Guiding Principles for Training in Reconstruction

- Training is the intervention that most determines whether the housing reconstructed after a disaster is an improvement over what people had before, especially with respect to disaster resilience.
- A training program should be developed based on an assessment of housing damage, the reconstruction approach, and the recommended technical guidelines.
- An appropriate organizational set-up is a necessity for a training program, as are sufficient resources to mobilize trainers and a system for producing and distributing written material.
- Training should be simple and based on people’s everyday experience—the simpler the instructions, the better. Good results come as much from instilling a “safety mindset” in builders as from the sophistication of the knowledge imparted.
- Training on the job is an essential component of a training program. Follow-up is needed throughout the reconstruction process.
- Development of a training program should start early on, and be finalized only when the reconstruction approaches have been agreed to and detailed damage assessments have been conducted.
- The training design must be adapted to specific country conditions and reconstruction requirements.

Introduction

The training of those who will be directly involved in housing reconstruction programs can play a decisive role in ensuring the quality and disaster resilience of the reconstructed housing. Key considerations in developing a training program concern its organization, the technical content, and the form in which damage data is gathered and information is provided to those involved in construction.

To ensure that a training program reaches wide coverage, scaling up is a major concern. The system usually needs to have a multiplier effect, whereby it starts with the training of trainers, who then go on to train others. The content of the training generally does not need to be technically difficult; a worker with modest skills should be able to learn the requirements in a few days. However, learning requires an open mind, since innovations in construction methods often need to be introduced. Small but specific adjustments can have an enormous effect on building resilience. The training curriculum should be designed to help builders acquire a commitment to safety improvement.

Key Decisions

1. The lead disaster agency should decide how reconstruction training will be managed within the context of the housing and community reconstruction strategy and ensure that adequate staff and resources are available for the lead training agency.
2. The lead training agency should help decide on the reconstruction approach after conducting a thorough review of housing damage in the disaster region and, based on that review, design the training program.
3. The lead training agency should decide on the requirements and begin recruitment of the core team, the trainers, and the field teams as early as possible, even while the training program is being designed.
4. Agencies involved in reconstruction should decide on the human and financial resources they can provide to assist with the development of the training program and with the complete dispersion of training activities and materials throughout the disaster region.
5. **Agencies involved in reconstruction** should coordinate with the **lead training agency** to incorporate training into their projects and to agree on standards and procedures for monitoring and evaluation of training activities.

6. **Local governments** should coordinate closely with the **lead training agency** and should ensure that relevant local building codes, guidelines, and approval procedures are incorporated in the training program.

7. **Civil society organizations associated with the building trades and academic institutions** should decide how they can support the training process and contribute their expertise during development and implementation of the training program.

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**Public Policy Related to Reconstruction Training**

Post-disaster reconstruction training is unlikely to be contemplated in any public policy document, except when a country has post-disaster institutional arrangements in detail before the disaster. Regulations such as building codes and technical guidelines for builders should be analyzed and incorporated in training if they are relevant.

Those developing a post-disaster reconstruction training program should clarify early on whether there is training capacity in the construction trades, in either the public or private sector. If there are licensing requirements for building trades, for example, there may be public or private training institutes, training materials, and experienced trainers who can be called on to help develop and implement the post-disaster builder training. Associations of building trades may also be a resource, especially if they have programs to train or credential their members.

To ensure the quality of training programs, a number of countries are developing accreditation programs for training. The accreditation ensures that training programs are evaluated by an external body to determine if applicable training standards are met. Some countries have independent organizations that oversee the accreditation process, while others accredit through a government agency. Professionals carrying out these efforts should be involved in the development of post-disaster construction training. Faculty from institutions of higher learning, such as schools of engineering and architecture, and built environment professionals such as chartered surveyors may also be able to contribute expertise.

