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**31st INTERNATIONAL CONFERENCE
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**Addressing regulatory barriers
to providing emergency and transitional shelter
in a rapid and equitable manner after natural disasters**

Background report

**Document prepared by the
International Federation of the Red Cross and Red Crescent Societies
in consultation with the International Committee of the Red Cross**

Geneva, October 2011

Executive Summary

In recent years, many natural disasters have resulted in large-scale displacement, with thousands and sometimes even millions of persons rendered homeless. For these survivors, securing **adequate shelter** is critical. Their health, their livelihoods and their security depend on it. This is also generally a priority for their governments and for humanitarian and development organizations, which recognize that recovery cannot begin while people lack safe and signified accommodation.

For all concerned, long-term solutions are the main goal. Displaced persons want to see their homes repaired or rebuilt as soon as possible. Governments and assisting actors hope to see communities placed sustainably back on their feet. However, rehabilitation, repair and reconstruction are nearly always slow and difficult processes and it is therefore often indispensable to also pursue interim solutions, including both **emergency and transitional shelter**.

The Red Cross and Red Crescent has been scaling up its work in this area, particularly since specific commitments were made in 2005, when the International Federation of Red Cross and Red Crescent Societies agreed to take on a leadership role in the provision of emergency shelter in natural disasters, including the role of global convenor of the Emergency Shelter Cluster for such emergencies. As the work of the National Societies has increased, so too has the realization that **regulatory barriers** are among the biggest obstacles they, and their humanitarian partners, face in providing emergency and transitional shelter in a rapid and equitable manner.

These range from issues related to ambiguity as to the ownership of **land and property**, to fairness problems in the way assistance is provided (particularly as between documented owners and others and as between men and women), to the impact of building standards and other regulations on the work of shelter providers. Some of these problems relate to long-term problems, gaps and inequities in property regimes. These large social questions are unlikely to be solved rapidly in the aftermath of a major disaster. However, temporary fixes – sufficient to enable the meeting of emergency and transitional shelter needs – should be possible to devise. That they are often not put into practice (at least not without substantial delay) points to a lack of preparedness by governments, the humanitarian sector and others.

There is already a good deal of **international guidance** on these issues, derived from the international normative framework and from a series of guidelines and handbooks that have recently been developed by international experts. Moreover, there are many anecdotal examples of good practice, some of which are mentioned in this report. However, there is a need to move proactively to avoid these problems in the future.

This report hopes to facilitate a **dialogue** between states and the Movement on existing problems and potential solutions. It also proposes three concrete steps for collaborative work moving forward:

- National Societies are encouraged to cooperate with their governments to undertake informal “audits” of the national regulatory environment for providing post-disaster shelter;
- Governments are encouraged to consider putting in place procedures to enable rapid and equitable shelter after disasters; and
- It is proposed that an international certification should be developed based on existing best practices for a process of participatory land mapping aimed at

determining land occupancy rights for the purpose of post-disaster shelter, when official titling systems are absent or incomplete.

1. Introduction

This report is intended to facilitate dialogue between participants at the 31st International Conference of the Red Cross and Red Crescent (“the International Conference”) on:

- common regulatory barriers to the provision of emergency and transitional shelter assistance in the aftermath of a natural disaster;
- how states and humanitarian and development actors have sought to address these barriers in past disasters; and
- preparatory steps that might be taken to more effectively resolve these issues in the future.

It is also provided as one of three background documents supporting the proposed International Conference Resolution No. 31IC/11/5.5DR on “strengthening disaster laws”.¹

The report begins with some background, noting the reasons why the International Federation of Red Cross and Red Crescent Societies (IFRC) and its humanitarian partners have grown so concerned with regulatory barriers in this area. It summarizes some of the key categories of these problems as experienced in recent major disasters and discusses the kinds of solutions that international norms and operational tools have been proposed for them. It then provides examples of creative solutions that have had success in recent disasters and finishes with some recommendations for future work.

This report draws on several sources of information. They include:

- a review of literature related to operational experiences in post-disaster shelter programmes;
- a commissioned case studies report;²
- key stakeholder interviews with shelter practitioners working with the IFRC and/or involved in the Emergency Shelter Cluster; and
- an experts meeting convened by the IFRC in Geneva in June 2011.

Both the problems identified and the good practices discussed in this report are based on major disaster operations in the last decade, with a particular focus on the many catastrophic events of the last few years.³

2. Why focus on regulatory barriers in the provision of emergency and transitional shelter?

According to recent research, 42 million people were displaced from their homes by sudden-impact natural disasters alone in 2010, up from 17 million the year before. While massive earthquakes, such as those experienced in Japan in 2011, Haiti in 2010 and China in 2008,

¹ Those documents are ““Progress in the Implementation of the Guidelines for Domestic Facilitation and Regulation of International Disaster Relief and Initial Recovery Assistance,” Doc. No. 31IC/11/5.5.1 and “Law and Disaster Risk Reduction at the Community Level,” Doc. No. 31IC/11/5.5.2.

² Displacement Solutions, Regulatory Obstacles to Rapid and Equitable Emergency and Interim Shelter Solutions and Natural Disasters (2011).

