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# TOOLKIT GUIDE

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The Green Recovery and Reconstruction Toolkit (GRRT)
is dedicated to the resilient spirit of people around the world
who are recovering from disasters. We hope that the GRRT
has successfully drawn upon your experiences in order to
ensure a safe and sustainable future for us all.

GRRT

**DVD:** **GREEN RECOVERY AND RECONSTRUCTION: A VIDEO INTRODUCTION**
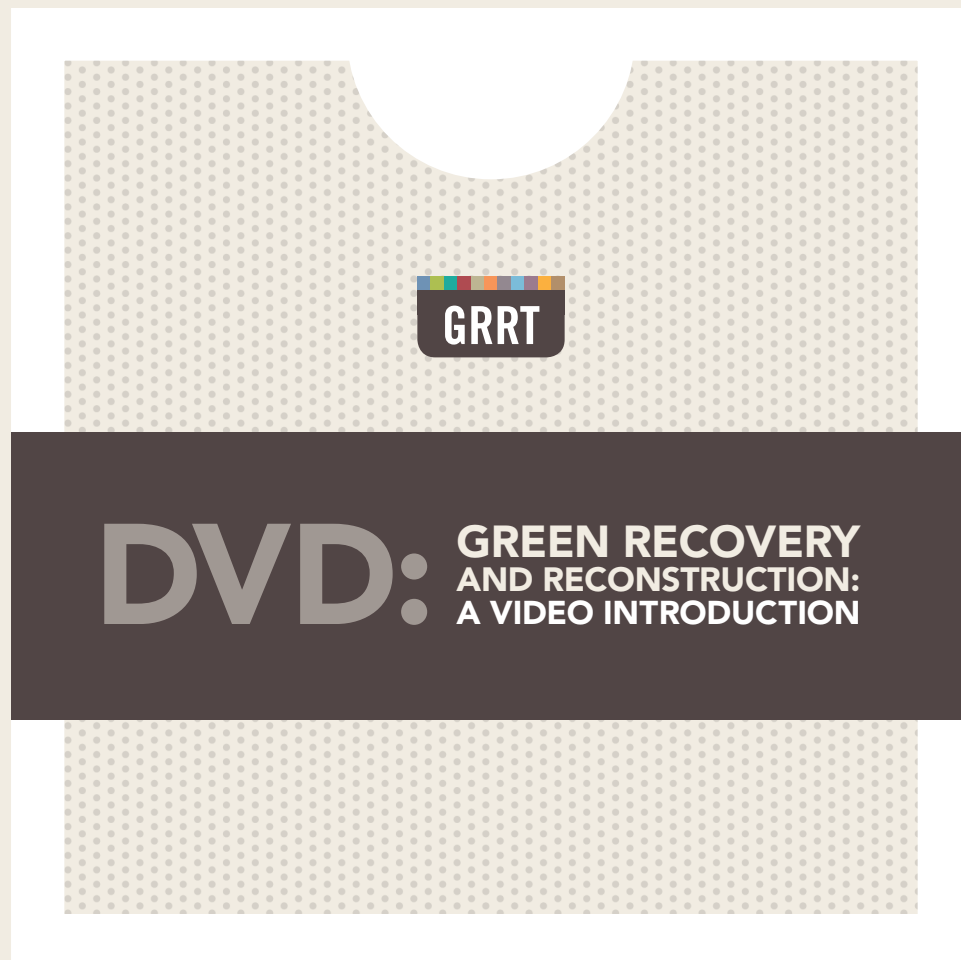
* A resource CD that contains the workshop materials, presentation slides, trainer's guides, and technical content papers is located on the inside back cover.

## ACKNOWLEDGEMENTS

## MODULE A: TOOLKIT GUIDE

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# 1 WELCOME

Welcome to the Green Recovery and Reconstruction Toolkit (GRRT). Through this toolkit and training program, participants will learn about the intersection of the environment and post-disaster recovery and reconstruction. Actively addressing environmental issues will help to protect people and communities in the long-term. We hope that the solutions, strategies, tools, and techniques presented in this toolkit will help you and others respond to the global challenges of sustainable recovery and reconstruction.

Two leading organizations in their fields, World Wildlife Fund (WWF) and the American Red Cross, developed the GRRT together during an innovative five year partnership (2005-2010). The partnership was created after the 2004 Indian Ocean tsunami for the purpose of incorporating environmental sustainability into recovery and reconstruction projects. They developed considerable skills, strategies, tools and trainings designed to enhance communities' resilience and reduce risk and vulnerability to future hazards. Particular areas of focus were water and sanitation, shelter, livelihoods and disaster risk reduction. Together, their work improved project outcomes in Sri Lanka, Indonesia, Thailand and the Maldives.

The GRRT was developed by over 30 international subject matter experts and humanitarian specialists from over 18 organizations. Through a collaborative development process, the GRRT was able to capture a cross-section of disaster scenarios, and diverse geographic and cultural contexts. Participating organizations include the International Federation of Red Cross and Red Crescent Societies, Oxfam, CARE, Save the Children, Mercy Corps, Tearfund, United Nations Environment Programme, ProAct, World Conservation Union (IUCN), World Vision, RedR UK, the U.S. Agency for International Development, the International Strategy for Disaster Reduction, ProAct, the Danish Refugee Council, the Asian Disaster Preparedness Center, Shelter Centre, and Environment Foundation Limited.

Although disasters (natural, man-made or conflict related) wreak havoc, the rebuilding effort that follows represents a significant and important opportunity to rebuild communities that are more environmentally and socially sustainable than before the disaster. Humanitarian professionals, conservation practitioners, local communities, government organizations, donor organizations, and private citizens can all take specific steps to ensure that reconstructed communities are built back safer by actively addressing environmental sustainability to reduce risk and vulnerability to future disasters. These activities include incorporating sustainable spatial planning; procuring and using sustainable building materials and practices; improving natural resource management to reestablish sustainable livelihoods; and adopting environmentally sound water and sanitation approaches.

# 2 WHAT IS THE GREEN RECOVERY AND RECONSTRUCTION TOOLKIT?

The Green Recovery and Reconstruction Toolkit (GRRT) is a series of 10 standalone modules that address a wide range of topics and sectors vital to disaster response. Each module consists of the following:

1. A content paper, presenting the key information about the topic

2. Trainer's guide for training planners and facilitators on a proposed workshop agenda, participant learning objectives, key points for presentations, interactive learning activities, and PowerPoint slides to support the workshop

3. All the materials necessary for a one-day workshop on the topic (except for Module 1, which is limited to a 60-minute overview session.)

Each topic presents a range of green recovery and reconstruction principles and practices. In addition, several modules combine to form a "suite" of workshops with a focus on a broader application. Most participants in a GRRT workshop would benefit from a combination of the introductory module, which presents the context of green recovery and reconstruction, and one or more sectoral modules, e.g., construction, water/sanitation, and livelihoods. A menu of workshop suites is described below. For senior managers, project managers, and others involved in project design in any sector, the workshop on Module 2 is recommended. This workshop provides guidance on how project design, monitoring, and evaluation can better incorporate and address environmental issues within the typical project cycle. GRRT Module 3 builds upon Module 2, focusing specifically on assessment tools that can be used to determine the environmental impact of humanitarian projects regardless of the type of project or sector.

# 3 WHO IS THE GRRT FOR?

The core audience for the GRRT is individuals involved in the conception, design, implementation, monitoring, or evaluation of a humanitarian project. It applies as well to those involved in the various planning and implementation stages of temporary camps, permanent housing, water supply projects, livelihoods interventions, or any other activity designed to support communities recovering from disaster. Specific audiences may include project managers in the field or at headquarters, project designers, shelter and other construction professionals, monitoring and evaluation specialists, physical planners, logistics and procurement officers, donors, livelihood specialists, water and sanitation project designers and managers, and disaster risk reduction planners.

The staff of local and national government agencies, as well as environmental specialists involved in the design, review, and implementation of recovery and reconstruction projects, would also benefit from the training. The GRRT modules may also be used by consultants working for humanitarian agencies or specialist staff responsible for ensuring that the environmental aspects of humanitarian projects are addressed. It is for national as well as expatriate staff.

Target staff includes shelter specialists, water and sanitation specialists, field engineers, program and country directors, disaster management staff, livelihoods specialists, spatial planners, environmental managers, and procurement staff. The audience should also include national headquarters staff, since in disasters they are often in-country and/or designing projects when there are still no in-country staff. These staff have wider program portfolios that can incorporate GRRT learning across many projects and countries. National headquarters staff may also provide buy-in and proactive support for environmental concerns, especially at decision-making levels.

Other important stakeholders who may be interested include the local community, local and national government officials, and private-sector representatives (e.g., construction contractors, suppliers, and estimators). Staff from donors and multilateral agencies can also promote and apply GRRT principles to help grantees and fund recipients meet donor-mandated requirements for addressing sustainability issues in their projects.

In terms of the audience size for workshops, the modules have been designed with exercises and other interactive activities for groups of 15–25. As a consequence, if a training planner is expecting a smaller or larger group, then they will need to modify the exercises or the training plan accordingly.

## 4 WHAT DOES THE GRRT TRY TO ACHIEVE?

The goal of the GRRT is to equip humanitarian, environmental, and conservation field staff involved in post-disaster recovery and reconstruction with the practical information and strategies necessary to improve project outcomes for the affected population, build back communities that are more environmentally and socially sustainable, and reduce risk and vulnerability to future disasters.

The GRRT is available for use by organizations that want to train their own and partners' staff in the knowledge, skills, and, most important, attitudes of building back with a "green" approach.

## 5 HOW IS IT ORGANIZED?

The GRRT consists of 10 modules in addition to this Guide. The titles are listed in the following table as well as the modules' learning objectives and the intended audience.

| TITLE | MODULE LEARNING OBJECTIVES<br>By the end of the training, participants will be able to…. | TARGET AUDIENCE |
|---|---|---|
| A. TOOLKIT GUIDE | This is not a training module but a brief summary guide of how the GRRT works and recommended training tools and methods. | All trainers |
| 1. OPPORTUNITIES FOR GREEN RECOVERY AND RECONSTRUCTION: AN INTRODUCTION | 1. Describe how addressing the environment in a humanitarian response a) is critical to saving lives and livelihoods, b) reduces risk and vulnerability, and c) contributes to successful recovery outcomes<br>2. Explain the purpose of the Green Recovery and Reconstruction Toolkit and its components.<br>3. Discuss key opportunities, misconceptions, and challenges for mainstreaming the environment into humanitarian action. | All participants |
| 2. GREEN GUIDE TO PROJECT DESIGN, MONITORING, AND EVALUATION | 1. Understand why it is important to incorporate environmental considerations into project design, monitoring, and evaluation in order to improve outcomes for people and communities recovering from disaster.<br>2. Integrate environmental indicators into the project strategy and the key steps of the project cycle's development and implementation.<br>3. Select and measure environmental indicators using the same criteria as other indicators (e.g., SMART indicators).<br>4. Demonstrate that integrating environmental monitoring into a project does not have to be difficult, costly, or time consuming. | M&E Specialists, Program and Country Directors, Delegates Across Sectors, Environmental Managers |
| 3. GREEN GUIDE TO ENVIRONMENTAL IMPACT ASSESSMENT TOOLS AND TECHNIQUES | 1. Describe the value and role of environmental impact assessment tools in post-disaster recovery and reconstruction project planning.<br>2. List the five elements of the Environmental Impact Assessment (EIA) process.<br>3. Use the ESR tool with a sample project to identify and assess the adverse environmental impacts and propose mitigation measures to prevent, reduce, and compensate for the impacts.<br>4. Describe several tools that are used for environmental assessments in post-disaster settings. | Delegates across sectors (Water and Sanitation, Livelihoods, Shelter, Disaster Risk Reduction), Field Engineers, Program and Country Directors, Environmental Managers |