In the absence of a sufficient local institutional framework, international experts can also be called on, but their expertise should not be allowed to completely displace that of local technical experts and builders. Additional resources that may be useful in developing the training program are listed in the Resource section, below, and in Chapter 10, Housing Design and Construction Technology.

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**Technical Issues**

The advice in the chapter is based on extensive experience with training. It describes in detail a particular model that may not be appropriate after a particular disaster. However, the principles on which this model is built can be applied in nearly every situation.

**Scope of Training Requirements**

There are training needs in almost every stage of a reconstruction project. This chapter focuses specifically on those training activities that help ensure (1) the accurate identification of damage (that is, the detailed damage assessment of houses, not the initial post-disaster needs assessment [PDNA]), and (2) the quality of the physical housing reconstruction. Such a training program should include the following:

- Training of technical advisors and supervisors
- Training for detailed damage assessment (at this stage, the degree of damage of each house is identified and the houses are assigned a category for housing assistance)
- Training of owners and other builders in the field
- Training for data collection and information management

In a large disaster, the first three elements ideally entail the training of trainers, in order to reach adequate coverage.

The training program must be tailored to the reconstruction approach and is especially critical if the reconstruction will be carried out by owners (owner-driven reconstruction) or by small-scale,
s semi-skilled contractors. It includes two components: a component for training in assessment and a component for training in reconstruction. Only training in assessment is necessary if the reconstruction is to be fully implemented by professional construction firms with knowledge of resilient building practices, an approach likely to be employed, for example, in an urban context for the reconstruction of multi-story buildings. See Chapter 6, Reconstruction Approaches, for additional information.

**Typical Training Program Staffing**

The staffing requirements should be carefully planned and adjusted according to what is learned during the scoping study, the detailed damage assessment, and/or the reconstruction process.

A “four eyes” principle is strongly recommended, which implies that no field team should have fewer than two people. The number of field staff on each team may be as many as five, depending on such factors as the accessibility of the sites.

The team staffing includes the following elements.

**Chief Training Officers.** The core team includes two chief training officers (CTOs)—one for assessment and one for reconstruction. Each CTO should have an organizational assistant and assistant for preparing training material (demonstration models and handouts). The CTO for reconstruction is also supported by a senior mason and a carpenter to do practical demonstrations during the demonstration phase of the training.

The CTOs should have experience in training and in the execution of several reconstruction projects, and a sound technical background and demonstrated skills to develop training material and to translate technical problems into demonstrations that can be understood by unskilled people. It is preferable that the person be as independent as possible, so s/he is usually an expatriate.

After the initial training of trainers (first level), the CTOs should oversee subsequent training and pilot activities, and ensure that a commitment to training standards is maintained.

**Assessors.** As well as carrying out detailed damage assessments, a frequent (and recommended) practice is to employ members of assessor teams to later carry out the field supervision once their assessment assignment is fulfilled. If this is done, members of assessment teams will need to receive training in both assessment and construction, and the training sessions will need to be scheduled in a way that this is possible.

**Trainers.** The first-level trainers are responsible for training field supervisors and advisors (second level). Once the second-level training sessions are completed, an ideal task for the first-level trainers is supervision and cross-checking the field teams. The staffing of the training teams is two persons at a minimum: one with a background in building construction (an engineer) and one with experience in working with villagers (social worker or community facilitator).

Some trainers should remain available for additional training during the project, as the field teams are subject to turnover. One trainer can later oversee 10–15 field teams, depending on the geography and distribution of field sites.

While it is advantageous for the team members to be experienced engineers or to have a construction background, the basic technical knowledge can in fact be learned from the
training. In special cases when more in-depth technical know-how is required, experts from the core team can be brought in.

**Crafts persons.** One crafts person is assigned to each reconstruction training team to oversee hands-on activities during training. The crafts person’s assistance is required mostly during the model-building phase (first six months).

**Information experts.** An information management expert should either be added to each assessment team or be available for daily data input. Administrative oversight and management of databases should take place at the agency responsible for overseeing reconstruction and the training system.

