

FORMULATING POLICIES FOR DISASTER MANAGEMENT

1. ORIENTATION

In providing assistance to disaster victims, many differing approaches and programs may be used. Often, different approaches result in inequitable or unequal levels of materials and services. This can cause problems for the host government and for organizations with long-term commitments to the area.

One of the ways in which these problems can be avoided is by setting uniform reconstruction policies and minimum reconstruction standards. These provide a method for shaping the emergency and reconstruction response and a basis upon which program coordination can be effected.

Ideally, uniform reconstruction policies and standards are set as a part of the disaster preparedness process. If they do not exist at the time of a disaster, it is important that they be established during the initial stages of reconstruction planning prior to commencing the programs.

Normally, the host government is responsible for developing and implementing policies and standards, but all major organizations, especially those providing substantial relief, should participate in developing the documents.

Policies do not need to be extremely complicated nor long; in fact, the more simplified and brief, the better the chances of voluntary compliance. An example of basic reconstruction policies is shown in Appendix I.

Reconstruction standards should also be brief and uncomplicated. In housing, these may take the form of minimum building standards or performance criteria. An example is shown in Appendix II at the end of this paper.

2. KEY ISSUES

There are three key issues to consider when establishing and implementing uniform policies and standards. They are:

A. Who Sets The Policies

It is the responsibility of the host government to establish and implement policies and standards. A government, however, may be reluctant to develop or enforce these standards for fear of alienating foreign assistance agencies, and thereby reducing or hampering the aid process. In this case, the relief agencies or a consortium of the major donor organizations should get together and work out informal guidelines and minimum standards which all relief agencies can follow.

B. Compliance

Unless the government makes compliance an operating requirement, some agencies will conduct relief programs contrary to the expressed intent of the policies or provide services below the minimum standard recommended. If policies and standards have been developed by the government but are not enforced, donor agencies can assist by ensuring that projects they fund meet and/or exceed the standards set.

C. Restrictive Versus Permissive Standards

It is important that all policies and standards be flexible and permit relief agencies to adapt their programs to the specific requirements of the communities in which they are working. As a general rule, it is best to develop permissive policies and to set minimum standards, rather than to be overly restrictive. The objective of policies and standards is to guide reconstruction, not to dictate the precise approach of all relief agencies.

3. KEY CONCEPTS

A. Linkage to Development Plans

Reconstruction policies and standards should be coordinated with long-term development plans and objectives of the government. Reconstruction aid can be a means of helping to attain many of these objectives, and thus, reconstruction policies and standards must be compatible with long-term plans and, to the greatest extent possible, contribute toward these ends.

B. Performance Concepts

The establishment of policies and standards should be based on the level of performance desired. In housing reconstruction for example, the degree of safety to be attained in reconstruction of each building must be decided. This can be done by establishing the level of performance that is expected of each building. For example, it is probably not cost-effective (nor technically feasible) to rebuild every house so that it is completely disaster-proof; yet, it is possible to ensure that all houses have an increased level of safety. A primary objective of the standards, therefore, would be to encourage the development of more disaster resistant houses, i.e., a substantially increased level of safety, rather than to require that all houses be built to a high engineering standard. In terms of program implementation, this means that a variety of choices are available enabling the agency to select appropriate options, rather than follow strict engineering specifications.

4. PEOPLE AND ORGANIZATIONS

Key organizations that should be involved in the development of policies and standards are:

- Coordinating organizations
- Appropriate government ministries
- Appropriate financial institutions
- Voluntary agencies

- Representatives of affected trades
- Representatives of the local technical community
- U.S. A.I.D. Mission
- Appropriate U.N. Representatives

5. ROLES FOR RELIEF AGENCIES

Important roles which agencies can play are:

- A. Encouraging the appropriate authorities to develop and implement uniform reconstruction policies and standards as part of disaster preparedness activities.
- B. Encouraging the appropriate agencies to develop and/or review policies and standards during the initial stages of reconstruction planning.
- C. Providing technical input to the development of the policies and standards.
- D. Disseminating information about the standards and encouraging periodic review.
- E. Supporting compliance with standards and policies.