| TITLE | MODULE LEARNING OBJECTIVES<br>By the end of the training, participants will be able to…. | TARGET AUDIENCE |
|---|---|---|
| 4. GREEN GUIDE TO STRATEGIC SITE PLANNING AND DEVELOPMENT | 1. Understand the principles of environmentally sustainable site selection and development.<br>2. Conduct an assessment of post-disaster site selection, design, and adaptation to address environmental conditions in order to protect people and communities.<br>3. Identify strategic points of entry in the post-disaster recovery and reconstruction cycle to promote environmentally sustainable site selection and development. | Country Office Directors, Government Officials, Senior Program Managers, and Site Planners who make site planning decisions. |
| 5. GREEN GUIDE TO MATERIALS AND THE SUPPLY CHAIN | 1. Identify the typical environmental impacts of building material choices in order to minimize impacts to people and communities recovering from disaster.<br>2. Use environmentally aware approaches in the design of buildings and selection of materials for post-disaster housing reconstruction.<br>3. Identify the typical environmental impacts of material procurement options.<br>4. Describe strategies for procuring materials for post-disaster housing reconstruction that have the least negative impact on human welfare and the environment.<br>5. Explain the benefits and limits of environmentally conscious decision making in the selection and procurement of building materials after disasters. | Procurement Specialists, Shelter Delegates |
| 6. GREEN GUIDE TO CONSTRUCTION | 1. Describe the key principles of environmentally sustainable building design and architecture to protect people and communities recovering from disaster.<br>2. Describe the key principles of environmentally sustainable on-site construction management.<br>3. Demonstrate how to apply the key principles of sustainable building design and construction management to a community-based project. | Shelter Delegates, Field Engineers, Spatial Planners |
| 7. GREEN GUIDE TO WATER AND SANITATION | 1. Promote and implement water and sanitation systems that improve community well-being by enhancing environmental sustainability.<br>2. Explain to stakeholders why water supply project infrastructure should include watershed protection to ensure sustainability, and identify examples of ways to achieve sustainability.<br>3. Demonstrate how water and sanitation projects can be made more sustainable for communities through initial technology choice, project design, and community consultation. | Water and Sanitation Delegates, Field Engineers, Hygiene Specialists. |
| 8. GREEN GUIDE TO LIVELIHOODS | 1. Explain how livelihoods, disaster recovery, risk reduction, and ecosystems are linked.<br>2. Identify the recurring environmental impacts of typical livelihoods interventions.<br>3. Understand and address solutions for sector-specific livelihoods challenges, and be able to identify sources of expertise to improve livelihoods project outcomes. | Livelihoods Delegates, Environmental Managers |

| TITLE | MODULE LEARNING OBJECTIVES<br><br>By the end of the training, participants will be able to…. | TARGET AUDIENCE |
|---|---|---|
| **9. GREEN GUIDE TO DISASTER RISK REDUCTION** | 1. Describe the ways in which disaster risk and environmental conditions are linked.<br>2. Integrate environmental issues into typical disaster risk reduction assessments.<br>3. Identify a set of ecosystem-based activities that can reduce risk and enhance disaster risk reduction programs.<br>4. Describe how disaster risk reduction activities can have negative impacts on the environment and how these impacts can be mitigated. | Disaster Risk Reduction Delegates, Environmental Managers |
| **10. GREEN GUIDE TO ORGANIZATIONAL OPERATIONS** | 1. Describe the three core strategies of Green Organizational Operations and how they can be used to implement a plan for reaching greening goals and targets.<br>2. Assess opportunities for improving the environmental performance of the operational aspects of organizations and identify specific areas to address.<br>3. Describe three examples of "action items" for greening and discuss how they can be instituted within each of the core strategies.<br>4. Assign responsibility, motivate staff, and develop a green team to participate in greening efforts. | Facility managers, and other headquarters and field offices staff who have decided to apply the principles of sustainability to their own work environment |

## 5.1 Choosing Applicable Modules for Your Participants

Each of the above modules is designed to support a one-day workshop, except *Module 1: Opportunities for Green Recovery and Reconstruction: An Introduction*, which can be presented in one 90- to 120-minute session. Users (training planners) of the GRRT are encouraged to combine modules, using two or more of them to provide a broader coverage of the topic of green recovery and reconstruction. For example, a training audience interested in exploring the full range of issues surrounding the reconstruction of housing would benefit from the modules that address site selection, construction techniques, and building materials and their procurement.

Another way of determining which modules to combine for a GRRT workshop is to send participants a pretraining survey to inform the training planners of the audience's level of knowledge and skills regarding green recovery and reconstruction. A model Pre-workshop Survey is provided as Annex A. This model survey may need to be modified to be appropriate to the recipients when it is apparent that some questions do not apply to the audience, or if there are information requirements that the survey does not cover.

A well designed-survey will not only enable training planners to assess the training needs of the target audience, but also will provide guidelines on how the workshop should be tailored to meet the specific needs of the audience.

Section 7 below includes suggestions for multimodule workshops.

## 6 WHEN SHOULD THE GRRT BE USED?

The time frame for the target audience to apply the principles of the GRRT is immediately following the disaster, when recovery and reconstruction strategies are first being formed, and then throughout the recovery and reconstruction phase, which may last from six months to several years after a disaster strikes. Training on the GRRT should ideally occur before a disaster happens so that you can equip responders with the knowledge and strategies necessary to begin immediate implementation. However, the concepts can be applied after immediate, life-saving relief activities have taken place and alongside the recovery and reconstruction planning. While it is best to address environmental issues during the recovery planning phase early on after a disaster, it is never too late to take some action to improve outcomes for people and communities.

## 7 SUGGESTED TRAINING SERIES

Modules 2–10 are designed to support a standalone one-day workshop on its topic. However, if the audience is relatively uninformed about the basics of green recovery and reconstruction, they would also benefit from starting with an introductory session of *Module 1: Opportunities for Green Recovery and Reconstruction: An Introduction*. The following outlines a range of suggested combinations of modules to provide a more comprehensive training on related topics. The trainer's guides for these modules suggest how some workshop sessions might be modified or combined to create a multimodule workshop.

### 7.1 The Basics: Modules 1, 2

Module 1: *Opportunities for Green Recovery and Reconstruction: An Introduction*
Module 2: *Project Design, Monitoring, and Evaluation*

These are the introductory modules. They are intended to be taken by individuals who have not previously been engaged with the concept or practice of integrating environmental sustainability to their disaster/conflict response programming. Module 1 provides the theoretical underpinnings and practical examples for this approach. Module 2 describes why it is important to incorporate environmental considerations into project design, monitoring, and evaluation in order to improve outcomes for people and communities recovering from disaster. It demonstrates how to integrate environmental indicators into the project strategy and every step of the project cycle's development and implementation.

### 7.2 Environmental Impact Assessment Tools and Techniques: Modules 1, 2, 3

Module 1: *Opportunities for Green Recovery and Reconstruction: An Introduction*
Module 2: *Project Design, Monitoring, and Evaluation*
Module 3: *Environmental Impact Assessment Tools and Techniques*

The discussion above regarding combining Modules 1 and 2 applies here as well, but is enhanced through the additional information about how to better inform project design through incorporation of environmental assessments from the earliest stages of the project cycle. Post disaster/conflict assessments are always necessary, but these assessments need to include environmental observations and information gleaned from environmental impact assessments so that the project design can include appropriate environmental actions.

### 7.3 Essentials for Construction: Modules 1, 2, 4, 5, 6

Module 1: *Opportunities for Green Recovery and Reconstruction: An Introduction*
Module 2: *Project Design, Monitoring, and Evaluation*
Module 4: *Strategic Site Planning and Development*
Module 5: *Materials and the Supply Chain*
Module 6: *Construction*

The natural and human-built environments often sustain heavy damage from disasters and conflict, and they may also sustain damage from some humanitarian action during the recovery and reconstruction. After the introduction to GRRT, this set of modules begins with Module 4, with guidelines on environmentally sound site selection and planning of buildings and infrastructure. The principle is that even well-designed structures, if built in the wrong location, can contribute to future risk. Closely linked to this is Module 5, with its discussion of the principles of selecting building materials from environmentally sustainable sources and employing procurement practices that reinforce these principles and minimize energy usage. Module 6 examines the principles of construction, especially in terms of environmentally sustainable architectural design and construction techniques.

### 7.4 Essentials for Water and Sanitation: Modules 1, 2, 7, 5

Module 1: *Opportunities for Green Recovery and Reconstruction: An Introduction*
Module 7: *Water and Sanitation*
Module 5: *Materials and the Supply Chain*

Module 7 focuses on the related priorities managing water sources, wastewater, and solid waste in sustainable ways. During post-disaster/conflict recovery and reconstruction, we have an opportunity to minimize negative environmental impact on the watershed and install water systems that provide high-quality water utilizing sustainable sources. Similarly, sanitation systems can be installed that safeguard against pollution and even promote practices that convert waste into a resource. The addition of Module 5 to Module 7 would allow for further exploration of the interrelationship between acquisition of building materials and their impacts on watershed management, and would allow more discussion of environmentally sustainable building materials for water and sanitation projects.

### 7.5 Essentials for Sustainable Livelihoods: Modules 1, 2, 8, 5

Module 1: *Opportunities for Green Recovery and Reconstruction: An Introduction*
Module 2: *Project Design, Monitoring, and Evaluation*
Module 8: *Livelihoods*
Module 5: *Materials and the Supply Chain*

The support to livelihoods after disasters and conflict, whether by creating new jobs or restarting previously existing jobs, is key to disaster recovery and reconstruction. Linking a workshop on Module 8 with Module 5 allows for the opportunity to promote environmentally sustainable jobs that are based in the potentially booming sectors related to construction. The study of these modules together requires thinking about balancing the competing demands of job creation while protecting the environmental resources upon which many of the jobs depend.

### 7.6 Essentials for Sustainable Disaster Risk Reduction: Modules 1, 2, 9, 4

Module 1: *Opportunities for Green Recovery and Reconstruction: An Introduction*
Module 2: *Project Design, Monitoring, and Evaluation*
Module 9: *Disaster Risk Reduction*
Module 4: *Strategic Site Planning and Development*

Active environmental management and protection can reduce disaster risk and compliment more conventional DRR strategies. Module 4 can be considered as a subset of DRR, that is, good site selection, planning, and development will result in minimized environmental impact. Many of the principles of DRR correspond with and reinforce strategic site planning and development. Putting these workshops together creates an opportunity for participants to explore this synergy.

## 8 GRRT WORKSHOP PLANNING CHECKLIST

It is necessary to ensure that arrangements are in place several days before the workshop begins for all of the following items.

| DONE | NO. REQ. | ITEM |
|---|---|---|
| ❑ | 1 | **Data projector** for showing PowerPoints. Ensure that the projector includes cable for connection to computer and that it is operating properly. Conduct a test setup with the computer to be used during the workshop at least **the day before the workshop begins**. Ensure that the projector light is bright enough for slides to be seen clearly. |
| ❑ | 1 | **Projection screen**, as large as possible so that the image can be large enough for people to read PowerPoint slides from the back of the room. |
| ❑ | 1 | **Office equipment**: computer, laser printer and copier, uninterrupted power supply |
| ❑ | 1 | Arrange for **secretarial and administrative support** throughout the workshop |
| ❑ | 2 | **Extension cords**, one for the data projector and another for the office equipment |
| ❑ | 1 | **Carton of paper** |
| ❑ | 1 | Set of **office supplies**: stapler, scissors, masking tape, hole punch |
| ❑ | 4 | **Flip-chart stands** |
| ❑ | 4 | **Flip-chart paper** tablets, minimum 50 sheets each |
| ❑ | 4 | Boxes of **markers** for flip-chart paper |
| ❑ | 1 ea | **Ball point** pens (one for each participant) |
| ❑ | 1 ea | **Writing tablet** (one for each participant) |
| ❑ | 1 ea | **Name tags** (include enough for all facilitators) |
| ❑ | 1 ea | **Table name cards** (heavy-stock paper) |
| ❑ | 1 ea + 5 | **Participant workbook binders** (if ring binders are used) |
| ❑ | 1 ea + 5 | Printed copies of **Participant Workbook** = the number of participants and facilitators plus about five extra |
| ❑ | 1 ea + 5 | **Certificate blanks** (with extras copies in case of mistakes) |

## 8.1 Arrangements with Conference Facility

The following criteria for the workshop venue must be met:

1. The conference room should be large enough to accommodate participants, facilitators, and resource materials, at least 2 $m^2$ per person. The room should have adequate electrical outlets and minimal noise intrusions from highway traffic, kitchen, or other noise in the facility, such as a generator or construction. The air-conditioning unit should be adequate and not noisy.

2. The facility must have enough appropriately sized tables to meet workshop needs and is able to arrange them in a café-style layout. Appropriate size means that four to six people can sit **comfortably** around a rectangular or round table in such a way that nobody has his or her back to the front of the room. For rectangular tables this often requires the combination of two medium-sized or three small tables.

3. The conference room must be able to be darkened enough for the showing of PowerPoint slides but should have adequate lighting for comfortable note taking and discussions.

4. The conference facility should provide a room where the secretariat can be set up, near the conference room. Leaders must be able to secure/lock that room. (Sometimes the main room is large enough to accommodate the secretariat, but the activities may be a source of distractions.)

5. The coffee/tea break arrangements should be satisfactory in terms of food and beverages served in a pleasant location convenient to the conference room. Water needs to be provided for participants throughout the day.

6. The lunch should be served quickly and on time, generally requiring a buffet arrangement. All food selections should be culturally appropriate.

7. Sleeping accommodations for participants and facilitators should be satisfactory and comfortable.

## 8.2 Arrangements for Secretariat Support

Tasks for the one or two individuals who will staff the secretariat:

1. Make sure the secretariat room is equipped and working.

2. Make sure the conference room equipment is complete and working.

3. Be responsible for printing and copying workshop materials.

4. Ensure that there are adequate flip-chart paper, markers, and writing materials for participants.

5. Provide conference venue management and food caterers with workshop agenda.

6. Ensure that the workshop materials for participants are ready, complete, and handed out to the participants upon arrival.