³ These include, but are not limited to: Haiti, 2010 earthquake; Chile, 2010 earthquake; Sri Lanka, Indonesia, Thailand and Maldives, 2004 Indian Ocean Tsunami; Pakistan, 2010 floods and 2005 earthquake; Myanmar, 2008 Cyclone ‘Nargis’; Peru, 2007 earthquake in Pisco; India, 2001 earthquake in Gujarat; Indonesia, 2006 earthquake in Yogyakarta; United States, 2005 Hurricane ‘Katrina’; Turkey, 1999 earthquakes in Marmara Region; Japan, 1995 earthquake in Kobe.

have dominated media attention, the majority of those rendered homeless by disasters have been affected by climate-related phenomena, like the massive floods of Pakistan and China in 2010, which together displaced over 26 million people (IDMC 2011). In light of the accelerating effects of climate change on disasters globally, there is reason to believe that the numbers of those displaced will continue to grow (RC/RC Climate Centre 2007).

While disasters bring many miseries, the loss of housing can be among the worst. Without adequate shelter, survivors often face dramatically increased risks to their health (Noji 1997), heightened vulnerability to violence and crime, and overwhelming challenges to retaining their livelihoods, dignity and community cohesion (Mooney 2005). There is no question that the ultimate goal in such cases must be to re-establish affected persons in appropriate, permanent homes. In fact, it has long been accepted by the international community that transitional housing periods and investments should be minimised in favour of investing early in the recovery of durable housing (UNDRO 1982). However, rehabilitation, repair and reconstruction are nearly always slow and difficult processes and it is therefore often indispensable to also pursue interim solutions, including both emergency and transitional shelter.

In response to the rising needs, the IFRC and its member National Societies have become increasingly involved in providing post-disaster shelter solutions around the world, in particular since they took on the twin commitments at the 2005 IFRC General Assembly to scale-up their own shelter activities and to accept a global leadership role as convenor of the Global Shelter Cluster for natural disasters. As this work has grown, however, so too has the realization (both from our own operations and from our interactions with humanitarian partners) that regulatory barriers have come to represent some of the chief obstacles to providing rapid and equitable emergency and transitional shelter solutions.

What are these barriers? As described in Section 3 below, many stem from pre-existing systemic gaps related to housing and land regulation (such as titling and cadastral systems), which are only exacerbated by the effects of the disaster. Others relate to inflexibility in applicable procedures and rules (such as appropriate building standards and approval procedures for the immediate post-disaster context or rapid dispute resolution mechanisms) in the face of the enormous volume of housing needs in the aftermath of a disaster. Equally problematic are inequities that often arise in the delivery of shelter assistance (particular as between documented landowners and others and as between men and women) – sometimes due to engrained unfairness in existing laws and sometimes arising from the specific regulatory circumstances of the post-disaster context.

These issues are certainly not unique to emergency and transitional shelter. If anything, the need for carefully crafted solutions for these kinds of concerns can grow even greater as housing arrangements settle into a more permanent state (Kaelin 2005). However, it is at the early stages after a disaster that basic shelter needs are most acute and that even brief delays can cause the greatest suffering. Moreover, it is at these stages that solutions ought to be the easiest to agree, as temporary fixes should not require lasting changes in property regimes. That the problems remain quite common nevertheless is an indication that better preparedness is needed, from governments, the humanitarian community, civil society and the private sector. We can and should do better and it is hoped that the International Conference will generate momentum in this respect.

3. Common regulatory barriers

First, it is important to have a good understanding of the nature and scope of the regulatory barriers to post-disaster shelter and how they specifically apply to emergency and transitional solutions. This section provides a non-exhaustive summary of the common issues identified in our research and consultations (see also UN Habitat 2010; IASC 2011). In order to avoid

singling out any particular state for criticism (since these problems occur quite generally) specific countries are not identified in this section.

a. Gaps in documented evidence of ownership rights

Determining ownership of land after a disaster can often be challenging. In many countries, cadastral and titling systems are quite incomplete. UN Habitat asserts that only 30 per cent of land is registered around the world, with particularly large gaps in developing countries (UN Habitat 2010). Some national systems are also inefficient in preventing multiple registrations of a single plot of land.

Moreover, even where land and title records exist, they are often lost or destroyed because of the disaster itself. Similarly, land markers and other forms of land demarcation can be erased or skewed (IISD 2006). “Informal” land holdings are also common in many countries, particularly where registration systems are too expensive or complex for easy access by poor residents. Sometimes customary law or other national property law principles recognize unregistered land rights when persons have occupied land for long periods of time, but proving these rights can require a lengthy adjudicatory process. In addition, many persons displaced by disasters lack basic personal identification documents, such as birth certificates, national identification cards, or death certificates for former owners. This can further complicate the task for proving current ownership rights.

