

International Learning and Best Practices in U.S. Transitional Shelter

Framework and recommendations on how to improve the U.S. shelter response by learning from the international shelter communities.

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Executive Summary: Improving Transitional Shelter in the United States

The goal of transitional shelter responses in the wake of an emergency or disaster is to improve the human living condition and to bridge the shelter gap between emergency shelter and redevelopment and reconstruction. This phase may last weeks, months, and even years and its success can significantly aid or hinder the redevelopment of a sustainable, secure, and productive community.

Over the last ten or more years, the international emergency shelter community has sought to pool knowledge on how to best implement transitional shelter processes and projects; as a result, they have compiled significant best practices and lessons learned. Many of these are applicable to transitional shelter situations in the United States. However, successful application depends upon analyzing their appropriateness and fit for the United States and the context of a particular response.

The purpose of this report is twofold. First, to identify how the international shelter communities define shelter issues and how they have integrated lessons learned into their existing work and best practice documents. Second, to leverage the resources and experiences of the international shelter community to determine how U.S. transitional disaster housing experience parallels that of the international community, and to initiate the process of integrating international best practices into U.S. policy and practice.

Meeting these dual objectives requires four components:

1. Definitions. A discussion of definitions and definitional differences between the international communities and the United States. Definitions differ between the United States, the humanitarian relief sector, and the development sector and these differences hinder communication and learning between sectors. Clearly articulating what each sector or community means when they use a key term will highlight differences and open a dialogue on how to better communicate needs and agendas to one another and to other stakeholders such as policymakers and local community officials.
2. Comparative Framework. A draft comparative framework to assess the appropriateness and fit of international best practices for the U.S. domestic post-disaster shelter context. Many best practices are context specific and are not fully applicable to transitional needs and expectations in the United States. There needs to be a standard framework to assess whether the goals and needs of a U.S. shelter response fit with the best practices and recommendations derived from the international experience.

The five-part comparative framework allows users to analyze and compare best practices and case studies, breaking each response into its most important components: key parameters and goals, the environment in which the response will take place, the affected community's role and needs, existing policy and needed policy changes, and institutional constraints and factors.

3. Case Studies and Best Practices. The five case studies included in this report were chosen to illustrate those best practices which have been identified both as most needed by experts, and at

which the United States has historically performed poorly and thus has the most to learn from international experiences. The selected case studies are: the response to the 2006 earthquake in Indonesia, to the 2005 earthquake in northern Pakistan, to the 2009 earthquake in Italy, and to the 2007 flooding in Southern England.

Each case study includes a description of the context of each disaster and its shelter response, and is then subjected to analysis using the comparative framework. By methodically considering if and how a practice or process applies to the U.S., this framework-based analysis allows the user to consider the merits of each best practice and to make better, more appropriate recommendations.

The best practices that are most critical to transitional shelter success and most lacking in current U.S. policy, process, and practice include:

- a. Expanding the range of options for transitional shelter to include options that: get affected communities back into their existing homes quickly, make use of the existing stock of apartments and hotels, and create permanent stock with an intended later use;
 - b. Building and leveraging community capacity throughout the post-disaster response and reconstruction effort to: improve community buy-in for the transitional response, leverage the entire community and private sector capacity; and position the community to economically grow after the transitional period; and
 - c. Focusing on the transition from post-disaster relief to community redevelopment and on using transitional shelter as a tool to help rebuild the community and housing stock and infrastructure better and safer.
4. Recommendations. Based on the best practices identified through the case studies, we make a set of recommendations targeted at U.S. federal government officials and policymakers on how to improve the U.S. post-disaster transitional shelter response. Highlights of these recommendations include:
1. *Affected communities should decide how they will organize themselves to participate in the construction effort.*
 2. *Agencies involved in reconstruction should decide how they will support and empower communities*
 3. *To ensure the consistent availability of funds, the relationships with all funding sources must be carefully managed and all funds carefully programmed and tracked*
 4. *All institutions and stakeholders participating in some phase of helping the affected population should be involved as early as possible in the planning process*
 5. *Agencies involved in reconstruction should decide with communities how to monitor and evaluate the involvement of the community in reconstruction*

1.0 Issues in Post-Disaster Human Shelter: The Need for Improved Transitional Shelter

In the wake of disasters around the world, there is a great need for immediate emergency shelter as homes are destroyed, damaged, and rendered otherwise uninhabitable. In time, given the necessary capacity and will, reconstruction and redevelopment efforts will put people into new or refurbished permanent housing either on the original site or in new locations.

In between the emergency shelter phase and the permanent housing phase there is a transition; in this period displaced persons need shelter solutions that are more durable, secure, and functional than emergency shelter, but which facilitate rather than inhibits them from moving back into permanent housing. This shelter need and its accompanying intervention phase is referred to as temporary or transitional shelter and is intended to be non-permanent or semi-permanent (used less than one year).

In the United States, the most commonly known form of transitional shelter is the Federal Emergency Management Agency (FEMA) trailer—the name for the mobile campers deployed after Hurricanes Katrina and Rita, as well as many other emergencies over the past twenty years. In the wake of Katrina, the trailers were widely criticized for causing health problems among residents as a result of their containing formaldehyde and are the recent subject of ongoing and already settled health-related lawsuits (CNN, 2012)(Centers for Disease Control and Prevention, 2008).

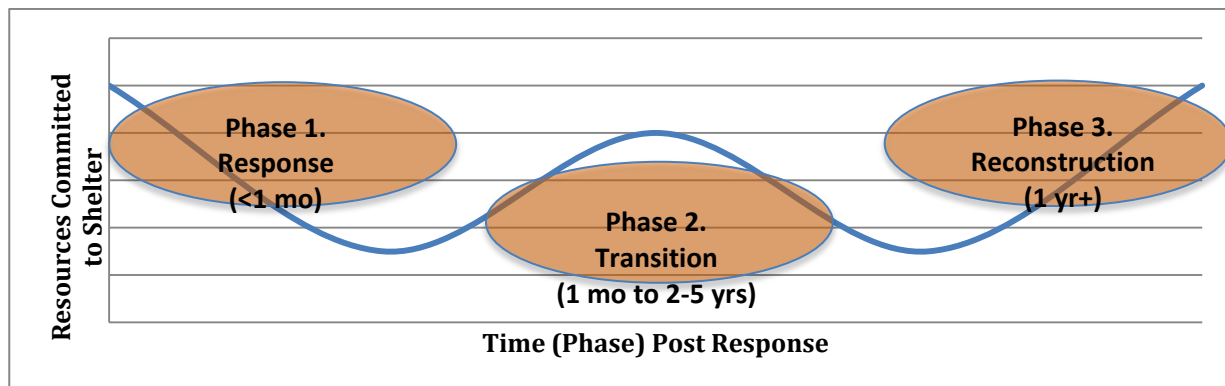
Transitional shelter solutions, however, can range from shelter material or house repair kits to vouchers for hotel rooms or apartments in nearby cities. Post-Hurricane Katrina, FEMA updated many of its guidelines on emergency and transitional shelter strategies, practices, and procurement—largely as a result of domestic lessons learned from this disaster and relief effort and at the request of multiple government agencies.