**Timing of Training**
The more time that passes after the disaster, the greater the probability that people will begin to rebuild without any guidance or supervision. Therefore, training for assessors and reconstruction technical advisors should start as soon as possible after the disaster, once the critical decisions are made about reconstruction and training material can be prepared. Similarly, reconstruction field teams should be deployed as soon as possible after the damage assessment. The first reconstruction field teams can be ready about two weeks after the completion of the detailed damage assessment, which provides sufficient time to construct pilot houses in the field, as reconstruction scales up over several months.

**Structure of Training Program**
The following figure shows the relationship of the different elements of the training program.
Principles for Organizing the Training Process

The core team should organize the training process based on the following guidelines.

The core team. The core team is the starting point of training. The core team designs the content of the training and organizes and conducts the training of trainers. Later, the core team is a resource pool for handling queries, updating recommended practices, and designing remedial measures for mistakes that are likely to occur.

Training of trainers. The model proposed depends on the multiplier effect of training trainers who themselves go on to train others using the same methodology. It is extremely important during training to ensure that not only technical knowledge is transmitted. Most important is that the trainees get skills to explain the key issues to the next level, so that the proper implementation takes place in the field. The emphasis should be on establishing a commitment to proper construction and safety on the part of the trainers and builders, on understanding the typical working conditions, and on overcoming predictable challenges.

Who trains whom. Trainers receive training from the core team. The trainer teams then train the field teams, which should have a similar staffing structure. The field teams then provide supervision, advice, and on-the-job training to the builders and owners in the field.

Supervision and feedback. The usual 1-day training of crafts persons is considered to be almost useless if not followed up in the field. Similarly, the provision of superficial information to homeowners (a half-day presentation or use of posters) does not provide the necessary understanding of how to construct or reconstruct safely. Instead, there should be continuous on-the-job training and efficient supervision, adequate feedback mechanisms, and constant oversight of reconstruction in the field to ensure that the desired results are being produced.

Technical basis for training. Preparation of training material needs to start at a very early stage and should be well coordinated with the overall social communications strategy, which may employ radio, television, or other media. See Chapter 3, Communication in Post-Disaster Reconstruction.

Calculation of staffing requirements

In a project in which 50,000 houses are to be reconstructed, one team of two persons (one engineer and one social worker serving as a field team) can manage the reconstruction of 100–120 houses, under average conditions. Assuming the lower number allows for staff level fluctuations during the project. Therefore, 500 teams of 2 experts need to be trained.

The core team conducts the first-level training of trainers, which results in 10 teams of trainers after two weeks. The second-level training (conducted by these 10 teams) can train 10 field teams in every training session of two weeks. In 10 weeks, the trainers can conduct five such trainings, resulting in 500 field teams (5 x 10 x 10). Three months (2 weeks for one training of trainers + 10 weeks for field team training) is approximately the same as the time needed to conduct the detailed damage assessment. If the project is larger, the core team should train a second group of 10 trainer teams.

The figure of 100 houses per team is conservative. Average time of construction per house, access to housing sites, available time for construction (weather conditions and harvesting time are examples of factors to consider), and frequency of visits or interactions of the supervisors with the beneficiaries will all affect this ratio. It is assumed that supervisors will visit each site or village twice a week, spending four days a week in the field and one day in administrative duties. These calculations must be adjusted based on the experience gained during execution, so flexibility is a must.
Training in detailed housing damage assessment. The first stage of the assessment component of the training program is the training of trainers, using a training approach that the newly educated trainers will follow when they train the assessment field teams.

Training in damage assessment should take place in three steps. Step 1 is classroom instruction for approximately three days, including lectures in the morning and practical demonstrations as well as tests using photos of damage in the afternoon. Step 2 is assessment field training, which should take approximately one week, during which the group is divided into teams that evaluate the same group of houses on different days followed by comparative analysis and discussion of the results. The goal is for different assessment teams to reach uniform results. Step 3 should be lectures to consolidate acquired experience and cover assessment problem solving.

