GUIDELINES FOR BANK PARTICIPATION IN RECONSTRUCTION PROJECTS AFTER DISASTERS

by

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Purpose of the Guidelines

These guidelines address the issue of Bank participation in reconstruction after natural and man-made disasters. Since 1970 requests by member countries for Bank assistance to finance reconstruction activities after disasters have prompted a response in more than 40 reconstruction cases after earthquakes, floods, hurricanes, volcanic eruptions and wars. The results of reconstruction projects have been mixed, with some projects achieving their objectives and others not. The substantial reconstruction experience and knowledge have not been efficiently used as a resource in the formulation of projects. These guidelines attempt to distill this experience into a readily accessible form.

The objectives of the guidelines are:

- to review the criteria and circumstances under which the Bank would be prepared to respond to reconstruction needs;

- to define the kinds of responses the Bank would be prepared to consider;

- to assist staff to prepare timely and effective reconstruction projects;

- to suggest mechanisms for rapid processing without diluting the system of checks and balances which the Bank's normal processing cycle provides.

- to help preserve the institutional memory concerning reconstruction.

For the purpose of these guidelines a reconstruction project is defined as a set of activities and investments to help rebuild the economic, social, and physical systems after natural or man-made disasters through projects that can be identified, prepared, approved, implemented, and completed within a total period of two to three years.

Criteria for Bank Participation in Reconstruction

Bank involvement in reconstruction will be restricted to those cases where the destruction is enough to affect national priorities or may disrupt seriously the development process; and where national resources are inadequate to deal with the problems that arise. The Bank would not expect to become involved where the disaster is a minor event in national terms; where disasters are recurrent events and the countries have adjustment and response mechanisms in place; or where the required response is of a long-term nature (e.g. droughts) and needs to be addressed by longer range development plans in the affected country. Reconstruction projects, although closely related to the attainment of medium and long-term development goals, should confine themselves to specific rebuilding activities and the rapid restoration of

physical plant and productive activities.

The Bank is not equipped to provide assistance in the immediate post-disaster period and relief activities are best carried out by the local population, the governments, bilateral emergency aid programs, and specialized organizations like the Red Cross. Thus Bank intervention in the urgent relief operations is not envisaged.

The Bank will continue its present policy of financing reconstruction loans primarily from existing country allocations in the context of changes in country investment priorities following the disaster.

Reconstruction and Disaster Characteristics

Disasters vary in terms of their frequency, predictability, duration, extent of impact, and disruptive potential. In turn, reconstruction needs differ according to the source of disaster agent and the magnitude of destruction.

Disasters can be sudden or of slow onset, with the speed of impact influencing the type of response required. Sudden disasters, e.g. earthquakes or hurricanes, can destroy the housing stock, infrastructure, commercial and industrial facilities, making large populations homeless and disrupting the productive basis. Not only do they damage capital assets, but they have long-term effects on the economy. The cost of repair and replacement may require the diversion of investment from uses that could have created a net addition to productive capacity. Earthquakes can bring substantial changes in urban structures, expand the area occupied by the city and accordingly, pose new demands for infrastructure (water

supply, roads, transportation) and social services (schools, health care facilities) in addition to simple reconstruction.

Slow onset disasters require a different approach. In droughts, for example, the situation caused by the failure of rain may compound long-standing problems such as deforestation, an inefficient pattern of land tenure and use, and soil erosion. Droughts can generate migrations of large groups of the affected population. Rather than a reconstruction response as defined here, such disasters require longer-term development responses.

The destruction caused by civil wars, similar to that of a sudden onset disaster, can be compounded by several years of reduced public and private civil investment and neglect of maintenance. Serious manpower problems often occur due to migration and to lack of education and training through the war years. The migration of skilled workers can create acute shortages during reconstruction. The war period accordingly tends to be reflected in a substantially depressed economy, a weak public administration, and general deterioration in capital stock as well as severely damaged urban centers and production facilities.

Given the destruction and social and economic losses created by disasters, the humanitarian response they create, and the visibility they achieve in public opinion and in the local, national and international press, they are phenomena with substantial political repercussions. Governments are assessed in terms of their ability to provide an efficient and rapid response to the emergency created needs and to mobilize resources. Thus, although the affected area may not be one of the high priorities in the country's development process, the disaster may bring it to the forefront.

Characteristics of Effective Reconstruction Projects

The characteristics for efficient reconstruction projects listed below have been drawn from past experience. Reconstruction projects have to address both the needs and the limitations imposed by the emergency situations. They are not adequate instruments to reflect broad sectoral, structural, or institutional goals. Projects that are too complex, attempt to implement entirely new approaches, rely on an institutional support that in most cases is weak, and require detailed planning studies are not appropriate to be undertaken after a disaster.

Effective reconstruction projects may be characterized by the following:

(1) rapid response by the Bank to the request for assistance;

(2) strong commitment to reconstruction by the government;

(3) quick assessment of damage and identification of needs by professionals with experience in post-disaster situations;

(4) major emphasis on the restoration of damaged infrastructure and physical plant and on ensuring the continuity of productive and social life;

(5) limited reconstruction objectives with an implementation schedule adapted to the emergency constraints;

(6) emphasis on strengthening the government organization and local capabilities required to handle the reconstruction;

(7) close supervision by the Bank and continuity of the staff in charge of supervision;

(8) efficient coordination of reconstruction efforts at all levels -- local, national, and international;

(9) adaptation of Bank requirements and procedures to the emergency.

A post-disaster context is often an appropriate time to bring about limited change and to reduce vulnerability; however, reconstruction projects are poor instruments to introduce major innovations. For example, weaknesses of the old structures can be remedied after an earthquake; rebuilding of obsolete productive facilities could be prevented; early warning systems might be incorporated into the reconstruction work in areas devastated by floods. To be successfully implemented, change must be introduced carefully and be consistent with the local economy and traditions. Reconstruction is a process that should be understood as a continuum between pre- and post-disaster conditions; major changes may be difficult to absorb by a society already facing crisis.

Project Identification: Assessment of Damages and Needs

The identification phase, of vital importance in a reconstruction project, is concerned with assessing the damage and evaluating the needs in order to define the scope and priorities for reconstruction. The assessment of damage entails an evaluation of the direct, indirect, and cumulative impacts of the disaster. In order to assess damage and needs it is necessary to find out what the conditions in the stricken area were before the disaster, what material and institutional resources are available for reconstruction locally; and whether long term development plans may provide guidance for reconstruction in the disaster aftermath. Ideally the assessment of damage and needs should be based on pre-disaster baseline data against which the impact of the disaster can be measured. When insufficient data are available, prior experience in similar situations may prove helpful for making inferences. Prior experience is particularly important because in general the tendency is to overestimate damage and as a consequence to propose large and unrealistic reconstruction programs.

The independent gathering of information by different agencies that takes place after disasters may create an unnecessary duplication of effort as well as inconsistencies in the data and variations in the estimated cost of destruction and replacement. Information gathering should be coordinated as far as possible.

Project Preparation: Reconstruction Strategies and Priorities

In the wake of a disaster both the government and the affected community react rapidly. A number of goals surface that in some cases could

be conflicting such as the rapid restoration of normalcy, the prevention of further losses from a recurrence of the disaster, and the use of the occasion to create a better community. The latter may be particularly confusing, leading to delay in immediate reconstruction activity. The physical work of reconstruction starts immediately and decisions that have long-range implications are made shortly after the catastrophe. In some cases inappropriate policies may be adopted; in housing for example, emphasis on temporary shelter programs to relocate the affected population on sites far from employment and from access to services and social facilities may divert efforts and capital from the implementation of progressive programs of well-located permanent housing. In other cases an unbalanced emphasis on housing programs may result in an inappropriate concentration of resources in this sector to the detriment of higher priority programs of economic recuperation. Promises of aid in the aftermath of the event may generate high expectations in the population, beyond the capacity of the country to support them in the long range. Thus, a rapid and efficient identification of needs is necessary to define appropriate reconstruction policies, priorities and scope.

Institutional Framework for Reconstruction

The success of reconstruction projects depends to a large extent on a strong government support of the program. However, the government may lack experience in handling the situation and have difficulty in accommodating the overwhelming demands of a disaster. Confusion, lack of coordination and of skilled manpower retard reconstruction planning and implementation. The

establishment of an entirely new institutional framework for reconstruction is generally unadvisable in such a context. Instead, existing institutions ought to be supported. Although only limited institution building activities can be incorporated successfully in reconstruction, the need to strengthen capabilities to cope with the crisis situation, prepare and implement a recovery strategy, ensure coordination among the various participating levels; control for consistency in reconstruction policies concerning different sectors and social groups; and promote an efficient use of all inputs and activities have to be considered in the assessment of the need for support to the existing institutional framework.

Informal organizations and community groups play an important role in reconstruction and their contribution and participation in the program may deserve special support. Collaboration with NGOs that have prior experience in disaster reconstruction, good knowledge of the area, ability to mobilize different social groups, and a flexible approach could be helpful in all stages of a reconstruction project.

Economic Aspects of Reconstruction Projects

The benefits of restoring damaged facilities and productive activities in reconstruction projects usually exceed the costs involved. In addition, not only do repairs to the damaged structures have a high economic priority, but in many cases the long-term benefits from disaster prevention measures adopted in reconstruction are substantial (e.g. implementation of earthquake-resistant construction, flood control measures, hurricane warning and response systems, etc.). Of paramount importance in the reconstruction

strategy are those decisions concerning the use of resources to help restore the economy of the area and to generate income-earning opportunities for the survivors.

After disasters governments have to make choices about the uses of resources that can best help to achieve the basic objective of restoring the economy. The rapid restoration of productive facilities should be promoted. For instance, if the commercial establishments are destroyed, any relocation should be designed to prevent additional losses. Relocation may interfere with a prompt resumption of activities and impede the integration of the business with the community. The lead time required for the reconstruction of certain activities has to be realistically estimated. This time may be very long in the rehabilitation of agriculture and stock breeding. For the restoration of industry, it may depend on obtaining needed inputs such as power, replacement parts and equipment. Thus, depending on the reconstruction project, the major benefits will be the restoration of damaged facilities necessary for a healthy functioning of the society (housing, infrastructure) and its contribution to attaining pre-disaster levels of output, exports, and employment in different sectors (such as agriculture and industry).