Critiques and recommendations for improving FEMA's shelter response include: the Department of Homeland Security Office's *FEMA's Sheltering and Transitional Housing Activities After Hurricane Katrina* (2008), the Government Accountability Office's *DISASTER HOUSING—FEMA Needs More Detailed Guidance and Performance Measures to Help Ensure Effective Assistance after Major Disasters* (2009) and Francis X. McCarthy's *FEMA Disaster Housing: From Sheltering to Permanent Housing* (2009) for Congress. However, within the United States there has been only minimal learning from the international disaster relief and development communities, despite the long-term involvement of the U.S. international aid community in foreign disaster response and reconstruction.

One of the key issues facing transitional shelter as a whole (including in the United States) is post-disaster response gaps that result from transfers of responsibility between levels and areas of the government at the federal or national, as well as local and state levels. The 2008 report *FEMA's Sheltering and Transitional Housing Activities After Hurricane Katrina*, concluded that “the lack of a unified federal, state, and local catastrophic disaster housing plan... contributed to many of the planning shortfalls in meeting disaster victims' housing needs.” (DHS, 2008) This lack of a unified plan creates

critical gaps that lengthen response time, reduce effectiveness, and inhibits the process of rebuilding houses, communities, and local economies in the wake of disasters.

Figure 1. Gaps in Post-Disaster Shelter Response



The first gap is in the continuity of funding between emergency response and long-term reconstruction. Emergency funds are made available almost immediately by governments or other institutional donors, and this funding is often reduced as funding from other sources is mobilized for reconstruction. This leaves little in between for transitional shelter; as a consequence, transitional shelter projects are sometimes started immediately and without proper planning or are delayed, to the detriment of the displaced population. A resource and planning issue, this can be addressed through better Goal Setting and managing Policy and Institutional factors inhibiting resource distribution.

The second gap is one of poor planning. If competing plans are developed, for instance, by different levels of government or donors, then the resulting policy and funding uncertainties may delay (and have delayed) or halt altogether a response that meets obligation to the affected population. This is a planning gap is primarily related to inadequate goal setting and organization and can be addressed through improved Goal Setting and considering the Environment and Institutional Reality.

A third gap concerns implementation. For example, a humanitarian agency specialized in, or funded for, emergency lifesaving activities may leave an area before the post-disaster situation has stabilized. This is primarily related to institutional, policy, and process factors and can be addressed by considering existing and necessary Policy and Institutional Reality.

The fourth important gap is in the capacity of the affected population to participate in the response. While the initial shock, financial losses and post-disaster migration and dispersal may limit the affected community's initial contributions, the affected population has a significant role to play in the response. In the short term, this community has the best knowledge of its own needs; in the long term, it often is the most significant source of necessary capital—social, labor, and in many cases economic—in the transition and reconstruction phases in weeks, months, and years ahead. The U.S. government can and should learn from the international disaster relief community, where successful examples of effective shelter and reconstruction projects “had the close involvement of all the people affected, often through existing community groups or specially established committees.” (IFRC, 2008)

2.0 Purpose: What Can the United States Learn from the International Community?

The purpose of this report is to analyze and make recommendations for improving the U.S. disaster shelter policy and response by drawing on lessons learned from the international humanitarian shelter community and their experience.

The context of the United States is very different from other countries, and particularly of the developing countries where the humanitarian and development communities primarily work; because of this, many lessons and best practices from the international community may not cross-apply. Each will need to be considered on a case-by-case basis using a standard comparative framework. We have created such a framework with a goal of discovering—and providing a method for others to discover and apply—international practices that may improve U.S. shelter practice.

To this end, we define key terms related to disaster shelter, outline the comparative framework for transitional shelter, and apply this framework through case studies.

1. There is a good deal of disagreement and confusion over terms within the U.S. and between the United States and international humanitarian and development communities. To remedy this, we review current definitions and terms related to post-disaster shelter and housing in order to highlight definitional differences; the goals of this section are to reduce confusion in discussions between these communities, to make policymakers aware of these differences, and to discuss possible improvements to and coordination of U.S. definitions.
2. We develop a broad framework for shelter planning and analysis with the dual goal of highlighting the most important factors in developing a shelter strategy and providing users with a tool to analyze the applicability of a specific best practice or strategy to their particular context within the U.S.
3. Finally, we draw on case studies from the international shelter community to provide best practice recommendations on how to improve U.S. policy and practice within the different operational context of the U.S. disaster relief experience. The best practice recommendations exist both as part of the whole document and as standalone policy briefs; each is structured within the shelter comparative framework, seeks to provide enough context to be valuable to U.S. policymakers, and uses case studies to illustrate how the lessons of the international disaster shelter community can be leveraged to improve American disaster shelter policy and planning.

3.0 Disaster Shelter and Housing: Defining and Clarifying our Terms

Common definitions and clarity of terminology is essential to the successful transfer of lessons learned and best practices. Competing or non-specific definitions are likely to hamper planning and response efforts as it confuses or weakens the message to funders, stakeholders, local players, and government officials. In addition, common language within and between disaster-related communities allows disaster institutions to better assess performance, create concrete roadmaps and goals, and work cooperatively.

At present, however, the communities involved in disaster shelter use different and sometimes contradicting definitions and terms. In this section we define key terms used within each community and highlight the significant distinctions between terminology usages within each community.

We consider three primary communities relevant to post-disaster shelter. These are 1) the international humanitarian (disaster response) community, 2) the international development community, and 3) the U.S. domestic disaster response community. The humanitarian response community is concerned primarily with immediate post-disaster relief (Phase 1), while the domain of the development community is primarily redevelopment and reconstruction (Phase 3). However, there is significant overlap between the domains and responsibilities of each community, especially in the transitional phase or time period between meeting immediate shelter needs and reconstruction or redevelopment efforts, assuming these efforts occur.

For more than ten years the humanitarian shelter community has worked to create common definitions. This effort has been somewhat successful as shown by the glossary provided in the *2010 Literature Review of Shelter after Disaster*, published by the Shelter Centre, as well as in the *Shelter After Disaster* strategy handbook. These documents collect the best and most widely accepted definitions for terms related to shelter, settlement, and reconstruction. These definitions draw extensively from the UN framework “Shelter after Disaster: Strategies for transitional settlement and reconstruction,” as well as from various U.N. agencies, the World Bank, the IFRC, and “Transitional Settlement, Displaced Populations” by Tom Corsellis and Antonella Vitale.

In the United States, shelter terminology is generally set and defined by the U.S. Code or FEMA. (U.S. Code, 2010)(FEMA 2010)(HUD).