7. Make arrangements for water in the conference room and coffee/tea breaks in the breakout room.

# 9 TRAINING TOOLS AND METHODS

## 9.1 Training Tips

### Pretraining survey

The more training planners know about their prospective training audience the better they will be able to plan and prepare for their workshops. One technique for learning about the potential trainees is to undertake a training needs assessment by sending participants a brief survey two to four weeks before the planned workshop. The survey should seek to develop a profile of the audience, such as job descriptions and current skills and experience related to the workshop, as well as the participants' descriptions of what they want to get out of a workshop.

Annex A is a draft pre-workshop survey that training planners can consider adapting and sending to their training audience. The attendees list, therefore, needs to be made available to the trainer beforehand with enough time for the survey to be implemented.

### Post-training survey

The real value in the GRRT training will be in the information that the participants learned and put into practice. How successful the training was and how useful it was in on-the-job applications is also information that training planners should know. Follow-up surveys or interviews will provide important feedback that may inform future training and help improve the GRRT content and training approach. The post-training survey can also include a training impact assessment that can be used to monitor specific changes in a participant's knowledge, skills, and perceptions.

## 9.2 Principles of Adult Learning

The following section (Sections 9.2.1 – 9.2.9) is excerpted from www.library.yale.edu/training/stod/onthejob/principles.html (as of May 22, 2010).

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The following learning principles are important to keep in mind when you are planning and conducting training activities for adults. They are adopted from Xavier University Train the Trainer Workshop, delivered by Edward E. Jones, Ed.D.

> *Motivation Utilization Interest Stimulus Transfer*
> *Logic Immediate Application Participation Repetition*

### 9.2.1 Motivation

#### *Learners must be motivated before they will learn.*

Learning requires action on the part of your student. Often this action is internal and is initiated by the student. He/she freely chooses to act or not to act – to do something to acquire the knowledge, attitude, or skill you are teaching, or to do nothing. You cannot motivate your learners; they must motivate themselves.

"If I can't motivate my learners, then what can I do?" A motive is a desire in response to a need, which causes a person to act. A study by the American Productivity Center (1980) says, "Since motivation comes from within, a worker (student) is more motivated to perform well if he or she understands what is going on. The more I understand what is going on, why it is going on, how it affects me, and what's in it for me, the more I will tend to support…its goals."

#### *How do I help my learners become motivated?*

Show your learners what's in it for them. Don't assume that they feel that your class or subject is useful and valuable to them.

Show them the value or use of the subject. It's good to keep in mind that what's valuable for one person may not be valuable for another. It then becomes your job to show the whole class how every experience can be a beneficial learning experience.

Use the learning itself as a motivator. When your learning sessions are rich and rewarding, when learners feel they have enlarged the limits of their minds, when they can see useful application for the things they've just learned, then they'll be motivated to continue to learn more. Motivation is internal but you have the responsibility of providing a positive learning climate.

Use praise liberally. Call it positive reinforcement, a pat on the back, encouragement, and support for a job well done. Praise your learners for the little things they do well. Don't wait for the "big success." The key here is to praise often but be natural and above all sincere! Don't make things up because you'll be discovered as a phony. Learners want praise, but they want genuine praise.

Make course objectives clear when setting expectations. Then challenge learners to achieve them. For some, having a goal to attain is the motivation to attain it. Make sure that class work is clearly relevant to the objectives. This will help maintain the motivating challenge of striving to attain the goal.

This is not a complete listing of motivators and motivating techniques. Such a list does not, and cannot, exist. Because each person is different, with unique qualities, experience, needs, and desires, each will be motivated differently. Some will be motivated entirely by knowing "what's in it for me?" Others need a complex array of motivators.

### 9.2.2 Utilization

#### *The student must see a use for the material being learned.*

Your instructor role is specifically geared toward helping people (the employees of your company or organization) do their jobs better. These employees/learners are looking for help with their jobs. Remember that adult learners are problem centered. If they cannot see how the subject matter will help them (be useful), they won't be inclined to try very hard to learn it.

Often you present material that is "background" or "foundation" material. Well and good, but do make certain they realize that the material is relevant and that you intend to build on it. Learners must see the connection between your "background" material and solid, usable job applications.

### Show your learners how the material can be used.

First, paint the "big picture." They need to see how the material you're teaching is relevant to their job. Show how all the material has application to them. Let them know that it's not just interesting but useful.

Watch out for too many "war stories." These may be interesting to you and fun to tell but are they practical for the learners? Remember, these are adult learners and are problem-solution centered. Being entertained by too many stories may well turn them off. If the story brings perspective, then by all means use it. But don't use it just because it's your favorite.

Much of the material in your class will fall into two categories: "nice to know" and "need to know." Many times your learners won't be able to discriminate between the two. You will have to point out what's background and what's critical to their performance.

The "How can I use this back on the job?" and "What will you teach that will help me with my problem?" questions are going to be on the minds of your learners throughout the class. The answers should be on your mind and a part of your presentation.

### 9.2.3 Stimulus

### Learning is stimulated through the five senses.

Your mind, like your muscles, becomes active when the bodily senses are stimulated. The learners who come to your classes are no different. Their sensory equipment must be activated before their minds will realize and accept the facts, concepts, and skills you wish them to learn.

There are few stimuli that will activate all five senses simultaneously. Since you'll have to select among these senses, it will be useful for you to know that some are much more vital to the learning process than others. Here's a breakdown of how we learn what we know today:

- 75% through the sense of sight
- 13% through the sense of hearing
- 6% through the sense of touch
- 3% through the sense of smell
- 3% through the sense of taste

Clearly, visual stimuli should have a large part in the learning process. But you must also realize that the more senses a student uses while learning, the faster and more efficiently he or she will learn.

When an instructor uses words alone, learners retain only a portion of the facts. They will retain 3-1/4 times more information if the instructor uses pictures alone. But they retain 6-1/2 times more if the instructor uses both words and pictures.

### To stimulate learning through the senses:

- Use visual stimuli whenever possible to get your point across. Learners remember more of what they see.
- Appeal to several senses simultaneously for the most efficient learning.

- Use strong stimuli for greater response: vivid pictures, loud noises, and bright colors.
- Vary the stimuli. Repetition of even a strong stimulus becomes monotonous and may weaken the desired response.

A stimulating presentation requires more preparation, but if a subject is worth remembering, it's worth presenting so it will be remembered.

### 9.2.4 Interest

### The student must be interested in the learning.

You can't assume your students are interested in learning just because they're in the class. We do know students will be thinking about something that interests them. Your job is to generate interest in the course materials.

The difference between interest and motivation is subtle, for the two often work in a cause-and-effect relationship. If interest is high, there will be little need for you to motivate a class. If motivation is applied throughout training, the interest problem is solved. We treat them here as separate to emphasize the necessity for including both in your classes: hold the learners' attention and make them want to learn.

### How can you keep learners interested?

First, you, as the instructor, must be interested. Learners quickly turn off to an instructor who appears to be disinterested in the subject, is listless, or seems tired or bored. Build interest throughout the session. The interest that learners bring to class can quickly be lost. Arouse curiosity and increase enthusiasm as new material is introduced. Vary your methods.

Hold interest once you've gotten it. Some tools you can use are visual aids, student participation, and humor. Perhaps a change of pace in the presentation or in the physical surroundings will be necessary.

You must also be interested in the learners. They'll respond to genuine interest and enthusiasm that involves them personally.

Get your students' interest aroused early in your session. You may want to consider some variety in your class opening. Instead of handling all the administrative material and then student introductions, start with an exercise that will have them interacting right from the start (team questions for you about the course, or "why I'm here and what I want to get out of this class" are a couple of examples). This approach gets them involved quickly, covers the introduction dilemma, and starts your class with student interest high.

If your trainees aren't interested, check yourself, not them. After all, they're your trainees, in your class, learning your subject, and it's your job to keep them interested. Remember the materials and training approaches, which keep adults interested and problem centered. And remember that involvement creates interest.

### 9.2.5 Transfer

### Learners learn easily when they can make transfers.

Learners always arrive in your class with some prior knowledge. They may already understand the basics of the subject; they may possess considerable misinformation; they may know nothing about the subject. They will

have some knowledge or understanding about something, and it is your job to use that knowledge to enhance the learning process. We call this the principle of transfer.

Building on what a class knows, working from the known to the unknown, is termed "positive transfer." When prior knowledge interferes with the new learning, "negative transfer" is taking place. Negative transfer can be avoided by emphasizing new learning as something to build upon. People resist changing ideas that they have long accepted. Instructing them in new ideas will be easier if they are not confronted with the necessity of unlearning the old ways.

Relating new ideas to known facts can affect a positive transfer. Some of the mystery is removed when a student can relate new information to something that is familiar to the student. This allows him or her to grasp the new concept by having a mental picture to which the new facts can be tied.

### To use the principle of transfer:

- Always proceed from the known to the unknown.
- Relate new ideas to familiar facts by analogies and comparisons.
- Emphasize new ideas, concepts, or methods as better, not different from, the old ways.

### 9.2.6 Logic

### The learner must see the logic of the material.

Our thought processes may begin with our sensory equipment, but we do have such a thing as "think power," which is rooted in the mind and which utilizes logical reasoning processes. All information entering the mind is screened by an analytical procedure that rejects, or at least questions, ideas that don't make sense. Use the principle of logic to prepare your lesson so it will be logical to this reasoning mechanism of the mind.

### The principle of logic involves two things:

Each point must make sense by itself. The ideas or concepts you present must appear inherently logical. To help accomplish this, try these methods:

1. Give the "why" behind your point. People want to know the reason behind a procedure, method, or principle. They want to know what caused it and/or what effects will result.
2. Lead up to the point by presenting several facts from varying situations that all point to the desired conclusion. Your learners may draw the conclusions themselves, in which case their learning is improved.

State your point, and then ask the learners to apply it to specific instances. This reasoning will help them see what makes a general point true. The points must come in a logical sequence. Put your ideas in an order that establishes the clear relationship between points and that will be understood by the student.

Here are some logical sequences that can be employed:

- Whole-to-part: Give the big picture first, then the specific parts.
- Magnitude: Large to small, or vice versa.

- Importance: Start with the most important item, and work to the least.
- Geographical: Take things in the order of their physical relationship, whether they are store locations or equipment in restaurants.
- Difficulty: From the easier or known to the more difficult or unknown.
- Performance: Present a procedure in the order it is performed.

### 9.2.7 Immediate Application

### Immediate application improves the learning

This principle directs you to try out the skills or verbalize the facts just acquired. In effect, tell your learners, "You've just leaned it; now do it here in the classroom." As they begin actually applying what they've just heard or seen, they will do the following:

- Establish more relationships between the parts of the course
- Perfect or test their understanding of the subject
- Get involved
- Develop still stronger motives for learning

The methods and techniques used for class participation can be used to apply the principle of application. The point here is this: have learners do and verbalize as soon as possible after their exposure to new facts.

An effective way to use this principle is to have your learners give (write-present-discuss) an application of the concepts to their own situations "back home." This could be done individually or in teams. The key is to "do it now." Thus, the principle of immediate application is activated.

### 9.2.8 Participation

### Learners learn better when they are actively involved in the training.

If a student doesn't participate in the class, that is, doesn't say anything or get involved other than sitting there, what does that tell you?

Such behavior can indicate how much the person is getting from the class. Sometimes these individuals do learn, but usually it is an indication of less learning. A good rule to follow is the more participation, the more learning. Without active participation, your learners won't be doing the thinking and applying – two essential elements that lead to increased learning. This is particularly true with adult learners who, for the most part, aren't used to long periods of uninterrupted sitting.

As an instructor you must plan participative activities for everyone in the class. Give them things to do. This gives them a chance to ask questions and comment on the materials being taught. They feel they are a part of the learning situation and not just passive receivers. A word of caution is also in order. Participation just for participation's sake is a waste of time for you and the learners. To have them "break into small groups" just because you like small groups isn't going to be effective. Make sure you have a planned purpose to your activity.

*Active participation includes:*

- Oral: Asking questions of the whole class, assigning some learners to explain various sub-points or having them conduct a demonstration. Encourage voluntary contributions, challenges, or questions.

- Written: Working on group problems or exercises, individual tasks, pop quizzes, flip-chart summaries, or case solutions.

- Group work: Group discussions, small-team exercises, role-plays, case studies, projects for later presentation.

- Physical assembly of components: machines, instruments, or layouts; performing or demonstrating an activity.

This principle operates for the benefit not only of the student but of the instructor as well. With properly planned participation, you are now free to work with individual learners, observe student groups, and prepare yourself for the next session. Learners don't want to see and hear only you all day. You will quickly tire if you have to be the focus of attention all day.

Remember the principle of stimulus – involving many of the senses. Participation is an effective way to get more of the senses involved and increase the learning. When we discussed stimulus, we said that words alone are not very effective. We remember more of what we do and say than of what somebody else does or says – because we're involved. Don't use involvement for its own sake, but to increase learning. So get 'em involved!