The potential constraints to the implementation of a reconstruction program deserve special attention. These constraints could be the limited capacity of the economy to deal with the proposed size of the program, reduced capability of the government to mobilize internal and external resources, weakness of the institutions, lack of availability of skilled manpower to execute the work, and shortages of construction materials. During the

rehabilitation process, a project's benefit will result from an activation of the economy and an increase in employment as a result of reconstruction activities.

Financial Aspects of Reconstruction Projects

Because of the size of the investments over a short period of time, there is generally a need for financial transfers from unaffected parts of the country. The contribution of institutions and individuals in the disaster area to reconstruction financing will depend on the degree of disruption of income producing activities and the speed with which they can be restored, as well as on the existence of accumulated reserves or income from other parts of the country.

While free distribution of supplies may be appropriate for relief in the immediate aftermath of a disaster, the period of reconstruction should be viewed as one of transition from relief to normal functioning of the economy, and habitual cost recovery practices should be restored as quickly as possible. These practices may be imperfect, raising the issue of whether the Bank should seek reforms in connection with a proposed reconstruction project. Because such loans must be made quickly and usually benefit a limited geographical area, they are not generally suitable vehicles for policy reform or institutional development. In cases of extreme distortion in cost recovery policies, the Bank may decline to finance the respective elements of the reconstruction program unless there is a long-term commitment to consider improvement; it should not, however, press for such improvements in the context of the reconstruction operation. Hard-pressed governments may agree

to policy reforms which they later cannot implement. Resolution of disputes on such issues is likely to interfere with the main purpose of the project, the rapid restoration of physical plant and productive activities.

The government may have to introduce supplemental credit programs where commercial sources are insufficient to meet the needs of local government, business and households during reconstruction efforts. To avoid driving out normal sources of credit and creating a long-term dependency on such programs, they should approximate commercial terms as closely as possible and should be temporary. The normal tests of affordability and eligibility should be applied.

Bank Support for Reconstruction

Most governments have limited experience in dealing with disasters. The Bank could support them in a number of ways but the decision whether it is to become involved or not has to be made quickly in order to facilitate the Bank's presence at the site within days of the disaster event and ensure an efficient participation in reconstruction. The Bank could support reconstruction in project preparation during the assessment of damage and needs; in the identification of a reconstruction strategy; in strengthening institutional and coordinating capacity; in project implementation; in financing; and in the development of disaster prevention and mitigation measures. In addition, experience indicates that in a number of cases Bank support has played an important role as a catalyst for other reconstruction efforts.

In project preparation, early involvement in a reconstruction process provides an opportunity for the Bank to assist the government in defining appropriate reconstruction strategies, identifying long-term implications of immediate responses and designing an appropriate institutional organization. Since relatively few governments have either the knowledge or skilled manpower to conduct the assessment of damage and evaluation of needs, participation of experts able to make inferences based on prior reconstruction experience in the assessment may help to reduce the problem. To provide assistance with this task, the Bank could take advantage of existing in-house specialized skills and also help organize expertise available in the country or in the region.

Assistance to the government in the coordination of reconstruction efforts is another area where Bank support could be of help. In post disaster situations substantial and varied emergency assistance converges on the affected area and the number of participating institutions is large. Coordination among government and international agencies is vital to avoid duplication of efforts, adoption of contradictory policies to guide reconstruction, neglect of areas that may be important to consider in the reconstruction strategy, and waste of resources. Bank experience may reinforce the government's capacity to coordinate efforts at all levels -- local, national and international.

During project implementation there are areas that may require special attention and where Bank assistance could have positive effects. In the past in some cases project implementation suffered delays due to complex project design, institutional and management problems, and procurement and

disbursement bottlenecks. Delays in project implementation may lead to higher construction costs, in some cases due to post disaster inflationary pressures and in other cases due to further deterioration of an already damaged infrastructure. The Bank could assist the country in assessing the capacity of its organizations and in tailoring a suitably simple and limited set of reconstruction interventions.

Within the context of general country allocations, Bank investment in reconstruction could be done through the reallocation of existing loans with uncommitted funds or through substitution in future lending. Assistance could be achieved through program or sector loans or by developing a more project-specific reconstruction effort. In general there is no need for a departure from ordinary Bank lending mechanisms.

Reduction of Disaster Potential

The Bank can also assist disaster-prone member countries in efforts to reduce their vulnerability to disasters, both through regular projects and through reconstruction projects. Human activities affect in many ways the vulnerability of populations to disasters, the size of areas affected, and the severity and magnitude of the damage. The extent of damage from natural hazards, may be considerably increased or reduced by policies affecting the location of people and structures, materials and methods used in construction, ways in which the topography is modified, modes in which natural resources are used, emergency systems implemented, and transportation and communication systems developed. Although in recent years there has been an improvement in the concerns for disaster reduction and prevention measures in some disaster-

prone countries, in many cases, avoidable costly destruction still persists. Bank assistance could be particularly helpful in the case of countries that are small and where the resources to cope with catastrophes at the national level are less adequate than in large countries.

The means to minimize the effects of disasters could be included in the process of project preparation, appraisal, and supervision in the context of potential future risks. In preparing projects, any special features that may affect risk or vulnerability (e.g. seismic characteristics, topography, climate) should be identified and their implications analyzed. Costs and benefits of disaster reduction measures that merit consideration could be reviewed. The potential of some projects to serve special functions in times of disaster threat, the need to mantain disaster resource reserves, and other factors that may have an impact on vulnerability could, if appropriate, be incorporated in project preparation. In reconstruction projects, measures to reduce vulnerability to disasters should be a component in project design.

Programs of education and training to strengthen technical capacity of member countries with regard to disaster mitigation, prevention, and response may be supported. These programs could emphasize the integration of preventive methods in project preparation, data collection, planning, management and implementation.

Appropriate Processing of Reconstruction Projects

The decision whether the Bank is to become involved in a reconstruction project has to be made quickly in order to facilitate the Bank's presence at the site within days of the disaster event and ensure

effective participation in reconstruction. By and large, normal procedures are appropriate also for reconstruction projects except for the following that are specific to those cases:

i) convening of a Reconstruction Advisory Group;

ii) early clearance of the project as a reconstruction project;

iii) preparation of a combined Staff Appraisal Report and President's Report; and

iv) simplified procedures.

In case of an emergency, a small Reconstruction Advisory Group will be convened by the Water Supply and Urban Development Department in order to:

- assist in the decision-making process concerning whether or not Bank participation after a disaster is warranted;

- estimate approximately the magnitude and type of support;

- address the multi-sectoral nature of the problem; and

- help ensure the preservation of institutional memory and continuity.

This will be an ad hoc group with experience in reconstruction. It would not have independent authority and its function would be to provide advice to the Regions and to the Loan Committee on issues concerning participation in reconstruction activities, project preparation, substance and design, and processing of effective reconstruction projects.

Of particular importance, the Reconstruction Advisory Group will operate as a referral service and it will assist the Regions in identifying rapidly the type and location of the expertise required whether available within the Bank or from consultants for participation in the identification/appraisal/supervision processes.

The Water Supply and Urban Development Department will act as the contact point for the Reconstruction Advisory Group. In those cases where non-urban sectors are part of the reconstruction needs, participation in the Advisory Group of staff from the relevant sectors will be sought. A member of the Legal Department will also be included. In order to facilitate the work of the Reconstruction Advisory Group, a file of specialized Bank staff and an international roster of consultants, both individual and firms with expertise in reconstruction, who could be called on to join the Bank missions in case of emergencies, will be maintained by WUD. WUD will also maintain background notes on reconstruction to assist the Advisory Group and staff working on reconstruction projects. With the understanding that the Bank is not expected to assume a leadership role in the field of reconstruction, and that it can provide assistance only on a case-by-case basis, liaison will be established with other agencies like WHO, FAO, UNESCO, UNDRO, and with NGOs with experience in emergencies that may prove helpful and efficient in implementing

certain aspects of reconstruction projects.

Before a Region proceeds with a reconstruction project, the Reconstruction Advisory Group will help determine the advisability of Bank assistance. An initiating memorandum, proposed by the Regions, outlining the reasons for Bank involvement should be cleared with the Office of the Senior Vice President, Operations (SVPOP). The memorandum should serve as a decision point on whether the Bank should be involved, on the magnitude of the Bank's support, and on the composition of this support.

After determining the advisability of Bank assistance, the magnitude, and type of support, considering that speed is of the essence in a reconstruction project, a combined Staff Appraisal Report and President's Report should be prepared.

Where necessary, established Bank procedures may be simplified to facilitate project preparation and implementation. The Reconstruction Advisory Group will provide the necessary expertise to facilitate a rapid project preparation process. In agreement with OPS, review schedules and procedures may be simplified and reduced. The Project Preparation Facility (PPR) may be used.

Bank procedures already exist that may be used to contribute to the speedy and effective implementation of reconstruction projects (e.g., advance contracting and retroactive financing) and, if necessary, to the rapid disbursement of project funds. Since reconstruction projects have to be identified, prepared, and appraised within a short time with incomplete information, departures from the original project may occur during implementation. A close collaboration between Bank staff and the Borrower

should help to resolve implementation problems that are likely to appear. Given that in most cases countries lack adequate experience with reconstruction, supervision is an efficient way for the Bank to provide technical assistance. The availability of staff with reconstruction experience as well as staff continuity are two important aspects of supervision. The use of consultants in-situ may be desirable when local agencies are weak, to ensure prompt and efficient disbursement, review construction programs and cost estimates, prepare monthly reports, check expenditures, and acelerate applications for disbursement.

