overall control of emergency activities" to indicate "which official, agency, or organization has the authority to make crucial decisions during a crisis."⁸

Foster suggests that all disaster plans "should include a detailed listing of all emergency-related personnel, their addresses, and business and private telephone numbers."⁹ A linking system should be established to adequately cover and support affected parties, and a warning system should be developed to provide "an optimum preimpact response so that potential life and property losses can be detected prior to impact."¹⁰ The plan should provide shelters for evacuees as well as for the setting up of centers for coordinating the rescue, evacuation, and recovery process. The need to obtain and transmit accurate information on a variety of aspects highlights the importance of effective communication, with information relating to the disaster being promptly disseminated to "community organizations, the mass media, and to the public."¹¹ In search and rescue operations, "specialized equipment such as boats, planes, helicopters, mobile hospitals, bulldozers, and other technology together with the qualified personnel to operate and maintain them" should be provided. It is also necessary to maintain order and discipline in the community, as well as provide medical facilities and even morgues for the more unfortunate victims. Foster lists the restoration of community services, protection against continuing threats, and continuing assessment of the overall situation as other essential tasks during a disaster and recommends their inclusion in a comprehensive plan.

As mentioned above, disaster management can become a challenge if responsibilities are not allocated clearly among the participating units of the

⁷Ibid., 220.

⁸A. R. Parr, "A Brief on Disaster Plans," *EMO Digest*, no. 9 (1969): 13-14.

⁹Foster, *Disaster Planning*, 224.

¹⁰Ibid., 226-27.

¹¹Ibid., 230.

government, and crucial decisions are delayed due to the lack of authority entrusted to officials at lower levels. As Laura G. Kaplan notes, "Following a natural disaster, the emergency plan should be implemented by territorial departmentalization, led by one specifically appointed business unit."¹² The organizational structure of headquarters is significant since it has implications for direction, decisions, control, communications, efficiency, and safety.

For the purpose of developing an adequate disaster plan, Kaplan has identified eight key areas covering a wide range of activities which can be made effective by the establishment of organizations with specific responsibilities. Organization and planning should be followed up by "employee services" to ensure that affected personnel are able to report for duty while arrangements are made to ensure their families' safety and return to normalcy.¹³ Efforts should also be undertaken to restore services disrupted by disasters as soon as possible, which can be facilitated by ensuring "the availability of the right type of materials, at the right quantity, at the right place, at the right time" by an "inventory services coordinator."¹⁴ In addition, an external services organization, Kaplan comments, can coordinate and facilitate "the flow of information with government agencies and media" and assist in "the expeditious and safe restoration of services in the aftermath of a disaster."¹⁵

Despite these comprehensive plans, it should be borne in mind that governmental style and emphasis on plans may vary to a considerable extent from the prescribed model, with implementation subject to various constraints. Therefore, it may be useful to consider the specific case of Hong Kong regarding the issue of inter-organizational cooperation in implementation. For example, Kaplan's ideas emphasize the importance of developing specific organizational bases for the various aspects of disaster management.

¹²Laura G. Kaplan, *Emergency and Disaster Planning Manual* (New York: McGraw-Hill, 1996), 79.

¹³*Ibid.*, 137.

¹⁴*Ibid.*, 213.

¹⁵*Ibid.*, 222.

The Hong Kong Disaster Plan and Its Implementation

A number of steps have been taken over the years to improve Hong Kong's disaster management system. A new storm warning system was introduced in 1993 after a public outcry over chaos due to misunderstanding over communications from Education Department officials that lessons should stop at noon in the territory's schools in May 1992. Although it was reported to be a "marked improvement" over the system, leaders of the Hong Kong Confederation of Trade Unions claimed that it had "prompted confusion among workers not sure whether to go home or stay where they were."¹⁶ In another incident, overcrowding led to the death of several people in a small area where festivities were taking place during New Year's Eve in 1993. Therefore, incremental steps were not considered adequate in dealing with the problem, and dissatisfaction was expressed by the community over disaster management. Eventually in 1994, the Security Branch of the Hong Kong Government issued a disaster plan for dealing with all kinds of emergencies.