In these circumstances, it can be very difficult to determine whether, and for whom, even temporary housing may be erected in a particular location. As a result, shelter solutions can be greatly delayed. Moreover, uncertainty over ownership often induces displaced persons to become very hesitant about leaving the sites of their destroyed homes even temporarily in order to take advantage of emergency or transitional shelters offered elsewhere, for fear of losing possession.

b. Opportunistic land claims or “land grabs”

Unfortunately, those fears can be quite justified. Private and commercial parties sometimes take advantage of post-disaster chaos to seize control of land over which they lack any colourable claim. For example, in one recent disaster, community leaders registered land that belonged to others (in many cases, widows), in their own names, in the names of friends, relatives or powerful community members, or in the names of the true owner’s relatives. To prevent such attempts from being formalised, involved agencies eventually required four sworn affidavits from neighbours before rebuilding could take place and rights conferred.

c. Insecurity of renters and squatters

Renters can face some of the same difficulties as owners. For example, renters may also lack documentary evidence of their leaseholds or lose it as a result of a disaster and may therefore have difficulty proving their rights to re-occupy their homes. However, renters are generally even less secure than those with stronger ownership claims to land because, in many countries, their rights are quite weak (or are feebly enforced).

For example, after one recent disaster, renters who had been required to pay their rent many months in advance had no recourse against their landlords when their homes were destroyed, leaving them both without shelter and without cash. In another case, landowners shied away from rebuilding rental housing after a disaster in hopes of greater gains from other kinds of construction and, where rental units were created, rents were raised substantially over the previously prevailing rates.

This kind of insecurity is naturally even greater for squatters (in other words, persons with no recognized legal rights to the homes they previously occupied). In many post-disaster settings, private sector entrepreneurs have sought to evict these groups in order to redevelop land for commercial purposes, as have governments seeking to clear public lands.

d. Absence of rapid and effective dispute resolution mechanisms

Compounding these problems, the formal dispute resolution mechanisms for housing, land and property issues in many countries (both developed and developing) are often slow, expensive and difficult for the poor to access, even in normal times. They can be completely overwhelmed by a post-disaster caseload and incapable of producing fast enough results to support temporary shelter solutions. Informal (such as customary) dispute resolutions mechanisms are often quicker and may have greater local legitimacy, but can also be prone to bias and arbitrariness (UN Habitat 2009; Rolnik 2010).

e. Inequitable assistance as between documented owners and others

Beyond the different property rights to which documented owners and other categories of land users may be entitled and the mechanisms available for enforcing them, there is also an issue of equity in the assistance that is provided after many disasters. Very often, documented home owners receive assistance that is quicker, easier to access and more abundant than that provided to others. This is so even though those other categories of person are often needier. Moreover, this bias frequently arises not only in governmental assistance but also in the assistance provided by humanitarian organizations.

For example, in one post-disaster context, the government recognised the rights of people who had lost their homes and was willing to provide compensation, but only to those who could prove registered ownership of the land/property in question. Many owners had not formally registered before the disaster (some had private contracts but this was not considered an official means of registration), or they had lost the relevant documentation. A number of them sought to register after the disaster, however, the registration offices could not cope with such a large influx of people. In another major disaster, a number of humanitarian organizations declined to build transitional shelters for persons who could not provide documentation of ownership of the land, for fear that their investments would later be appropriated by other landowners rather than by needy people.

Most of those working in the shelter sector interviewed for this paper indicated that renters throughout the world face a structural bias in accessing shelter assistance in the aftermath of disasters. Some governments provide financial and in-kind assistance for reconstruction and repair to owners but little or nothing to renters as individuals or to the reconstruction of rental housing. For example, in one country, renters in urban areas failed to appear on any official beneficiary lists, thus effectively excluding them from disaster assistance. Four years after the disaster, there remained 20,000 households that had not received direct assistance to repair or rebuild, damaged houses. After another disaster, people in all tenure situations, including owners, renters and squatters, had access to transitional shelters after the disaster. However, once permanent housing had been built, the owners moved on to the new houses, and the renters had no choice but to remain in the transitional shelters indefinitely. Due to the lack of housing supply after the disaster, the costs of rental in the private market had increased. Renters were not considered part of the state's post-disaster housing programme.

In addition to these structural biases, the circumstances of a particular shelter operation can also contribute to inequity, even within categories. When multiple (generally foreign) agencies become involved in providing shelter, they often work according to varying

standards of quality and cost. As a result, some beneficiaries may receive shelter solutions of much greater quality than others.

f. Other common areas of bias in shelter assistance

It is not only renters and informal dwellers that face differential treatment in the provision of shelter assistance based on their tenure status. Non-citizens, families headed by minors and other “unfavoured” categories of disaster victims are sometimes denied official shelter assistance. Moreover, people with disabilities sometimes face difficulties due to inadequate laws and policies on making new housing accessible to them.

Perhaps the most pervasive form of bias is against women. Women are often left off beneficiary lists in favour of husbands and fathers and their views are rarely heard in shelter planning. Similarly, inequitable inheritance and succession laws can have the effect of reducing women's access to housing and land, arbitrary conferral of the rights accorded to widows and the inability to have property titles registered in a woman's name. Likewise, land provided as assistance to disaster affected households is sometimes registered only in the name of men. In one such case, shelters that had been provided were more valuable than the housing the affected families had before the disaster. Due to the value of the shelters, the family came under pressure to sell them, which placed the women in precarious situation since they did not have the legal power to resist the sale.

g. Absence of effective procedures for temporarily requisitioning land

Finding appropriate land for mass sheltering can be quite difficult in the aftermath of a disaster. Particularly in urban settings, land that is suitable even for temporary occupation is rarely vacant. Yet, many governments lack clear plans and procedures for the temporary requisitioning of land for the use of emergency or transitional shelter after a disaster.