Reconstruction Management Information System

Reconstruction projects tend to potentially have more implementation problems than regular projects in view of the uncertainties and difficulties to be expected. The development of a reconstruction management information system may be part of the effort by the Bank and the borrowing countries to improve disaster reconstruction and to take advantage of the lessons learned from experience. The information system would be built through monitoring of reconstruction projects, that is, through periodic reports of project progress. The system will maintain a file of relevant supervision and other reports, as well as cross-reference information on topics which may be of interest in future lending.

I. INTRODUCTION

Purpose and Scope of Guidelines

1. These guidelines address the issue of Bank participation in reconstruction after natural and man-made disasters. Up to now the substantial experience and institutional memory of the Bank in reconstruction has not been systematically and efficiently used as a resource in decisions concerning Bank participation in reconstruction or in the formulation of new projects. These guidelines attempt to distill this experience into a readily accessible form and respond to the following objectives:

- review the criteria and circumstances under which the Bank would be prepared to respond to reconstruction needs;
- define the kinds of responses the Bank would be prepared to consider;
- assist staff to prepare timely and effective reconstruction projects;
- suggest mechanisms for rapid processing without diluting the system of checks and balances which the Bank's normal processing cycle provides.
- help preserve the institutional memory concerning reconstruction.

2. The Bank has already participated in a number of reconstruction projects that have been completed while others are currently under execution. A preliminary review of reconstruction projects since 1970

shows that the Bank has participated in more than 40 cases of reconstruction after earthquakes, hurricanes, floods, volcanic eruptions, and civil wars. 1/ Reconstruction projects covered a wide range of sectors: urban, water, education, agriculture, industry, and power supply. In addition, a number of program loans were made as a response to disasters. At present, approximately three requests per year are received to finance reconstruction activities.

3. Large portions of the world, and Bank member countries, are prone to disasters, particularly the region that stretches across the tropical and subtropical regions in Africa, Asia and Latin America. Although the scale of disasters may be small in a national context, reconstruction rapidly becomes a high priority in the affected countries' investment program. The social, economic, physical, and political importance of catastrophes leads to repeated requests by the concerned countries for Bank assistance. Up to now, however, the criteria that would define whether or not the Bank should respond to those requests have not been defined.

1/ The list of reconstruction projects compiled here is not exhaustive. The total number of reconstruction projects that do not refer to "reconstruction" in their title exceeds the number of projects identified here.

4. The review of reconstruction projects indicates that the experience of the Bank in reconstruction has been mixed. 1/ In some cases the response has been rapid and has adapted flexibly to the needs. Projects were well defined, shortcuts were adopted in following the Bank's procedures, and intensive supervision contributed to the timely and efficient completion of projects. In other cases, however, the response has been slow, the specific requirements of emergencies have not been fully accounted for, and reconstruction projects had goals that were too broad, complex, and difficult to implement. As a result, some projects met with implementation problems, and fell short of achieving their objectives.

5. In the past, there has been lack of continuity in the response to reconstruction needs and the opportunity to learn from experience has not been fully used. There has been no agreement on the circumstances under which the Bank would respond; the kinds of responses it would be prepared to consider; the objectives of reconstruction projects and how they should be processed. The review of past experience indicates that there has been no consistency in approach, each case has been treated differently, and ad hoc solutions have been developed. An assessment of the adequacy of Bank involvement in different reconstruction projects, the experience gained in those projects and their assets and liabilities have not been systematically integrated in decision making concerning

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1/ LAC's experience in reconstruction projects was summarized in the Fall 1981 Project Implementation Review. A more comprehensive review of reconstruction projects was conducted as a background for the Issues Paper on Response to Disaster, WUD, June 23, 1983. A retrospective review of reconstruction projects is currently being prepared in WUD.

new reconstruction projects. The objectives of reconstruction projects could be better met through a more efficient Bank response and, in turn, a better definition may result in faster processing of the projects. In-house resources available within the staff and the body of knowledge developed by experts around the world working on the problem could be used more advantageously.

6. The impact of different disaster agents (floods, earthquakes, droughts, civil wars) is varied, the vulnerability to disasters differs from area to area, and the capacity of governments to mobilize resources is not uniform. Thus, the problem of reconstruction is complex. In order to address these complexities and differences, the scope of the guidelines is by necessity broad and comprehensive and variations from case to case should be accounted for in specific projects.

7. In Section I of these guidelines, 1/ the meaning of reconstruction for Bank projects is defined and the criteria for Bank participation in reconstruction are identified. The characteristics of disasters of slow and sudden onset; and the direct, indirect, and cumulative impacts of disasters considering their social, physical, and economic implications are discussed. Section II focuses on Bank's experience in reconstruction. A summary of reconstruction projects is presented, and the problems and achievements of reconstruction projects are discussed. Section III analyzes the features that contribute to efficient reconstruction projects. The stages in the project cycle

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1/ In order to develop these guidelines, interviews with Bank staff who participated in reconstruction projects were conducted and documents concerning the reconstruction projects listed in Table I were reviewed. Where available, reports by the Operations Evaluation Department were consulted.

relevant to reconstruction are discussed: Project identification and design; appraisal of technical, institutional, economic and financial issues; implementation and supervision; and evaluation. Within the project cycle, the assessment of damage and the evaluation of needs are discussed, reconstruction strategies and priorities are spelled out; technical aspects of reconstruction projects--housing, population patterns and migration, and disaster prevention and mitigation--and procurement and disbursement issues are discussed. Section IV explores Bank support for reconstruction and identifies assistance needs in project preparation, coordination, implementation, financing, and reduction of disaster potential. Section V explores how to improve Bank's processing of reconstruction projects. Setting up a group within the Bank to take advantage from past experience, to preserve the institutional memory, to provide continuity to reconstruction activities, and to tap on existing resources within and outside the Bank is proposed as an appropriate mechanism to facilitate an efficient Bank participation in reconstruction. The tradeoffs required between project preparation and supervision are identified and the importance of setting up a reconstruction management system is discussed.

Reconstruction: A Definition

8. For the purpose of these guidelines a reconstruction project is defined as a set of activities and investments to help rebuild the economic, social, and physical systems after natural or man-made disasters through projects that can be identified, prepared, approved, implemented, and completed within a total period of two to three years.

9. Since in most cases reconstruction implies not only replacement of destroyed structures but also updating and improvement, the objectives of reconstruction projects will necessarily have an impact also on the development process.

Criteria for Bank Participation in Reconstruction

10. Bank involvement in reconstruction will be restricted to those cases where the destruction is enough to affect national priorities or may disrupt seriously the development process and where national resources are inadequate to deal with the problems that arise. The Bank would not expect to become involved where the disaster is a minor event in national terms; where disasters are recurrent events and the countries have adjustment and response mechanisms in place; or where the required response is of a long-term nature (e.g. droughts) and needs to be addressed by longer range development plans in the affected country. Reconstruction projects, although closely related to the attainment of medium and long-term development goals, should confine themselves to specific rebuilding activities and the rapid restoration of physical plant and productive activities.

11. In the past, a major issue in the definition of the Bank's response to disasters was that the difference between relief and reconstruction activities had not been clearly delineated. Relief includes those activities and inputs which start immediately after the disaster. They are best carried out by the local population, the governments, bilateral emergency aid programs and special organizations like the Red Cross. Thus Bank intervention in the urgent relief operations is not envisaged.

12. The Bank will continue its present policy of financing reconstruction loans primarily from existing country allocations in the context of changes in country investment priorities following the disaster.

Reconstruction and Disaster Characteristics

13. Disasters vary in terms of their frequency, predictability, controllability, speed of onset, length of forewarning, duration, scope of impact, and disruptive potential. In turn, reconstruction needs differ according to the type of disaster agent and the magnitude of destruction. Of critical importance in any particular region or settlement is the probability and frequency of occurrence, physical effects, physical impacts, vulnerability factors and related localized qualities. The nature and scale of disruption brought about by those disasters differs in each case. The Managua and Popayan cases are illustrative of differences in scale while meeting the criteria proposed above. The Managua, Nicaragua, earthquake in 1972 destroyed the capital of the country and, given the centralized structure of political, cultural, and productive activities in the country, the destruction had national repercussions. The earthquake that heavily damaged Popayan, Colombia, in March 1983, had a more limited impact in terms of national development, but reconstruction became a major social and political issue of high priority in the government's agenda. The greatest losses from both disasters occurred in urban areas and were of a substantial magnitude due to poor construction practices and lack of seismic-resistant construction methods. In both cases a population resettlement followed the disaster and resulted in the city's physical expansion and

increased demand for urban services and transportation.

14. Disasters can be sudden or of slow onset, with the speed of impact influencing the type of response required. Sudden disasters, e.g. earthquakes or hurricanes, can destroy the housing stock, infrastructure, commercial and industrial facilities, making large populations homeless and disrupting the productive base. Not only do they damage capital assets, but they have long-term effects on the economy. The cost of repair and replacement may require the diversion of investment from uses that could have created a net addition to productive capacity. Earthquakes can bring substantial changes in urban structures, expand the area occupied by the city and, as in the Managua and Popayan examples, accordingly pose new demands for infrastructure (water supply, roads, transportation) and social services (schools, health care facilities) in addition to simple reconstruction.

15. Slow onset disasters require a different approach. In droughts, for example, the situation caused by the failure of rain may compound long-standing problems such as deforestation, an inefficient pattern of land tenure and use, and soil erosion. Droughts can generate migrations of large groups of the affected population, as it occurred in the Sahel between 1968-1973, where two million pastoral people, in an already impoverished region, were driven from their economy and culture, constituting an additional burden. Rather than a reconstruction response as defined here, drought requires longer-term development responses.

16. The destruction caused by civil wars, similar to that of a sudden onset disaster, can be compounded by several years of reduced public and private civil investment and neglect of maintenance. Serious

manpower problems often occur due to migration and to lack of education and training through the war years. The migration of skilled workers can create acute shortages during reconstruction. The war period accordingly tends to be reflected in a substantially depressed economy, a weak public administration, and general deterioration in capital stock as well as severely damaged urban centers and production facilities.