The group of assessors trained by the core group will go on to train the field assessment teams. Trainers from the core group should oversee the next level training process by visiting training activities and taking corrective measures, where required.

Specific content of training. The content of the training program should include learning to assign damage categories, estimate the housing assistance (if based on damage), and collect required data. (The same team may also be involved in organizing the qualification process. See Chapter 15, Mobilizing Financial Resources and Other Reconstruction Assistance.) Topics include:

- Basic information about disaster effects and typical damages (earthquake, storm, flooding)
- Understanding what can be repaired and strengthened and what cannot
- Criteria for the specific categories of damaged buildings (normally three categories) and understanding of the related structural design issues (guidelines are required)
- Procedures regarding what should be documented and how (photography, global positioning system [GPS] data, forms and procedures, information from owners)
- Information on grievance procedures (should be defined by the time of the assessment)
- How to deal with social issues in the field (complaints, assaults, bribery attempts, etc.)

It is also necessary to provide for data collection and information management. Assessors should receive basic training on data collection, overcoming missing information, plausibility checks, and data handling, but they should be assisted in the field by experts in this area.

Training of reconstruction supervisors and technical advisors. The first stage of the training of supervisors and technical advisors is the training of trainers, using a training approach that the newly educated trainers will then follow with their training of the reconstruction field teams. The training should take one to two weeks and should include lectures and the simultaneous building of the model buildings of the type(s) that have been explained in the training.

Early in the training period, training teams are formed, consisting of two experts—one whose principal focus in the training will be technical and a second whose focus in the training will be on facilitating the relationship with the members of the community—and a trained crafts person. In the field, each member of the team needs to be able to both provide advice and training on the guidelines for reconstruction and supervise reconstruction, with the goal of ensuring that the homeowners are able to receive
If it is necessary to carry out any testing of or research into the safety of local building materials or housing technologies, and to identify measures to improve housing resilience during reconstruction, these activities should begin as early as possible—as soon as a study is carried out to identify the ways in which local building materials and technologies failed in the disaster.

Local universities and international research organizations can play a key role in the research and testing of improved building technologies. See the annex to Chapter 10, Housing Design and Construction Technology, for a list of international organizations that work on improving vernacular building technologies.

If, in addition to the normal construction method with reinforced concrete and cement mortar masonry (for earthquake-prone areas, normally using International Association for Earthquake Engineering [IAEE] guidelines), improved traditional methods are acceptable, then related technical information and building methods must be included in the formal and demonstration components of training.

payment at defined points in the process. The trained crafts person participates in the training of trainers and later supports the training team in carrying out the training of the field teams.

Trainees should practice the training by giving each other lectures, to prepare for providing builders with the information necessary to carry out safe reconstruction. The whole group should practice model building, either in nearby villages or at a training camp. Field reconstruction teams have a similar composition to the training team. Each field team should include a crafts person, who will later support the team in carrying out the training of builders in the field. The practical aspects of the training are disseminated at the village level by constructing a pilot building and by site visits by the field team during the construction period. The field teams are monitored by the training team who earlier trained them.

Specific content of training. Training should cover basic construction skills and how to teach them, explain how to organize reconstruction in the field, and provide the capacity to diagnose and address the specific damage from the disaster, and should include:

- Understanding basics of disaster impacts (earthquake, storm, flooding) on buildings
- Principles of reconstruction/mitigation (building structure, location, etc.)
- Learning and practicing basic technical skills (assisted by crafts persons) (if trainees are mainly engineers, their structural skills may need to be updated)
- Model demonstrations so that unskilled builders can understand the rules that are being enforced
- How to hold training sessions in the field
- Social pressures they will be subject to and how to handle them
- Information on grievance procedures
- Typical mistakes, mitigation measures, and where flexibility is, and is not, permitted
- Any updates to procedures that are issued during the project
- Material quality and testing, mainly simple field tests
- Procedures for carrying out model-building projects in field training

Scaling up. For both assessment and construction, about 10 teams (20 persons) can be trained in each training session, both by the core team and by the training teams, so that the initial training by the core team over a period of four weeks (two weeks for training of trainers and two weeks for training of field teams) results in about 100 (10 x 10) field teams.