The HKDP outlines an alert and warning system; procedures for managing rescue, recovery, and restoration; and the respective roles and responsibilities of departments and agencies. According to the plan, the Hong Kong Police Force and the Fire Services Department will be the first to be called during a disaster. They will then confirm the situation and initiate the alert system by calling the Security Branch Duty Officer. The latter will secure approval from the Secretary for Security and activate the Government Secretariat Emergency Coordination Center, which will coordinate the response to the disaster. As the situation requires, "each responding organization will immediately take all necessary actions."¹⁷

The section on rescue management specifies that the responsibilities will rest with the Fire Services Department on land and the Marine Department at sea, while the Hong Kong Police Force will carry out a supporting role for both. The document recognizes that it is "necessary to exercise

¹⁶"Black Storms Bring Chaos and Closures," *South China Morning Post*, June 17, 1993.

¹⁷Security Branch, Hong Kong Government, *Hong Kong Disaster Plan* (November 1994), 6.

strict control over access to the disaster site, in order to ensure that the emergency services are not deflected from their task of saving lives, protecting property, and safeguarding the disaster site for subsequent expert investigation."¹⁸ The roles and responsibilities of various departments, such as the Civil Aviation Department (in case of an air crash), the Fire Services Department, and the Hong Kong Police Force in effecting rescue operations are also outlined. In short, the HKDP provides "for on-site command and control, and off-site command and coordination in the event of a disaster."¹⁹

The plan provides specific guidelines for the roles of the City and New Territories Administration, the Information Services Department, and the Hospital Authority in coordinating rescue efforts, overseeing press activities, and arranging briefings to the media and providing hospital services for victims, respectively. The Government Secretariat Emergency Coordination Center will be responsible for obtaining and issuing policy directives on behalf of the Governor's Security Committee, Chief Secretary, and Secretary for Security; advising the Governor's Security Committee on the need for enacting emergency legislation for dealing with disasters; providing a permanent link with the Secretary for Security through which decisions on policy matters can be made by the departments concerned; coordinating the acquisition and mobilization of civil and military resources as well as those of outside agencies; liaising with departments for obtaining and collating information on the overall situation as it develops; acting as a link through which urgent public messages can be issued from the Government Secretariat for publication or broadcast; briefing senior public officials on the situation; and "performing any other duties set out in the Government Secretariat Emergency Coordination Center Guide, the Internal Security Guide, contingency plans, or as may be required by the Governor's Security Committee, Chief Secretary, and/or Secretary for Security at the time."²⁰ Liaison officers from various departments will perform specific tasks related to their own organizations. For example, the Transport Department

¹⁸Ibid., 7.

¹⁹Diana L. C. C. Ying, "A Study of the Lan Kwai Fong Disaster in the Context of Emergency Management" (Master's thesis, City University of Hong Kong, 1995), 115.

²⁰*Hong Kong Disaster Plan*, 9.

Duty Officer "will establish contact with public transport operators and keep the Government Secretariat Emergency Coordination Center informed of the situation,"²¹ and other departments will fulfill their part in contributing to the rescue process.

The HKDP devotes considerable attention to recovery management following the control of disasters "to return the community to a condition acceptable by that community." The physical, psychological, and social needs of the community are to be satisfied by providing accommodations, food, clothing, and relief funds; responding to inquiries from the public; and following up with an inquiry into the causes and effects of the disaster. Hence, "the relevant District Officer from the City and New Territories Administration will set up his own emergency coordination center and coordinate relief measures to be provided by the Social Welfare Department, the Housing Department, and other agencies."²² Temporary shelters are to be arranged, and the Social Welfare Department will be responsible for providing essential relief items to the victims. The District Officer will assist the Police in dealing with public inquiries at the scene, while the Director of Information Services will be responsible for disseminating information on the situation to the public through the media and government departments concerned. The Social Welfare Department will be responsible, in conjunction with the Housing Department, for establishing a combined registration center for disaster victims.²³ This will be followed by restoration management in order to "release" the disaster site as soon as possible.

The plan indicates the respective roles and responsibilities of the relevant agencies and also reiterates that government departments should carry out their normal functions as far as possible. This is a tall order, as public agencies are usually burdened with a heavy workload. Military units may be called upon to help, and a few nongovernmental organizations (NGOs) are listed for providing assistance with a variety of tasks.