17. Given the destruction and social and economic losses created by disasters, the humanitarian response they create, and the visibility they achieve in public opinion and in the local, national and international press, they are a phenomena with substantial political repercussions. Governments are assessed in terms of their ability to provide an efficient and rapid response to the emergency created needs and to mobilize resources. Thus, although the affected area may not be one of the high priorities in the country's development process, the disaster may bring it to the forefront.

II. THE WORLD BANK EXPERIENCE IN RECONSTRUCTION

Bank Lending for Reconstruction

18. The Bank's initial role in reconstruction, reflected in its name, was to assist in the reconstruction of Europe and Japan after the Second World War. The first loans for reconstruction to Denmark, France, Luxembourg, and the Netherlands were approved in mid-1947.

19. In recent years, the Bank has participated in a number of reconstruction projects, some already completed, some under consideration or execution, and some that for various reasons never

materialized. Those projects that include urban, education, agriculture, industry, power, water supply, and transport, address problems brought about by earthquakes, hurricanes, floods, volcanic eruptions, and civil strife. Table I describes for the period 1970-1983, 38 selected reconstruction projects by region and country, type of emergency, project components and lending. The total cost of those projects approved to date is approximately $1,100 million. The average amount per project has been $29.0 million. The size of the projects varied from $80.0 million for highway rehabilitation in Nigeria after the civil war to $3.2 million for agricultural rehabilitation in Haiti after a hurricane.

TABLE 1. SELECTED RECONSTRUCTION PROJECTS (1970-1983)

Region/Country	Type of Emergency	Sector/Project Components	Amount Loaned (in US$ million)	Year of Project Preparation
Europe, Middle East and North Africa				
o Al Asnam, Algeria	Earthquake	Urban Housing, Technical Assistance	Did not materialize	1981
o Lebanon Loan 1476-LE	Civil War	Transport, Telecommunications, Water Supply, Rehabilitation of Port of Beirut, and Institutional Improvements	50.0	1977
o Lebanon	Civil War	Global Reconstruction Program: Urban Reconstruction, Housing, Education, Health, Telecommunications, Transport, Water Supply, Industry	Under consideration	1983
o Yemen, Arab Republic	Earthquake	Urban, Housing, Technical Assistance	5.0 Not pursued further at Government request	1983
o People's Democratic Republic of Yemen	Flood	Road Construction	7.0	1982
o Romania Loan 1169-RO	Flood	Agriculture, Flood Recovery Program	40.0	1975
o Romania Loan 1170-RO	Flood	Industry, Transport, Flood Recovery Efforts	20.0	1975
o Romania Loan 1581-RO	Earthquake	Industry	60.0	1977
o Yugoslavia, Montenegro Loan 1768	Earthquake	Transport, Port Reconstruction	50.0	1973
o Yugoslavia, Montenegro Loan 1759-YU	Earthquake	Transport, Highway Reconstruction	21.0	1973
o Iceland Loan 941-ICE	Volcanic Eruption	Transport, Reconstruction of Fishing Ports	7.0	1973
Eastern Africa				
o Sudan Credit 476	Civil War	Agriculture and Livestock Rehabilitation	10.7	1974
o Mauritius	Hurricane	Urban, Housing and Urban Services, Traffic Management, Public Transport, Solid Waste Disposal	15.0	1982
o Uganda Cr. 983-UG	Civil War	First Reconstruction Program, Imports Loan	72.5	1980
o Uganda	Civil War	Post and Telecommunications Rehabilitation	22.0	1983
o Uganda Cr. 1329-UG	Civil War	Education Rehabilitation, Primary and Secondary Education	32.0	1983
o Uganda Cr. 1077-UG	Civil War	Technical Assistance	8.0	1980
o Uganda Cr. 1110-UG	Civil War	Water Supply Engineering	9.0	1980
o Uganda Cr. 1328-UG	Civil War	Agricultural Rehabilitation	70.0	1983
o Uganda Cr. 1248-UG	Civil War	Industrial Rehabilitation	35.0	1982
o Uganda Cr. 1252-UG	Civil War	Second Reconstruction Program, Imports Loan	70.0	1982

Region/Country	Type of Emergency	Sector/Project Components	Amount Loaned (in US$ million)	Year of Project Preparation
Western Africa				
o Nigeria Loan 640-UNI	Civil War	Transport, Highway Rehabilitation	10.6	1969 1/
o Nigeria Loan 694-UNI	Civil War	Transport System, Lines of Credit for Port, Rail and Road Expenditures	25.0	1970
o Nigeria 732-UNI	Civil War	Program Loan, Imports Finance	80.0	1971
South Asia				
o Bangladesh Credit 339-BA	Cyclone	Agriculture Coastal, Area Rehabilitation	25.0	1972
o Pakistan Credit 683-PAK	Flood	Agriculture/Flood Protection Works	40.0	1977
o Pakistan Credit 466-PAK	Flood	Agriculture/Flood Protection Works	35.0	1974
East Asia and Pacific				
o Fiji Loan 1921-Fij	Cyclone	Transport, Roads and Drainage	18.0	1980
Latin America & Caribbean				
o Nicaragua Credit 389-Ni	Earthquake	Urban Reconstruction, Sites and Services, Industry, Education	20.0	1972
o Nicaragua Loan 808-Ni	Earthquake	Water Supply Reconstruction	6.9	1973
o Nicaragua 965-Ni	Civil War	Urban, Reconstruction of Secondary Cities, Small-Scale Enterprise and Transport Rehabilitation	22.0	1979
o Nicaragua Credit 966-Ni Loan 1785-Ni	Civil War	Agriculture, Industry	Credit 20.0 Loan 10.0	1979
o Guatemala Loan 1315-GU	Earthquake	Urban, Sites and Services, Housing Credits, Small-Scale Enterprise Credits	51.4	1976
o Peru Loan 706-PE	Earthquake	Transport, Road Construction	30.0	1970
o Haiti	Hurricane	Agriculture	3.2	1981
o Dominica	Hurricane	Transport, Rehabilitation of Roads and Drainage	5.0	1982
o Popayan, Colombia	Earthquake	Global Reconstruction Program, (Urban Reconstruction, Housing, Production, Infrastructure, Studies)	40.0	1983
o Dominican Republic Loan 1782-DO	Hurricane	Imports Loan	25.0	1979

Achievements and Problems in Reconstruction Projects

20. A preliminary review of reconstruction experience shows that achievements and problems in reconstruction projects were related to the following:

(a) appropriate understanding of the nature of emergencies, the specific requirements posed by reconstruction, the cross-sectoral nature of needs, and the procedural and legal mechanisms for loan approval and project implementation. In many cases reconstruction projects were conceived as regular projects to be implemented in a compressed amount of time. This resulted in poorly prepared projects that met numerous implementation problems and cost and time overruns;

(b) correct assessment of the impossiblity of achieving broad structural, sectoral, or institutional goals, and a definition of specific and limited goals in reconstruction projects. Reconstruction projects can only address specific reconstruction requirements to be achieved in a limited period of time, with restricted resources and information. Many projects had goals that were too broad, complex and difficult to implement, consisted of too many components and had unrealistic completion dates;

(c) the need to prepare projects which take into account institutional weakness and inexperience in dealing with emergency situations. Frequently governments are poorly equipped and overwhelmed by the new demands posed upon

them and by the new tasks to be undertaken. Often the importance of providing technical assistance in reconstruction has been underestimated;

(d) the need to assign responsibility for reconstruction projects to Bank staff and consultants with prior experience in emergencies. Professionals with experience in regular projects do not necessarily understand the idiosyncracies of reconstruction projects and may propose approaches that may not be the most adequate response to the emergency situation;

(e) the difficulties in introducing new approaches in a post-disaster context. Approaches that were new to the Bank implemented within the context of reconstruction (e.g. sites and services), faced implementation problems such as land assembly, contracting, shortage of manpower, increases in the cost of materials, land and labor that, given the lack of prior experience, were not adequately assessed while planning the projects;

(f) the need to provide for continuous supervision, particularly in view of limited time and information available, and lack of experienced government agencies; and

(g) the need to consider alternatives that would enable better utilization of resources for preventing and mitigating the disruptive impacts of natural disasters and thereby achieve greater socioeconomic efficiency.

21. Table II summarizes for six selected reconstruction projects after earthquakes, floods, and civil wars the main specific problems encountered during the planning and implementation stages as well as the main achievements of those projects. The most efficient participation for the Bank in recovery after disasters is related to specific reconstruction and rehabilitation activities to help restore the disrupted economic, physical, and social systems, that can be identified, implemented and completed in approximately two to three years.

TABLE II: SELECTED RECONSTRUCTION PROJECTS (TOTAL 6)
MAIN PROBLEMS ENCOUNTERED AND ACHIEVEMENTS

Project	Analyzed	Components Objectives	Problems Identified	Achievements
Nicaragua Earthquake Reconstruction Project Credit 389-NI	Sites and Services: Serviced lots, community facilities and technical assistance	o Meet priority needs Through quick implementation of the components	o Slow implementation, thus component failed to meet priority needs through rapid implementation	o Agile Bank performance in project identification appraisal and signing of credit agreement
			o Delays and complications in land acquisition	
			o Delays in design approval	
			o Failure to complete infrastructure required	
			o Slow response by the Bank to approval of project designs, bid documents, and contract award	
			o Lack of continuity in staff supervising the project	
		o Support long-term strategy of deconcentration of Greater Managua and decentralization among secondary cities	o Sites and services: Inadequate as a mechanism to achieve deconcentration and decentralization	
		o Support refugees resettling in secondary cities and accelerate growth rate of those cities	o Unfavorable location of project with regard to jobs	
		o Provide safe shelter and services to low-income families affected by the earthquake	o Component failed to reach target population	
			o Inadequate housing unit design	
		o Reactivate the economy	o Minimal impact in reactivating the economy	
		o Provide guidance and training in low-cost self-help construction		o Project provided for a mutual aid/self help sites and services scheme
		o Test the sites and services concept and build an institutional capacity to replicate such a program	o Lack of experience with sites and services	o Testing the sites and services concept
			o Lack of government support to concept of sites and and services	
			o Inadequate implementing agency	
			o Inadequate cooperation from other agencies.	
		o Contribute to an orderly urban development of Managua	o Failure to contribute to an orderly urban development of Managua	

Project	Components Analyzed	Objectives	Problems Identified	Achievements
caragua, Urban econstruction oject Civil War) redit 965-NI	o Municipal Reconstruction o Small-scale Enterprise Rehabilitation o Rehabilitation of Managua's Public Transport	o Provide emergency urban reconstruction o Provide assistance in rehabilitating six towns o Establish an institutional basis for medium- and long-term reconstruction and development	o Slow start of small-scale enterprise rehabilitation due to institution reorganization problems and liquidity problems of participating banks. o Procurement and implementation delays from poor performance of foreign suppliers of tools and contractors, in Public Transport Component.	o Timely completion of majority of project within two-year implementation period. o Rapid response of the Bank to request for assistance o Acceptable cost overruns (25% over cost estimate) given level of preparation of cost of materials. o Dedication in government's response. o Substantial institution building during during execution of the project. o Close cooperation between Bank and local agencies. o Close project supervision by the Bank. o Commitment of local banks to small-scale enterprise program. o Additional benefits provided by project: - literacy campaign - Housing improvements as a result of street improvements.