### 9.2.9 Repetition

*Repetition, repetition, repetition assists learning.*

The world of advertising recognizes the effect of a repeated message. Stop and think how many times you've seen the same ad on TV or in print. They want to imprint the product on your mind and constant repetition does just that. Let's see how this works in training.

Notice that each time you have a "refresher" session, the Desirable Learning Curve holds constant (because your desired student progress hasn't changed) but the Forgetting curve shows less and less falloff. In other words, your learners are remembering more and getting closer to your desired learning level.

In his many cassette tape programs, Earl Nightingale tells his listeners, "a message read or heard several times a day for eight days is virtually memorized; at the end of 30 days the memory retains 90% of the message."

No, you should not repeat your message like a tape recorder in your classes, but you should be aware of how the mind works in retaining material and the importance of repetition in your learning situation.

## 9.3 Review of Training Methods and Techniques[1]

In this section we briefly discuss several training methods and the advantages and disadvantages associated with each of them.

| | BRAINSTORMING | CASE STUDIES |
|---|---|---|
| **DESCRIPTION OF METHOD** | Creative thinking is more important than practical thinking. Participants spontaneously offer ideas on the given theme. | Case studies involve discussion of details about actual or hypothetical situations that participants could face in their work. The event or case is analyzed and discussed, and a plan of action is developed to address the given situation. |
| **PROCEDURES/ HOW TO USE** | Participants spontaneously offer ideas on the given theme. During the idea-generating stage, no idea is rejected or criticized, all ideas are written down, and all participants are given a turn to share their ideas. Participant ideas should be quick and brief. Participants should be encouraged to feel at ease suggesting any ideas – even the most absurd (wild) ideas should be welcomed. When all ideas have been mentioned, the group should discuss the ideas generated, asking for clarification, combination, or refinement of ideas. The most valuable ideas should be chosen and developed. | Either the trainer or the participants prepare a case study in advance of the session. The trainer should provide a structure for the case studies to follow. For example, case studies could consist of a description of the problem, an analysis of the problem, the actions that were taken, results, and lessons learned. The value of case studies must correspond to the time spent developing and analyzing them. Examples should not be too long, complicated, or detailed. |
| **WHEN TO USE** | The aim of this method is to generate as many ideas as possible and to stimulate creative thinking. It is a good technique to use for problem-solving sessions, when you want to reframe an issue, or when you want to generate new ideas (e.g., identification of project ideas). | Very good method for applying theory to a real case. Case studies allow participants to suggest alternative solutions and promote the development of problem-solving skills. For example, following a discussion of coordination of an international response to a large-scale disaster, it may be useful to analyze a case study for a specific example. |
| **ADVANTAGES** | - Freedom of expression is encouraged.<br>- This is a fast way to gather many opinions.<br>- New and innovative solutions are often suggested. | Case studies promote the development of problem-solving skills and allow participants to learn from each other's experiences and suggest alternative solutions. |
| **DISADVAN- TAGES** | Requires a skilled trainer to encourage full participation and to suspend criticism and judgment of ideas. | - Case studies must be developed ahead of time.<br>- May take much time to prepare and complete.<br>- Participants may lack the knowledge or experience to analyze adequately the case study. |

1  Source: *REA Training of Trainers, Trainer's Reference Reader*. 2006. Rapid Environmental Impact Assessment for Disasters Workshop Materials. Designed and developed by InterWorks LLC for CARE International. Funded by United States Agency for International Development (USAID). Version: 4.4.1. *Revised* January 2006

| | SIMULATION/ROLE PLAYING | GROUP DISCUSSIONS |
|---|---|---|
| **DESCRIPTION OF METHOD** | Modeling, simulations, and role-plays involve participants in situations that mirror or simulate reality. The purpose is to get participants to think, feel, and act in these simulated situations and then to reflect on their experience. Simulations recreate the environment that participants are likely to encounter in a real situation. | In group discussions, the trainer serves as a facilitator, enabling all members of the group to participate and ensuring that a vocal minority does not dominate the discussion. |
| **PROCEDURES/ HOW TO USE** | To conduct a simulation or role-play, at a minimum the trainer needs to develop the scenario for the role-play and several roles that participants will take on. The trainer must also consider what the objectives of the role-play are and make sure that the role-play/simulation illustrates relevant points. | Additional guidelines are offered in Part II, in the section "Facilitation of group discussions." |
| **WHEN TO USE** | This method serves as a type of "experimental laboratory" where participants are allowed to try out different roles, make mistakes, and learn from the whole experience. One example of a simulation is a situation that requires participants to plan, prepare for, and respond to a large refugee influx, chemical spill, or earthquake. | Use when you want:<br>• Trainees to share their opinions and experience<br>• Conflicting viewpoints to emerge and be debated<br>• To encourage examples and anecdotes from trainees' experience<br>• To raise issues that you will address in a case study or presentation |
| **ADVANTAGES** | Practical exercises that stimulate adult learning | • Shows respect for trainees' opinions and experience<br>• Involves trainees in the teaching and learning process<br>• Relies on the real opinions and experience of trainees<br>• Helps highlight many important, complex, and interrelated issues |
| **DISADVAN- TAGES** | Often costly and time consuming to develop | • Requires someone with good facilitation skills<br>• Good discussions require trust among participants<br>• Some trainees may want the trainer to provide the "correct" or final viewpoint<br>• New, tangential issues may arise that may require additional time to discuss |

| | DEMONSTRATION | PRESENTATIONS/LECTURES |
|---|---|---|
| **DESCRIPTION OF METHOD** | A demonstration is a way of showing how to perform an action, or how to follow a certain procedure. | Presentations or lectures may be used to present factual material in logical form, to describe one point of view on a debatable issue, to entertain or inspire the audience, to stimulate thinking and further study of a problem, or to initiate a general discussion. Some participants prefer to learn by listening rather than by having to read the same information. |
| **PROCEDURES/ HOW TO USE** | The trainer models the behavior or the action that he or she wants participants to copy. Trainer demonstrations should be followed by practical hands-on exercises that give participants an opportunity to practice what they have just observed. | Presentations should be brief, not longer than 20 minutes (lectures should be limited to an hour or less), should be thoroughly prepared in advance, and should be followed by some other training method. Try to involve participants by asking questions, and use visual materials to supplement your presentation. |
| **WHEN TO USE** | Use when your objective is to get participants to use and learn new technical skills. For example, how to create compost bins for use in household solid waste management. | Use with large groups, when participation is not required, and to summarize main points.<br>Presentations are also useful for presenting new concepts, themes, or theories. |
| **ADVANTAGES** | • Participants have a chance to practice.<br>• Trainers can see whether participants have mastered the skill. | • A lot of information can be presented quickly.<br>• Useful for large groups.<br>• Participants pose questions that may be of interest to the whole group.<br>• Often preferred when the lecturer is a highly respected expert who is also engaging.<br>• Participants who like traditional methods will like this. |
| **DISADVAN- TAGES** | Demonstrations are constrained by the amount of time and money that may be required to conduct them.<br>If the materials used in a demonstration are small, some participants will have difficulty seeing what is being done. | • Relies on the speaker's experience<br>• Participants are passive recipients of knowledge<br>• Tiring after about 15 minutes<br>• Easily forgotten<br>• No feedback from audience |

|  | PRACTICAL EXERCISES/GROUP WORK | INDEPENDENT READING |
|---|---|---|
| DESCRIPTION OF METHOD | Practical exercises involve participants in thinking about and/or using a technique or method. | Participants are asked to read some material independently and be able to discuss it later. |
| PROCEDURES/ HOW TO USE | Practical exercises are usually preceded with a presentation by the trainer that provides the necessary concepts, principles, questions, or formula for resolving the problem posed in the subsequent practical exercise. Participants then work on a problem or exercise in groups. Groups discuss the problem and come to a solution or make a recommendation, and then report their decision to the whole meeting. Reports are presented by a member of the group, with the use of flip-chart illustration, lists, or other visual aids.<br><br>For example, an instructor may present the principles of storing relief supplies in a warehouse and then give participants a written practical exercise in which they have to calculate the use of warehouse space. |  |
| WHEN TO USE | Participants learn best by actually practicing what they are learning. | This technique may be used at the beginning, at the end, and during the lesson. In many cases independent reading will save time. |
| ADVANTAGES | • Everyone participates.<br>• Encourages discussions, exchange of experience and ideas.<br>• Shy participants are more relaxed in small groups.<br>• Incorporates the use of specific information and recommendations. | • Participants can proceed at their own pace.<br>• Allows participants to delve into topics more deeply. |
| DISADVAN-TAGES | • Takes time and may require more space where separate rooms are required.<br>• May turn out to be nonproductive, if instructions or set-up are confusing or incomplete or if not enough time is allotted for the groups to work.<br>• Small-group work can be an overused method.<br>• Requires effective group leadership.<br>• Do not overload the amount of work the small groups need to produce. Allow enough time for group work or you will frustrate the participants. | • Can be time consuming.<br>• Difficult to rely on this method because some participants will not do the reading. |

|  | SKITS | ROUNDTABLE (PANEL) DISCUSSIONS |
|---|---|---|
| DESCRIPTION OF METHOD | Skits are short, rehearsed performances involving one or more participants. | Roundtable discussions offer listeners information on different sides of a problem and give them the opportunity to weigh all sides of an issue. |
| PROCEDURES/ HOW TO USE | Using prepared scenarios, participants perform a situation or event, dramatizing a real situation at work. | To organize a roundtable (also referred to as a panel discussion), the trainer invites a group of experts to discuss and debate an issue.<br><br>Roundtable discussions require an effective discussion leader who maintains order, gives every expert equal time to express himself or herself, and organizes the discussion so that the theme is adequately covered. Discussions should be followed by an opportunity for participants to ask questions about what has been said. |
| WHEN TO USE | Skits may be used to present a new theme for discussion, highlight certain problems, or sensitize participants to the culture or lifestyle of a group or society. | When you want to allow multiple experts to speak in a semi-structured session. |
| ADVANTAGES | Skits allow participants to become personally and emotionally involved in the topic or problem. They also stimulate participants' interest and their involvement in the discussion. | • Allows multiple viewpoints to be expressed.<br>• Good method for incorporating experts into a workshop. |
| DISADVAN-TAGES | While skits can include humor, it should not overshadow or blur the intended message. | The use of roundtables is limited when not all sides of an issue are discussed, as in the case when all roundtable experts share similar points of view. Also, roundtables depend on having a good, effective roundtable leader to make sure that all the experts have equal time to share their ideas. |

|  | VIDEO FEEDBACK | VIDEO PLAYBACK |
|---|---|---|
| DESCRIPTION OF METHOD | Participants are videotaped while performing a specified activity. | A good collection of video materials may enliven the workshop, and is useful for stimulating discussion. |
| PROCEDURES/ HOW TO USE | The trainer must clearly define the purpose and objectives of the videotaping exercise. After participants are taped, the video is played back so each participant can review his or her own performance. The trainer offers helpful suggestions to each participant. | It is frequently useful to show short video segments and discuss their relevance to the topic being considered. |
| WHEN TO USE | Useful when participants are practicing a specific skill, as it allows them to see their own performance. For example, trainees in a training-of-trainers workshop can be videotaped making presentations. | Videos show real-life situations about which you are talking. They are also a good method for demonstrating a procedural or step-by-step skill. |
| ADVANTAGES | Participants can view and critique their own performances. | • Can show real situation.<br>• Provides variety for participants. |
| DISADVAN-TAGES | Can be time consuming<br><br>Need the proper equipment to conduct such an exercise. | Can be expensive to purchase or produce.<br><br>May be difficult for all participants to see or hear the video without the proper equipment. |

|  | IDEA CARDS |
|---|---|
| DESCRIPTION OF METHOD | Sometimes it is useful to record thoughts, lists, and ideas on small cards rather than on the static whiteboard or flip-chart paper. |
| PROCEDURES/ HOW TO USE | Distribute large cards (minimum size should be approximately 1/2 of an A4 sheet of paper) to participants. Ask them to write one idea/comment/procedure/etc. per card (depending on the topic you are discussing). Collect the cards from the participants. Organize and summarize them based on the group's discussion. |
| WHEN TO USE | Use when you want input from the entire group. For example, if the topic you are discussing is assessment information sources, you could ask participants to write down one source of information per card, and then discuss the list generated by the whole group. |
| ADVANTAGES | • Useful for soliciting ideas from everyone<br>• Useful when you need to capture a lot of input from the group in a short amount of time.<br>• Notes made on separate cards are easily classified, organized, and moved. |
| DISADVANTAGES | May be difficult for participants to read the cards during the debriefing session. |

## 9.4 Facilitation Skills and Techniques

### 9.4.1 Responsibilities of the Discussion Facilitator

When leading a discussion, the workshop trainer has many responsibilities, including the following:

- Encouraging active, meaningful, and full participation
- Stimulating discussion
- Managing the discussion time and keeping the workshop on track
- Managing conflicts that may arise
- Allowing minority views to be expressed
- Summarizing and synthesizing main points, views, and conclusions
- Inviting quieter or shy participants to give their opinion or ideas

During participatory workshops, both structured and impromptu discussions will occur between participants, and between participants and the trainer. Thus, the trainer needs to be adept at managing and leading group discussions.