Emphasis has been placed on communications, and an appendix to

²¹Ibid.

²²See note 19 above.

²³*Hong Kong Disaster Plan*, 11-12.

the plan includes a directory of relevant telephone numbers of departments involved in the HKDP. Interestingly, appendix C, which contains a directory of contact telephone numbers of agencies involved in responding to disasters, is not included in the document available to the public. Several technologically advanced devices are to be used to facilitate conference calls and ensure privacy, while a backup system has been planned in the event of disruptions in communications.

Dissemination of information is crucial in managing disasters, preventing outbreaks of panic, and reducing the impact of hazards. The Information Services Department has thus been slated to coordinate the collection and dissemination of information, with the Government Secretariat Emergency Coordination Center providing the Information Services Department with bulletins and advice for the public. The City and New Territories Administration will deal "with technical and operational enquiries from the media and public on site" as well as monitor public reaction to keep the Government Secretariat Emergency Coordination Center informed. The Government Secretariat Emergency Coordination Center will coordinate the decision-making process and provide information to the Information Services Department for broadcast to the public. In general, the HKDP is expected to provide "details to ensure effective and efficient communication, both in respect of interdepartmental and internal departmental communication."²⁴

The HKDP includes two appendices. Appendix A specifies the roles of the various government agencies and departments in disaster planning. Appendix B provides a list of NGOs which are expected to assist with dissemination of information and public broadcasts, operation of cargo terminals, public transportation, and power supply. The long list of departments, public agencies, and NGOs has given rise to concerns over the prospect of cooperation, especially since some of them have no interaction in the course of regular administrative activities. The last page of the document includes a "Record of Amendments," although its purpose is not clear in the layout. Table 1 lists the functions and responsibilities of the various agencies and

²⁴Ying, "A Study of the Lan Kwai Fong Disaster," 117.

Table 1
Functions of Various Organizations in Disaster Planning

Functions	Government Department	Others
Preparation	All departments	Community
Information dissemination and alert system	Information Services Department Hong Kong Observatory	Broadcast media and companies providing telecommunications services
Rescue	Hong Kong Police Force Marine Department Fire Services Department Auxiliary Medical Services Civil Aviation Department Government Flying Services Information Services Department Hospital Authority	Nongovernmental organizations
Recovery	Social Welfare Department Civil Engineering Department Drainage Services Department Housing Department Regional Services Department Information Services Department	Companies providing transport-related services
Restoration	Agriculture & Fisheries Department Architectural Services Department Buildings Department Electrical & Mechanical Services Department Government Supplies Department Department of Health Transport Department Hong Kong Police Force Fire Services Department	Companies providing power (electricity and gas), nongovernmental organizations, and the community

organizations involved in the process. It should be noted that the Government Secretariat Emergency Coordination Center and the City and New Territories Administration are closely involved in every step of the rescue, recovery, and rehabilitation process, and therefore are not included in the list separately.

The HKDP strives to cover all aspects of disaster management. Beginning with the recognition of a disaster, there are systematic procedures for notifying relevant agencies, providing accurate information to the vic-

tims and the public, searching and rescuing survivors, providing them with the required support and comfort, and rehabilitating them, followed by an investigation to identify the causes of the disaster and develop strategies for future reference. There is a cycle of activities beginning with prevention, and moving through the stages of amelioration and rehabilitation, with follow-up action strengthening the preventive aspect. It appears that the HKDP strives to be effective by "bringing together the involved parties, [and] defining their respective functions as well as those of the coordinating departments in conducting and controlling the rescue functions."²⁵ It is therefore particularly worth considering whether the plan can be expected to be effectively implemented with regard to the organizational arrangements and required pattern of response.

