

This training manual is for people working on emergency response and disaster risk management; it aims to provide an overview of the major land issues that may arise following a natural disaster that require consideration and inclusion in the decision-making processes associated with response, recovery and rehabilitation. These issues also should be considered for inclusion in follow-on reconstruction and development projects to improve tenure security for the more vulnerable as part of a disaster mitigation process.

This manual is also intended for people who work in the land sector, to provide information on the challenges that may be faced in the context of emergency response and recovery from disasters. The information contained in the modules provides a background for the rationale and processes of disaster risk management (DRM).

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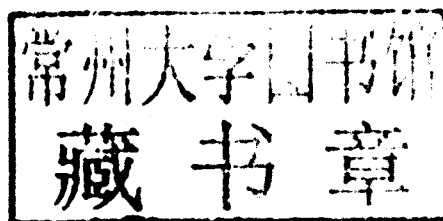
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Assessing and Responding to Land Tenure Issues in Disaster Risk Management

Training Manual

David Mitchell

**With the supervision of
Adriana Herrera Garibay**



ROME, 2011

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Preface

Since 2007, FAO, UN-HABITAT and the Early Recovery Cluster of the UN Inter-Agency Standing Committee (IASC)¹ have produced several publications on methodologies, approaches and lessons learned to address land tenure and natural disasters. These publications are the result of a coordinated effort to address land tenure issues after natural disasters within the framework of the IASC.

In 2007 UN-HABITAT initiated the formulation of a holistic framework to address land issues, from the aftermaths of a natural disaster through the early recovery and reconstruction phases. This framework, developed in collaboration with FAO, was integrated into the guidelines for practitioners published by UN-HABITAT in 2010.²

As part of the same inter-Agency effort, in 2010 FAO published “On Solid Ground”,³ a series of six national briefs dealing with natural disasters that have occurred in the past ten years and the land tenure lessons learned in each country. Following the same lines of inter-Agency work, in January 2011 FAO published “Addressing Land Tenure in Countries Prone to Natural Disasters”,⁴ an in-depth analysis of land tenure issues in the framework of natural disaster policies and programmes in four countries: Bangladesh, Ecuador, Mozambique and the Philippines.

In addition to its Inter-Agency work, an FAO group working with Disaster Risk Management (DRM) has been developing practical tools to guide the analysis of national, district and local institutional systems for DRM and provide appropriate demand-responsive capacity-building alternatives. These methods and tools are based on field experiences and use a sustainable livelihoods approach. They were published by FAO in 2008 in the guidebook “Disaster risk management systems analysis.”⁵

After reviewing all of these publications, FAO and UN-HABITAT agreed on the importance of producing training modules that could be used either in land tenure and natural disaster training activities, or as

1. The IASC is the main mechanism for inter-Agency coordination for humanitarian assistance. It is comprised of nine full-member UN Agencies and nine standing invitee international agencies working on emergency operations and human rights.

2. UN-HABITAT, FAO, IASC Early Recovery Cluster, Global Tools Network. Land and Natural Disasters. Guidance for Practitioners. UN-HABITAT, Geneva, June 2010.

3. FAO, UN-HABITAT, IASC Early Recovery Cluster, Global Tools Network. On Solid Ground. FAO, Rome, March 2010. Re-printing, January 2011.

4. FAO, UN-HABITAT, IASC Early Recovery Cluster, Global Tools Network. Land Tenure and Natural Disasters. Assessing Land Tenure in Countries Prone to Natural Disasters. FAO, Rome, January 2011.

5. FAO. Disaster Risk Management Systems Analysis. A Guide Book. FAO, Rome, 2008.

a user-friendly self-training instrument. The present “Training Manual for Assessing and Responding to Land Tenure Issues in Disaster Risk Management” is the result.

The Manual was developed by David Mitchell, under the supervision of Adriana Herrera, and edited by Brett Shapiro.