### 9.4.2 The Discussion Cycle

Trainers should know where they want to lead a discussion and what kind of discussion is to take place. It is helpful to envision beforehand how the discussion should proceed. Trainers should imagine the types of questions or concerns that will arise during the discussion and prepare a response to deal with those issues. A useful approach to organizing discussions is to follow the steps outlined in the "discussion cycle" illustration below.
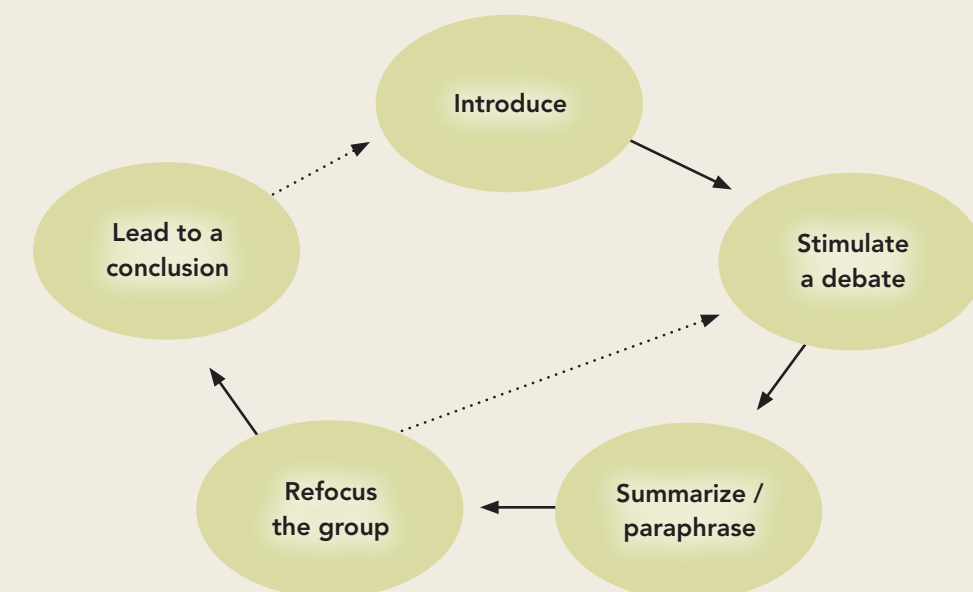
*The steps in the discussion cycle are:*

**Introduce:** Introduce the topic and explain the purpose and procedures for this session.

**Stimulate debate/discussion:** The trainer will need to find a way to stimulate the group's interest and participation if he or she is to engage them in the discussion. There are various ways to do this.

1. Make a brief presentation that raises issues of concern to participants and sets the stage for the discussion questions that follow.

2. Ask the group to read a short excerpt from an article.

3. Distribute discussion papers or reports ahead of time.

4. Show a short thought-provoking video.

5. Ask the group to complete a quick exercise, questionnaire, or short problem.

6. Make a provocative statement or ask a provocative question.

7. Stage a brief role-play or skit.

After using any of these techniques, the trainer should have several follow-up discussion questions ready. "What did you think about … ?" "How do you feel about what you saw?" "What is your view about what you've read?"

**Summarize key perspectives and main points:** Discussions will be freewheeling and perspectives will be numerous, and participants may or may not express themselves clearly or succinctly. It is the responsibility of the discussion facilitator to summarize the key perspectives as well as the main points that have surfaced during the discussion.

**Refocus the discussion:** If the discussion wanders off course or if there is another level of analysis that is required, the facilitator will need to **refocus** the discussion by asking the group another question.

**Lead to a conclusion:** Trainers need to lead the discussions to a sense of closure. The trainer can do this by offering some final concluding remarks that capture the spirit and key points of the discussion or that offer some next steps.

While the discussion cycle tells us how to structure a discussion or sequence a group activity, it does not, by itself, guarantee success. Trainers must also use techniques that facilitate lively dialogue and communication. These techniques include:

1. Asking good questions

2. Handling participant questions

3. Listening actively

Each of these three techniques is now considered more fully.

### 9.4.3 Asking Good Questions

Not all questions will generate the response you want. Asking good questions is an important skill trainers must master. Trainers who ask good questions keep the discussion interesting, highlight critical issues, and keep participants engaged. Here are some guidelines for asking good questions.

1. Initially pose general questions to the whole group.

2. Make follow-up questions precise and direct.

3. Ask answerable questions (questions that seek information that is within the participants' knowledge or experience).

4. Formulate clear questions. If your question is not initially understood, reformulate it, or break it down into sub-questions.

5. Prepare your questions in advance and envision the responses you hope to receive. This will help you reformulate the question if the initial response takes the discussion on an unintended tangent.

6. Ask one question at a time. Allow enough time for participants to answer. If there is silence, count to five before asking your next question.

7. Avoid leading questions such as, "Don't you think that … ?"

8. Formulate reflective or hypothetical questions. "What would happen if… ?"

9. Use open-ended questions. Open-ended questions cannot be answered with a simple "yes" or "no." They require a more complex answer or opinion. Generally, questions that begin with "What," "How," or "Why" will generate more complete responses.

Even when trainers ask good questions, they do not always get in-depth, informative answers. Trainers must follow up with participants to go beyond superficial answers that are sometimes offered. For example, in a discussion about ensuring local participation in projects, trainers might ask the following questions:, "How specifically would you involve the local population?" "What specific activities would they be involved in?" "Who would you involve?" "Can you give me a specific example of what you have tried in the past?" These types of questions will invoke more thoughtful responses that will benefit other participants in the course.

### 9.4.4 Handling Participant Questions

Not only will the trainer be asking questions, but often he or she will have to respond to questions posed by participants. Here are some guidelines for handling participant questions:

1. Anticipate the types of questions participants might ask and prepare your response or strategy for handling them.

2. Redirect the question to someone else: the questioner, other participants, or other trainers.

3. If the question is critical, insulting, or confrontational, stay calm. Some ways to stay calm include counting to six and taking a deep breath before responding. You can also defuse a tense situation by taking a break, or by breaking a larger group into smaller groups and asking each group to identify four or five main problems or issues under contention and what they would

recommend to solve them. You might also ask if anyone can share a different perspective or opinion on the matter. Sometimes just thanking a person for his or her contribution, or suggesting that you can speak with him or her during the break, are good strategies for dealing with this challenging behavior.

4. Summarize or reformulate the question before answering.

5. Take several questions at a time.

6. Stimulate a general discussion if the question seems of general interest to other participants.

7. Admit it when you don't know the answer and redirect the question to someone who does know.

### 9.4.5 Listening Actively

The trainer will need to be an active listener if he or she is to encourage participants to share their opinions and respond meaningfully to questions. A trainer who listens actively is telling his or her participants that he or she cares about what they are saying. Active listening helps the trainer accurately interpret the meaning and purpose of the participant's question or comment. Active listening techniques include:

1. Allowing the participant to complete his or her question or comment before responding

2. Asking questions to clarify your understanding

3. Paraphrasing

4. Summarizing and reformulating what has been said

5. Asking open-ended questions

6. Including participant's words or concepts in your response

7. Asking a participant to elaborate on his or her answer: "Ali, why don't you tell us more about that."

## 9.5 Preparing, Organizing, and Planning Participatory Workshops

### 9.5.1 Understanding How Adults Learn

When conducting a training event, it is important to recognize that adult learners bring expertise, experience, and insights that, when tapped, can enhance the quality of a training session. Participants will learn from each other, not just from the official "trainer." Adults must be interested and engaged in a topic in order to learn the material. If they do not feel there is a reason to learn a particular skill or subject, it will be very difficult to engage them. One way to engage adults is to make workshops participatory.

Participants learn best when they are actively involved in the learning process. The old adage, "learn by doing," applies here. By actively involving adults in their own learning—drawing on their past experiences and allowing opportunities to learn by doing—trainers will facilitate the adult learning process.

In general, participants learn better and are more interested if the methods used are varied and if they are given opportunities to actively participate through practical exercises, small-group work, and group

discussions. Participants should be challenged to think critically, use and develop planning skills, and solve problems creatively.

For additional information on how adults learn, see the article in Annex 3.

### 9.5.2 Understanding Participatory Workshops

Participatory or interactive training methods differ from instructor-centered teaching approaches. Ideally, the participatory approach grants a higher value to participant insight and experience and thus relies on increased participant involvement in the teaching and learning process. Participatory workshops also recognize that participants learn best when several of their senses are engaged in the learning process (seeing, hearing, and doing).

In participatory workshops, trainers still make presentations, but they do not rely primarily on this method. They will also plan, design, and facilitate group discussion, self-study, and group problem-solving exercises. The following chart presents some additional differences between instructor-centered approaches and participatory approaches.

| COMPARISON | INSTRUCTOR CENTERED WORKSHOPS | PARTICIPATORY WORKSHOPS |
|---|---|---|
| EXPERTISE/KNOWLEDGE | Instructor is the sole expert and authority; instructor alone has the "correct" knowledge | Both the trainer and participants bring experience, expertise, and knowledge relevant to the topic |
| ROLE AND RESPONSIBILITY OF INSTRUCTOR | Lecturer, scholar, savant | • Plans and organizes seminar; provides structure for participant involvement<br>• Stimulates group discussion<br>• Facilitates discussion by participants<br>• Summarizes group discussions and conclusions<br>• Makes mini-presentations |
| ROLE OF THE LEARNER | Passive listener; listens and poses questions to instructor. | Active learners, involved in discussions and problem solving |
| PRIMARY METHODS | • Lecture or presentation by the instructor followed by question and answer period<br>• Participants direct their questions to the instructor | • Group discussion and analysis<br>• Practical exercises and activities<br>• Mini-presentations to introduce a topic or to emphasize important points<br>• Participants direct questions to each other and to the trainer |
| LEARNING | Participants must memorize theory, information, and facts. The insights, opinions, and experience of participants are seldom sought. | • Participants learn from instructor and from each other through discussions<br>• Critical reflection; practical activities<br>• A primary goal of participatory seminars and workshops is to develop participants' critical-thinking, problem-solving, and planning skills |
| SOLUTIONS/ACTION | Instructor proposes a set of "correct solutions" or expertise-based technical solutions that participants must learn and follow | Participants are involved in identifying and generating solutions, and proposing actions, based on technical information as well as their own experience, resources, and capacities |

There are many different types and variations of training methods. Trainers have to choose the most suitable methods for each training situation. To choose suitable and effective training methods, it is necessary to take into account many factors including participant needs and characteristics; the training situation; trainer expertise and skills; amount and content of information; the timing and location of the event; and available equipment. Annex 1 provides a matrix that compares the uses, advantages, and disadvantages of various types of training methods.

### 9.5.3 Training Needs Assessment
Training needs assessment identifies the characteristics of the training audience: their specific job performance, competency, and/or information needs; their gaps in knowledge or skills; and the most cost-effective or

optimal mode of delivering the training. Information collected during the needs assessment – whether obtained through informal conversations with key stakeholders or more formal interviews, observations, focus groups, performance data, questionnaires, or tests – can clarify issues and provide a focus on performance. It is also good practice to allow time at the beginning of a workshop to ask participants to share one thing that they hope to learn or acquire during the workshop.

### 9.5.4 Establishing Training And Learning Objectives
Whenever you conduct a training event – be it a presentation, workshop, demonstration, or similar activity – you must consider in advance what you would like participants to learn from the event. While the GRRT workshop learning objectives are outlined already in the course materials, keep in mind that each group of participants will have specific needs and expectations. A training needs assessment will help you establish priorities and clarify specific training and learning objectives particular to your training event.

It may be useful to consider two broad types of objectives for your event. First, what are your overarching or broad reasons for holding the training event? What do you hope it will accomplish? Your answers may relate strictly to learning or they may also relate to networking, team building, or increasing the visibility of your program or expertise.

Once you have developed your overarching course objectives, the focus should be on developing specific training objectives. Your answers to the following questions can help you determine these specific objectives.

> **Q:** Upon completion of the training, what should participants know about the topic that they do not already know?

> **Q:** After the training, what should participants do differently?

In order to answer the above two questions, you must have an idea of your trainees' experience with the topic and what they already know about it. Therefore, you will need to determine how you will find out what participants already know and then take steps to assess their existing knowledge and experience.

Based on the answers to the above two questions and on the participants' existing knowledge and experience, develop specific training objectives related to learning, knowledge acquisition, and skill development. For example, one of the specific training objectives for this course is "Learners will understand the basic principles of adult learning and be able to apply them by developing training strategies appropriate to different learners."