The plan has not been completely effective in handling some of Hong Kong's disasters in recent years. In a 1996 incident, according to the *Hong Kong Standard*, factory owners and a church criticized the government for "failing to coordinate its contingency plan when the red rainstorm signal was hoisted."²⁶ Flooding contributed to heavy traffic congestion as the warning signal was canceled when staff and visitors were preparing to evacuate. In another case, a fire which killed forty people in November 1996 could not be contained due to violations of fire safety procedures, the illegal alteration of fire doors and exits, and an inadequate number of ladders.²⁷ Each case illustrates the inadequacy of emergency management measures and draws attention to the need for constant revision of the plan, particularly the organizational arrangements for enabling responding agencies to work with one another. On the other hand, there have been some cases in which emergencies were handled efficiently. In early 1998, for example, officials of the Fire Services Department demonstrated extraordinary skill in evacuating and rescuing residents trapped in a residential building on fire.

²⁵Ibid.

²⁶"Government Storm Plan Blasted," *Hong Kong Standard*, May 1, 1996.

²⁷"Governor to Decide on Garley Fire Probe," *South China Morning Post*, December 13, 1996.

The Inter-Organizational Imperative

Public organizations have a number of unique features that can act as constraints on their performance. They are more difficult to design and re-structure, as their activities are overwhelmingly influenced by constitutional considerations. Constant scrutiny by the public, media, and other watchdogs render maneuvering almost impossible, and public officials find comfort in sticking to the prescribed rules and procedures. These have been common criticisms of the bureaucratic structure of organizations, and Robert Merton has long pointed out that the bureaucratic structure and personality of officials have contributed to the displacement of goals and an emphasis on the means.²⁸

The evolution of organization theory has been marked by controversies and debates centered around law and/or legal authority, rationality and/or efficiency, psychological and social relations, and politics and/or power relations.²⁹ In designing organizations, however, it is often impossible to consider all these aspects, as the latter two areas evolve gradually as the organization acquires maturity. Therefore, public organizations are usually established on the basis of existing law and focus on the rational and efficient accomplishment of tasks. The tasks are determined, categorized, and divided according to specialization in advance so as to make it possible for members to accomplish them with minimum difficulty. The classical bureaucratic model of organization is still favored by many entrepreneurs, but public organizations, particularly those employing large numbers of people, are conditioned by the psychological, social, and power relations within them.

In situations with a number of agencies needing to come together and perform essential functions at critical moments, agencies may come into conflict with one another due to real and/or perceived differences in orien-

²⁸See Robert K. Merton's chapter on "Bureaucratic Structure and Personality" in his *Social Theory and Social Structure* (New York: The Free Press, 1968). This is a revised version of an article that appeared earlier in 1940 in the journal *Social Forces*, volume 18.

²⁹Harold F. Gortner, Julianne Mahler, and Jeanne Bell Nicholson, *Organization Theory: A Public Perspective* (Chicago: The Dorsey Press, 1987), 55-56.

tations, approaches, and attitudes as well as leadership and management styles. The degree of cooperation will depend to a considerable extent on the nature of inter-organizational relationships. This idea has become popular among organizational theorists in studying delivery of social services, a task often at the core of disaster management. The idea of an "action set," in which a group of organizations form a temporary alliance for a limited purpose, reflects this situation.³⁰ Thus, according to Richard H. Hall, inter-organizational relationships "provide a means of adapting to, rather than merely responding to, environmental pressures."³¹ Hall has accordingly developed a framework for analyzing inter-organizational relationships based on general environmental considerations as well as specific situational factors, bases of interaction, resource flows, transaction forms, and outcomes.³²

Bureaucratic structure and authority relationships add to the complexity of disaster management. Public managers are constantly searching for procedures to regularize activities; this can be accomplished through an established structure indicating the flow of authority, command, and communications. As disaster management calls for a breakdown of inter-agency barriers and coordination of several entities' activities, authority relations have to be established to obtain compliance and cooperation. In planning disaster management, special bodies may be provided for, with explicit authority to direct activities. Barry A. Turner suggests that "it is important to be able to rely on people and organizations with good local knowledge, with an intimate knowledge which permits them to deal swiftly and flexibly with unique local uncertainties."³³ NGOs can contribute by filling this gap in knowledge as well as providing expertise from their ranks. This can be facilitated by giving the bulk of responsibility to primary agencies, with

³⁰Howard E. Aldrich, *Organizations and Environments* (Englewood Cliffs, N.J.: Prentice-Hall, 1979), 280.

³¹Richard H. Hall, *Organizations: Structures, Processes, and Outcomes*, 6th edition (Englewood Cliffs, N.J.: Prentice-Hall, 1996), 230.