In one recent disaster, the lack of such procedures meant that humanitarian agencies had to develop and agree with the local government on a system whereby contracts were developed as agreements between landowners, beneficiaries and agencies and then signed by the local mayor's office. At one point after the disaster there were 1,400 individual contracts that required a signature, which overwhelmed the capacity of the local government. The time taken to develop and then agree upon a system between all the stakeholders and also to receive the necessary signatures slowed down the shelter response.

In some cases, governments themselves own a substantial amount of land and property, but its use for post-disaster shelter has not been carefully thought out in advance or included in contingency planning. Moreover, in the absence of clear policy for the use of land on a temporary basis, private landowners are reluctant to cooperate, for fear that “temporary” housing may become permanent.

For example, in one situation, the local community was worried about the permanence of transitional shelters and though it was comfortable donating land for the short term, it wanted clear assurances that the shelters would be dismantled and removed later. In another case, local authorities objected to the use of concrete pads for transitional housing built by humanitarian organizations, on the basis that they were as permanent as other buildings. Such concerns have often proven to be well-founded, as the shift from temporary to permanent housing is rarely smooth and, in a number of situations, even emergency housing (like tents and plastic sheeting) have continued to be used for many months or even years after a disaster. In other instances, in part due to the threat of eviction and relocation, shelter providers were required to use shelter designs that were transparently temporary in nature. Agencies eventually designed shelters in such a way that fixtures and bolts were easily visible. This reinforced the perception of the ease of disassembly.

There is, understandably, often an impulse to resettle disaster-affected persons away from crowded city centres, to areas where land is less intensively used and is therefore easier to purchase or less politically problematic to requisition. However, affected persons can be reluctant to go far from their communities and their sources of livelihood even on a temporary basis. In past settings, this has resulted in poor take-up of the offers by governments and humanitarian agencies. Thus, it is sometimes indispensable to be ready to access even highly-prized land in case of need.

In this respect, it is noteworthy that many countries' legislation provides for governmental powers of expropriation of land for public uses in normal times. Moreover, many laws provide, either explicitly or implicitly, for requisition of land among the emergency powers that might be granted to the executive power in the case of a major calamity. However, general expropriation procedures are designed for permanent takings of land and are correspondingly slow and deliberate. Moreover, emergency powers are often strictly time-limited and generally allowed to last for a far shorter period than that required for transitional housing.

h. Problems with land planning rules, building standards, and environmental protection regulations

Unsurprisingly, land use, building and environmental regulations are rarely designed with post-disaster settings in mind. The absence of specific standards and procedures for emergency and transitional shelter, however, can lead both to barriers to provision of shelters and gaps in the oversight and control over potential consequences of poor planning or execution in post-disaster shelter.

Land use planning often becomes contested in the aftermath of a disaster, as governments take the opportunity of a "tabula rasa" to reformat communities. As always, there is a potential for the interests of poorer segments of society to lose out to the interests of the more powerful. While generally of more direct relevance to the development of permanent housing, the development of such plans, and the disputes they may engender, may impede even the provision of temporary shelter, as governments seek to ensure that the "status quo on the ground" is consistent with their long-term plans.

This can apply even to measures meant to mitigate future disasters. For example, in one country, the central government announced an exclusion zone of 100 metres from the coastline as a safety measure against future tsunamis. Allegations of arbitrariness and differential treatment were made when it was alleged that hotels had been allowed rebuild within exclusion zones. After a period of protest and debate, the zone this was later reduced to the pre-disaster distance of 35-50 metres. In the meantime, however, aid agencies were reluctant to support shelter efforts that possibly fell within the exclusionary zone fearing that their shelter would eventually be demolished.

Complying with building codes designed for permanent structures can also hamper the construction of temporary shelters, due, for example, to high specifications for materials and building methods. For example, in one disaster situation, the repair of damaged housing was blocked for months due to delay in the finalization of national repair guidelines. In others, central governments have required humanitarians to use a specific design that local communities did not wish to accept, as they were deemed inappropriate to local conditions. On the other hand, where no standards were imposed by the government, transitional shelters erected by humanitarian organizations have sometimes been built poorly or even unsafely and without regard to local custom.

Environmental regulations (or their absence) have been an additional problem in several shelter programmes. For instance, in one recent disaster, a ban on felling domestic timber seriously restricted the materials available for rebuilding. In another, suppliers had already exhausted the capacity of rivers to supply sand for construction and the humanitarian emergency increased the demand exponentially. In a third situation, there was an ongoing programme to clean up asbestos that had been contaminating the shores and communities of the region while shelter agencies were actively importing asbestos as a construction material. In yet another disaster, the United Nations Disaster Assessment and Coordination (UNDAC) team conducted an environmental assessment of the sheltering programme and found that waste from shelter construction and camps was amounted to an environmental disaster. Moreover, in several post-disaster situations, sourcing timber has been a huge challenge and there is a clear need for regulations and procedures concerning what and how agencies and local suppliers can cut.