On-the-job training of crafts persons and orientation of home owners. The field teams trained during the second stage of training then carry out the training of builders in the villages.

A lecture-type demonstration should take place in several successive evenings with builders, community leaders, and interested homeowners, showing disaster effects and key rebuilding requirements. If homeowners are to be directly involved in reconstruction (i.e., acting as builders), they receive the same training as other builders. Otherwise, orientation of homeowners results mainly from watching the construction of the pilot houses, from written materials (with illustrations), and from community leaders and similar persons. The following principles apply.

- Practical training of builders is done on the job and in the field, by constructing model buildings. The buildings built in the model-building activity can be houses of vulnerable families, in which case the model building accomplishes two results simultaneously—training and critical reconstruction. See the case study, below, on the use of model buildings in the Pakistan Poverty Alleviation Fund/Sarhad Rural Support Program after the 2005 North Pakistan earthquake.
- Focus is on improvement of normal building skills, such as filling of vertical joints in masonry, installation of headers in stone masonry, roof anchoring, and good practices for mixing concrete.
- Good practices related to specific types of disasters should be taught and incorporated in the guidelines (e.g., bands, opening rules, vertical bars, hooks at stirrups, tension lap length). See the case study, below, on how shake-table demonstrations and guidelines were used to educate builders, homeowners, and others in the 2003 Bam earthquake reconstruction.

Depending on the construction/reconstruction technology and on the availability and skill level of local masons, additional masons may need to be brought in or trained in earthquake-proof reconstruction using IAEE-recommended practices. In the case of mitigation for other types of (or multiple) disasters, reconstruction will entail measures for wind resistance, such as roof anchoring, and for flood mitigation, such as raising building level. The case studies, below, show how Habitat for Humanity has provided training after two emergencies so that women and internally displaced persons could participate as trades people in the reconstruction effort.
## Typical Training Problems and How to Address Them

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<th>Typical problem</th>
<th>Potential solution</th>
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<td>Supervisors belong to a social group that considers physical work not consistent with their status, and as a result practical demonstrations in the field don’t take place.</td>
<td>Ensure that a willingness to do hands-on work is used as a selection criteria and is included in the position description used to recruit supervisors. In some societies, there are easily identifiable experts or expert groups, who may be targeted during the recruiting process.</td>
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<td>Contradictory or unclear messages are given during training, which leads to confusion. For instance, training on framed structures (which are not recommended for simple housing due to difficult detailing) can’t easily be adapted to supervise reinforced masonry construction (shear wall system).</td>
<td>Begin training only once the rules for reconstruction and detailed damage assessment are clear. Ensure that the core team is highly qualified and that adequate time is spent on the preparation stage.</td>
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<tr>
<td>Good students of training during aren’t necessarily good trainers or supervisors in the field.</td>
<td>Follow-up and thorough supervision of the second-level supervisors is required (task of first-level supervisors).</td>
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<td>There is social pressure on the supervisors to certify noncompliant construction work for payment. This ranges from bribery to physical attacks.</td>
<td>This problem can be mitigated if beneficiaries know that certifications will be cross-checked at the next level and, if not genuine, will only delay payments.</td>
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<td>Explanations are too theoretical and not easily understood by ordinary people.</td>
<td>Demonstrate all key effects with simple models that are related to everyday practice.</td>
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<td>Pilot or model buildings are different from what people will actually be building.</td>
<td>Avoid mixing training for common reconstruction with experimental building practices, which might make sense in a research setting but should be tested before being applied in the field.</td>
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## Recommendations

1. Conduct a rigorous, thorough review of housing damage in the disaster region, and use the knowledge gained as the basis for designing the detailed assessment reconstruction techniques and for developing builder training.