³²*Ibid.*, 232-52.

³³Barry A. Turner, "A Perspective from the Social Sciences," in *Natural Risk and Civil Protection*, ed. Tom Horlick-Jones, Aniello Amendola, and Riccardo Casale (London: E & FN Spon, 1995), 535.

support from those designated as secondary agencies. The specific activities of particular departments will assist in this designation. For instance, the Fire Services Department will be the primary agency for dealing with fire-related disasters, while the hospitals and housing services can provide secondary support.

The HKDP seeks to provide a detailed description on the functions and responsibilities of various agencies in case of disasters. The plan is designed with the assumption that disasters can be tackled with a number of steps planned in a proposed sequence, i.e., a series of activities for detecting a disaster, rescuing the victims, and recovering and rehabilitating the survivors. It thus gives the impression that disasters can be completely and competently dealt with by following the prescribed steps. A similar clinical approach dominates thinking on the respective roles and responsibilities of the involved agencies. Responsibilities have been assigned on the basis of the specified role of the agency. Hence, for example, the Drainage Services Department is responsible for clearing and repairing blocked and damaged sewers and stormdrains, while the Highways Department is "responsible for clearing and repairing blocked or damaged public roads, removing dangerous and fallen boulders and dealing with landslides on Government land, answering requests for assistance in the saving of lives, protection of property, and miscellaneous calls for action or assistance."³⁴ All agencies which could conceivably be of some use during a disaster have been listed and their functions briefly described.

Unfortunately, there is no framework of coordination for these activities. The designers of the HKDP appear to be confident of the existence of an effective communication system among the agencies involved. Obviously, the successful implementation of the plan will depend on smooth communication and cooperation among the actors and agencies, but it is also necessary to recognize the possible conflicts and rivalry as well as jurisdictional disputes which are common in modern organizations.

The emphasis on media briefing and public relations activities has also emerged as a major task in disaster management. There is no doubt

³⁴*Hong Kong Disaster Plan*, 20-21.

that keeping the public and media informed of disasters and actions to deal with them constitutes part of the management. But the HKDP appears to have placed too much emphasis on this aspect, while the task of saving lives and property through coordinated efforts has received inadequate attention.

An overview of the HKDP conveys the impression that disasters and the subsequent task of management will follow a specific pattern of sequences. It is important to realize that one of the features of disasters is that they are unpredictable in terms of the time, place, or speed with which they will strike. Disaster plans should thus be more flexible in terms of deciding which steps should be taken immediately and how the subsequent activities are to be organized. For example, there may be a need to initiate recovery even before the disaster has been controlled, but the HKDP only states that recovery operations should be conducted "after a disaster has been controlled."³⁵

A limited number of NGOs are listed in the HKDP for providing assistance in disaster management, including a number of commercial organizations providing services in the communications sector through telecommunications services, radio and television broadcasts, and management of marine terminals. The others are involved in providing transportation services and public utilities. While these NGOs certainly have a useful role to play, a vast number of NGOs specializing in rescue and recovery have been left out. The responsibilities entrusted to the Social Welfare Department could be shared and performed by a number of NGOs which are engaged in the provision of care, relief, and assistance to victims. Moreover, rehabilitation of disaster victims is often a huge responsibility which few governments are able to handle on their own.

In referring to the disaster plan developed by Foster, further comments can be made on the inadequacy of the HKDP. The plan does not clearly spell out the conditions under which it becomes operative, but vaguely refers to incidents of disaster. There is also no reference to particular types of hazard to which the agencies should respond, but carries the general as-

³⁵Ibid., 11.

sumption that specific agencies will be activated as the need arises. The Government Secretariat Emergency Coordination Center is presented as the coordinating body, but its nature of authority has not been specified.

From the activities of the Hong Kong government, it is clear that efforts have been undertaken to improve the capability to deal with disasters. For example, school principals were invited to an exhibition and seminar at the Royal Observatory (now the Hong Kong Observatory) to ensure that they knew what to do in typhoons or rainstorms.³⁶ A typhoon contingency plan has been established for directing traffic in the event of bad weather occurring at the bridge connecting the new airport with the city.³⁷ While attention to such details is commendable, overall organizational requirements should also be addressed.