David Mitchell is the Director of the Land Centre at the School of Mathematical and Geospatial Sciences at RMIT⁶ University in Melbourne, Australia. His expertise in natural disaster analysis derives from his experience as an international consultant, and from his role in organizing a “Climate Change and Land Tenure” session in the workshop “Small Island Developing States and the Millennium Development Goals” that took place within the International Federation of Surveyors (FIG) World Congress in 2010.⁷ David is also co-chair of the International Federation of Surveyors Commission 7, Working Group 7.2, “Land Administration, Natural Disasters and Climate Change”. He has been a Visiting Expert in FAO in 2009.

Adriana Herrera is a Land Tenure Officer from the Land Tenure Team in FAO’s Climate, Energy and Tenure Division. She has worked in the field of land tenure and land reform providing technical assistance to projects in Latin American, African and Asian countries since 1990. Adriana has been in charge of developing the land tenure and natural disaster activities of the FAO Land Tenure Team programme since 2006. It is within this programme that the FAO-inter-Agency land tenure and natural disaster publications have been produced.

Brett Shapiro is a freelance writer, editor and translator. His work as a consultant includes over 20 UN Agencies, including the three Rome-based Agencies (FAO, World Food Programme, IFAD), and the European Community, for which he edits and writes a wide variety of reports and publications.

The Manual has benefited from valuable comments from Stephan Baas from the Natural Disaster Risk Management group in FAO, the FAO Emergency Unit, the World Bank and UN-HABITAT. The layout was created by Claudia Tonini.

Rome, March 2011

Paul Munro-Faure
Principal Officer
Climate, Energy and Tenure Division
Food and Agriculture Organization of the United Nations

6. Royal Melbourne Institute of Technology.

7. XXIV FIG International Congress. Sydney Australia, 11 – 16 April, 2010.

Acronyms

ACM	Alternative conflict management
BPN	Badan Pertanahan Nasional
CRED	The Centre for Research on the Epidemiology of Disasters
CSO	civil society organization
DFID	UK Department for International Development
DLA	Detailed Livelihood Assessment
DRM	disaster risk management
DRR	disaster risk reduction
EM-DAT	Emergency Events Database
FAO	Food and Agricultural Organization of the United Nations
HFA	Hyogo Framework for Action 2005-2015
IDP	internally displaced persons
ILIA	Initial Livelihood Impact Appraisal
ILO	International Labour Organization
IPCC	Intergovernmental Panel on Climate Change
LAT	Livelihood Assessment Toolkit
NGO	non-governmental organization
OCHA	UN Office for the Coordination of Humanitarian Affairs
SEAGA	Socio-economic and gender analysis
SIDS	small island developing states
SLA	sustainable livelihoods approach
UNDAC	United Nations Disaster Assessment and Coordination
UNFCCC	The United Nations Framework Convention on Climate Change

Glossary¹

Adaptation

The adjustment in natural or human systems in response to actual or expected climatic stimuli or their effects, which moderates harm or exploits beneficial opportunities. Adaptation can occur in an autonomous fashion, for example through market changes, or as a result of intentional adaptation policies and plans. Many disaster risk reduction measures can directly contribute to better adaptation.

Climate change

The United Nations Framework Convention on Climate Change (UNFCCC) defines climate change as “a change of climate which is attributed directly or indirectly to human activity that alters the composition of the global atmosphere and which is in addition to natural climate variability observed over comparable time periods”.

Disaster

A serious disruption of the functioning of a community or a society involving widespread human, material, economic or environmental losses and impacts, which exceeds the ability of the affected community or society to cope using its own resources.

Disaster risk

The potential disaster losses – in lives, health status, livelihoods, assets and services – which could occur to a particular community or a society over some specified future time period.

Disaster risk management

The systematic process of using administrative directives, organizations, and operational skills and capacities to implement strategies, policies and improved coping capacities in order to lessen the adverse impacts of hazards and the possibility of disaster.

Disaster risk reduction

The concept and practice of reducing disaster risks through systematic efforts to analyse and manage the causal factors of disasters, including through reduced exposure to hazards, lessened vulnerability of people and property, wise management of land and the environment and improved preparedness for adverse events.