2. Start training only after establishing the rules for assessing the damage to individual houses and developing a consensus on the reconstruction approach and appropriate reconstruction technologies.

3. Hire the strongest and best-prepared core team possible, as it is decisive for the success of the program.

4. The reconstruction approach, the program rules, and the training material and public information are all interrelated. Procure key training staff as early as possible, so that they can be involved in establishing the rules and in preparing training materials and public information.

5. Draw up and implement a comprehensive staffing plan that is coordinated with the overall program. Don’t let recruitment become a bottleneck, and be prepared to keep training trainers during the reconstruction program, as there will likely be turnover and dismissals.

6. Adapt the content and organization of the training program to the specific situation and keep both flexible, able to be improved as the reconstruction program progresses.

7. Take the time to research how to improve local building technologies and materials or investigate whether research has been done inside or outside the country, so that the training program is based on scientific knowledge, not intuition.

8. Use demonstrations and simple messages in training, so that the concepts and instructions will be understood by builders without formal training (crafts persons and homeowners).
Case Studies

2005 North Pakistan Earthquake, Pakistan

Use of Demonstration Buildings

Model building is the best way to demonstrate building technologies and provide on-the-job training. A demonstration project can also provide a house for a vulnerable family who might otherwise have difficulty rebuilding. Public buildings, such as a training center, meeting hall, or storage building, are also good demonstration projects, and can serve as a location for information sharing, material banks, or accommodations for the field staff. Demonstration buildings must use techniques and materials directly related to the approved construction methods and be affordable using the funding available. It is unwise to build demonstration buildings that raise expectations about the quality or quantity of housing that cannot be fulfilled with the available funds, as has happened in numerous programs. If there is more than one approved construction method (a reinforced masonry method and an improved traditional construction method, for instance), each should be used in demonstration projects. The adjacent photo shows a wooden frame building in the Pakistan North-West Frontier Province, Siran Valley reconstruction project later used as an information center. The project, executed by the Pakistan Poverty Alleviation Fund/Sarhad Rural Support Program, was financed through KfW/Germany.


2003 Earthquake, Bam, Iran

Raising Public Awareness on Earthquake-Resilient Construction through Shake-Table Tests and Technical Guidelines

Empowering communities that had been affected by disaster through increased access to information resources on disaster recovery programs and projects, thereby raising public awareness on earthquake-resistant construction techniques, was one of the United Nations Development Programme’s (UNDP) top priorities in its support to the reconstruction process in Bam, Iran, after the 2003 earthquake. In addition to its community-based information and communications strategy, UNDP organized shake-table demonstrations. The main objective of these demonstrations was to show the effect of earthquake-resilient technologies to the affected population and builders. A wide range of stakeholders participated, including local laborers and masons; homeowners from communities affected by the earthquake; university students, instructors, and researchers; representative of local authorities; representatives of the media; and staff from international and local nongovernmental organizations (NGOs) involved in the Bam recovery. The demonstrations were considered crucial to making participants aware of their vulnerabilities and of measures that could be taken to reduce risk in reconstruction. Several guidelines were also produced for engineers, architects, and recovery decision makers, including Guidelines for Urban Planners on Child-Friendly City Concept, Guidelines for Training of Building Workers on Masonry Earthquake-Resilient Construction, Earthquake and Conventional Building in Iran: A Guideline for Architects and Engineers, and Typology and Design Guide for Housing in Bam.