Organizational Issues in Disaster Management

Disaster management entails public organizations performing a diverse range of functions. Law and order must be upheld and discipline strictly maintained, since the lives and properties of a large number of people and the community can be at stake. All of the aforementioned functions have to be performed within a short period of time, with the involved agencies also expected to continue performing their normal duties. In short, disaster management calls for performing most government functions with fewer agencies and staff and within a shorter time-span.

The normal structure of organizations does not allow for flexibility in dealing with emergency matters. The need to take action based on needs of the moment is one area which has emerged as a challenge to traditional organizational arrangements, where regularity of procedures serves a useful purpose. For example, the police performs a number of functions that are not related to crime control and law enforcement, such as emergency

³⁶"Teachers Get Lesson on Typhoon Trouble," *Hong Kong Standard*, October 14, 1993.

³⁷"Typhoon Plan to Maintain Sea-Channel Safety," *South China Morning Post*, May 12, 1995.

medical services or mediation of family disputes.³⁸ Disaster management requires the performance of multiple functions, and organizational flexibility is an essential trait.

A related requirement is the need for innovation in management. Innovation is advocated in all types of situations, but cannot be pursued in rigid and inflexible organizations. Disasters give rise to the need for dealing with problems as soon as they arise, and provides the opportunity for managers to utilize innovative measures to reduce suffering and deal with urgent matters. Douglas Kiel advocates dynamism in organizations which face complex tasks: "Surprises are expected as work processes are transformed but they are seen as part of the risk, uncertainty, and reward of creation and innovation."³⁹

Authority should also be clearly defined; in managing disasters, it is not desirable to bring together organizations which may be competing with one another for governmental funding or power. The situation also carries the danger of jurisdictional conflict and disagreements over the chain of command. It is thus advisable to establish a clear structure of authority to allow agencies and officials to work under a common organizational framework.

Disaster management may be carried out by public as well as non-public agencies, although the nature of the former imposes a number of constraints and limitations on them. In case of emergencies, it may be prudent to grant exemptions from some of the requirements of openness, access to information and officials, and strict vigilance in order to allow the agencies more time, freedom, and flexibility to complete the urgent task of disaster management.

In view of the above discussions, it can be suggested that the best arrangement for disaster management in terms of organizational competence could be the establishment of ad hoc agencies composed of specialized per-

³⁸Mark H. Moore, "Police Leadership: The Impossible Dream?" in *Impossible Jobs in Public Management*, ed. Erwin C. Hargrove and John C. Gildwell (Lawrence: University Press of Kansas, 1990), 78-79.

³⁹Douglas Kiel, *Managing Chaos and Complexity in Government: A New Paradigm for Managing Change, Innovation, and Organizational Renewal* (San Francisco: Jossey-Bass, 1994), 14-16.

sonnel who will be able to respond to the unique challenge. The members of the groups can be drawn from different agencies possessing the expertise required for the task. Such groups will have the advantage of flexibility as they will not be required to strictly follow established procedures and will be encouraged to be innovative if the situation calls for it. The process of communication will be more effective, and coordination will present less problems. This authority structure will help contain the sources of conflict, and the ad hoc nature of the group will eliminate some of the constraints and limitations imposed on public agencies.

The HKDP also suffers from the lack of an organizational framework to operationalize the plan. A clear definition of the respective roles of the various departments/agencies must be supplemented by an organizational structure for bringing together and ensuring better coordination of their efforts. The expertise, services, and resources of nongovernmental organizations could be useful in contributing to this end.

The Asia-Pacific region's economic influence has started to encounter roadblocks, as has been evident in the emergence of fiscal/financial problems in several of the region's countries. There is a strong likelihood that it will not be possible for East Asian countries to achieve further prosperity as they have been over the past decades. Governments should make use of this opportunity to review the existing organizational arrangements for performing various tasks, and examine the disaster management system as an area of great significance. In times of economic growth as well as decline, natural disasters will continue to strike, and governments in the region should learn from one another as well as cooperate to improve disaster management systems. It is expected that Hong Kong's experience will be useful for tackling similar challenges in other East Asian countries.