1. This glossary has been adapted from the following sources:

UNISDR. *Terminology on disaster risk reduction* (2009).

Inter-agency. *Handbook on housing and property restitution for refugees and displaced persons: Implementing the 'pinheiro principles'*, FAO/IDMC/OCHA/OHCHR/UN-HABITAT/UNHCR (2007).

UN ECE. *Land administration guidelines with special reference to countries in transition* (1996).

FAO. *Multi-lingual thesaurus on land tenure* (2003).

UN-HABITAT. *Handbook on best practices, security of tenure and access to land* (2003).

Hazard

A dangerous phenomenon, substance, human activity or condition that may cause loss of life, injury or other health impacts, property damage, loss of livelihoods and services, social and economic disruption or environmental damage.

Hydrometeorological hazard

Process or phenomenon of atmospheric, hydrological or oceanographic nature that may cause loss of life, injury or other health impacts, property damage, loss of livelihoods and services, social and economic disruption or environmental damage. Hydrometeorological hazards include tropical cyclones (also known as typhoons and hurricanes), thunderstorms, hailstorms, tornados, blizzards, heavy snowfall, avalanches, coastal storm surges, floods including flash floods, droughts, heatwaves and cold spells. Hydrometeorological conditions also can be a factor in other hazards such as landslides, wildfires, locust plagues and epidemics, and in the transport and dispersal of toxic substances and volcanic eruption material.

Land access

Opportunities for temporary or permanent use and occupation of land for purposes of shelter, productive activity or the enjoyment of recreation and rest. Land access is obtained by direct occupation, by exchange (purchase or rental), through membership of family and kin groups or by allocation by government, other land owners or management authorities.

Land administration

The processes of determining, recording and disseminating information about the ownership, value and use of land when implementing land management policies.

Land rights

Socially or legally recognized entitlements to access, use and control areas of land and related natural resources.

Land tenure

The way land is held or owned by individuals and groups, or the set of relationships legally or customarily defined among people with respect to land. In other words, tenure reflects relationships between people and land directly, and between individuals and groups of people in their dealings in land.

Land tenure security

Can be defined as:

1. the degree of confidence that land users will not be arbitrarily deprived of the rights they enjoy over land and the economic benefits that flow from it;
2. the certainty that an individual's rights to land will be recognized by others and protected in cases of specific challenges; or, more specifically,
3. the right of all individuals and groups to effective government protection against forced evictions.

Land tenure systems

Sets of formal or informal rules and institutions which determine access to and control over land and natural resources.

Land-use planning

The process undertaken by public authorities to identify, evaluate and decide on different options for the use of land, including consideration of long-term economic, social and environmental objectives and the implications for different communities and interest groups, and the subsequent formulation and promulgation of plans that describe the permitted or acceptable uses.

Mitigation

The lessening or limitation of the adverse impacts of hazards and related disasters. The adverse impacts of hazards often cannot be prevented fully, but their scale or severity can be substantially lessened by various strategies and actions. Mitigation measures encompass engineering techniques and hazard-resistant construction as well as improved environmental policies and public awareness. It should be noted that in climate change policy, “mitigation” is defined differently as the reduction of greenhouse gas emissions that are the source of climate change.

Natural hazard

Natural process or phenomenon that may cause loss of life, injury or other health impacts, property damage, loss of livelihoods and services, social and economic disruption or environmental damage.

Preparedness

The knowledge and capacities developed by governments, professional response and recovery organizations, communities and individuals to effectively anticipate, respond to and recover from the impacts of likely, imminent or current hazard events or conditions.

Prevention

The outright avoidance of adverse impacts of hazards and related disasters.

Property rights

Recognized interests in land or property vested in an individual or group. Rights may apply separately to land and to property on it (e.g. houses, apartments or offices). A recognized interest may include customary, statutory or informal social practices which enjoy social legitimacy at a given time and place.