Project	Components Analyzed	Objectives	Problems Identified	Achievements
Guatemala, Earthquake Reconstruction Project L 1315-T-GU L 1314-T-GU	o Housing Sites and Services and Housing Credit	o Housing: Creation of housing quickly	o Housing: Conflicts between role of the Bank in housing reconstruction and the Reconstruction Committee. o Delays and difficulties in land acquisition. o Problems with lot allocation. o Cancellation of portions of project, reduction in number of services plots. o Arrears at high levels, poor collection records.	o Good response from Bank to the emergency through Third Window loan. o Positive program of reconstruction of housing credits.
		o Establishment of an institutional framework for national urban development in the future o Provision of technical assistance to the National Housing Bank	o Institutional weakness of implementing agency. o Delays in staffing project unit.	o Moderately successful institution-building objectives.
	o Education	o Replace primary and secondary schools servicing low-income population damaged or destroyed by the earthquake.	Education Component: o Delays and postponement of closing date of loan.	
	o Port Reconstruction	o Rehabilitation of Puerto Barrios and technical assistance program.	Port Rehabilitation Component: o Poor performance of institutions. Cancellation of loan portion of Port rehabilitation	

Project	Components Analyzed	Objectives	Problems Identified	Achievements
Peru. Road Reconstruction Project, earthquake Loan 706-PE	Road Reconstruction	o Improve access to and within the earthquake disaster area. o Study preparation, road construction and technical assistance for highway engineers.	o Project failed to alleviate emergency problem. o Lack of first-hand knowledge of the country by the Appraisal Mission. o Long implementation period. o Overestimate of capacity of local contractors to execute work. o Time-consuming project preparation process. Complex feasibility and engineering studies. o Overestimate of speed with which various stages of the project could be carried out. o Lack of continuity in key management personnel. o Long time needed for the creation of new agency to handle reconstruction. o Limited implementation capacity of new agency. o Disagreement between Bank and used in the road. o Failure to ensure continuity of labor demand after completion of reconstruction work.	o Loan approved three months after the disaster. o Increased employment during road construction.

Project	Components Analyzed	Objectives	Problems Identified	Achievements
Rumania Flood Recovery Loan 1170-RO	Financing for industrial and transportation sectors.	o Assist Rumania's flood recovery efforts through rapidly disbursing foreign exchange.	o Borrower's difficulties with the Bank's procurement requirements. o Slower than anticipated loan disbursements. o Delays in project completion. o Inability of executing bank to identify items suitable for procurement and difficulties to coordinate with the ministries. o Delays in physical implementation due to (1) underestimation of extent of rehabilitation works; (2) changes in investment priorities to reflect overall development strategy.	o Flood Recovery Program efficiently implemented by the government. o Efficient centralization of information and coordination of efforts at the local and ministry levels. o Rapid assessment of damages and identification of needs.

Project	Components Analyzed	Objectives	Problems Identified	Achievements
Nigeria Highway Rehabilitation Civil Strife Loan 640-UA	Highway Rehabilitation	o Promote a speedy rehabilitation after the civil war	o Delays in Government procedures required for loan effectiveness. o Government's administrative difficulties to award contracts. o Delays to begin work. o Additional damages and deterioration of road created by delays. o Only 40 percent of road length constructed satisfactorily. o Delays in project implementation. o Increases in cost of road works due to additional work required to bring road to an acceptable service level and to higher prices.	o Prompt and flexible project processing by the Bank. o Satisfactory preparatory work and supervision of the non-physical components.

III. CHARACTERISTICS AND FEATURES OF EFFICIENT RECONSTRUCTION PROJECTS

Characteristics of Effective Reconstruction Projects

22. Reconstruction projects have to address both the needs and the limitations imposed by the emergency situations. They are not adequate instruments to reflect broad sectoral, structural, or institutional goals. Projects that are too complex, attempt to implement entirely new approaches, rely on an institutional support that in most cases is weak, and require detailed planning studies are not appropriate to be undertaken after a disaster.

23. Effective reconstruction projects may be characterized by the following:

(a) rapid response by the Bank to the request for assistance;

(b) strong commitment to reconstruction by the government;

(c) quick assessment of damage and identification of needs by professionals with experience in post-disaster situations;

(d) major emphasis on the restoration of damaged infrastructure and physical plant and on ensuring the continuity of productive and social life;

(e) limited reconstruction objectives with an implementation schedule adapted to the emergency constraints;

(f) emphasis on strengthening the government organization and local capabilities required to handle the reconstruction;

(g) close supervision by the Bank and continuity of the staff in charge of supervision;

(h) efficient coordination of reconstruction efforts at all levels--local, national, and international.

24. A post-disaster context is often an appropriate time to bring about limited change and to reduce vulnerability; however, reconstruction projects are poor instruments to introduce major innovations. For example, weaknesses of the old structures can be remedied after an earthquake; rebuilding of obsolete productive facilities could be prevented; early warning systems might be incorporated into the reconstruction work in areas devastated by floods. To be successfully implemented, change must be introduced carefully and be consistent with the local economy and traditions. Reconstruction is a process that should be understood as a continuum between pre- and post-disaster conditions; major changes may be difficult to absorb by a society already facing crisis.

25. Two cases illustrate this point. The Nicaragua Reconstruction Project following the civil war in 1978 had narrowly defined objectives and addressed specific reconstruction needs such as restoration of infrastructure and physical plant. Its components were easy to implement and based on prototype designs; the design accounted for constraints in the availability of data; the scope was adjusted to emergency priorities; the institutional framework took into consideration limited local management and implementation capacity; and long-term development efforts were confined to studies. The project was successfully completed.

26. The reconstruction project after the earthquake that destroyed Managua, Nicaragua, in 1972, had very broad goals, including support to a long-term strategy of deconcentration of greater Managua and decentralization among the secondary cities through the implementation of the project. As a study of past reconstruction experience would have

predicted, the majority of evacuees flocked back to Managua, along with industry, services and government agencies, recreating pockets of concentrated development in the city. It was impossible to develop the economic base of the secondary cities rapidly enough to support the evacuees, and to achieve the goal of national decentralization. Thus, the long-term objectives of the project were not met successfully, and they probably detracted from the focus on more tractable problems.

Project Identification: Assessment of Damage and Needs

27. With a regular project ideas originate from a multiplicity of sources over a period of time but in reconstruction, the need for Bank assistance is generated by a natural or man-made catastrophic event. Bank participation is activated either by a request from the concerned government or by a need perceived by the Regional Office within the Bank. In order to be efficiently designed and implemented reconstruction requires a serious commitment on the part of the local authorities.

28. The identification phase, of vital importance in a reconstruction project, is concerned with assessing the damage and evaluating cross-sectoral needs in order to define the scope and priorities for reconstruction. The assessment of damage entails an evaluation of the direct, indirect, and cumulative impacts of the disaster. In order to assess damage and needs it is necessary to find out what the conditions in the stricken area were before the disaster, what material and institutional resources are available for reconstruction locally, and whether long-term development plans may provide guidance for reconstruction in the disaster aftermath. Ideally

the assessment of damage and needs should be based on pre-disaster baseline data against which the impact of the disaster can be measured. When insufficient data are available prior experience in similar situations may prove helpful for making inferences. Prior experience is particularly important because in general the tendency is to overestimate damage and, as a consequence, to propose large and unrealistic reconstruction programs. If possible, damage assessment groups should be constituted by government officials and members of local professional organizations with prior experience in emergency situations. If the expertise is not available locally, assistance may be required to strengthen damage assessment cpabilities. Experts from UN agencies and NGOs with experience in the country and in damage assessment may be of help at this stage.

29. The independent gathering of information by different agencies that takes place in many cases following a disaster may create an unnecessary duplication of effort and waste of human resources, particularly when different organizations collect the same information from the same sources. It can also create inconsistencies in the information and variations in the estimated cost of destruction and replacement. Information gathering should be coordinated as far as possible and special efforts made to strengthen the capabilities of governments to coordinate damage and needs assessment. Few governments have either the experience or skilled manpower to do this job. The rapid restoration of telecommunications services is a high priority in order to evaluate the extent of damage and to ascertain needs and locations.

30. In assessing damage not only the direct impact but also the indirect impact should be considered. For instance, the economic impact of the destruction of an industrial plant after an earthquake entails not only the cost of the structure destroyed but also the cost of not operating the plant during the reconstruction period. This cost will depend on the time necessary to rebuild it and it should be a factor to consider in the definition of reconstruction priorities. The damage to production units generates a loss of employment and the impact depends upon the strategies adopted to reduce the losses due to cessation of productive activities.