After developing your training objectives, list how you will accomplish each objective – including what training methods you will use and the materials that you will need. After you have developed a complete list of objectives and identified your methods, proceed with the development of specific training materials.

In the case of the GRRT Workshop, you will want to compare the training methods, exercises, and logistics suggested in the training materials to the needs of the participants and the learning objectives you identify either before the workshop begins or on the first day of the workshop.

### 9.5.5 Preparing The Training Venue And Learning Environment
The workshop venue or facility is an important consideration. Does the group need to get away from the office in order to focus more intently on the topic? Or, do they need to be close to the office in order to respond to urgent work requests? Generally it is advisable to hold the training workshop off site and far enough away

so that the trainees' attention is not divided between the workshop and the demands of their office. If the workshop is held on site or near trainees' offices, you are almost guaranteed to lose participants for small or major parts of the workshop. You will find yourself repeating information for those who missed parts of the training, and needing to reduce the amount of material that you can cover in the allotted time.

The training environment refers to all the things external to the trainer and the workshop thematic content that can affect the success of the workshop and the transfer of learning, including workshop duration, location, room temperature, number and mix of participants, room layout, and seating. Each one of these variables has a real effect on the quality of the training. For example, if participants are seated in rows arranged in a traditional classroom setting, a school mentality may prevail in which the trainer is considered to be the only expert and, therefore, the only one to speak while the participants sit passively taking notes, like students in grade school. On the other hand, if participants are seated in small groups of four to six, a team-building and collegial atmosphere is promoted. The successful trainer is able to manage the training environment to the fullest extent and minimize any negative effects. Generally, the workshop site plenary room should have movable round or square/rectangular tables that can accommodate five to seven participants each.

If the event is to run smoothly, the facility must offer a basic level of service. If administrators, facilitators, and trainers, for example, are constantly fighting bad lighting, space that is too small, and participants complaining about bad food and the distance to banks and shopping, the time and energy left for discussion and learning is greatly reduced. The cheapest venue is not necessarily the best venue. Some constraints are so difficult to overcome that even the best trainers and facilitators cannot succeed. When selecting a training venue, consider the space requirements, seating arrangements, equipment, and refreshment/dining facilities that the location provides.

### 9.5.6 Arranging for the Training Equipment and Materials

Since workshops rely on a variety of training methods, it is essential for the workshop coordinator to ensure that all of the necessary equipment and materials are present. The workshop organizer must consider the need for overhead projectors, VCRs and television screens, flip-chart paper and markers, masking tape, scissors, notebooks, writing pads, and many other equipment and material needs. Since workshops or training sessions often involve experts from different organizations or offices, make sure you communicate with these experts before the workshop to verify exactly what they will need. It is best to determine the minimum needs beforehand and ensure that the facility has them.

## 9.6 Icebreakers

### The suitcase and the bin[2]

**Time required:** About 20 minutes

**Supplies:** An empty suitcase and a large bin and a pile of index cards

This exercise is great workshop starter, as it helps you immediately understand your audience's needs. It also creates space for any workshop resisters to feel their concerns can be voiced, heard, and then put aside.

2  Adapted from Bastick, Megan and Kristin Valasek, Eds. 2009. *Gender and Security Reform Training Resource Package.* Geneva: Geneva Centre for the Democratic Control of Armed Forces (DCAF).

After completing this exercise, trainees will be able to:

- Identify concerns and expectations concerning a workshop on greening disaster response
- Leave behind some of the negative concerns and engage with the positive expectations

Put an open suitcase and a large bin in the middle of the room about a meter apart. Distribute a pile of index cards to the trainees and ask them to identify any negative feelings toward addressing environmental issues in this workshop on one set of cards and any positive expectations on another. They can fill out as many cards as they want. Explain that the game you are about to play involves going on a journey. As space is limited you have to sort through your belongings and have to make a strict choice about what can and cannot come with you. You decide to take only nice and useful things (your positive expectations regarding environmental issues) with you, and leave worn-out things (your negative feelings regarding environmental issues) behind. Ask participants to get up and put their positive cards into the suitcase and their negative cards into the bin, reading out aloud what it is they take along and leave behind. As the trainer, take note of key items on a flip chart. As you wrap up, summarize the range of feelings you have come to know about. Make sure to explain how some of the issues mentioned will be addressed during the workshop.

You can limit this exercise to one negative and one positive card per person, if you have very little time. Should you not have a suitcase or a bin available, you can use any other large receptacles.

### Speed debating[3]

Best with a fairly large group of around 20 trainees (must be an even number)

**Time required:** About 20 minutes

**Supplies:** A stopwatch

This exercise is meant to open trainees' minds to a discussion of environmental issues in the context of disaster recovery and to help the trainer to gauge the mood in the room. It is also a nice icebreaker: Trainees move around the room and expand the number of people they interact with beyond those sitting next to them. At the same time, the one-on-one interaction affords privacy that may help shy participants express their opinions.

After completing this exercise, trainees will be able to:

- Clarify their own beliefs regarding environmental issues
- Understand ways in which the environment influences decisions and policies
- Realize different ways of understanding the environment and its implications

Number all trainees in ones and twos, alternately. Those numbered "one" will sit across the table from those numbered "two." Read trainees a statement regarding the environment in the context of disaster recovery and instruct them to discuss it with their partners across the table, for two minutes only. After the two minutes, interrupt the discussions and ask all trainees to move one chair to their left. Read another statement and allow another two minutes to discuss. Repeat several times (for a total of five to six statements). After the last two-minute discussion, thank trainees and instruct them to return to their original seats.

3  Adapted from Bastick, Megan and Kristin Valasek, Eds. 2009. *Gender and Security Reform Training Resource Package.* Geneva: Geneva Centre for the Democratic Control of Armed Forces (DCAF).

The goal of the session is to ease trainees into an environmentally sensitive frame of mind, not to develop any ideas or to gather reactions to the statements provided; therefore, a group debrief is not necessary.

It is better to use statements rather than open questions. Statements help trainees take clear positions and make the debates livelier. It is important that the statements be absolute, not relative, and provocative without being outrageous, so that two people may reasonably disagree with each other. For instance, "women are inferior to men" is not a good statement to use, because defending (or disagreeing with) it will cause negative feelings and anger.

Below are some sample statements, but trainers should devise their own statements, tailored to trainees' interests:

- When working in a foreign country, international actors should respect local culture and traditions and not impose Western notions of the value and role of the environment.

- During the post-disaster emergency, saving lives and reducing suffering is all that matters. Protecting the environment can come later.

- All disaster response agencies should incorporate environmental activities into their projects.

- Even if implementing environmentally sustainable activities costs more and takes and more time, it is worth it in terms of long-term environmental objectives.

### Team-building – juggling balls[4]

Best with a fairly large group: 20 trainees or more

**Time required:** 30 minutes

**Supplies:** Three balls or more (they can range in size, weight, color, etc. but it is best if they are soft balls to avoid injury)

This exercise is focused on solving problems in a team in a practical and fun way. It demonstrates the juggling of many tasks, including responsibility for environmental issues.

After completing this exercise, trainees will be able to:

- Laugh together about their ball-catching skills

- Understand that partners are necessary in problem solving

- Know to look ahead (and behind) when given many different tasks (including integration of environmental issues)

Ask the trainees to stand in a circle, shoulder to shoulder. Explain that each ball will be thrown to someone in the circle who will in turn throw it to someone else in the ring. This continues until all group members have thrown the ball once. Start with one ball. Have the group repeat the exercise but this time in reverse order. On the next round, after the ball gets to the third person, add a second ball, and a third, fourth, etc., depending on the size of the group and the number of balls you have. Next, tell the group that you will now give them a time

limit (base this on how long that first time took). On the next round, shorten the time. Stop play and ask how they might be able to accomplish the task better and faster. Ask them how fast they think they can go. Have them try to do it in that time.

Process the exercise by asking the group to relate this to the juggling of tasks in their organization, including how to juggle the topic of the environment within the context of disaster response. Can they relate to "Sometimes you don't know what is coming," "Sometimes the person throws something to you without you knowing how to handle it," "Sometimes things go too fast and you drop the ball," etc.?

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4  Adapted from Bastick, Megan and Kristin Valasek, Eds. 2009. *Gender and Security Reform Training Resource Package.* Geneva: Geneva Centre for the Democratic Control of Armed Forces (DCAF).

## ANNEX A: PREWORKSHOP SURVEY

### Introduction

This is a brief pretraining survey for all participants who will be attending a workshop of the Green Recovery and Reconstruction training project. This survey will be used to:

- Give facilitators an understanding of participants' needs and expectations so they can properly structure the training

- Identify current skill areas of the trainees

- Help evaluate the effectiveness of the training after it is complete

Please note that this is not a test. This information will only be used to improve the quality of the training, so please be honest and open.

Please replace the [bracketed] text after each question with your answer. Your answers do not have to be very detailed; just a sentence or two will be good.

#### Background Information

Your Name:
*[Name]*

Your e-mail address:
*[e-mail]*

Other contact options that you can share (e.g., address, phone numbers, etc.):
*[other contacts]*

The country you are currently working or living in:
*[country]*

How would you describe your understanding of written and spoken English (none, basic, good, excellent)?

Written English: *[written English skill]* Spoken English:
*[spoken English skill]*

Please tell us about any other languages you speak:
*[other languages]*

What is your current job title/description?
*[job description]*

Please list your primary professional skills developed through training and experience.
*[professional skills]*

### Training Topic Questions

#### Green Recovery and Reconstruction Concept

On a scale of 1–5, how would you rate your current understanding of the Green Recovery and Reconstruction (GRR) Concept (what GRR is, how GRR is used in other parts of the world, etc.)?
[scale 1–5, 1 being least or lowest and 5 being greatest or highest]

Please also write down any comments you have about your experience with the GRR concept and/or specific knowledge you hope to gain about the GRR concept.
*[comments]*

#### Environmental Management and/or Ecosystem Approach

On a scale of 1–5, how would you rate your current understanding of Environmental Management and/or Ecosystem Approach (what is it, what are the key concepts, etc.)?
*[scale 1–5]*

Please also write down any comments you have about your experience working with environmental management groups, and/or any specific knowledge you hope to gain about applying environmental management to disaster response.
*[comments]*

#### Technical Skills

On a scale of 1–5, how would you rate your current understanding and experience as a technician (knowledge of environmental management, conservation, or disaster management, including recovery and reconstruction, methods, tools and resources, etc.) in each of the following sectors or skills)? Place a number in each of the boxes to the left of the following topics.

| Environmental management | Conservation | Disaster management | |
|---|---|---|---|
| | | | Environmental impact assessment |
| | | | Monitoring and evaluating humanitarian projects |
| | | | Physical planning |
| | | | Construction |
| | | | Procurement |
| | | | Water and sanitation |
| | | | Livelihoods |
| | | | Disaster risk reduction |
| | | | Green organizational management practices |
| | | | Other, related area: please describe |
| | | | Other, related area: please describe |

Please also write down any comments you have about previous experience with environmental management, conservation, and/or humanitarian assistance, and/or any specific consulting skills that you hope to gain.
[comments]

### Training

On a scale of 1–5, how would you rate your current knowledge and experience as a trainer (training methods, learning styles, etc.)?
[scale 1–5]

Please also write down any comments you have about your experience with training and/or specific knowledge you hope to gain about training concepts.
[comments]

## General Comments

Finally, please give us any general comments or concerns you have about the upcoming training or your future work in post-disaster/conflict response, etc.
[general comments]

Thank you very much for your feedback. Your comments are greatly appreciated and will help shape a more effective training program.

## GLOSSARY

The following is a comprehensive list of the key terms used throughout the Green Recovery and Reconstruction Toolkit. In some cases, the definitions have been adapted from the original source. If no source is given, this indicates that the module author developed a common definition for use in the toolkit.

**Anaerobic Filter (or Biofilter):** Filter system mainly used for treatment of secondary effluent from primary treatment chambers such as septic tanks. The anaerobic filter comprises a watertight tank containing a bed of submerged media, which acts as a support matrix for anaerobic biological activity. For humanitarian aid agencies, the prefabricated biofilters that combine primary and secondary treatment into one unit can provide a higher level of treatment than do traditional systems such as precast cylindrical septic tanks or soakage pit systems. Source: SANDEC. 2006. *Greywater Management in Low and Middle Income Countries.* Swiss Federal Institute of Aquatic Science and Technology. Switzerland.

**Better Management Practices (BMPs):** BMPs are flexible, field-tested, and cost-effective techniques that protect the environment by helping to measurably reduce major impacts of growing of commodities on the planet's water, air, soil, and biological diversity. They help producers make a profit in a sustainable way. BMPs have been developed for a wide range of activities, including fishing, farming, and forestry. Source: Clay, Jason. 2004. *World agriculture and the environment: a commodity-by-commodity guide to impacts and practices.* Island Press: Washington, DC.