Recovery

The restoration and improvement, where appropriate, of facilities, livelihoods and living conditions of disaster-affected communities, including efforts to reduce disaster risk factors. The recovery task of rehabilitation and reconstruction begins soon after the emergency phase has ended, and should be based on pre-existing strategies and policies that facilitate clear institutional responsibilities for recovery action and enable public participation. Recovery programmes, coupled with the heightened public awareness and engagement after a disaster, afford a valuable opportunity to develop and implement disaster risk reduction measures and to apply the “build back better” principle.

Resilience

The ability of a system, community or society exposed to hazards to resist, absorb, accommodate to and recover from the effects of a hazard in a timely and efficient manner, including through

the preservation and restoration of its essential basic structures and functions. Resilience means the ability to “resile from” or “spring back from” a shock. The resilience of a community in respect to potential hazard events is determined by the degree to which the community has the necessary resources and is capable of organizing itself both prior to and during times of need.

Response

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. 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 supplying temporary housing and water supplies, may extend well into the recovery stage.

Risk

The combination of the probability of an event and its negative consequences.

Restitution

The return to and reassertion of control over one’s original home, land or property.

Vulnerability

The characteristics and circumstances of a community, system or asset that make it susceptible to the damaging effects of a hazard. There are many aspects of vulnerability, arising from various physical, social, economic and environmental factors. Examples may include poor design and construction of buildings, inadequate protection of assets, lack of public information and awareness, limited official recognition of risks and preparedness measures and disregard for wise environmental management. Vulnerability varies significantly within a community and over time. This definition identifies vulnerability as a characteristic of the element of interest (i.e. community, system or asset) which is independent of its exposure. However, in common use the word is often used more broadly to include the element’s exposure.

Introduction

This training manual is for people working on emergency response and disaster risk management. It aims to provide an overview of the major land issues that may arise following a natural disaster which need to be considered and included in the decision-making processes associated with response, recovery and rehabilitation. These issues also should be considered in reconstruction and development projects to improve tenure security for the more vulnerable as part of a disaster mitigation process.

This manual is also intended for people who work in the land sector, to provide information on the challenges that may be faced in the context of emergency response and recovery from disasters. It contains information that underpins the rationale and processes for disaster risk management (DRM).

The disasters included in this discussion are hydrometeorological disasters (such as floods, drought, tropical cyclones, storm surges and tornadoes) and geophysical disasters (such as earthquakes, tsunamis, avalanches and landslides). Most of these disasters are rapid onset and cause extensive loss of life, loss of livelihoods and damage to infrastructure. Drought, a slow-onset disaster, also is considered in these training materials because of its severe global impact and because there are particular land tenure issues associated with extended and recurrent droughts.

The first module of this training manual provides an overview of the land tenure issues that can arise in the aftermath of a natural disaster, and explains the importance of having a land tenure perspective in emergency response and recovery operations and planning. Module 1 also explains how pre-disaster measures and emergency response and recovery are combined in a DRM framework. It is aimed particularly at FAO staff, consultants and national officials who, while working on emergencies, come across land issues and seek to gain a deeper understanding of these. However, it is also relevant for land professionals to introduce the key elements of DRM.

Module 2 provides further discussion on how land is administered, and identifies common themes by drawing on case studies and lessons learned about land issues that have arisen after natural disasters. It is intended to provide emergency and disaster management experts with information on the land issues specific to particular disasters, and to inform land experts on how land issues differ from one disaster to another.

Module 3 describes how the lessons presented earlier may be addressed during prevention, mitigation and preparedness phases as part of a disaster risk reduction process. Modules 4 and 5 then explore how land issues may be considered and addressed in the post-disaster phases of emergency response, recovery and reconstruction.

As most of the recent FAO and UN-HABITAT publications on the topic of natural disasters and land tenure¹, the ultimate objective of this training manual is to create awareness about land tenure – its main issues, characteristics and importance – during disaster risk reduction processes and in an emergency situation following a natural disaster, and to provide information that may assist in preparing project documents. In particular, this manual aims to discuss why land tenure is important and to identify land issues that may arise following a natural disaster. It advocates that land tenure should be considered in all stages of DRM and associated projects. Improving land tenure security and protecting access to land will reduce the risk of future disasters to all landholders, and in particular the most vulnerable sections of the community.