Project Preparation: Reconstruction Strategies and Priorities

31. In the wake of a disaster both the government and the affected community react rapidly. A number of goals surface that in some cases could be conflicting such as the rapid restoration of normalcy, the prevention of further losses from a recurrence of the disaster, and the use of the occasion to create a better community. The latter may be particularly confusing, leading to delay in immediate reconstruction activity. The physical work of reconstruction starts immediately and decisions that have long-range implications are made shortly after the catastrophe. In some cases inappropriate policies may be adopted; in housing, for example, emphasis on temporary shelter programs to relocate the affected population on sites far from employment and from access to services and social facilities may divert efforts and capital from the implementation of progressive programs of well-located permanent housing. In other cases an unbalanced emphasis on housing programs may result in an inappropriate concentration of resources in this sector to

the detriment of higher priority programs of economic recuperation. Promises of aid in the aftermath of the event may generate high expectations in the population, beyond the capacity of the country to support them in the long range. Thus, a rapid and efficient identification of needs is necessary to define appropriate reconstruction policies, priorities and scope.

32. In the assessment of damage and evaluation of needs the relative importance of the disaster vis-a-vis the country's economy should be estimated. The impact of the disaster has to be evaluated within a national/regional/local context. In the analysis of how reconstruction needs fit within the country's goals the relative importance of the disaster has to be weighed considering the political importance it acquires.

33. Reconstruction projects result from the identification of the following aspects:

(a) needs generated by the destruction brought about by disaster;

(b) needs that may develop as a result of the reconstruction process itself, for example, additional damage to infrastructure as a result of heavy traffic generated by demolition activities;

(c) needs generated by the perception of a potential threat that requires preventive measures to contain it such as the threat of landslides after an earthquake.

34. A reconstruction program can be defined on the basis of baseline and background information and the assessment of damage and needs. The program has to consider the following aspects: the scope of reconstruction, scale and realistic schedule and phasing of activities, availability of manpower and materials, appropriate institutional framework, economic and financial aspects, implementation requirements, and supervision needs. The identification of a reconstruction strategy may be obstructed by the lack of an accurate assessment of damage and the need to make decisions with incomplete information. Under normal conditions project preparation is the responsibility of the borrower. However, in post-disaster situations the participation of experienced Bank staff and consultants at this stage may help substantially to reduce the potential negative effects of lack of data and uncertainties. Thus, depending on the specific case, assistance from the Bank in project preparation may be significant.

35. Reconstruction strategies need to devote special attention to phasing expenditures in time in order to maintain the economy working and avoid an abrupt interruption after the reconstructin process is completed. The "boom town" syndrome, a frequent occurrence in a reconstruction context, needs to be monitored and controlled.

36. Next, the following selected issues relevant to reconstruction strategies will be discussed: (A) Population patterns, migration, and resettlement; (B) Housing; and (C) Integration of prevention and mitigation measures in reconstruction projects.

Selected Issues in Project Design

A. Population Patterns, Migration and Resettlement

37. Various types of disasters have different impacts on population patterns, migration, and resettlement needs. For instance, earthquakes and floods may bring about resettlement on the basis of safety considerations and civil wars may generate migration to other regions during the war period, especially of skilled labor. In turn, reconstruction activities may attract groups of unemployed population from other areas. In defining population aspects in the reconstruction strategy, special attention should be given to the following issues:

(a) Avoid unnecessary relocation of population unless it is required by risk, environmental, or economic factors. Uprooting from a familiar environment compounded by the loss and disruption can create severe social problems; thus resettlement, if necessary, has to be planned carefully.

(b) Avoid overambitious plans to move entire cities to new areas; consider the attachment of the population to old homes and familiar surroundings.

(c) In any resettlement plan weigh the costs of moving vis-a-vis the benefits that derive from the use of existing capital investment in infrastructure.

(d) If relocation is required, planning, decision-making and implementation should start immediately after the disaster to avoid the development of temporary settlements and

facilitate the progressive development of permanent resettlement.

(e) Relocation and resettlement require cooperation from the affected community, an appropriate land tenure policy, security of access to employment opportunities, services and infrastructure.

(f) Promote opportunities for the relocated community to generate income and become self-sufficient and discourage the creation of dependency of the resettled population towards the agency in charge.

(g) Encourage the participation of the community in resettlement and work closely with community organizations and leaders in planning and implementation.

(h) Consider plans for the potential future growth of the resettled community.

B. Housing

38. Major disasters can cause significant damage and losses to the housing sector of stricken countries. The extent and characteristics of those losses depends not only on the disaster agent but also on the housing conditions prevalent before the disaster. The damage to housing depends on the type of disaster (earthquakes, floods, high winds, fires), the intensity of the impact (the magnitude of the earthquake, the velocity of winds, the extent of flooding), the construction materials used (masonry, concrete, adobe, tiles, bamboo, taquezal, timber), and the topographic location of buildings (in low lying plains, ravines, steep slopes, coastal areas, unconsolidated soils).

39. In planning the reconstruction of housing the following issues should be considered:

(a) Avoid temporary solutions and facilitate the rapid reconstruction of permanent dwellings.

(b) Land tenure is an essential component of housing reconstruction. Explore what steps are necessary to facilitate problems concerning land tenure in order to ensure a rapid housing reconstruction process. Analyze whether emergency legislation exists or may be required to address land tenure.

(c) Consider the impact of technological choices on housing reconstruction and avoid the use of solutions culturally inadequate and too complex, the production of units that cannot be replicated or that are difficult to assemble and to maintain.

(d) Control the expectations that may be created by promises of external aid and of provision of high standard units.

(e) Consider possible bottlenecks in housing reconstruction due to scarcity of construction materials, explore alternative ways to overcome them, and the availability of construction materials locally.

(f) Give priority to the creation of centers for the distribution of construction materials and ensure coverage and access of the affected population through a decentralized network, as well as strict controls against speculation.

(g) Include provisions for the reuse of demolition or salvaged materials in housing reconstruction. Organize and systematize the demolition to prevent health hazards, to generate employment, and to reduce traffic disruption.

(h) Consider in the cost estimates contingencies for inflation that occurs after disasters and increases in the cost of materials, land, etc.

(i) Ensure efficient ways of strengthening local capabilities for housing reconstruction. Develop training programs in disaster-resistant construction and ensure financial assistance as incentive for the trainees.

(j) Utilize existent and well established institutions for training such as unions, national training system and community organizations.

(k) Consider the proper sequencing of activities in housing reconstruction and the projects that most efficiently respond to these requirements. In the case where resettlement is necessary, for example, land assembly is the first step in the reconstruction process along with the distribution of construction materials. The provision of infrastructure networks and community facilities may have to develop gradually, simultaneously with the process of housing consolidation. In planning the reconstruction of housing, time consuming steps should be avoided.

C. Integration of Prevention and Mitigation Measures in Reconstruction Projects

40. In preparing a reconstruction strategy any special features that might affect risk or vulnerability (e.g. seismic characteristics, topography, climate), should be identified and their implications for the project spelled out. The identification of risks, vulnerability, and constraints has to be considered in the definition of the reconstruction strategy so that mitigation and prevention become components of the program. Ideally, this implies development of the following information:

(a) Mapping territory at risk. Development of risk assessment maps, indicating hazard distribution by type, intensity, and frequency. For example, in the case of reconstruction after a flood, a flood risk assessment map will indicate frequency of inundation, water depth, and debris content. It will outline the flow areas and distinguish the floodway, control section of total flooded area (characteristically deep water, high velocities, and much debris) and the flood-fringe (the area of shallower, still water). The flood risk assessment map will also identify hazard zones in relation to storm surges, and low-lying areas in a cyclone-prone region.

(b) Identification of vulnerable areas. The disaster vulnerability of a given region refers to the likelihood of human, physical, and economic loss owing to natural hazards. Base maps of settlement patterns indicating the distribution of socio-economic activities in relation to

area at risk may be prepared. Of special importance in those maps is the identification of location of dangerous industries (chemical plants, oil storage plants, gas storage plants, nuclear facilities) and the location of services and industries that are vital to communities (hospitals, water treatment plants, community facilities, transport and communication networks, and centralized points of activity).

(c) Identification of relevant seasonal factors. These are factors that may affect the vulnerability to future disaster (e.g. the onset of the monsoon season) or the priorities for reconstruction (e.g. cold weather that may require acceleration of housing construction).

(d) Identification of land use and building constraints. This step refers to constraints that should be considered in reconstruction in order to reduce the vulnerability of human settlements and facilities to hazards.

(e) Identification of potential conflicts. These conflicts may arise between reconstruction strategies and prevention measures, and could be explored considering costs and benefits of preventive measures. For example, flood prevention may conflict with irrigation programs since reservoirs for irrigation water are frequently full, while for flood prevention the need is for empty reservoirs. In this case, the gains of extra production through irrigation can be weighed against the extra benefits for flood prevention.

41. Methods for reducing vulnerability should be included in project design. These methods vary according to the disaster agent, but typically consist of structural and nonstructural measures The costs and benefits of using in some cases structural vis-a-vis nonstructural measures may be assessed. Examples of these methods are the following:

(a) For floods, the structural methods include floodwalls, channel improvements, reservoirs, river diversions; modification of cropping practices; terracing; gully control; bank stabilization; waterproofing interiors; revegetation; weather modification; improvement of building techniques; adjustment of land elevation; and elevation of structures on piles or stilts. The nonstructural methods include: warning; relocation; evacuation; land use zoning; building codes; taxation; insurance; economic incentives/disincentives; public investment; education and training programs.

(b) For earthquakes, the typical structural methods for reducing vulnerability include: structure protection and resistance, modification of construction shape and siting; reduced densities; and access/escape roads. The nonstructural methods include: insurance, relocation; building codes; zoning regulations; taxation; economic incentives/disincentives; public investment; and education and training programs.

(c) For cyclones the structural methods for reducing vulnerability include: protective shore works,

afforestation, resistant construction techniques, control of loose materials; and construction of refuges. The nonstructural methods include: warning systems, evacuation, emergency reserves, land-use zoning, building codes, taxation, economic incentives/disincentives; public investment, and education and training.

(d) For tornadoes, the typical vulnerability reduction structural methods include improvement of building techniques, and construction of underground shelter or other refuges. The nonstructural methods include education and training; forecasting and warning, building codes and insurance.