3.1 Key Terminology in Post-Disaster Shelter Communities

	Humanitarian	Development	United States—domestic
Shelter	<p>Shelter is a humanitarian community output, and includes both structural and non-structural forms of sheltering, including transitional shelter. (Chuck Setchell, 2011)</p> <p>More specifically: A habitable covered living space, providing a secure, healthy living environment with privacy and dignity for the groups, families and individuals residing within it. (Corsellis and Vitale 2005)</p>		<p>Provides short-term refuge and life-sustaining services for disaster victims who have been displaced from their homes and are unable to meet their own immediate post-disaster housing needs, (FEMA, 2010).</p> <p>This is typically the high school gym floor, a convention center, a hotel, or grandma’s attic, and most often for a very short period of time (3-5 days). For periods greater than 2 weeks, long-term/mega shelters require greater square footage (60 rather than 40 ft² of dormitory space). (FEMA, 2010)</p>
Housing		Housing is a development (including reconstruction) community output, and focuses on permanent solutions to the need for living space.	
Transitional Shelter	<p>Intended to last 2-5 years, though often occupied longer.</p> <p>Provides a habitable covered living space and a secure, healthy living environment, with privacy and dignity, for both displaced or non-displaced occupants over the period between a conflict or natural disaster and the completion of transitional reconstruction. (Corsellis and Vitale, 2005)</p>		<p>Facilitates the movement of individuals and families experiencing <i>homelessness to permanent housing</i> within 24 months. (U.S. Code, 2010)</p>
Interim Housing/ Temporary Housing	<p>Term not used in international community. U.S. “interim housing” is most closely synonymous with the international community’s term “transitional shelter.”</p>		<p>Intermediate period of housing assistance that covers the gap between sheltering and the return of disaster victims to permanent housing. (FEMA, 2010) Also referred to by FEMA as temporary housing.</p>
Transitional Reconstruction		<p>This term implies a transformation of shelter to a more permanent and durable solution, which in development is typically done over a lengthy (years long) period of time using limited resources, and is typically occupant-built.</p>	

3.2 Disagreement in Shelter Terminology

Shelter versus housing

According to many in the international community, shelter in the context of disaster relief is the broad term used to describe interventions or structures that meet basic protection and shelter needs throughout the post-disaster cycle, from the immediate emergency response up to permanent reconstruction. The definition and requirements for shelter are that it be “a habitable covered living space, providing a secure, healthy living environment with privacy and dignity for the groups, families and individuals residing within it.” (Corsellis and Vitale, 2005)

“Shelter” is enshrined in human rights law and The Humanitarian Charter (Sphere Project, 2011) as a component of “adequate housing.” The Sphere Project (2011) notes, “Shelter is a critical determinant of survival in the initial stages of a disaster. Beyond survival, shelter is necessary to provide security and personal safety, protection from the climate and enhanced resistance to ill health and disease. It is also important for human dignity and to sustain family and community life as far as possible in settlement and non-food item responses should support communal coping strategies, incorporating into the process as possible.”

This use of shelter in the international humanitarian and development communities is not universal. UN Habitat, for example, uses the term shelter to mean permanent housing rather than “basic protection” interventions and structures as defined by The Shelter Centre and most others.

So what is housing? The transition from shelter to housing focuses on permanence and on a solution that meets the long-term household and community economic, social, and security needs. Generally the humanitarian community is concerned with providing shelter, while the separate development community is concerned with building or assisting communities to (re)construct permanent, stable housing solutions. There is often a responsibility and service gap in the transition between shelter and housing projects, which take months, years and in some cases, decades to be realized.

Transitional Shelter: A post-disaster or homeless shelter solution?

The term transitional shelter as widely applied in U.S. policy does not refer to post-disaster shelter or housing in any way.

The terms “transitional shelter” and “transitional housing” are used interchangeably in the United States and refer to an entirely different concept than that of the international relief community. The U.S. Congress in the *United States Code* defines transitional housing as “housing the purpose of which is to facilitate the movement of individuals and families experiencing homelessness to permanent housing within 24 months or such longer period as the Secretary determines necessary” (U.S. Code 2010). Rather than a program designed to aid in the post-disaster recovery, the U.S. definition focuses on the transition from homelessness to permanent housing.

“Transitional shelter” (or “t-shelter”) is a term widely agreed upon within the international community as the collective term for the shelters, material kits, prefabricated solutions, and local building(s) that provide basic human sheltering and security needs during the transitional phase between a disaster and permanent reconstruction. This stage or aspect of post-disaster sheltering is also termed: intermediate, second stage, medium-term, semi-permanent, and interim housing or shelter.

The definition of “transitional shelter” in the 2010 *Literature Review for Shelter after Disaster* reads as follows:

“... the term [transitional shelter] describes family shelter which provides a habitable covered living space and a secure, healthy living environment, with privacy and dignity, for both displaced or non-displaced occupants over the period between a conflict or natural disaster and the completion of transitional reconstruction, that is [often, but not necessarily] intended to be relocated, upgraded, or disassembled for materials, and that may be supported as an assistance method.” (Corsellis and Vitale, 2005)

The Shelter Centre definition emphasizes not only the physical shelter itself, but related processes—“a process rather than a product,” and clarifies that that the transitional shelter approach is not another phase of response, but a process of building and upgrading incrementally and that use of transitional housing must not take away from the question “transition to what?” (ALNAP Innovations, Case Study No. 5) However, the process of transitional shelter in the United States may look very different than that of the much of the international community; with the relatively high U.S. standard of living, private and public insurance, and a strong federal government role in post-disaster reconstruction, an approach focused on incremental improvements to shelter are unlikely to yield acceptable permanent housing.

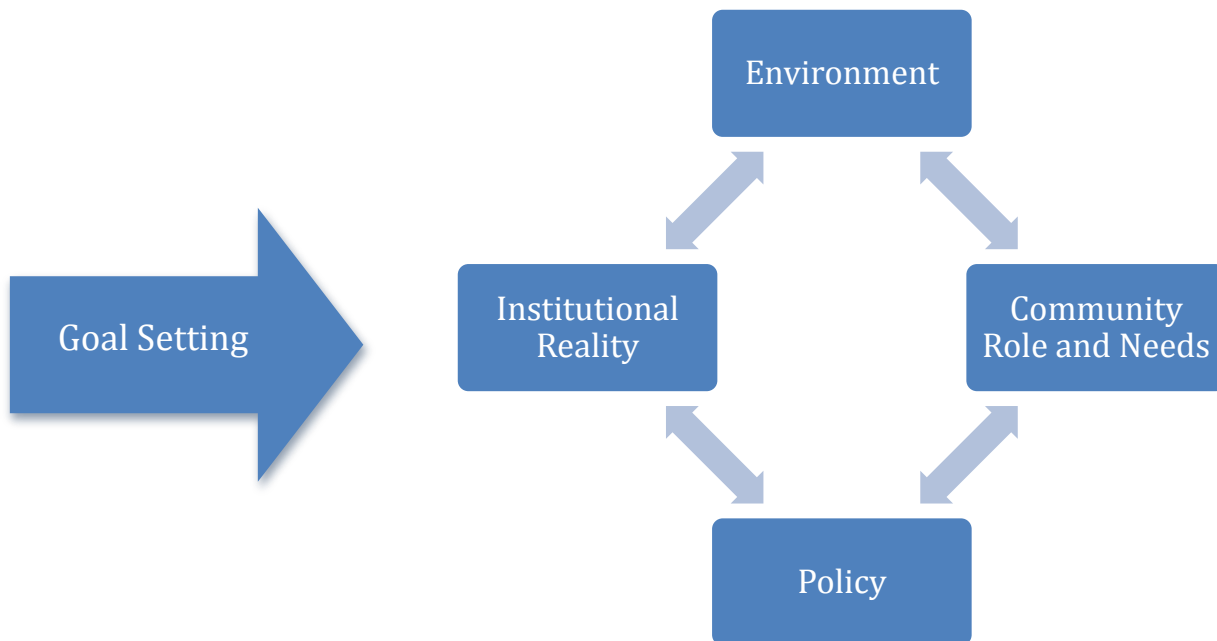
4.0 Disaster Shelter: A Comparative Framework for Analyzing Best Practices

The context of each disaster, humanitarian response, and redevelopment is different and unique. As such, each successful disaster shelter project must fit the needs, goals, and specific context of the situation. This is especially true of cross-situational learning where the context, economic, environmental, etc., is drastically different.. To promote cross-situational learning it is necessary to create a comparative framework into which all best practices and case studies can be input and assessed along identical criteria.