i. Corruption

Corruption is a significant concern in many post-disaster contexts and the shelter sector is particularly vulnerable, in light of the significant sums of money often involved, the pressure for speedy results, the ease with which corrupt practices can be hidden (i.e. through substandard workmanship or inflated damage assessments) and the involvement, in some cases, of foreign agencies without experience of local construction practices (ODI 2006; TI 2010; World Bank 2010). For example, in one recent disaster situation, shelter contractors and recipient families were threatened by senior police officers if they refused to pay bribes. In several others, bribes were demanded for faster customs clearance of materials. Many building contractors have been found to substitute cheaper (and often unsafe) materials and practices for those agreed as a means of increasing profits. Also, in some situations, businesses with strong ties to the government have controlled the import of materials and have taken a percentage of anything imported by shelter providers.

j. Problems specific to international shelter assistance

Participants in our consultations also cited a number of regulatory problems specific to international assistance providers. For example, they noted significant delays and difficulties in customs in obtaining clearance and duty waivers for the importation of shelter materials. Likewise, a number encountered difficulties in engaging or terminating labour contracts for local personnel involved in shelter construction. They also noted that there is often a lack of communication as to existing domestic standards and procedures (for example for damage assessments or for construction) and as to the identity of authorities responsible for specific aspects of a sheltering operation. At the same time, international actors sometimes fail to engage sufficiently with local authorities in their planning and operations.

4. Existing international norms and tools concerning regulatory barriers to emergency and transitional shelter

Many of the regulatory issues discussed above impact the human rights of disaster-affected persons, including the rights to adequate housing, an adequate standard of living, freedom of movement, and non-discrimination, among others. The constellation of (sometimes disparate) rights most relevant to shelter is often referred to by professionals as “housing, land and property” (HLP) rights (Displacement Solutions 2011; Harper 2009).

While HLP rights are broadly stated in the relevant treaties, in recent years, the international community has developed a number of specific guidelines and tools to explain how they

should apply in humanitarian settings.⁴ As a result, there is now substantial guidance available to states and humanitarian actors as to questions that arise from the problem areas described above.

One such question is where ultimate responsibility lies for ensuring that people quickly obtain adequate shelter when their homes are damaged or destroyed by a disaster. In light of the right to adequate housing (as guaranteed by art. 25 of the Universal Declaration of Human Rights and art. 11(1) of the International Covenant on Economic, Social and Cultural Rights, among other instruments), it is clear that it lies with domestic authorities. As noted by the Committee on Economic Social and Cultural Rights, “a State party in which any significant number of individuals is deprived of ... basic shelter and housing ... is, prima facie, failing to discharge its obligations under the Covenant” (CESCR 1990). Thus, if regulatory barriers are substantially impeding the provision of shelter after a disaster, it is a responsibility of states to address them.

A second question relates to the differential treatment of documented owners of land and other occupants. While human rights law does not require governments to erase the distinctions that their property laws make between different levels or types of ownership and use rights, it does imply a responsibility to uphold the legal security of tenure for each category, meaning that holders should be protected from illegal evictions and that appropriate governance measures should be in place to allow them to assert their ownership/usage rights (CESCR 1991). This would mean, for instance, that procedures for developing or replacing official documentation related to those rights and for dispute resolution mechanisms where they are contested must be made available (IASC 2011; Pinheiro 2009).

Moreover, regardless of any prior claim to property, everyone has a right to adequate housing and to non-discriminatory treatment in the provision of post-disaster assistance (Guiding Principles on Internal Displacement 1998). Thus, if states or humanitarian agencies provide substantially more shelter resources to property owners than to renters or squatters, or to men as opposed to women, they offend not only common sense notions of fairness but also international law.

While the emphasis of this report is on emergency and transitional shelter, it must also be borne in mind that decisions made as to temporary housing can often impinge upon the rights and aspirations of affected persons (and the wider community) over the long term. Thus, the UN Special Rapporteur on the Right to Adequate Housing warns of the risks associated with doing “unintended long-term harm through well-meaning early action” and argues that “care must be taken, however, to ensure that good intentions are grounded in ‘do no harm’ principles for humanitarian action”, particularly in relation to issues of security of tenure, location, cultural adequacy and availability of services, facilities and infrastructure (Rolnik 2010). Likewise, it is important to mitigate any potential negative impact that the shelter solutions chosen for displaced persons may have on the rights of others (for example, those with claims to property temporarily taken for emergency or transitional housing) (FAO 2011).

⁴ These include state-sanctioned instruments such as the UN’s Guiding Principles on Internal Displacement (1998) and FAO’s draft Voluntary Guidelines on the Responsible Governance of Tenure of Land, Fisheries and Forests (2011), which are currently under negotiation. There are also a number of interpretive documents such as the Pinheiro Principles on Housing and Property Restitution for Refugees and Displaced Persons (2005) and the comments of UN treaty bodies as well more operational tools, such as the Inter-Agency Standing Committee’s Operational Guidelines on the Protection of Persons in Situations of Natural Disasters (revised 2011), the Sphere Project Humanitarian Charter and Minimum Standards in Humanitarian Response (revised 2011), UN Habitat’s Land and Natural Disasters: Guidance for Practitioners (2010), the World Bank’s Handbook for Reconstructing after Natural Disasters (2010), and the Shelter Centre’s, Transitional Settlement and Reconstruction After Natural Disasters (2008).