Institutional Framework for Reconstruction

42. The success of reconstruction projects depends to a large extent on a strong government support of the program. However, the government may lack experience in handling the situation and have difficulty in accommodating the overwhelming demands of a disaster. After a civil war the institutional/administrative structure may change, a break-up of regions may occur, or a different political organization may be set up. Changes in government institutions and management may be substantial. After a natural disaster the situation in most cases is one of institutional weakness to handle the work, and lack of expertise and human resources. In some cases the fluid institutional context may allow for the development of illegitimate profit-making schemes by certain interest groups that may attempt to take advantage of the substantial reconstruction needs and inputs.

43. Confusion, lack of coordination and of skilled manpower retard reconstruction planning and implementation. The establishment of an entirely new institutional framework for reconstruction is generally unadvisable in such a context since it may be exceedingly difficult to have a functioning institution organized and made operational in the short run. Instead, existing institutions ought to be supported. Although only limited institution building activities can be incorporated successfully in reconstruction, the need to strengthen capabilities to cope with the crisis situation, prepare and implement a recovery strategy, ensure coordination among the various participating levels; control for consistency in reconstruction policies concerning different sectors and social groups; and promote an efficient use of all inputs and activities have to be considered in the assessment of the need for support to the existing institutional framework.

44. Past experience indicates that, if possible, the organizational arrangements on the government's account should include single agency responsibility within the country to work as Bank counterpart even if the project includes different sectoral components. An integrated institutional framework also may facilitate a wider coverage of assistance. Responsibility for individual projects can be entrusted to the relevant agencies in each sector. To avoid duplication and prevent conflicts the role of each agency should be clearly specified and the additional resources required to strengthen them identified. If different agencies are involved in the preparation of sub-components of the reconstruction program, it is recommended that special attention be paid to the standardization of procedures for project identification, appraisal, and implementation.

45. Informal organizations and community groups play an important role in reconstruction and their contribution and participation in the program may deserve special support. Collaboration with NGOs that have prior experience in disaster reconstruction, good knowledge of the area, ability to mobilize different social groups, and a flexible approach could be helpful in all stages of the reconstruction project. The institutional arrangement for reconstruction may provide the basis for an organization to deal with future emergency situations.

Economic Aspects of Reconstruction Projects

46. The benefits of restoring the damaged facilities and productive activities in reconstruction projects are important and usually exceed substantially the costs involved. Given the nature of these projects some of the benefits may be difficult to quantify. For example, the benefits from the restoration of services such as water supply and sanitation, cannot be quantified. A safe and continuous supply of potable water and the provision of basic levels of sanitation are essential to the rehabilitation of the society and its economy and to prevent serious risks to the health of the population. In most cases, in addition to the restoration of physical, social and economic assets reconstruction projects have long-term benefits in the increased risk reduction they provide (e.g. implementation of earthquake-resistant construction, flood control measures, hurricane warning and response systems, etc.). That is, not only repairs to damaged existing structures have a high economic priority, but in many cases the long-term benefits from disaster prevention measures are substantial.

47. After disasters, governments have to allocate limited resources (labor, capital, land) among a number of competing demands. A special effort is required to allocate the resources to promote a rapid recovery. For instance, using all the resources in housing may reduce the opportunities for allocating resources to restoring productive activities. Thus, choices have to be made about which are the uses of resources that can help the area (and the country) achieve the basic objective of restoring the economy. In order to accelerate restoration of the productive capability of the area the rapid return to function of destroyed productive facilities should be promoted. For instance, if the commercial establishments are destroyed, any relocation prone to creating additional losses should be prevented. Relocation may interfere with a prompt resumption of activities and impede the integration of the business with the community. The lead time required for the reconstruction of certain activities has to be realistically estimated. This time may be very long in the rehabilitation of agriculture and stock breeding. For the restoration of industry, it may depend on obtaining needed inputs, replacement parts and equipment. Thus, depending on the reconstruction project the major benefits will be the restoration of damaged facilities necessary for a healthy functioning of the society (housing, infrastructure) and its contribution to attaining pre-disaster levels of output, exports, and employment in different sectors (such as agriculture and industry).

48. The potential constraints to the implementation of a reconstruction program deserve special attention. These constraints could be the limited capacity of the economy to deal with the proposed size of the program, reduced capability of the government to mobilize

internal and external resources, weakness of the institutions, lack of availability of skilled resources to execute the work, and shortages of construction materials. As a benefit of the project it should be considered that during the rehabilitation process there will be an activation in the economy and an increase in employment as a result of reconstruction activities. The extent to which the project will put to use domestic resources, for instance, employ local labor which will be translated into income is an important benefit. Thus, reconstruction opportunities for the survivors to rebuild their homes and cover other needs have to be contemplated as well as the means to provide employment.

Financial Aspects of Reconstruction Projects

49. The potential sources of capital in the country to finance reconstruction should be identified in order to ensure that there are sufficient funds to cover the costs of implementing the project on schedule. The Bank has to assess whether the proposed financial plan is sound or whether it needs to be modified. In the analysis of available funding for reconstruction after disasters, a recurrent problem is that sometimes after the emergency subsides the offers of help from different sources never materialize. Thus in order to preserve its feasibility the plan for reconstruction financing has to be realistic in assessing the available funds. Since many governments are not prepared for the emergency, in most cases special arrangements may be required to cofinance reconstruction projects with other international and bilateral funds. The existence of other Bank loans to the area has to be explored in order to evaluate the possibility of allocating unused portions of

existing loans to the reconstruction task. This also requires an examination of whether or not the resources necessary to complete the existing project are available.

50. Because of the size of the investments which will be required over a short period of time, there is generally a need for financial transfers from unaffected parts of the country. The contribution of local institutions and individuals to reconstruction financing will depend on the degree of disruption of income producing activities and the speed with which they can be restored, as well as on the existence of accumulated reserves or income from other parts of the country. While free distribution of supplies may be appropriate in the immediate aftermath of a disaster, the period of reconstruction should be viewed as one of transition from relief to normal functioning of the economy, and habitual cost recovery practices should be restored as quickly as possible. These practices may be imperfect, raising the issue of whether the Bank should seek reforms in connection with a proposed reconstruction project. Because such loans must be made quickly and usually benefit a limited geographical area, they are not generally suitable vehicles for policy reform. In cases of extreme distortion in cost recovery policies, the Bank may decline to finance the respective elements of the reconstruction program unless there is a long-term commitment to consider improvement; it should not, however, press for such improvements in the context of the reconstruction operation. Hard-pressed governments may agree to policy reforms which they later cannot implement. Resolution of disputes on such issues is likely to interfere with the main purpose of the project, the rapid restoration of physical plant and productive activities.

51. The government may have to introduce supplemental credit programs where commercial sources are insufficient to meet the needs of local government, business and households during the reconstruction effort. To avoid driving out normal sources of credit and creating a long-term dependency on such programs, they should approximate commercial terms as closely as possible and should be temporary. The normal tests of affordability and eligibility should be applied.

52. The benefits of credit may have to be expanded to cover those groups that under normal circumstances may not be eligible to obtain assistance due to limited creditworthiness or to issues concerning legal home ownership. The special situation of those groups that lack experience with credit has to be considered. Procedures for loan application in local credit institutions may have to be streamlined and simplified and education programs implemented to familiarize those groups with credit mechanisms. Lack of understanding of credit is widespread among low income urban groups and rural populations, who fear that lack of employment may affect their ability to repay the credit, and thus expose them to losing their homes. If necessary, access of tenants to loans for repair of the destroyed houses has to be contemplated taking into consideration length of occupancy and availability of alternative housing solutions.

IV. BANK SUPPORT FOR RECONSTRUCTION

Assistance in Project Preparation, Coordination, Implementation and Financing

53. Most governments have limited experience in dealing with disasters. The Bank could support them in a number of ways but the decision whether it is to become involved or not has to be made quickly in order to facilitate the Bank's presence at the site within days of the disaster event and ensure an efficient participation in reconstruction. The Bank could support reconstruction in project preparation during the assessment of damage and needs; in the identification of a reconstruction strategy; in strengthening institutional and coordinating capacity; in project implementation; in financing; and in the development of disaster prevention and mitigation measures. In addition, experience indicates that in a number of cases Bank support has played an important role as a catalyst for other reconstruction efforts.

54. In project preparation, early involvement in a reconstruction process provides an opportunity for the Bank to assist the government in the assessment of damage and needs; defining appropriate reconstruction strategies, identifying long-term implications of immediate responses; designing an appropriate institutional organization; and defining studies that will be required at a later stage. Since relatively few governments have either the knowledge or skilled manpower to conduct the assessment of damage and evaluation of needs, participation of experts able to make inferences based on prior reconstruction experience in the assessment may help to reduce the problem. To provide assistance with this task, the Bank could take advantage of existing in-house

specialized skills and also help organize expertise available in the country or in the region.

55. Assistance to the government in the coordination of reconstruction efforts is another area where Bank support could be of help. In post disaster situations substantial and varied emergency assistance converges on the affected area and the number of participating institutions is large. Coordination among government and international agencies is vital to avoid duplication of efforts, adoption of contradictory policies to guide reconstruction, neglect of areas that may be important to consider in the reconstruction strategy, and waste of resources. Bank experience may reinforce the government's capacity to coordinate efforts at all levels--local, national and international.

56. During project implementation there are areas that may require special attention and where Bank assistance could have positive effects. In the past in some cases project implementation suffered delays due to complex project design, institutional and management problems, and procurement and disbursement bottlenecks. In turn, delays in project implementation led to higher construction costs due in some cases to post disaster inflationary pressures and in others due to further deterioration of an already damaged infrastructure. The Bank could assist the country in assessing the capacity of its organizations; identifying specialized international agencies and NGOs with expertise on the problem and with capacity to implement components of the project; and in tailoring a suitably simple and limited set of reconstruction interventions.