This framework must be comparative in nature, include the primary determinative factors in intervention success, and allow for learning to be applied across contexts and despite differences in shelter needs and goals. Ultimately, the framework is intended as a tool for disaster shelter planning, policymaking, and analysis.

The first level of this framework consists of five broad analytical categories: assessing the basic parameters of the need and the best practice (parameterization), the environmental context, the community role and needs, existing policy constraints and opportunities, and the institutional reality at play. These categories are the most important factors in developing a successful shelter policy, strategy, or intervention as well as those factors most likely to vary significantly between countries.

Figure 2. Framework for transitional disaster shelter analysis



4.1 Using the Framework

Each of the five framework categories includes key components that must be considered in order to effectively apply a new strategy, policy, or best practice. Many components are listed as questions; these are not intended to have a “right” or “wrong” answer and need not all be answered. However, they will help users identify the key components of the international best practice, of the domestic need, and whether and how a particular lesson or practice in question applies to that need.

The framework is not intended to address every possible issue in constructing an effective disaster shelter intervention. Instead, within each of the five categories the determinative questions seek to address key differences and barriers that may inhibit cross-context learning, and to provide a framework for considering how to apply lessons to the United States disaster shelter experience.

This basic framework requires the user to start by considering and comparing the user’s goals and needs and that of the international best practice or case study (Goal Setting). The purpose of this step is to determine what the user’s needs and goals are and whether the best practice in question meets these goals.

Next, the user should assess the best practice(s) under consideration using the next four categories. The focus of this stage in the framework is to determine whether the best practice applies and how to adapt that best practice to develop a successful transitional shelter response.

4.2 Goal Setting

Goal setting should be the first step in your analysis as well as a factor you consider throughout the analytical process. The purpose of this category is to ensure that the goals of your transitional housing need align with those of the best practices and recommendations you are integrating into your approach. At a basic level, through goal setting you are asking three questions:

1. what are the goals and purposes of my response?
2. Can any international best practices contribute to my meeting these goals and needs? And
3. How does this practice or process need to be adapted to better align with my context and goals?

While the goals of each response will be unique, the following set of questions may help you to set your own goals and consider the appropriateness of international best practices:

In setting your own goals and integrating international best practice recommendations consider:

- **WHY.** What would be the purpose of using a transitional shelter response and is it appropriate for the scale and nature of the disaster?
- **WHAT.** Identify best practices with similar goals to your own that may be appropriate for your need and goals.
- **WHO.** Who is being targeted in the response? Who is responsible for implementing the response?

- **RESOURCES.** What resources are available to you? Who pays the cost of the response and is that cost paid now or in the future?
- **INTEGRATE GOALS.** Is this or should this shelter intervention be combined with other humanitarian and reconstruction efforts—especially public health, sanitation, and economic development initiatives?
- **WHEN.** What is your timeframe for the transitional phase? What is the lifecycle of the transitional shelter solution (including prefabricated, built, and rented shelters)? For example, how long is a prefabricated transitional shelter (such as a trailer) intended to be in use and what happens to the shelter after its initial intended use (e.g., integration into the permanent house, sold, recycled, converted to secondary use, etc.)?
- **LONG-TERM.** What comes after the transitional shelter? For the targeted individuals and communities, as well as for the shelter solution itself? Remember that transitional shelter (where appropriate) must transition TO something else. Projects should seek, where possible, to improve the living situation of the affected population. Is this possible in your case?
 - Examples of quality of life improvements: quality of housing; creating economic opportunities; Infrastructure sustainability and land use planning; use of new renewable, efficient, and safer energy and water sources; preservation of cultural or historical heritage.

The next four framework categories: Environment, Local Community Role and Needs, Policy, and Institutional Reality (4.3-4.6) can be assessed in any order; each of the categories relates to one or more of the goal-setting questions—prioritize assessment based on which you consider to be the most significant to your needs and goals. While using the framework, keep your short and long term goals and needs in mind and remember that the goal of this framework is to consider **WHETHER** and **HOW** an international best practice can help you to meet your goals.

4.3 Environment

Relates most to goal-setting questions on: **WHY, WHAT, RESOURCES, and WHEN.**

The local environment and climate plays an important role in the nature of shelter needs and appropriate solutions. Environmental factors that should be considered in whether a best practice applies in the U.S. include:

- Climate
- Nature of the pre-disaster housing, density, and infrastructure. For example, was the community urban, rural, or peri-urban and how does that change the intervention requirements.
- Challenging topography that presents transportation and logistical challenges

4.4 Local Community and Stakeholder Role and Needs

Relates to goal-setting questions on: WHO, RESOURCES, WHEN, and LONG-TERM.

The most important factor in meeting your LONG TERM transition and community improvement goals are what the capacity of the local community and local stakeholders is to participate in or take ownership over the transition and what resources the community need during the transition and reconstruction phases of intervention.

In the U.S. domestic context, the specific needs, role, and capacity of the local community for adapting to disasters and creating their own transitional shelter solutions has been underappreciated and underutilized. Better understanding of how to leverage this capacity and work with local communities is one of the most significant best practices that the United States transitional shelter community can learn from the international community. In order to determine how to apply this best practice to the U.S. context, needs, and goals, consider:

- What are the minimum expectations of the local community? In the U.S. the expectations for a shelter solution are likely to be much higher than for the developing world, with people expecting better serviceability, quality, space, durability, and security. As such, few shelter kits and models from the developing world will be adequate in the United States and most of the cross-applicable best practices from these countries will relate to processes, procurement, and planning rather than the shelters themselves. Forms of transitional shelter and shelter products
- What is or could be the role of the community in the intervention? What is the community's capacity and willingness for self-sheltering? Are there opportunities to use and build upon local capacity and organization for now and in the future by organizing an intervention appropriately?

4.5 Policy

Relates most to goal-setting questions on: WHY, WHAT, RESOURCES, INTEGRATE GOALS, and LONG TERM.

Any new program, process, or policy for transitional shelter interacts with existing policy and practice at the national/federal, regional, state, and local levels. Looking at existing policy is particularly important where implementing a new best practice will require policy change.

Key questions to think about with a new practice or policy include: How will existing U.S. policy be affected and what needs to be done in order to maximize uptake and buy-in for the policy? How does the policy change the role of responsible parties at each level?

The elements of any policy are its:

1. Principles: what should a policy achieve and a general view of how to arrange public affairs.
 - For example: the principle that local communities have the right to a voice in how their disaster relief and reconstruction efforts are planned and implemented.
2. Strategies: specific intentions on how to achieve overarching ideas.
 - For example: designing an emergency planning process that includes public input and that improves coordination between the multiple levels of governance.
3. Instruments: the tools of government and governance that include informational, economic, regulatory, and voluntary instruments.
 - For example: public awareness campaigns on the shelter rights of affected persons, insurance industry regulations on compensation payments, or a financing provision that provides grants to households for temporary or transitional housing payments in hotels or apartments.
4. Practices: behavior or official action normally expected to carry out policy measures. The key issues are implementation and how policy interacts with existing norms and practices. This element is the most important to consider in new transitional shelter policy success as failure to consider the practical “how to” will inhibit uptake of the new policy or approach.
 - For example: does the local government have the necessary training and personnel to carry out a planned transitional shelter program or would a shelter plan that involves temporarily moving people out of state be acceptable to the local community?