1. UN-HABITAT, FAO, IASC Early Recovery Cluster, Global Tools Network. Land and Natural Disasters. Guidance for Practitioners. UN-HABITAT, Geneva, June 2010
FAO, UN-HABITAT, IASC Early Recovery Cluster, Global Tools Network. On Solid Ground. FAO, Rome, March, 2010. Re-printing, January 2011.
FAO, UN-HABITAT, IASC Early Recovery Cluster, Global Tools Network. Land Tenure and Natural Disasters. Assessing Land Tenure in Countries Prone to Natural Disasters. FAO, Rome, January 2011.

Module 1. Natural disasters and land tenure

MODULE 1. Natural disasters and land tenure



is also with 78 percent of deaths from natural disasters during the period 2000-2007. China, India, Indonesia, the Philippines and Vietnam are among the world's most disaster-prone countries, while "small island developing states" (SIDS) are among the most vulnerable. Earthquake losses attributed to natural disasters have increased from US\$75.4 billion in the 1980s to US\$198.9 billion in 2004, a 263 percent annual growth rate of 8 percent (United Nations Development Programme, 2004).

Natural disasters vary in intensity and impact. They include the frequent geophysical disasters of earthquakes, tsunamis, and hurricanes, which may be followed by secondary, human-generated disasters, such as floods or

1. <http://www.un.org/News/Press/docs/2004/04/20040429.htm#18>

2. <http://www.un.org/News/Press/docs/2004/04/20040429.htm#18>

3. <http://www.un.org/News/Press/docs/2004/04/20040429.htm#18>

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Module 1. Natural disasters and land tenure

1.1 BACKGROUND

This first module sets the context for these training materials by describing the impact of climate change on the incidence and intensity of natural disasters, and how natural disasters affect land and livelihoods. The purpose is to create a common understanding of how land tenure is affected by natural disasters and to discuss why an understanding of land tenure issues is important. This module also covers the international conventions for people who lose access to land following a disaster. The module is particularly relevant for people involved in DRM and emergency response and therefore includes a brief explanation of land tenure. As this training manual is set in the context of a DRM approach, it provides an overview of the DRM process.

The Intergovernmental Panel on Climate Change (IPCC) Fourth Assessment Report (IPCC 2007) states that climate change is very likely to result in increased frequency and intensity of extreme weather events such as heat waves, tropical cyclones, floods and drought. According to the Centre for Research on the Epidemiology of Disasters' (CRED) 'EM-DAT' database¹, the number of deaths from natural disasters worldwide has steadily increased from the time records began in 1900, and this is illustrated in Figure 1.