**Biodiversity:** Biological diversity means the variability among living organisms from all sources, including inter alia, terrestrial, and marine and other aquatic ecosystems, as well as the ecological complexes of which they are part; this includes diversity within species, between species, and of ecosystems. Source: United Nations. Convention on Biological Diversity. www.cbd.int/convention/articles.shtml?a=cbd-02 (Accessed on June 18, 2010)

**Carbon Footprint:** The total set of greenhouse gas emissions caused directly and indirectly by an individual, organization, event, or product. For simplicity of reporting, the carbon footprint is often expressed in terms of the amount of carbon dioxide, or its equivalent of other greenhouse gases, emitted. Source: Carbon Trust. Carbon Footprinting. www.carbontrust.co.uk (Accessed on June 22, 2010)

**Carbon Offset:** A financial instrument aimed at a reduction in greenhouse gas emissions. Carbon offsets are measured in metric tons of carbon dioxide-equivalent ($CO_2e$) and may represent six primary categories of greenhouse gases. One carbon offset represents the reduction of one metric ton of carbon dioxide or its equivalent in other greenhouse gases. Source: World Bank. 2007. *State and Trends of the Carbon Market.* Washington, DC

**Climate Change:** The climate of a place or region is considered to have changed if over an extended period (typically decades or longer) there is a statistically significant change in measurements of either the mean state or the variability of the climate for that place or region. Changes in climate may be due to natural processes or to persistent anthropogenic changes in atmosphere or in land use. Source: UN International Strategy for Disaster Reduction. Terminology of disaster risk reduction. www.unisdr.org/eng/terminology/terminology-2009-eng.html (Accessed on April 1, 2010)

**Construction:** Construction is broadly defined as the process or mechanism for the realization of human settlements and the creation of infrastructure that supports development. This includes the extraction and processing of raw materials, the manufacturing of construction materials and components, the construction project cycle from feasibility to deconstruction, and the management and operation of the built environment.

Source: du Plessis, Chrisna. 2002. *Agenda 21 for Sustainable Construction in Developing Countries*. Pretoria, South Africa: CSIR Building and Construction Technology.

**Disaster:** Serious disruption of the functioning of a society, causing widespread human, material, or environmental losses which exceed the ability of the affected society to cope using only its own resources. Disasters are often classified according to their speed of onset (sudden or slow) and their cause (natural or man-made). Disasters occur when a natural or human-made hazard meets and adversely impacts vulnerable people, their communities, and/or their environment. Source: UNDP/UNDRO. 1992. *Overview of Disaster Management*. 2nd Ed.

**Disaster preparedness:** Activities designed to minimize loss of life and damage; organize the temporary removal of people and property from a threatened location; and facilitate timely and effective rescue, relief, and rehabilitation. Source: UNDP/UNDRO. 1992. *Overview of Disaster Management*. 2nd Ed.

**Disaster Risk:** Potential disaster losses in lives, health status, livelihoods, assets, and services that could occur to a particular community or a society over some specified future time period. Risk can be expressed as a simple mathematical formula: Risk = Hazard X Vulnerability. This formula illustrates the concept that the greater the potential occurrence of a hazard and the more vulnerable a population, the greater the risk. Source: UN International Strategy for Disaster Reduction. Terminology of disaster risk reduction. www.unisdr.org/eng/terminology/terminology-2009-eng.html (Accessed on April 1, 2010)

**Disaster Risk Reduction:** The practice of reducing disaster risks through systematic efforts to analyze and manage the causal factors of disasters, including reduced exposure to hazards, lessened vulnerability of people and property, wise management of land and the environment, and improved preparedness for adverse events. Source: UN International Strategy for Disaster Reduction. Terminology of disaster risk reduction. www.unisdr.org/eng/terminology/terminology-2009-eng.html (Accessed on April 1, 2010)

**Ecosystem:** Dynamic complexes of plants, animals, and other living communities and the nonliving environment interacting as functional units. Humans are an integral part of ecosystems. Source: UN. Convention on Biological Diversity. www.cbd.int/convention/articles.shtml?a=cbd-02 (Accessed on June 18, 2010)

**Ecosystem Services:** The benefits that people and communities obtain from ecosystems. This definition is drawn from the Millennium Ecosystem Assessment. The benefits that ecosystems can provide include "regulating services" such as regulation of floods, drought, land degradation, and disease; "provisioning services" such as provision of food and water; "supporting services" such as help with soil formation and nutrient cycling; and "cultural services" such as recreational, spiritual, religious, and other nonmaterial benefits. Integrated management of land, water, and living resources that promotes conservation and sustainable use provides the basis for maintenance of ecosystem services, including those that contribute to the reduction of disaster risks. Source: UN International Strategy for Disaster Reduction. Terminology of disaster risk reduction. www.unisdr.org/eng/terminology/terminology-2009-eng.html (Accessed on April 1, 2010)

**Embodied Energy:** The available energy that was used in the work of making a product. Embodied energy is an accounting methodology used to find the sum total of the energy necessary for an entire product life cycle. Source: Glavinich, Thomas. 2008. *Contractor's Guide to Green Building Construction: Management, Project Delivery, Documentation, and Risk Reduction*. John Wiley & Sons, Inc: New Jersey.

**Environment:** The complex of physical, chemical, and biotic factors (such as climate, soil, and living things) that act upon individual organisms and communities, including humans, and ultimately determine their form

and survival. It is also the aggregate of social and cultural conditions that influence the life of an individual or community. The environment includes natural resources and ecosystem services that comprise essential life-supporting functions for humans, including clean water, food, materials for shelter, and livelihood generation. Source: Adapted from: *Merriam Webster Dictionary, "Environment."* www.merriam-webster.com/netdict/environment (Accessed on June 15, 2010)

**Environmental Impact Assessment:** A tool used to identify the environmental, social, and economic impacts of a project prior to decision making. It aims to predict environmental impacts at an early stage in project planning and design, find ways and means to reduce adverse impacts, shape projects to suit the local environment, and present the predictions and options to decision makers. Source: International Association of Environmental Impact Assessment in cooperation with Institute of Environmental Assessment. 1999. *Principles of Environmental Impact Assessment Best Practice*.

**Green Construction:** Green construction is planning and managing a construction project in accordance with the building design in order to minimize the impact of the construction process on the environment. This includes 1) improving the efficiency of the construction process; 2) conserving energy, water, and other resources during construction; and 3) minimizing the amount of construction waste. A "green building" is one that provides the specific building performance requirements while minimizing disturbance to and improving the functioning of local, regional, and global ecosystems both during and after the structure's construction and specified service life. Source: Glavinich, Thomas E. 2008. *Contractor's Guide to Green Building Construction: Management, Project Delivery, Documentation, and Risk Reduction*. Hoboken, New Jersey: John Wiley & Sons, Inc.

**Green Purchasing:** Green Purchasing is often referred to as environmentally preferable purchasing (EPP), and is the affirmative selection and acquisition of products and services that most effectively minimize negative environmental impacts over their life cycle of manufacturing, transportation, use, and recycling or disposal. Examples of environmentally preferable characteristics include products and services that conserve energy and water and minimize generation of waste and release of pollutants; products made from recycled materials and that can be reused or recycled; energy from renewable resources such as biobased fuels and solar and wind power; alternate fuel vehicles; and products using alternatives to hazardous or toxic chemicals, radioactive materials, and biohazardous agents. Source: U.S. Environmental Protection Agency. 1999. Final Guidance on Environmentally Preferred Purchasing. *Federal Register*. Vol. 64 No. 161.

**Greening:** The process of transforming artifacts such as a space, a lifestyle, or a brand image into a more environmentally friendly version (i.e., "greening your home" or "greening your office"). The act of greening involves incorporating "green" products and processes into one's environment, such as the home, workplace, and general lifestyle. Source: Based on: Glavinich, T. 2008. *Contractor's Guide to Green Building Construction: Management, Project Delivery, Documentation, and Risk Reduction*. Hoboken, New Jersey: John Wiley & Sons, Inc.

**Hazard:** A potentially damaging physical event, phenomenon, or human activity that may cause the loss of life or injury, property damage, social and economic disruption, or environmental degradation. Hazards can include latent conditions that may represent future threats and can have different origins: natural (geological, hydrometeorological, and biological) or induced by human processes (environmental degradation and technological hazards). Source: UN International Strategy for Disaster Reduction. Terminology of disaster risk reduction. www.unisdr.org/eng/terminology/terminology-2009-eng.html (Accessed on April 1, 2010)

**Impact:** Any effect caused by a proposed activity on the environment, including effects on human health and safety, flora, fauna, soil, air, water, climate, landscape and historical monuments, or other physical structures, or the interaction among those factors. It also includes effects on cultural heritage or socioeconomic conditions resulting from alterations to those factors. Source: United Nations Economic Commission for Europe. 1991. *The Convention on Environmental Impact Assessment in a Transboundary Context.* www.unece.org (Accessed June 22, 2010)

**Indicator:** A measurement of achievement or change for the specific objective. The change can be positive or negative, direct or indirect. They provide a way of measuring and communicating the impact, or result, of programs as well as the process, or methods used. The indicator may be qualitative or quantitative. Indicators are usually classified according to their level: *input* indicators (which measure the resources provided), *output* indicators (direct results), *outcome* indicators (benefits for the target group) and impact indicators (long-term consequences). Source:  Chaplowe, Scott G. 2008. *Monitoring and Evaluation Planning.* American Red Cross/CRS M&E Module Series. American Red Cross and Catholic Relief Services: Washington, DC and Baltimore, MD.

**Integrated Water Resources Management:** Systemic, participatory process for the sustainable development, allocation, and monitoring of water resource use in the context of social, economic, and environmental objectives. Source: Based on: Sustainable Development Policy Institute. Training Workshop on Integrated Water Resource Management. www.sdpi.org (Accessed June 22, 2010)

**Life Cycle Assessment (LCA):** A technique to assess the environmental aspects and potential impacts of a product, process, or service by compiling an inventory of relevant energy and material inputs and environmental releases; evaluating the potential environmental impacts associated with identified inputs and releases; and interpreting the results to help make a more informed decision. Source:  Scientific Applications International Corporation. 2006. Life Cycle Assessment: Principle's and Practice. Report prepared for U.S. EPA.

**Life Cycle Materials Management:** Maximizing the productive use and reuse of a material throughout its life cycle in order to minimize the amount of materials involved and the associated environmental impacts.

**Life Cycle of a Material:** The various stages of a building material, from the extraction or harvesting of raw materials to their reuse, recycling, and disposal.

**Livelihoods:** A livelihood comprises the capabilities, assets (including both material and social resources), and activities required for a means of living. A livelihood is sustainable when it can cope with and recover from stresses and shocks and can maintain or enhance its capabilities and assets both now and in the future, without undermining the natural resource base. Source: DFID. 1999. *Sustainable Livelihoods Approach Guidance Sheets.* London: Department for International Development.

**Logframe:** Logical framework, or logframe, analysis is a popular tool for project design and management. Logframe analysis provides a structured logical approach to the determination of project priorities, design and budget and to the identification of related results and performance targets. It also provides an iterative management tool for project implementation, monitoring and evaluation. Logframe analysis begins with problem analysis followed by the determination of objectives, before moving on to identify project activities, related performance indicators and key assumptions and risks that could influence the project's success. Source: Provention Consortium. 2007. *Logical and Results Based Frameworks.* Tools for Mainstreaming Disaster Risk Reduction. Guidance Note 6. Geneva, Switzerland.

**Primary Wastewater Treatment:** Use of gravity to separate settleable and floatable materials from the wastewater. Source: National Research Council. 1993. *Managing Wastewater in Coastal Urban Areas.* Washington DC: National Academy Press.

**Project Design:** An early stage of the project cycle in which a project's objectives and intended outcomes are described and the project's inputs and activities are identified.

**Project Evaluation:** Systematic and impartial examination of humanitarian action intended to draw lessons that improve policy and practice, and enhance accountability. Source: Active Learning Network for Accountability and Performance in Humanitarian Action (ALNAP). Report Types. www.alnap.org (Accessed June 25, 2010)

**Project Monitoring:** A continuous and systematic process of recording, collecting, measuring, analyzing, and communicating information. Source: Chaplowe, Scott G. 2008. *Monitoring and Evaluation Planning.* American Red Cross/CRS M&E Module Series. American Red Cross and Catholic Relief Services : Washington, DC and Baltimore, MD.

**Reconstruction:** The actions taken to reestablish a community after a period of recovery subsequent to a disaster. Actions would include construction of permanent housing, full restoration of all services, and complete resumption of the pre-disaster state. Source: UNDP/UNDRO. 1992. *Overview of Disaster Management.* 2nd Ed.

**Recovery:** The restoration, and improvement where appropriate, of facilities, livelihoods, and living conditions of disaster-affected communities, including efforts to reduce disaster risk factors. Source: UN International Strategy for Disaster Reduction. Terminology of disaster risk reduction. www.unisdr.org/eng/terminology/terminology-2009-eng.html (Accessed on April 1, 2010)

**Recycle:** Melting, crushing, or otherwise altering a component and separating it from the other materials with which it was originally produced. The component then reenters the manufacturing process as a raw material (e.g., discarded plastic bags reprocessed into plastic water bottles). Source: Based on: Glavinich, Thomas E. 2008. *Contractor's Guide to Green Building Construction: Management, Project Delivery, Documentation, and Risk Reduction.* Hoboken, New Jersey: John Wiley & Sons, Inc.