57. Within the context of general country allocations, Bank investment in reconstruction could be done through the reallocation of existing loans with uncommitted funds or through substitution in future lending. Assistance could be achieved through program or sector loans or by developing a more project-specific reconstruction effort. In general there is no need for a departure from ordinary Bank lending mechanisms.

Reduction of Disaster Potential

58. The Bank can also assist disaster-prone member countries in efforts to reduce their vulnerability to disasters, both through regular projects and through reconstruction projects. Human activities affect in many ways the vulnerability of populations to disasters, the size of areas affected, and the severity and magnitude of the damage. The extent of damage from natural hazards, may be considerably increased or reduced by policies affecting the location of people and structures, materials and methods used in construction, ways in which the topography is modified, modes in which natural resources are used, emergency systems implemented, and transportation and communication systems developed. Although in recent years there has been an improvement in the concerns for disaster reduction and prevention measures in some disaster-prone countries, in many cases, avoidable costly destruction still persists. Bank assistance could be particularly helpful in the case of countries that are small and where the resources to cope with catastrophes at the national level are less adequate than in large countries.

59. The means to minimize the effects of disasters could be included in the process of project preparation, appraisal, and supervision in the context of potential future risks.* In preparing projects, any special features that may affect risk or vulnerability (e.g. seismic characteristics, topography, climate) could be identified and their implications analyzed. Costs and benefits of disaster reduction measures that merit consideration could be reviewed. The potential of some projects to serve special functions in times of disaster threat, the need to maintain disaster resource reserves, and other factors that may have an impact on vulnerability could, if appropriate, be incorporated in project preparation. In reconstruction projects, measures to reduce vulnerability to disasters should be a component in project design.

60. Programs of education and training to strengthen technical capacity of member countries with regard to disaster mitigation, prevention, and response may be supported. These programs could emphasize the integration of preventive methods in project preparation, data collection, planning, management and implementation.

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* Efforts to introduce hazard reduction measures were contained in project design in some Bank-financed reconstruction projects. The Romania post-earthquake reconstruction project had as one of its objectives to limit damage from future earthquakes through the development of a National Earthquake Protection Plan. The Romania Flood Recovery Project developed flood warning systems and flood prevention measures geared to reducing the loss to the economy of any similar calamity in the future, and setting up organizational arrangements to deal with future emergency situations. More recently, the Popayan Region Reconstruction Project included the development of a National Calamity Study to address disaster prevention and mitigation measures in the country.

V. APPROPRIATE PROCESSING OF RECONSTRUCTION PROJECTS

Procedures to Follow in Reconstruction Projects

61. The decision whether the Bank is to become involved in a reconstruction project has to be made quickly in order to facilitate the Bank's presence at the site within days of the disaster event and ensure effective participation in reconstruction. By and large, normal procedures are appropriate also for reconstruction projects except for the following that are specific to those cases:

- convening of a Reconstruction Advisory Group;
- early clearance of the project as a reconstruction project;
- preparation of a combined Staff Appraisal Report and President's Report; and
- simplified procedures.

A. Convening of a Reconstruction Advisory Group

62. In case of an emergency, a small Reconstruction Advisory Group will be convened by the Water Supply and Urban Development Department in order to:

- assist in the decision-making process concerning whether or not Bank participation after a disaster is warranted;
- estimate approximately the magnitude and type of support;
- address the multi-sectoral nature of the problem; and
- help ensure the preservation of institutional memory and continuity.

This will be an ad hoc group with experience in reconstruction. It would not have independent authority and its function would be to provide advice to the Regions and to the Loan Committee on issues concerning participation in reconstruction activities, project preparation, substance and design, and processing of effective reconstruction projects.

63. Of particular importance, the Reconstruction Advisory Group will operate as a referral service and it will assist the Regions in identifying rapidly the type and location of the expertise required whether available within the Bank or from consultants for participation in the identification/appraisal/supervision processes.

64. The Water Supply and Urban Development Department will act as the contact point for the Reconstruction Advisory Group. In those cases where non-urban sectors are part of the reconstruction needs, participation in the Advisory Group of staff from the relevant sectors will be sought. A member of the Legal Department will also be included. In order to facilitate the work of the Reconstruction Advisory Group, a file of specialized Bank staff and an international roster of consultants, both individual and firms with expertise in reconstruction, who could be called on to join the Bank missions in case of emergencies, will be maintained by WUD. WUD will also maintain background notes on reconstruction to assist the Advisory Group and staff working on reconstruction projects. With the understanding that the Bank is not expected to assume a leadership role in the field of reconstruction, and that it can provide assistance only on a case-by-case basis, liaison will be established with other agencies like WHO, FAO, UNESCO, UNDRO, and with NGOs with experience in emergencies that

may prove helpful and efficient in implementing certain aspects of reconstruction projects.

B. Early Clearance of the Project

65. Before a Region proceeds with a reconstruction project, the Reconstruction Advisory Group will help determine the advisability of Bank assistance. An initiating memorandum, proposed by the Regions, outlining the reasons for Bank involvement should be cleared with the office of the Senior Vice President, Operations (SVPOP). The memorandum should serve as a decision point on whether the Bank should be involved, on the magnitude of the Bank's support, and on the composition of this support.

C. Combined Staff Appraisal Report and President's Report

66. After determining the advisability of Bank assistance, the magnitude, and type of support, considering that speed is of the essence in a reconstruction project, a combined Staff Appraisal Report and President's Report should be prepared.

D. Simplified Procedures

67. Where necessary, established Bank procedures may be simplified to facilitate project preparation and implementation. The Reconstruction Advisory Group will provide the necessary expertise to facilitate a rapid project preparation process. In agreement with OPS, review schedules and procedures may be simplified and reduced. The Project Preparation Facility (PPR) may be used.

68. Bank procedures already exist that may be used to contribute to the speedy and effective implementation of reconstruction projects (e.g., advance contracting and retroactive financing) and, if necessary, to the rapid disbursement of project funds.

i. Procurement

69. Procurement is an essential aspect of reconstruction projects and a critical element in efficient project implementation. Problems with procurement have resulted in the past in higher costs and delays. Care must be taken that all parties understand procurement arrangements, including International Competitive Bidding (ICB), bidding under local procedures (LCB), and force account and that the most appropriate forms of procurement are agreed upon. The particular procedures adopted should be agreed upon by the borrower and the Bank and set forth in the loan agreement.

70. Labor-intensive methods of construction are substantially used in reconstruction. In those cases competitive bidding according to local procedures is particularly suitable, especially when the task includes a substantial number of small components that are not large enough to interest foreign bidders.

71. In some reconstruction projects, force account, that is, the execution of works by the borrower's own departmental forces may be an economic and efficient way of executing certain types of minor works. In many cases reconstruction activities are not suited to contracting because they are small works in remote areas, they are scattered or they are located in difficult areas during troubled times like in the case of civil wars. The principal advantage of using force account for

rehabilitation in those cases is that established forces can be mobilized and put to work rapidly. However, under the special conditions the established forces may not be sufficient and need to be strengthened. In the case force account is employed, an important concern should be that after the reconstruction is over the expansion in the capacity of the established forces is not beyond future needs. Thus the expansion and scheduling of work should be planned accordingly. Force account may be efficient to accomplish special training objectives such as the training of an agency's maintenance staff to cope with future periodic emergency work.

ii. Disbursement

72. The special conditions of effectiveness, are those peculiar to the project and may vary according to the type of reconstruction project. Requirements that may be necessary for the effective implementation of the project such as the acquisition of land needed for resettlement, the creation of a Reconstruction Unit and its staffing, appointment of technical staff to the agencies in charge of carrying out the projects, and the establishment of a special account may be put in the form of conditions of effectiveness. If possible, many of these requirements should be met before the loan is submitted to the Executive Directors for approval.

73. Advance contracting and retroactive financing may be used for the urgent repair of infrastructure and services, particularly in cases where seasonal factors may affect the urgency of rehabilitation works, where equipment is needed urgently or for establishing the Reconstruction Unit. Since in post disaster situations appraisal takes

place shortly after the emergency, advance contracting and retroactive financing could be limited to contracts let after appraisal. A consistency should be ensured between the elements to be retroactively financed and the reconstruction project as a whole.

74. The establishment of a working fund--a special account--may facilitate the disbursement of funds and ensure a continuous rate of construction. Depending on the specific conditions, the special account would be established separately and receive an initial deposit equivalent to several months' expenditures.

iii. Trade-Off Between Project Preparation and Supervision

75. The degree of detail with which a project can be prepared in a situation of emergency may differ substantiallly from normal situations. The detailed design of components before loan negotiation or loan/credit signing may not be feasible. Care must be taken to ensure that, if required, project description is general enough to permit a certain degree of flexibility, since departures from the original project may occur during implementation. Thus reconstruction projects require more than normal supervision to compensate for the limited project preparation time and information. Intensive supervision throughout project implementation will help reduce the potential negative effects of incomplete preparation, facilitate successful implementation, and consider all necessary steps to prevent extensions in the time required to complete the project. Staff or consultants with experience in reconstruction, and staff continuity, are two essential requirements for supervision.

Reconstruction Management Information System

76. Reconstruction projects tend to potentially have more implementation problems than regular projects in view of the uncertainties and difficulties to be expected. The development of a reconstruction management information system may be part of the effort by the Bank and the borrowing countries to improve disaster reconstruction and to take advantage of the lessons learned from experience. The management information system may be an essential instrument in facilitating the preparation of new construction projects and in ensuring the effectiveness of Bank's response.

77. The information system would facilitate the identification, collection and retrieval of relevant information; assist in analyzing issues and defining priorities and help in the implementation process. The information system would be built through monitoring of reconstruction projects, that is, through periodic reports of project progress. These can be reports on funds spent, facilities restored, number of people reached, training programs implemented, problems encountered, etc. Supervision missions and in-situ consultants could secure needed data for the organization of the information system. Information primarily designed to address problems of implementation and of operation, could be undertaken as part of the project progress reports. Ex-post evaluations integrated into the information system can help in future situations to adjust the character and nature of aid, anticipate needs, check for inaccuracies in the assessment of needs; and develop a systematic reconstruction response.