In addition to human rights-related norms and tools, there are instruments and guidelines that address specific issues related to providing international assistance in response to disasters, including shelter. These have been described previously by the IFRC in its work on “International Disaster Response Laws, Rules and Principles” (IDRL) (IFRC 2007) and are summarized in the “Guidelines for the domestic facilitation and regulation of international disaster relief and initial recovery assistance” (also known as the IDRL Guidelines). Pursuant to the IDRL Guidelines, it is accepted that states should facilitate the entry and operation of approved assisting actors providing shelter and other disaster assistance, including by simplifying and accelerating customs procedures and by cooperating to avoid the corrupt diversion of aid. At the same time, assisting actors should abide by minimum quality standards, abide by domestic and international laws and coordinate actively with local authorities.

5. Innovative solutions and good practice

International norms and guidance accordingly set out fairly clear expectations that solutions should be found to the kinds of regulatory problems discussed in this report. The good news is that many states and humanitarian actors have been working to do so. This section provides some anecdotal examples of innovation and good practice that might be replicated elsewhere.

a. Procedures for rapid verification or conferral of (temporary) tenure

Where titling systems were lacking or unable to keep up with post-disaster demands, governments and humanitarian organizations have cooperated in a number of instances to find rapid ways to guarantee at least temporary recognition of ownership or use rights, with flexible documentation and direct involvement of the community. These have included signed statements of ownership verified by neighbours and/or community leaders, placement of property or boundary markers by survivors in consultation with neighbours, informal maps of land parcels, and the location of terrain features, such as trees, burial location, ritual locations and public areas agreed through community mechanisms, or signed statements of inheritance verified by family members (Payne 2011).

Peru’s Pisco Earthquake of 2007 is one example where this approach was used successfully. The American Red Cross and the German Red Cross each developed procedures to select reconstruction beneficiaries. Those procedures relied on vulnerability criteria (i.e. elderly persons, disabled persons, children and others) as well as criteria related to the tenure of the land and properties built on it. The American Red Cross carried out a census of the area, collecting information about beneficiary families as well as requesting proof of possession in any form, with significant flexibility in the documents accepted, ranging from certificates of property, minutes of purchase contracts, and declarations by parents that they intended to leave the land to their children, among others. Ad hoc contracts or donations to transfer properties between members of the same family were also accepted. The German Red Cross relied essentially on the Peruvian Red Cross and on the local authorities for the selection of beneficiaries. Beneficiaries were identified by the Peruvian Red Cross, in agreement with the municipalities or emergency committees. The German Red Cross simply asked for a guarantee to be provided by the municipalities in this regard, but they do not assess the validity of the documents (Displacement Solutions 2011).

Likewise, after the 2010 earthquake in Haiti, shelter providers faced the issue of how to establish a legal document that could support construction of shelters in places where people lived previously but had no legal ownership documents. In response, the IFRC-led interagency Shelter Cluster created a document requiring the signatures of three people,

including the local administration, the beneficiary/family, and the legal owner of the land concerned. The document was effectively a lease agreement for the three-year life expectancy of transitional shelters. This process became the generally applied solution for documenting tenure in the affected areas.

After the 2004 tsunami in Sri Lanka, a procedure was developed whereby a combination of secondary documentation and community conferral was used to gather information on tenure. In order to prove that land/houses were being inhabited prior to the disaster, electricity bills, water bills, mail addressed to a particular site, or photos of people on their land were accepted. Community committees then verified this information. While this did not definitively prove their rights to the land/property in question, it demonstrated that they had been living there for certain (often extended) periods of time and allowed them to access shelter on this land. Moreover, to deal with complicated inheritance structures, a system was developed whereby communities made a chart of family bonds and NGOs helped to work with the local administration to streamline documentation of ownership and to reconstruct inheritances and property sales using community information.

In situations where boundary markers have been washed away or destroyed, communities living on the site have been recruited to quickly establish agreed property boundaries. After the 2004 tsunami in Aceh, Indonesia, documentation was lost in the disaster and many people were unable to prove ownership. Land markings were also destroyed, which led to disputes over property boundaries. Community-driven responses brought people together to address these disputes, with technical assistance from international agencies. Mapping exercises were conducted as well as a “communal land adjudication activity,” whereby all stakeholders had to agree on the final demarcations and sign a document outlining their agreement. The government created a system of validation for this process, which could be understood as ‘transitional titling’ rather than official legal title, as land owners had to wait for formal registration processes to be finalized before their title was fully recognized. However, this process allowed transitional sheltering to be constructed pending that process.

Also after the 2004 tsunami, the Tamil Nadu Slum Clearance Board (TNSCB) worked with the fisher community to replace slum and damaged housing, facing the significant challenge that approximately 11,000 people claimed to be the owners of the 6,000 properties that had been slated for replacement. The TNSCB carried out a transparent field survey, using an eligibility matrix to award points for current residency on site, residency immediately after the tsunami, and documentary proof of residence. After the list was developed it was shared with the families concerned for their review and eventually won general approval (World Bank 2010).