6. LESSONS LEARNED

- A. Without reconstruction policies and standards, relief programs and the aid they provide will be unequal, confusing, and in many cases, inequitable to the disaster victim.
- B. Reconstruction standards in housing should be based on safety considerations and increasing the structural performance of a house to better withstand expected disaster agents.

C. In order to achieve maximum compliance, as many agencies as possible should be involved in the setting of policies and standards.

D. The establishment of standards and policies provides guidance to volags in program planning and implementation.

E. Policies and standards should be based on reasonable expectations of performance and should recognize the capabilities and capacities of the implementing agencies.

F. The policies and standards must be set prior to the onset of reconstruction activities. Otherwise, they are unenforceable.

APPENDIX I

OBJECTIVES OF HOUSING POLICY RECOMMENDED BY HOUSING TASK FORCE (DOMINICA)

A. OBJECTIVE: To encourage people in unsafe areas to move to safe areas

METHODS:

1. Provide safe sites on government lands
2. Acquire safe sites where government land is not available
3. Provide services on a priority basis
4. Provide housing on a priority basis

B. OBJECTIVE: To support and stimulate local building market

METHODS:

1. Identify projects that will use Dominican resources for building materials
2. Provide a financial mechanism for funding these projects
3. Give priority to projects at the intermediate technology level
4. Give priority to those communities where employment needs are greatest
5. Support the existing building materials market system

C. OBJECTIVE: To stimulate participation by existing financial institutions

METHODS:

1. Guarantee a percentage of housing loans to persons within certain income limits
2. Provide loan funds to small credit institutions for loans to people
3. Open a housing window at National Commercial Development Bank (Agricultural-Industrial Development Bank subsidiary) for persons who are not members of any other banking or credit scheme

D. OBJECTIVE: To develop equitable distribution of housing, materials and service

METHODS:

1. Give priority in housing on the basis of damage to housing
2. Encourage a moratorium on refinancing of existing loans
3. Eliminate rent tax on property owners who will start to rebuild for renters within 6 months
4. Give priority to those not insured
5. Establish a price control mechanism
6. Establish a system with local impact to set priorities and to ensure equitable distribution

E. OBJECTIVE: To use reconstruction to stimulate national development plans and to establish firm land use plans

METHOD: Establish link with planning & development organization to formulate a policy

F. OBJECTIVE: To rebuild safer housing

METHODS:

1. Establish a committee to develop realistic methods for safer construction in Dominica
2. Distribute existing information on safe building techniques
3. Establish training programs for teaching safe construction techniques to carpenters and masons and contractors
4. Link loans to safe construction
5. Establish a pool of approved inspectors

APPENDIX II

RECOMMENDED BUILDING STANDARDS FOR JOYABAJ

I. Background

The purpose of the following building standards for the pueblo of Joyabaj is to provide a guide for the people when they build a formal house, to ensure that they build homes which will be safe for their families and which will not endanger the homes or lives of their neighbors.

These standards are what are known as "performance standards". This means that any type of house may be built, any size of house may be built, and any material can be used to build the house, so long as the final structure which is built is earthquake resistant, and so long as it does not endanger the lives or property of neighbors or passersby.

II. Definitions

- A. Earthquake resistant: A house is deemed to be earthquake resistant if it incorporates at least 75% of the earthquake resistant building principles and has a lightweight roof. Earthquake resistant does not mean that the house is earthquake-proof; it means that the house will suffer only limited damage in an earthquake and the occupants will have time to safely evacuate the house during an earthquake.
- B. Lightweight roof: A lightweight roof is defined as a roofing material which weighs less than 1 kilo per square foot. Examples: lamina, paja, duralita, oja de palma.
- C. L-Shaped house: An L-shaped house is one which is built in the shape of the letter "L", and in which the walls are continuous, not separated by crush sections.
- D. Lightweight walls: Lightweight walls are defined as walls which are either built of a lightweight material (such as wood, block, brick, or adobe de canto) or which do not exceed a height of 2.20 meters measured from the ground, or a combination of both.
- E. Steep slope: A steep slope is a slope which exceeds 60°, measured in declining numbers of degrees from the vertical (90°).
- F. General standards: General standards apply to all structures defined in Section III of this document.
- G. Dividing wall: A dividing wall is a solid wall which separates one lot from another, or which is used to subdivide a piece of property.