4.6 Institutional Reality

Relates most to goal-setting questions on: WHO, RESOURCES, WHEN, and LONG-TERM. The WHO question should focus on the responsible institutions or agencies and the procedural gaps that may inhibit a fluid transition from an initial response effort to permanent housing solution.

All post-disaster programs are enabled and constrained by the institutions and agencies—government and non-government—within which they operate. The most visible institution in U.S. emergency relief is FEMA, though other players include local and state governments, NGOs, insurance agencies, and the private sector. Many of the best practices and case studies from the international humanitarian and development communities focus on the role of NGOs and local capacity as the central government generally has only limited capacity, resources, and financing with which to intervene. In the United States, the capacity of the federal government and the private sector is generally quite high and these institutions generally play a dominant role in designing and implementing transitional shelter projects. However, the role of all institutions and stakeholders should be considered in adopting a new approach or policy.

The most important institutional questions to consider are:

1. Who bears the burden of risk and responsibility for loss and relief/reconstruction, e.g., private insurance, local government, national government, private citizens, or NGOs or community groups?
2. What are the existing procedural gaps, i.e., the common gap between disaster assistance and development reconstruction that will inhibit the flow from an effective immediate disaster relief to reconstruction?
3. How many levels of government are involved and how is the coordination among these levels of government?
4. And what are the additional institutional factors, e.g., corruption, bad community data, etc. that will inhibit the success of this project and can any existing best practices help to overcome these barriers?

5.0 Best Practice Case Studies: Introduction

This section presents five case studies of international transitional shelter responses. This diverse cross-selection of case studies includes developed and developing countries, hot and cold climates, and disasters ranging from flooding to earthquakes. Each case study was chosen as it has at least one unique or particularly well documented lesson that the United States could benefit from learning. In addition, case studies were preferentially chosen to illustrate best practices that are both particularly necessary to disaster response success and at that have not been adequately integrated into the existing American disaster response institutions and processes.

Best practices focus on those related to:

1. Expanding the range of options for transitional shelter,
2. Building and leveraging community capacity throughout the post-disaster response and reconstruction effort, and
3. Focusing on the transition from post-disaster relief to community redevelopment and on using transitional shelter as a tool to help rebuild the community and housing stock and infrastructure better and safer.

Note that neither the case studies nor the list of best practices is intended to be comprehensive. Appendix 1 is a reference list that includes links and access information for disaster shelter libraries, recommendations, case studies, and standards; we encourage you to find additional information on international best practices, case studies, and recommendations through this reference list.

Each case study starts with a brief description of the context of each disaster and its shelter response. Based on discussions in the disaster shelter literature, expert opinion, and response successes, we identify key best practices from each case study.

These best practices are subjected to analysis using the comparative framework (see above) as a template by which to determine *which* best practices are cross-applicable to the United States and *how* they should be modified to fit the U.S. context and needs. Through this analysis the five case studies illustrate how to use the comparative framework and the utility of the five components: first parameterization of the case study and the U.S. need, and then the environment, community needs and capacity, institutional reality, and policy.

5.1 Expanding Options in Transitional Shelter

Transitional shelter in the United States has historically been focused on procuring products such as mobile homes and trailers that are theoretically used temporarily and then either refurbished for future use or sold. This product-focused approach has benefits including the ability to house communities near to their homes and the ability to deploy the transitional shelters quickly. However, these products do not universally meet the shelter needs of the affected population, the timescale and goals of the response, and the institutional reality of U.S. federal, state, and local agencies and stakeholders.

The processes to acquire shelter and chosen shelter solutions must focus on meeting identified needs and goals rather than on just choosing a limited range of products that are already owned and available. The U.S. government has experimented with alternative procurement processes and shelter solutions, but this experimentation needs to be formalized and expanded.

Existing shelter options can provide flexibility, healthfulness, and security, and are capable of meeting human and community needs in the transition period (Phase 2) between emergency response and long-term reconstruction. These options are diverse and some are considered in the case studies below. In planning for emergency response and in the post-disaster period, goal setting and prioritization must be the impetus for the selection of shelter solutions and procurement processes rather than the reverse.

Defining Procurement

When considering the workable options for meeting transitional shelter needs, it is important to understand the difference between procurement processes and procurement products and the role each plays. Products procured are best understood as a part of or an option within a range of responses. Procurement processes are part of a broader emergency planning, risk mitigation, and response process that seeks to determine *whether* a product is the best solution and *how* to best acquire and deploy the product. Additionally, procurement processes are a tool to bridge the important gaps between the emergency lifesaving effort and post-disaster reconstruction.

5.1.1 The 2009 Abruzzo Earthquake, L'Aquila, Italy

Temporary Housing Solution Implemented by the Italian Civil Protection

(M6.3, 2009)

Soon after the April 6, 2009, Abruzzo earthquake, whose epicenter was near the city of L'Aquila, Italy, the Italian government began to analyze the feasibility of a temporary housing project. The first estimate after the earthquake was that 20,000–25,000 people would need temporary shelter. Later, it was agreed that 4,500 units would accommodate the temporary housing demand of all families with three or more members whose houses were destroyed or severely damaged by the earthquake.

Previous Italian experience with earthquakes had shown that reconstruction in a historical center can take 5–10 years, and sometimes longer, which creates a difficult situation for the affected population. While L'Aquila is in a cold mountainous area, the earthquake occurred in April, the beginning of six

months of good weather for construction. This made the option of building comfortable temporary housing much more feasible. Another consideration was that, because there are approximately 15,000 students seeking housing in L'Aquila every year, the temporary apartments could eventually be reused as student dormitories.

Government approved the temporary apartments project, called Progetto C.A.S.E (Complesse Antisismici Sostenibili ed Ecocompatibili or Antiseismic, Sustainable, and Ecofriendly [housing] Complexes), at a cost of 700 million euro (US\$929 million). The aim was to build energy-efficient, seismically sound temporary apartments in 3-story buildings. A total of 16 firms won design contracts. The new houses needed to be available within six months and to have expected useful lives similar to normal houses. While different designers used different materials (timber, steel, or concrete), all the units were prefabricated and had to meet a rigid time completion schedule. The design criteria and construction process were planned to allow this accelerated construction schedule. The foundations of the houses are composed of a double platform: the lower one is a foundation plate that rests directly on the ground, and the upper platform lies on more than 7,000 seismic isolators mounted on steel columns fixed at the foundation plates. The design drastically reduces seismic forces and makes the buildings earthquake-resistant. The covered area between the two plates is designed for underground parking. Besides paying for Progetto C.A.S.E., government is covering the repair costs, including seismic retrofitting, of all permanent housing.