The use of these participatory methods is becoming increasingly widespread among the international sheltering community in major post-disaster operations, with agencies sometimes developing their own “certificates” or seeking to have agreement documents signed by various parties, including, for example, local authorities. However, there is often significant uncertainty whether those documents can really benefit from any legal standing and whether they will be upheld by relevant officials. Moreover, concerns were voiced by some experts in our consultation about a tendency among some international responders to resort to ad hoc procedures without first determining what domestic law and practice would normally require and/or without a clear plan for post hoc “legalizing” of the ad hoc documents as was done in Aceh, as described above. It would appear that some preparatory work in this area would help to improve the success of these methods.

Another model worthy of attention comes from Chile’s efforts to provide shelter to those affected by its February 2011 earthquake. The government provided subsidies for repairing or rebuilding houses, but many families were unable to qualify because they lacked proof of ownership. To address this, in August 2010, the Government adopted a new law modifying

the norms for the regularization of land tenure, speeding the process from an average of two years to six months and passing all costs to the state (IFRC 2011).

b. Special mechanisms for settling disputes

Some authorities have also engaged in creative solutions to potential bottlenecks or unfairness in resolving land disputes in the aftermath of a disaster. For example, in Thailand, land disputes emerged almost immediately after the 2004 tsunami. To grapple with this, the Thai authorities established a Special Land Sub-Commission, which was entrusted with resolving any land disputes brought to its attention. Virtually all of the major land disputes were eventually resolved through mediation and negotiation, thus avoiding lengthy, costly and often unfair judicial processes, and the vast majority of such disputes resulted in local communities achieving security of tenure, often through community leasehold rights arrangements, and rights to remain on the land previously under dispute.

Similarly, in Sri Lanka, the National Human Rights Commission established a dedicated "Disaster Relief Monitoring Unit" after the 2004 tsunami (IFRC 2006). Its role was to independently monitor relief and reconstruction activities in the tsunami operation including "government services and civil society activities in relation to relief, benefits, land titles and livelihood of Tsunami victims from a human rights perspective." In addition to receiving complaints (at one point up to 200 per day), it organized consultation meetings with disaster affected communities and developed a code of conduct for civil servants. It intervened with governmental officials and non-governmental relief providers to mediate disputes.

c. Procedures for quickly obtaining the use of "new" land for shelters

Some states have put in place specific rules and procedures for the temporary requisition of land for sheltering. For example, the Italian Civil Protection regulations include specific provisions for the preparation of the areas of transitional settlement. Pursuant to these provisions, local authorities are invited to identify areas in advance for the setting up of shelter in case of emergency. In order to assist in the selection and reconstruction of the areas for transitional settlement, the Italian Department of National Civil Protection has provided for a series of "guidelines for the identification and the realization of the shelter areas and the installation of prefabricated buildings for civil protection". The Italian Conference of the Regions has approved these guidelines (Bologna 2006).

In Haiti, officials were able to make available government-owned land for shelter purposes in some areas after the 2010 earthquake. As noted by one shelter worker: "There were 300 shelters to build in Tabarre, but these shelters needed to be built in camp-settings, in groups, thus requiring larger land plots. We could not find enough people with rights in a set area, and proof of ownership was a huge barrier, as was dispersion. These issues were raised with the relevant mayor who was asked for permission to build on city land. The commune offered four different options of land owned by it for use over a period of up to three years. There were spontaneous settlements on the land, but it was government owned. Two sites seemed viable, so we went to an NGO and got the land prepared (levelling, drainage, etc) and we built on two of them."

Likewise, humanitarian agencies and governments have cooperated in developing standard agreement documents to facilitate renting land for shelter. For example, responding to the 2010 floods in Pakistan, the Protection Cluster's Housing Land and Property Rights Sub-thematic group in Pakistan is working to define a template lease agreement, which could be used to create fixed term tenancies for transitional sheltering after a disaster. It is also preparing a document that provides information about property rights to flood-affected people

as well as a document that describes property laws and rights in Pakistan to relief agencies.

d. Reducing inequities in the provision of emergency and transitional shelter

In a number of recent disasters, governments and humanitarian organizations have attempted to develop targeted shelter-related programming for landless persons to ensure that they were not forgotten in the process of reconstruction. For example, after the 2005 earthquake in Pakistan, the government adopted (with some delay) a rural landless policy, which provided rural landless families with cash grants of US\$1,200 to assist them in purchasing new land (Displacement Solutions 2011).

Another tool in reducing inequities is to involve the community directly in the selection of beneficiaries of shelter (and other) assistance. After the 2004 tsunami in Aceh for example, lists of eligible households developed by the national authorities were vetted by community members to ensure equity and minimize conflict. In some cases, community committees were established to conduct damage assessments and develop their own lists, which were later publicized locally (da Silva & Batchelor 2010).