**Resilience:** The capacity of a system, community, or society potentially exposed to hazards to adapt, by resisting or changing, in order to reach and maintain an acceptable level of functioning and structure. This is determined by the degree to which the social system is capable of organizing itself to increase its capacity for learning from past disasters for better future protection and to improve risk reduction measures. Source: UN International Strategy for Disaster Reduction. Terminology of disaster risk reduction. www.unisdr.org/eng/terminology/terminology-2009-eng.html (Accessed on April 1, 2010)

**Response (also called Disaster Relief):** The provision of emergency services and public assistance during or immediately after a disaster in order to save lives, reduce health impacts, ensure public safety, and meet the basic subsistence needs of the people affected.

*Comment: Disaster response is predominantly focused on immediate and short-term needs and is sometimes called disaster relief. The division between this response stage and the subsequent recovery stage is not clear-cut. Some response actions, such as the supply of temporary housing and water supplies, may extend well into the recovery stage.*

Source: UN International Strategy for Disaster Reduction. Terminology of disaster risk reduction. www.unisdr.org/eng/terminology/terminology-2009-eng.html (Accessed on April 1, 2010)

**Reuse:** The reuse of an existing component in largely unchanged form and for a similar function (e.g., reusing ceramic roof tiles for a reconstructed house). Source: Based on: Glavinich, Thomas E. 2008. Contractor's Guide to Green Building Construction: Management, Project Delivery, Documentation, and Risk Reduction. Hoboken, New Jersey: John Wiley & Sons, Inc.

**Secondary Wastewater Treatment:** Use of both biological (i.e., microorganisms) and physical (i.e., gravity) processes designed to remove biological oxygen demand (BOD) and total suspended solids (TSS) from wastewater. Source: National Research Council. 1993. *Managing Wastewater in Coastal Urban Areas.* Washington DC: National Academy Press.

**Site Development:** The physical process of construction at a building site. These construction-related activities include clearing land, mobilizing resources to be used in the physical infrastructure (including water), the fabrication of building components on site, and the process of assembling components and raw materials into the physical elements planned for the site. The site development process also includes the provision of access to basic amenities (e.g., water, sewage, fuel) as well as improvements to the environmental conditions of the site (e.g., through planting vegetation or other environment-focused actions).

**Site Selection:** The process encompasses many steps from planning to construction, including initial inventory, assessment, alternative analysis, detailed design, and construction procedures and services. Site selection includes the housing, basic services (e.g., water, fuel, sewage, etc.), access infrastructure (e.g., roads, paths, bridges, etc.) and social and economic structures commonly used by site residents (e.g., schools, clinics, markets, transport facilities, etc.).

**SMART Indicator:** An indicator that meets the SMART criteria: **S**pecific, **M**easurable, **A**chievable, **R**elevant, and **T**ime-bound. Source: Based on: Doran, G. T. 1981. There's a S.M.A.R.T. way to write management›s goals and objectives. *Management Review:* 70, Issue 11.

**Sustainable Construction:** Sustainable construction goes beyond the definition of "green construction" and offers a more holistic approach to defining the interactions between construction and the environment. Sustainable construction means that the principles of sustainable development are applied to the comprehensive construction cycle, from the extraction and processing of raw materials through the planning, design, and construction of buildings and infrastructure, and is also concerned with any building's final deconstruction and the management of the resultant waste. It is a holistic process aimed at restoring and maintaining harmony between the natural and built environments, while creating settlements that affirm human dignity and encourage economic equity. Source: du Plessis, Chrisna. 2002. Agenda 21 for Sustainable Construction in Developing Countries. Pretoria, South Africa: CSIR Building and Construction Technology.

**Sustainable development:** Development that meets the needs of the present without compromising the ability of future generations to meet their own needs. Source*:* World Commission on Environment and Development. 1987. *Report of the World Commission on Environment and Development: Our Common Future.* Document A/42/427. www.un-documents.net (Accessed June 22, 2010)

**Tertiary Wastewater Treatment:** Use of a wide variety of physical, biological, and chemical processes aimed at removing nitrogen and phosphorus from wastewater. Source: National Research Council. 1993. *Managing Wastewater in Coastal Urban Areas.* Washington DC: National Academy Press. p. 58

**Vulnerability.** *Human* vulnerability is the relative lack of capacity of a person or community to anticipate, cope with, resist, and recover from the impact of a hazard. *Structural or physical* vulnerability is the extent to which a structure or service is likely to be damaged or disrupted by a hazard event. *Community* vulnerability exists

when the elements at risk are in the path or area of the hazard and are susceptible to damage by it. The losses caused by a hazard, such as a storm or earthquake, will be proportionally much greater for more vulnerable populations, e.g., those living in poverty, with weak structures, and without adequate coping strategies. Source: UNDHA. 1997. *Building Capacities for Risk Reduction.* 1st Ed.

**Watershed:** An area of land that drains down slope to the lowest point. The water moves through a network of drainage pathways, both underground and on the surface. Generally, these pathways converge into streams and rivers that become progressively larger as the water moves downstream, eventually reaching a water basin (i.e., lake, estuary, ocean). Source: Based on: Oregon Watershed Enhancement Board. 1999. *Oregon Watershed Assessment Manual.* www.oregon.gov Salem.

## ACRONYMS

The following is a comprehensive list of the acronyms used throughout the Green Recovery and Reconstruction Toolkit.

| | |
|---|---|
| **ADB** | Asian Development Bank |
| **ADPC** | Asian Disaster Preparedness Center |
| **ADRA** | Adventist Development and Relief Agency |
| **AECB** | Association for Environment Conscious Building |
| **AJK** | Azad Jammu Kashmir |
| **ALNAP** | Active Learning Network for Accountability and Performance in Humanitarian Action |
| **ANSI** | American National Standards Institute |
| **BMPS** | best management practices |
| **BOD** | biological oxygen demand |
| **CAP** | Consolidated Appeals Process |
| **CEDRA** | Climate Change and Environmental Degradation Risk and Adaptation Assessment |
| **CFL** | compact fluorescent lamp |
| **CGIAR** | Consultative Group on International Agricultural Research |
| **CHAPS** | Common Humanitarian Assistance Program |
| **CIDEM** | Centro de Investigación y Desarrollo de Estructuras y Materiales |
| **CO** | Country Office |
| **CRISTAL** | Community-based Risk Screening Tool – Adaptation and Livelihoods |
| **CRS** | Catholic Relief Services |
| **CVA** | community vulnerability assessment |
| **DFID** | Department for International Development |
| **DRR** | disaster risk reduction |
| **EAWAG** | Swiss Federal Institute of Aquatic Science and Technology |

| | |
|---|---|
| **ECB** | Emergency Capacity Building Project |
| **EE** | embodied energy |
| **EIA** | environmental impact assessment |
| **EMMA** | Emergency Market Mapping and Analysis Toolkit |
| **EMP** | environmental management plan |
| **ENA** | Environmental Needs Assessment in Post-Disaster Situations |
| **ENCAP** | Environmentally Sound Design and Management Capacity Building for Partners and Programs in Africa |
| **EPP** | environmentally preferable purchasing |
| **ESR** | Environmental Stewardship Review for Humanitarian Aid |
| **FAO** | Food and Agriculture Organization |
| **FEAT** | Flash Environmental Assessment Tool |
| **FRAME** | Framework for Assessing, Monitoring and Evaluating the Environment in Refuge Related Operations |
| **FSC** | Forest Stewardship Council |
| **G2O2** | Greening Organizational Operations |
| **GBCI** | Green Building Certification Institute |
| **GBP** | Green Building Programme |
| **GIS** | geographic information system |
| **GRR** | Green Recovery and Reconstruction |
| **GRRT** | Green Recovery and Reconstruction Toolkit |
| **GTZ** | Deutsche Gesellschaft für Technische Zusammenarbeit |
| **GWP** | Global Water Partnership |
| **HQ** | headquarters |
| **HVAC** | heating, ventilation, and air conditioning |
| **IAS** | International Accreditation Service |
| **IASC** | Inter-Agency Standing Committee |

| | |
|---|---|
| **IAIA** | International Association for Impact Assessment |
| **IBRD** | International Bank for Reconstruction and Development |
| **ICE** | Inventory of Carbon and Energy |
| **ICT** | information and communication technology |
| **IDA** | International Development Association |
| **IDP** | internally displaced peoples |
| **IDRC** | International Development Research Centre |
| **IFC** | International Finance Corporation |
| **IFRC** | International Federation of Red Cross and Red Crescent Societies |
| **IFMA** | International Facilities Management Association |
| **ILO** | International Labour Organization |
| **IPCC** | Intergovernmental Panel on Climate Change |
| **IRC** | International Rescue Committee |
| **ISAAC** | Institute for Applied Sustainability to the Built Environment |
| **ISDR** | International Strategy for Disaster Reduction |
| **ISO** | International Standards Organization |
| **IT** | information technology |
| **ITDG** | Intermediate Technology Development Group |
| **IUCN** | International Union for the Conservation of Nature |
| **ISWM** | integrated solid waste management |
| **IWA** | International Water Association |
| **IWMI** | International Water Management Institute |
| **IWRM** | integrated water resource management |
| **IWQA** | International Water Quality Association |
| **IWSA** | International Water Supply Association |

| | |
|---|---|
| **KW H** | Kilowatt hour |
| **LCA** | life cycle assessment |
| **LEDEG** | Ladakh Ecological Development Group |
| **LEED** | Leadership in Energy & Environmental Design |
| **M&E** | monitoring and evaluation |
| **MAC** | Marine Aquarium Council |
| **MDGS** | Millennium Development Goals |
| **MSC** | Marine Stewardship Council |
| **NACA** | Network of Aquaculture Centers |
| **NGO** | non-governmental organization |
| **NSF-ERS** | National Science Foundation - Engineering and Research Services |
| **NWFP** | North Western Frontier Province |
| **OCHA** | Office for the Coordination of Humanitarian Affairs |
| **PDNA** | Post Disaster Needs Assessment |
| **PEFC** | Programme for the Endorsement of Forest Certification |
| **PET** | Polyethylene terephthalate |
| **PMI** | Indonesian Red Cross Society |
| **PVC** | Polyvinyl chloride |
| **PV** | photovoltaic |
| **REA** | Rapid Environmental Assessment |
| **RIVM** | Dutch National Institute for Public Health and the Environment |
| **SC** | sustainable construction |
| **SCC** | Standards Council of Canada |
| **SEA** | Strategic Environmental Impact Assessment |
| **SIDA** | Swedish International Development Agency |

| SKAT | Swiss Centre for Development Cooperation in Technology and Management |
|---|---|
| SL | sustainable livelihoods |
| SMART | Specific, Measurable, Achievable, Relevant, and Time-bound |
| SODIS | solar water disinfection |
| TRP | Tsunami Recovery Program |
| TSS | total suspended solids |
| UN | United Nations |
| UNDHA | United Nations Department of Humanitarian Affairs |
| UNDP | United Nations Development Programme |
| UNDRO | United Nations Disaster Relief Organization |
| UNEP | United Nations Environment Program |
| UNGM | United Nations Global Marketplace |
| UN-HABITAT | United Nations Human Settlements Programme |
| UNHCR | United Nations High Commissioner for Refugees |
| UNICEF | The United Nations Children's Fund |
| USAID | United States Agency for International Development |
| USAID-ESP | United States Agency for International Development- Environmental Services Program |
| VROM | Dutch Ministry of Spatial Planning, Housing and the Environment |
| WEDC | Water, Engineering, and Development Centre |
| WGBC | World Green Building Council |
| WHO | World Health Organization |
| WWF | World Wildlife Fund |

GRRT

**CD:** This CD contains the workshop materials, presentation slides, trainer's guides, and technical content papers that make up the Green Recovery and Reconstruction Toolkit.

Soon after the 2004 Indian Ocean tsunami, the American Red Cross and the World Wildlife Fund (WWF) formed an innovative, five-year partnership to help ensure that the recovery efforts of the American Red Cross did not have unintended negative effects on the environment. Combining the environmental expertise of WWF with the humanitarian aid expertise of the American Red Cross, the partnership has worked across the tsunami-affected region to make sure that recovery programs include environmentally sustainable considerations, which are critical to ensuring a long-lasting recovery for communities.

The Green Recovery and Reconstruction Toolkit has been informed by our experiences in this partnership as well as over 30 international authors and experts who have contributed to its content. WWF and the American Red Cross offer the knowledge captured here in the hopes that the humanitarian and environmental communities will continue to work together to effectively incorporate environmentally sustainable solutions into disaster recovery. The development and publication of the Green Recovery and Reconstruction Toolkit was made possible with support from the American Red Cross.