Best practices from Italy include:

- An analysis was begun by the Italian government to first assess the feasibility of a temporary housing project. Initial estimates were adjusted as more information was obtained. Feasible and considered goal setting (Comparative Framework Section 4.2) was a major determinant of project success.
- The government undertook a formal study of transitional shelter options to find those options that meet their primary identified goals and needs: providing safe and climate appropriate housing for victims that can be re-used in the future when the city center is re-built. Rather than a previous shelter option driving goals, the selection of the apartments (to be converted into university dormitories) was driven by government and community goals and priorities.
- The government issued a competitive bidding process that multiple firms were able to win in order to meet shelter needs quickly due to impending winter—an environmental concern (Framework Section 4.3)—and to leverage the full capacity of the private sector in meeting shelter needs. The houses provided by the winning firms were prefabricated and had to meet a schedule for completion. The design and construction process allowed for an accelerated construction schedule.
- The temporary homes were built back better as they were designed to be capable of withstanding future earthquakes.

Applying the best practices in the United States

These best practices following Italy's earthquake suggest the importance of a flexible analysis. Things can change quickly after a disaster, and as more information is obtained, an analysis about what is needed must be accommodating to these changes. Additionally, the importance of having different options in transitional shelter in different environments would be important to incorporate in the United States. Also, the design firms who won contracts suggest the value in having entities outside the government be allowed to come in and provide services. The interaction between these firms and the government regarding all aspects of the design and construction process and the time schedule for completion must be considered. Failure to account for the specific roles of each participant could lead to interruptions in funding and poorly integrated programming of funds with all of the relevant participants. Lastly, efforts in building homes back better should be applied where appropriate.

5.1.2 The 2010 Chile earthquake, Central Chile

"Red Card" program

(Shelter Centre, 2011)

After an off-shore earthquake destroyed thousands of homes in Central Chile and caused widespread infrastructure and economic damage throughout the country, the Chilean government provided affected families with basic transitional homes, which still required improvements such as insulation, stoves or bathrooms. Many residents lacked the financial resources to make these changes or repair their damaged homes.

Through the innovative "Red Card" program, the Red Cross is now helping people make improvements or repairs by providing debit cards to assist up to 42,000 people. These cards allow families to purchase up to \$350 in tools and materials at select hardware stores throughout Chile. To date, cards have been distributed to more than 5,000 families.

"The most important aspect of the Red Card is that it allows people to buy according to their needs," explains Guillermo Garcia, regional director of Latin America and the Caribbean for the American Red Cross. "During the relief phase, our conversations with those affected demonstrated that even more could be done to assist family recovery. This card allows people to buy items that improve the basic safety and comfort of their homes."

When one recipient, Carolina, received her card, she felt hope returning. "I had no money to repair my house, but now the card brings me closer to returning home."

Best practice from Chile:

- A debit card program that allows people to buy according to their needs instead of the government attempting to think about how to cover the basic needs of affected communities.

Applying this best practice in the United States

FEMA did attempt to distribute \$2,000.00 debit cards after Hurricane Katrina, and they were aimed at people who did not have bank accounts or addresses. Confusion over when and how they would be distributed led FEMA to cancel the program. Additionally, the project's significant incidence of fraud and mismanagement, including sending duplicate cards to over 40% of the 11,000 recipients, was attributed largely to FEMA's poor (almost nonexistent) process controls and oversight (GAO, 2006). But the idea of allowing people to buy according to their needs did have the desired effect in Chile, and the concept of rapidly providing capital means to fix and get people back into their existing homes should be implemented in the United States. There may need to be further study on the implementation and abuse of the program, but the idea of giving people the resources to get what they need is an important aspect to rebuilding after a disaster.

5.2 Leveraging Local Community Capacity and Improving It for Future Relief and Reconstruction/Development Efforts

The need to leverage a community's capacity for the purposes of reconstruction and development is often vital for its future prospects. Since communities know the most about their own local environment, culture, vulnerabilities, requirements, and building techniques, they need to have a central role in planning or at least directing reconstruction efforts.

There is a need for leveraging community capacity in the United States, particularly in light of the divisions of responsibility between local, state, and federal institutions that create response gaps and exacerbate already difficult response and reconstruction processes. Thus, there exists a need in America for local stakeholders to collaboratively carry out a number of activities that would allow the process of reconstruction to minimize these divisions. It should be mentioned, however, that the success in developing countries of leveraging such a capacity might not translate well to the United States, as U.S. citizens have higher expectations of what their government can provide than do those of most developing countries. Houses built out of simple kits or large (10-15 member) families in a single unit will not likely meet the expectations of affected U.S. communities.

5.2.1 The 2006 Java Earthquake, Indonesia

Organizing Community-Based Resettlement and Reconstruction

(Jha, et. al, 2010)

Somewhat hidden from the world by the ongoing flurry of Aceh tsunami recovery, the 2006 Java earthquake was nevertheless an enormously destructive event. Over 350,000 residential units were lost and 5,760 persons were killed, most from the collapse of non-engineered masonry structures. Using lessons learned from the tsunami experience and resources from the ongoing Urban Poverty Project (UPP), the Indonesian government was able to respond quickly and efficiently. Facilitators were recruited and villages elected boards of trustees, which later were instrumental in organizing community meetings and supervising implementation.

Key activities included (1) identifying beneficiaries and prioritizing the most vulnerable; (2) establishing housing groups of 10-15 families, who chose their leaders and a treasurer; (3) developing detailed plans to use the construction grants for each group; (4) opening group bank accounts; and (5) obtaining approval of plans, disbursement in tranches, and group procurement, construction, and bookkeeping. Training was provided to community members and local workers to ensure earthquake resistant construction. Later, the community developed plans to rebuild village infrastructure and facilities, with a particular focus on disaster resilience. Communities conducted self-surveys, prepared thematic maps, analyzed needs and disaster risks, agreed on priority programs, and established procedures for operations and maintenance. Grants for infrastructure were also disbursed in tranches through the selected bank as work progressed. An adequate understanding of rules and a sense of ownership by the community were essential to ensuring good targeting and plans, accountability, and social control of

implementation. The involvement of women increased accountability and enhanced the appropriateness of technical solutions. The role of facilitators was crucial, as they both ensured effective communication and adaptability of the program to local situations as well as compliance with program principles. In all 6,480 core houses were funded by a World Bank loan under UPP, and another 15,153 units were funded by the multi-donor Java Reconstruction Fund. This approach to reconstruction became the model for the much larger government-financed rehabilitation and reconstruction program, under which about 200,000 houses were rebuilt in Java.

Best practices from this case study include:

- Housing groups of 10-15 families chose their own leaders.
- Groups were given bank accounts.
- The community developed plans to rebuild infrastructure and facilities.
- Communities conducted self-surveys and analyzed their own risks and needs.
- The involvement of women increased accountability and enhanced appropriateness of technical solutions.

Applying Javanese Best Practices in the United States

There are many questions that need to be asked about taking the experience from Indonesia and applying it to the United States. Among the most important involve the expectations of the affected community with respect to quality of housing, durability, and security. This is something that must be identified, as it will determine how a community's capacity will be improved and used in the recovery effort. There may not be any international examples that translate well to the expectations of communities in the U.S. Whether housing groups of 10-15 families is too small or too large may also depend on expectations of the community.

The environment here is important. The climate in which a community lives will matter, as will whether the environment is urban or rural. This may determine which victims are most vulnerable and how priorities are made. The topography of the area may matter in how materials are transported.

Whether bank accounts should be opened for housing groups, individual families, or whether debit cards should be used depends on the community. Wealthier communities may be able to manage fine with bank accounts, where poorer communities may need debit cards, but these needs must be decided in consultation with stakeholders.