How technical requirements can be demonstrated with models and photos

Bending stiff corners of typical earthquake bands are important for maximum resistance. It is a common problem that is often not understood. The adjacent photo shows how the load-bearing capacity increases if the beam continues at the corners. A bent, stiff corner provides this continuation but requires special reinforcement. At the same time, the demonstration should show how the reinforcement should be placed and why.
2004 Indian Ocean Tsunami, India
Women Trained as Masons in Post-Tsunami Livelihood Project

Habitat for Humanity India partnered with the Centre for Action, Development, Research and Education in India (CADRE), a social services nongovernmental organization (NGO), to provide training as masons for a group of women whose family incomes had been adversely affected by the 2004 Indian Ocean tsunami. Fifty women who were members of self-help groups started the program in Colachel, Tamil Nadu, and 35 completed the month-long course and nearly six months of on-the-job training, from July through December 2005. The women were each paid Rs 140–Rs 190 (US$3.16–US$4.30) a day.

Six months later, a few of the women were hired as full-time masons; others formed crews to do repairs and renovations in their villages. Mary, a middle-aged, unmarried woman, was building houses for an NGO in a tsunami recovery project. She also took on small construction projects that she could share with her fellow women masons. Together, they had built concrete block walls and a kitchen; six of them plastered a house. “After the training, I was confident,” she said. “We can do this work. We can figure the cost and materials and we can build a house.” By April 2008, Mary had taken on her nephew as an apprentice and could afford to build her own house. The women maintain that because of their skills and knowledge, whether or not they are in charge of a village building site, shoddy construction is a thing of the past in their communities.

Sources: Kathryn Reid, Habitat for Humanity International, 2009, personal communication; and Habitat for Humanity India, “Welcome to Habitat for Humanity,” http://www.habitatindia.in.

2006 War, Lebanon
Vocational Training for Home Repair and Reconstruction

The 2006 war in Lebanon forced approximately 25 percent of the Lebanese population from their homes and damaged or destroyed more than 97,000 homes. As part of Habitat for Humanity’s (HFH) strategy of providing housing while assisting in the recovery of the local economy, HFH partnered with YMCA Lebanon to implement a livelihoods development program intended to train unemployed returning internally displaced persons in construction techniques in order to create livelihood opportunities. The 10-week vocational training program focused on sanitary and electrical installation, supplemented the existing construction workforce, and provided an alternate livelihood strategy while agricultural lands were being demined. YMCA developed the course curriculum and utilized practicing trades persons as course instructors. Trades persons were given a 4-day training of trainers orientation to the training curriculum and instruction on conducting effective vocational education. Following five weeks of theoretical learning, the 42 students spent five weeks in the field, gaining hands-on experience in installing sanitary and electrical networks in homes in their communities under the supervision of their instructors. All trainees were given a set of tools, which they were allowed to keep after completion of the training. Students benefited not only from the training curriculum but also from the wealth of experience brought to the training by practicing professionals. Some 37 students completed the practical training, and 28 had found employment by course completion.

Resources
Extensive information on training and training programs on a range of topics is available within the humanitarian community. A small sample of these resources is listed below.

Inter-Agency Standing Committee (IASC) Humanitarian Reform


The Emergency Shelter Cluster Field Coordination Toolkit. This website contains information that may be useful in designing training programs. http://www.humanitarianreform.org/Default.aspx?tabid=301.

Training sponsored by humanitarian agencies
Many humanitarian agencies provide training to their staff and to external counterparts. The International Federation of the Red Cross and Red Crescent Societies, for example, provides Field Assessment and Coordination Teams training that is aimed at experienced relief core staff. http://www.ifrc.org/what/disasters/responding/drs/tools/fact.asp.

People in Aid
A global network of development and humanitarian assistance agencies, People in Aid promotes good practice in the management and support of humanitarian aid workers and provides a wide range of practical resources for agencies seeking to improve the quality of their human resources management. They act through collaboration with various partners, such as local or regional training organizations.

Additional information is also available through the handbook Web site, http://www.housingreconstruction.org.

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<td><a href="http://www.unhabitat-indonesia.org/files/book-1420.zip">http://www.unhabitat-indonesia.org/files/book-1420.zip</a></td>
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