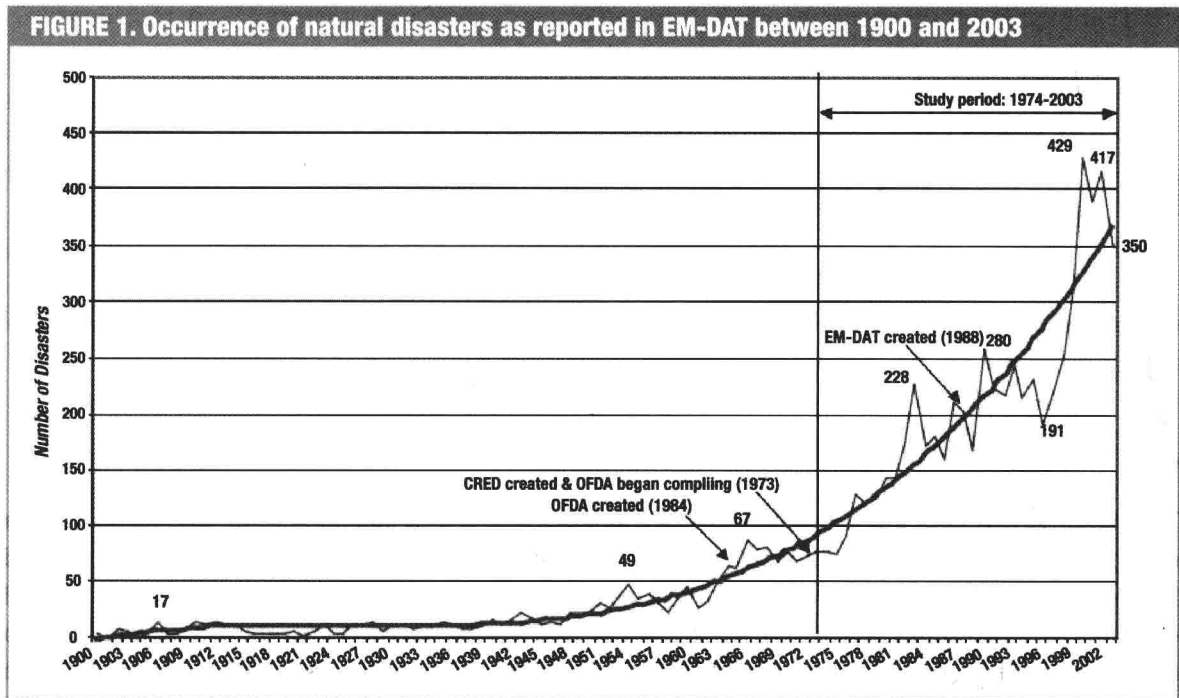
According to the World Bank Independent Evaluation Group, developing countries have borne the brunt of natural disasters, accounting for over 95 percent of all casualties (IEG, 2006). The most affected region is Asia with 79 percent of deaths from natural disasters during the period 2000-2007². China, India, Indonesia, the Philippines and Vietnam are among the world's most disaster-prone countries, while "small island developing states" (SIDS) are among the most vulnerable. Economic losses attributed to natural disasters have increased from US\$75.5 billion in the 1960s to US\$659.9 billion in the 1990s (a compound annual growth rate of 8 percent) (United Nations Development Programme, 2004)³.

Natural disasters vary in intensity and impact. They include less frequent geophysical disasters (e.g. earthquakes or tsunamis) where there may be little warning, hydrometeorological disasters (e.g. floods or

1. EM-DAT database - <http://www.emdat.be>.

2. Centre for Research on the Epidemiology of Disasters (CRED), *2008 Disasters in Numbers*. Department of Public Health, Université catholique de Louvain, Belgium; and ISDR: Brussels.

3. United Nations Development Programme, 2004: *Reducing Disaster Risk: A Challenge for Development*. United Nations Development Programme, New York, 161 pp. <http://www.undp.org/bcpr/disred/rdr.htm>.



Source: Guha-Sapir et al. (2004).

cyclones) where there may be sufficient warning to act prior to the disaster, and drought or extreme weather conditions which may be seasonal. The impacts of a natural hazard are specific to the country affected, and even to the region within a country. For a range of social, cultural and economic reasons, some communities are more resilient to natural disasters than others. Therefore, any consideration of disasters and vulnerability should include the local context. An important aspect of vulnerability and resilience is access to land and livelihoods before and after a natural disaster. Tenure security provides greater certainty of access to land and helps to protect these property rights to land in the event of a natural disaster.

The following discussion in this module expands on some of these terms and explains the concepts of livelihoods, land tenure security, property rights and access to land in the context of natural disasters. The discussion explores the relationship between land and livelihoods, identifies minimum standards in disaster response and introduces DRM.

1.2 CATEGORIES OF NATURAL DISASTERS

This discussion on natural disasters is based on the categories of natural disasters used in the OFDA/CRED International Disasters Database (EM-DAT) data published by The Centre for Research on the Epidemiology of Disasters (CRED). CRED defines a disaster as a “situation or event, which overwhelms local capacity, necessitating a request to national or international level for external assistance... an unforeseen and often sudden event that causes great damage, destruction and human suffering”⁴.

4. <http://www.unisdr.org/eng/terminology/lib-terminology-eng-p.htm>; UNISDR Terminology on Disaster Risk Reduction (2009). <http://www.unisdr.org/eng/terminology/terminology-2009-eng.html>.