The approval of plans on the way forward seems particularly important for success. How can communities or housing groups work together to decide what they want, and how FEMA can approve of the plan and allow for the disbursement of funds? There are not many answers from the international experience about such matters, and any suggestions must be considered carefully as communities in the U.S. may be very different from those in other countries. How working with communities and empowering them to make their own choices and how much freedom they should have and at what

cost is something worthy of further study and consideration. There must be guidelines and accountability along the way, but how to integrate that with FEMA and an affected community is not possible to concretely answer here without some further guidance. Does the government itself need personnel with particular training, or is it possible to devise a plan that can be acceptable to affected communities in the United States?

This orientation only serves to provide the context for the recommendations that follow, and the limitations inherent in them.

5.2 2 The 2007 United Kingdom Flooding

Study produced in response to 2007 flooding on the need for community capacity building, planning, and training

(Building Futures, 2007)

In 2007 summer flooding throughout England and Wales flooded more than 50,000 homes, nearly submerged entire cities, and caused approximately 6.2 billion USD in damage. In response, a study was produced noting the importance of preparing for significant flooding events in flood zone areas and along coastlines in light of sea level rise and increased likelihood of heavy precipitation events predicted to result from climate warming in the United Kingdom. Changes in weather patterns and water levels had already seen the Thames Barrier (the movable flood barrier protecting London) closed more than 15 times a year. The study discusses both structural and non-structural methods of dealing with expected flooding in the future: the creation of places and spaces which will accommodate the expansion of the water and allow flood plain communities to adapt to and live with a reality of rivers and estuaries that do flood (a strategy followed in the Netherlands and referred to as “make room for the river”); the creation of a ten mile barrier at the mouth of the river; and the possibility of controlled flooding and the increased use of soft and environmental defenses.

Regarding the idea of controlled flooding, the report offers several suggestions on how to do this. The first is to let each existing town within the Thames Estuary become something different and unique to the entire landscape. For example, Rochester could develop into a tourist destination with a beautiful campus or Medway Marshes could become the first national park to serve the people of London. These ideas could attract large numbers of visitors. These ideas might lead to development in areas that might otherwise remain underdeveloped and more vulnerable to flooding. Another approach could focus on the benefits that flooding could have such as making Basildon a beach destination due to its proximity to the shoreline. A new waterfront here might make it the focal point for cultural projects and leisure developments.

Best practices include:

- Creating new areas to accommodate expected flooding in the future, as well as a barrier at the mouth of the river to protect against future flooding.
- The possibility of using controlled flooding to bring development to areas that otherwise might not experience it.
- Involving local communities and their specific economic, social, and geographical needs and realities to dictate the nature of flood risk management.
- Producing government-funded reports in post-disaster scenarios that are targeted to local and regional planners and that provide guidance on how to prepare for and mitigate damage from disasters in the future.

Applying these best practices in the United States

While not necessarily directly related to transitional shelter, the 2007 England flood has significant lessons for the United States on how to share information with stakeholders, involve local communities, and leverage insurance and the private sector—all critical components to a successful U.S. shelter response.

Many of the ideas in the 2007 England flood study bring to mind a database maintained by FEMA on various areas in the U.S. at risk for flooding. In FEMA's Flood Map Viewer found here (<https://hazards.fema.gov/wps/portal/mapviewer>), there is a color-coded map that expresses the risk of flooding across the country. There are also reports linked to the data that describe how an area's particular flood risk designation (color) was decided.

Since traditional forms of city, commercial, and industry development are recommended against in areas at high-risk of flooding, these at risk areas face both natural disaster and economic challenges that can only be met through innovations in land use, economics, technology, and local river management practices. While national resources may still be necessary, flood risk mitigation activities should work with local communities to—as this report recommends—turn flood risks into an economic and social opportunities.

Such a locality-based approach attempts to provide new identity and uses for at-risk areas by reframing the potential or reality of increased flooding and water as an advantage—a new reason (such as a lake or canal) to visit or live nearby, an opportunity to create a wildlife habitat or to call attention to a historical site. While the opportunities are different for each at-risk area, by combining the existing FEMA risk database and reports with locally-generated ideas on development opportunities, it is possible to develop structural and non-structural flood mitigation projects that serve economic, social, and hazard reduction goals. The model of using federal government data and risk assessments in combination with local economic, social, and cultural knowledge to create unique and multi-purpose

hazard interventions may be the most effective way to produce locally accepted and beneficial flooding interventions.

All of the best practices listed from England study could likely be applied in the United States because of the strong similarities between the two countries. The populations in each country have similar expectations regarding their standard of living and role of the government in providing services and managing the human and economic impacts of disasters. In addition, both countries have governments that split central and strong local control, and government-funded reports about post-disaster scenarios provided to local and regional planners would likely provide useful guidance about how to prepare for and manage disasters in the future.

An additional similarity between England and the U.S. is that housing insurance is covered by private companies for all but the poorest citizens and this adds an additional stakeholder and possible complications, but also spreads the risk to more parties, an important element when attempting creative but unproven ways to help areas that are at high-risk for flooding. For example, while ideas deemed too risky by private insurers would likely need to be insured by the government, through a public-private partnership the private insurance sector may be able to leverage financing and rates to improve local buy-in and spur innovation in flood cost-reduction projects.

While there are complicated arguments to be made about insurance, counterparties, and financial instruments, both the U.S. and England have similar methods of spreading risk and the private insurance industry must be recognized as a possible partner in developing and deploying tools for innovative, unproven, and potentially profitable ventures.

5.3 Reconstruction as Development—Build it Back Better

Transitional shelter is not a phase of reconstruction, but should be considered a philosophy that recognizes that reconstruction takes years to complete and that shelter is required throughout this period. As such, transitional shelter is an important component to meeting Long Term reconstruction and redevelopment goals. There is opportunity in a post disaster context to build back the community's housing and infrastructure so that it is safer, more resilient, and better meets human needs than it did before the disaster. In addition to good goal setting and planning, the opportunity to “built it back better” requires community involvement throughout the process and integrating shelter needs and solutions with economic, health, and other redevelopment goals. While technically considered separate post-disaster phases, the transition (Phase 2) and reconstruction (Phase 3) are intimately connected as a good transitional shelter solution is critical for the ongoing success and involvement of the affected community and involved institutions and other stakeholders.

A case study in support of community involvement throughout the post-disaster process comes from the state government of Gujarat, India following its 2001 earthquake. Termed Owner-Driven Reconstruction (ODR), this case study showed that involving and giving some responsibility and initiative to the affected community produces high levels of satisfaction.

The World Bank also used ODR after the 2004 Indian Ocean tsunami in Thailand and Sri Lanka and after the 2005 North Pakistan earthquake. The Bank funded reconstruction and therefore was in a position to influence government reconstruction policy. In these cases, both official Bank documents and evaluations carried out by other agencies that pursued this approach confirm that this was the most successful housing assistance strategy. A further discussion of the Pakistani earthquake follows below.

