



# Green Recovery and Reconstruction Training Toolkit

## Rebuilding Stronger, Safer and More Resilient Communities

WWF and the American Red Cross, two leading institutions in the fields of environmental conservation and humanitarian aid, developed a toolkit and training to equip field staff working in humanitarian aid, government, and conservation with practical, solution-oriented techniques for integrating environmental sustainability into international disaster recovery and reconstruction.

Although disasters wreak havoc, the rebuilding effort that follows represents a significant and important opportunity to rebuild communities that are more environmentally and socially sustainable than what existed before the disaster. Humanitarian aid and conservation practitioners, government officials, local communities, and donor organizations can all take specific steps to ensure reconstructed communities are built back safer through actively addressing environmental sustainability and reducing risk and vulnerability to future disasters.

The Green Recovery and Reconstruction: Training Toolkit for Humanitarian Aid (GRRT) helps make communities stronger and more resilient by making environmental issues an integral part of the recovery process. The toolkit is made up of ten modules that cover project design, monitoring, and evaluation; impact assessment tools and techniques; strategic site selection and development; key concepts of construction, such as the materials supply chain; water and sanitation; livelihoods; and green organizational operations.

Each module includes a trainer's guide; training materials for a workshop; PowerPoint slides; a technical content paper that provides background information for the training; and additional resources for further learning. The ten training modules are described in detail below.



### Module 1: Opportunities for Green Recovery and Reconstruction: An Introduction

Module 1 provides a brief introduction to the concept of green recovery and reconstruction. Module 1 discusses why addressing environmental concerns in a humanitarian response is critical to a successful recovery process. The module also provides an overview of the tools, techniques and methodologies fundamental to building stronger, more resilient communities by integrating environmental issues into the disaster recovery process.

### Module 2: Project Design, Monitoring and Evaluation

Module 2 provides guidance on how project design, monitoring, and evaluation can better incorporate and address environmental issues within the typical project cycle of a post-disaster humanitarian aid project. This includes the development and analysis of project designs that incorporate sustainable environmental factors, the selection of appropriate indicators and targets to measure and monitor environmental impact, and practical guidance on how to monitor and evaluate environmental impact.

### Module 3: Environmental Impact Assessment Tools and Techniques

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 project type or sector. This module explains the value of conducting Environmental Impact Assessments, and answers the questions how, when and why an assessment should be conducted. A case study using the Environmental Stewardship Review for Humanitarian Aid (ESR) is presented.

### Module 4: Green Guide to Strategic Site Selection and Development

Strategic site selection and development are essential components to ensuring construction projects do not put people recovering from disasters at future risk. This module describes the principles of strategic, environmentally sustainable site selection and development for post-disaster humanitarian aid projects. It presents a detailed set of guidelines and checklists as well as a post-disaster recovery timeline with strategic action points for ensuring that the long-term health and security of people and communities recovering from disaster have been factored into site selection and development.

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### Module 5: Green Guide to Materials and the Supply Chain

Module 5 is concerned with construction materials and procurement. This module describes how to use fewer materials, how to use local sources of materials in a sustainable way, and the use of disaster debris and recycled items as building material. Through the use of relevant case studies, informative figures and strategies for procuring sustainable materials, Module 5 also explains the importance of material procurement policies and practices that help protect natural resources and people in the long term.

### Module 6: Green Guide to Construction

This module emphasizes key concepts of sustainable design including climate, energy efficiency, and the life cycle of materials. The module also addresses principles of environmentally sustainable construction, including construction site planning and layout, materials and equipment handling, waste handling and pollution prevention to minimize the impact of the construction process on people and communities recovering from disaster.

### Module 7: Green Guide to Water and Sanitation

Module 7 addresses innovative water and sanitation programs that can make communities more resilient to future disasters and reduce long-term impacts on ecosystems. The module explores approaches to community participation and watershed management. Technology choices such as treatment wetlands, household water treatment technologies, wastewater management, and solid waste management are offered as practical strategies and techniques to make water and sanitation interventions more environmentally sustainable.

### Module 8: Green Guide to Livelihoods

The Green Guide to Livelihoods explores the links between livelihoods, disaster vulnerability, and ecosystems and targets environmental issues related to the implementation of post-disaster livelihoods recovery projects in several sectors including agriculture, aquaculture, fisheries, and tourism, among others. The module discusses how natural resource management techniques, such as assessing and mitigating the environmental impacts of livelihood projects using better management practices, can be used to reduce impacts and improve livelihood outcomes for communities in post-disaster recovery settings.

### Module 9: Green Guide to Disaster Risk Reduction

Environmental issues are inextricably linked to disaster risk reduction and disaster management. Module 9 places a particular emphasis on identifying environmental aspects contributing to risk and the role that the sustainable use of environmental resources, or ecosystems, have in reducing disaster risk. In utilizing the Green Guide to Disaster Risk Reduction, disaster risk reduction specialists can increase their awareness of appropriate and useful integration of environmental considerations into risk assessment and risk reduction. The module explains concepts of ecosystem based risk reduction, costs and benefits of addressing environmental sustainability and assimilating the environment into DRR assessments.

### Module 10: Greening Organizational Operations

In the process of securing the protection and conservation of natural resources and ecosystems in the field, it can be easy to forget about how day-to-day organizational operations can impact the environment. Module 10: Greening Organizational Operations offers a comprehensive approach to improving the environmental performance of an organization's operational aspects, including office administration, logistics, and vehicle management.

Successful pilot testing of the GRRT was conducted in Sri Lanka and Indonesia in November, 2009. The complete GRRT is scheduled for general release in November 2010. WWF and the American Red Cross have worked together from 2005-2010 to help survivors of the Indian Ocean tsunami rebuild their communities as well as the natural environments on which they depend.



For more information about the WWF-American Red Cross Green Recovery Program or the Green Recovery and Reconstruction Training Toolkit please visit <http://www.worldwildlife.org/humanitarian> or contact Anita van Breda, Director WWF Humanitarian Partnerships [anita.vanbreda@wwfus.org](mailto:anita.vanbreda@wwfus.org)