III. Applicability

These building standards apply to all structures in which people live. They do not apply to commercial structures, industrial buildings, churches, or buildings owned by the city of Joyabaj, the Department of Quiché, or the Government of Guatemala.

IV. General Standards

A. Siting:

- 1. No house will be located closer than 1 vara to another structure or to a dividing wall.
- 2. No house shall be located closer than 10 meters to a steep slope.
- 3. No house shall be built on a landfill or on the edge of a slope known to be leveled by bulldozing.

B. Form of the Structure:

1. No house shall be built in the form of an "L" unless a crush section made of lightweight material separates the two parts of the house by a minimum distance of 1 vara. The roof may be continuous as long as it is lightweight and also has a crush section.
2. No house shall have an exterior wall which is more than 2.5 times longer than the shortest exterior wall.
3. The parallel walls of all structures must be of equal length.

C. Safety Standards:

1. All houses must have doors which open outward.
2. No house shall have a cornice.

D. Roof:

1. All houses must have a lightweight roof.
2. All trusses must rest on the upper ring beam of the wall and not be built into the wall itself.

V. Earthquake Resistant Principles

All structures must use at least eight (8) of the following principles:

- A. Exterior walls should be lightweight.
- B. Exterior walls should be balanced by having doors and windows opposite each other in the parallel walls.
- C. Parallel exterior walls should be built of the same material.
- D. All doors and windows should be a minimum of 1 vara from the end of a wall.
- E. All doors and windows should be a minimum of 1 vara from each other.
- F. All doors in interior walls should be in the middle of the wall.
- G. All doors and windows should be in the long walls of the house.
- H. The highest wall of houses with shed (sloping) roofs should be no higher than $\frac{1}{2}$ meter above the opposite wall.
- I. All overhanging porches (corridores) should be fastened or built in an approved manner.
- J. All doors inside the house should open in the direction of the nearest door leading to the outside of the house.
- K. All houses should use lightweight gables (mojenetes).
- L. Mortar should not be more than 1" thick.

VI. Earthquake Resistant Principles Applying to Specific Types of Houses

- A. Bajareque structures: All houses built of bajareque must use six (6) of the following principles:
1. Bajareque houses should use cross-braces of wood or wire.
 2. Bajareque houses should use a continuous ring beam at the top of all the walls, interior as well as exterior.
 3. Bajareque houses should use a diagonal brace at each corner of the ring beam.
 4. All posts should be treated with a recommended wood treatment.
 5. All posts should be a minimum of 1 vara in the ground.
 6. All windows and doors should have vertical posts on each side of the openings.
 7. A stucco should be applied to both sides of the walls.
- B. Adobe houses: All houses built of adobe de sogá must use a minimum of eight (8) of the following principles:
1. Adobe houses must have strong foundations.
 2. Adobe houses should use cross-braces of wood or wire.
 3. Adobe houses should use a continuous ring beam at the top of all the walls, interior as well as exterior.
 4. Adobe houses should use a diagonal brace at each corner of the ring beam.
 5. Adobe walls should have strong corner posts in each wall, buried at least 1 vara.
 6. All posts should be treated with a recommended wood treatment.
 7. All windows and doors should have vertical posts on each side of the openings.
 8. Each third layer of adobe should have a strand of barbed wire laid between it and attached to the posts to serve as additional reinforcement.
 9. Exterior walls should use buttresses.
 10. Interior walls should be attached to posts in the exterior wall as well as use diagonal braces attached to the ring beam.
- C. Adobe de canto houses: All houses built of adobe de canto must use a minimum of six (6) of the following principles:
1. Adobe de canto houses must have strong foundations.
 2. Adobe de canto houses should use cross-braces of wood or wire.
 3. Adobe de canto houses should have wooden ring beams every two layers. These must be attached to the vertical posts.
 4. Adobe de canto walls should have strong corner posts in each wall, buried at least 1 vara.
 5. Adobe de canto houses should use a diagonal brace at each corner of the ring beam.