5.3.1 The 2005 North Pakistan Earthquake, Pakistan

Flexibility in ODR Housing Reconstruction and Retrofitting

Following the North Pakistan Earthquake of 2005, the Pakistani government promoted ODR to rebuild some 400,000 houses. Under the lead of the Earthquake Reconstruction and Rehabilitation Authority (ERRA), a multitude of international NGOs joined this program. Homeowners were responsible for the reconstruction of their own houses, with technical assistance and financial support disbursed in tranches. Insufficient capacity in the field can slow down the pace of construction and increase the likelihood of substandard construction work. To prevent this, ERRA facilitated the mobilization of decentralized teams who could provide technical updates and onsite training to the scattered beneficiaries. ERRA also used field observations and field testing to decide whether to allow different construction techniques and developed retrofitting methods to increase or maintain the seismic resistance of diverse housing styles. The approval of the local timber-frame construction style Dhajji was vital for the success of the reconstruction effort; statistical analysis indicates that, as compared to concrete block masonry, Dhajji houses are less costly and can be made acceptably seismic-resistant. Also, Dhajji construction techniques are easier for homeowners to understand, utilize, and adapt to local contexts, preferences, and resources. Three years after the earthquake, almost 300,000 seismic-

resistant houses were nearing completion. An overarching factor in this success was the constructive way in which homeowners and those managing the implementation of the program were able to interact as the program was carried out.

Best practices from Pakistan include:

- Homeowners were responsible for the construction of their own homes.
- Pakistani government provided decentralized teams who could provide updates and onsite training to the beneficiaries.
- Pakistani government also used field observations to decide whether to allow certain construction techniques to increase or maintain seismic resistance.
- Constructive interaction between homeowners and those managing the implementation was crucial in building almost 300,000 seismic-resistant homes.

Applying these best practices in the United States

This example from Pakistan fits into our framework for analyzing best practices in that the Pakistani government had a long-term development goal: the construction of 400,000 homes. The ERRA considered the seismic environment and developed techniques to increase or maintain the resistance of the housing style. One procedural delay in moving from disaster relief to reconstruction was the insufficient capacity in the field, which slowed the pace of home construction. One aspect in this case study, which is not workable in the United States, however, is the construction of homes by the affected population themselves. Workers will likely need to be hired to rebuild homes in the United States.

6.0 RECOMMENDATIONS:

Upon a review of the best practices identified in the case studies, the authors have made a set of recommendations targeted at U.S. federal government officials and policymakers on how to improve the post-disaster transitional shelter response in the United States. These recommendations were derived while considering the current needs of transitional shelter processes that are written about in the literature and were discussed by various experts in interviews with Lindsey Marburger in preparation for this report.

The needs identified included bridging the unfortunate divisions between local, state, and federal governments and between emergency response and reconstruction. These divisions lengthen response time and reduce effectiveness. Another need was a flexible approach that recognized what affected populations could do, as they are the ones with the greatest stake in rebuilding their communities. A further need involved understanding the difference between product and process in disaster relief. The last major cited need was that institutional donors do not allow sufficient timeframes. As a result, transitional shelter is either started too early without enough time to finish or it doesn't get started until much later when families are more interested in permanent reconstruction.

6.1 Procurement Recommendations

The U.S. government should incorporate the following ideas into its procurement processes for transitional shelter:

1. *To ensure the consistent availability of funds, the relationships with all funding sources must be carefully managed and all funds carefully programmed and tracked.* Fund programming should include, where possible, institutions and agencies whose initial preference may be to operate outside of the government. The best funding is often the most flexible and readily available.
2. *All institutions and stakeholders participating in some phase of helping the affected population should be involved as early as possible in the planning process.* This would help resolve both the planning and funding gap by ensuring that only one plan is produced, rather than two or more that may not integrate adequately.
3. Any agency that must withdraw from the area before the situation has stabilized and reconstruction well underway must *hand over the responsibilities and caseloads* to agencies involved in reconstruction, or the coordination, efficiency, and consistency of the response may be jeopardized. Many agencies leave in such circumstances, so an effective coordination mechanism is essential to ensure a smooth transition.
4. A debit card program should be started that allows the affected population the option of undertaking critical repairs in their homes. Cards worth \$350 were provided in Chile, but the value would need to be more in the U.S. due to differing living condition expectations. FEMA has attempted a debit card program before that was largely ineffective. However, if combined with

a private sector partnership program allowing trained contractors or builders to assess needs and undertake repairs, this concept would contribute to communities staying in place. (Habitat for Humanity is, for example, a major resource and player in the field of critical repairs. For more on their critical repairs program, see: Federation of American Scientists, 2011.))

5. The following recommendations on how to leverage local community capacity.

6.2 Leveraging Local Community Capacity Recommendations

To leverage and improve local community capacity, the United States should do the following:

1. *FEMA should work with all stakeholders, including the affected communities, local government, and agencies involved in reconstruction to help define the role of communities in planning and managing reconstruction.*
2. *Affected communities should decide how they will organize themselves to participate in the construction effort.*
3. *Agencies involved in reconstruction should decide how they will support and empower communities to play the roles they have agreed to take on, and how two-way communication with communities will be established and maintained throughout reconstruction*
4. *Agencies involved in reconstruction should decide with communities how to monitor and evaluate the involvement of the community in reconstruction to ensure that agreements regarding role(s) and responsibilities are fulfilled on all sides. This monitoring should take place at both the community level and the national level for the overall reconstruction program.*
5. *FEMA should design or commission other reconstruction agencies to design training for community members about reducing future disaster risks. An understanding of the rules and a sense of ownership by the community are essential for good planning and accountability.*

6.3 Reconstruction Recommendations

In many cases, and especially where housing stock is repairable, the best solution for communities and individuals may be to reduce or eliminate use of transitional shelter (Phase 2) and speed up reconstruction and repair of permanent housing solutions (Phases 3). Decisions on transitional shelter and permanent housing require community consultation and buy-in; decision making processes should empower families and communities to choose the solution(s) best suited for them:

1. To foster development that builds it back better, *the U.S. government should selectively deploy an Owner-Driven Reconstruction (ODR) approach* where people who lost their shelter are given some combination of cash, vouchers, and in-kind technical assistance (TA) to repair or rebuild their homes. They will almost certainly not undertake the construction themselves, so employing a local contractor, laborers, or some combination should be explored.
2. *The ODR approach requires good oversight and governance*—a government capable of establishing and enforcing good standards and an agency (governmental or nongovernmental) responsible for reconstruction quality control. The United States already has significant oversight capacity through municipal, state, and national building code inspectors and standards-setting bodies (namely ASHRAE and the ICC), as well as federal agencies (especially Housing and Urban Development.)
3. Prior to the disaster occurring and throughout the disaster response, there must be *agreement among all stakeholders on performance benchmarks of those responsible* for transitional shelter and redevelopment, on reporting procedures, and on allocation of responsibility for establishing the baseline and the monitoring system.
4. *Affected communities should decide how they prefer to organize themselves* during reconstruction and should have some voice in the form of assistance and in how government agencies decide on shelter and reconstruction solution and processes. Community empowerment for decision-making is often an important component to building a better functioning infrastructure and housing.

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7.4 International Transitional Shelter and Post-Disaster Shelter Resources

The Emergency Shelter Cluster:

<http://www.humanitarianreform.org/humanitarianreform/Default.aspx?tabid=77>

Housing Reconstruction: www.housingreconstruction.com

One Response: www.oneresponse.info

Relief Web: www.reliefweb.int

The Shelter Cluster: www.sheltercluster.org/Pages/TheClusterApproach.aspx

Shelter Centre: www.sheltercentre.com