Some inroads have also been made in reducing discrimination against women in shelter programming. For example, after a massive 1993 earthquake, the Government of Maharashtra Province in India appointed a local women's development NGO, Swayam Shikshan Prayog (SSP), to assist it in encouraging effective community participation in a housing repair programme. SSP engaged several hundred women's groups and helped them to become central actors in disseminating information about how to access rebuilding entitlements, safe construction techniques and to become involved in planning. This greatly increased the fairness in the provision of benefits as between women and men and gave women a previously unprecedented role in decision making (Yonder 2005).

e. Building standards for emergency and transitional shelters

Building standards with a flexible approach for emergency and transitional shelter can be very helpful in reducing delays after a disaster. Ideally such standards should be developed with local built-environment professionals, masons/builders and civil society groups who wish to be involved in sheltering. Experts also recommend simplifying regulations for smaller structures to ensure these codes are relevant to sheltering needs--ideally in a pictorial and more accessible format would enable the code to be widely used in sheltering.

One example of a successful project along these lines is in Malawi. There, the Malawi Red Cross, has worked with the Royal Institute of Chartered Surveyors to assist authorities in the development of "Guidelines for Safer Shelter Reconstruction." There are also plans to build on these guidelines to develop national building codes in the country. Similarly, a number of Red Cross and Red Crescent Societies, along with the International Federation, have agreed a range of transitional shelter designs that have been used in a number of different geographical contexts, fully engineered with guidance on the performance of such structures to inform rapid, local decision-making.

There are also interesting examples of innovations to allow and even encourage incremental rebuilding, even if interim steps are not fully compliant with local or international norms. For example, following the 2006 earthquake in Jogjakarta, the Indonesia Government announced a one-step process from emergency shelter to permanent housing, rather than building transitional shelter. The scale of the challenge for shelter providers was enormous due to the number of houses that was required. Humanitarian agencies worked with the government to develop a modified one-step process called "Roof First". This required the rapid erection of a

permanent roof but allowed for the incremental construction of walls and flooring as time and resources permitted.

Likewise, after the 2005 earthquake in Pakistan, it was realized that few of the tents that had been donated for emergency sheltering offered appropriate protection from the harshness of the looming winter. Various options were considered for improving the performance of the tents against winter conditions including the provision of heating equipment and supply of insulation materials. However, due to safety and logistical reasons this approach was limited in scope and scale. A transitional shelter strategy was thus developed which comprised the mobilization of the affected communities to salvage building materials from the rubble of their destroyed houses, and distribution of corrugated galvanised iron sheets to the households along with construction tools. In effect, this was a first step towards the evolution of an incremental and owner-driven recovery strategy whereby households were to construct their own shelters with technical advice.. The government's Federal Relief Commission endorsed this strategy and mobilized army troops, especially the Corps of Engineers, to distribute sheets and train people. One of the factors that supported the adoption of the transitional shelter strategy at the policy level was that the corrugated galvanised iron sheets would later be used as roofing material for permanent reconstruction (Qazi 2010).

f. Procedures for reducing corruption risks in shelter

In recent years, humanitarian organizations have become increasingly aware of the need to take dedicated and wide-ranging measures to reduce their risks of corruption. This is particularly the case as they have scaled up their work in shelter to a large extent. The 2004 tsunami provided important lessons on this issue.

For example, a year after the tsunami struck Aceh, Save the Children US discovered that local contractors it had hired to build shelters had failed to lay proper foundations and had used substandard timber. Save the Children suspended construction, met with local communities, issued media reports about the problem and contacted the authorities. It dismissed its prior contractors and brought in additional experts to design procedures to ensure quality work. It then elaborated this work into a global construction policy and developed an internal ombudsman committee with powers to investigate complains of corruption (TI 2010).

Last year, Transparency International published a comprehensive Handbook on Preventing Corruption in Humanitarian Operations (TI 2010), which provided a range of steps that humanitarian organizations can take – from the needs assessment to project completion – to guard against corruption risks.

g. Steps for improving the facilitation, regulation and coordination of international responders

The facilitation and regulation of international disaster responders has traditionally received little attention. However, over the last ten years, the IFRC has been working with partners through its "International Disaster Response Laws, Rules and Principles"(IDRL) Programme to identify gaps and promote best practice. The IDRL Guidelines, adopted at the 30th International Conference of the Red Cross and Red Crescent in 2007, have inspired a number of governments to review their laws and procedures in order to be better prepared to address issues such as those of coordination, oversight, customs clearance and organizational registration. The companion background document "Progress in the Implementation of the Guidelines for Domestic Facilitation and Regulation of International Disaster Relief and Initial Recovery Assistance" Doc. No. 31IC/11/5.5.1 provides an overview of the successes in implementing the Guidelines around the world.

h. Ensuring that landless persons are not “trapped” in transitional housing

As described earlier in this report, many displaced person remain in transitional shelters much longer than anticipated because they cannot access land and housing programmes for durable housing solutions. However, numerous policy options are available to address this. These can include the provision of free or subsidised land plots or housing resources by government (or philanthropic private landowners or religious institutions), credit systems, the provision of housing with a lengthy rent-free grace period supporting the repair or reconstruction of rental housing, strengthening the tenure rights of informal landholders and relaxing tenure restrictions for housing eligibility.

Three years after the earthquake in Turkey in 1999, the families who were not part of the government’s reconstruction programmes were left in transitional housing. Some of these people formed housing cooperatives in an attempt to access land collectively, through government land allocations. They then applied to the government for land on which they could reconstruct durable housing and many of them were successful (Johnson forthcoming). In other cases, landless people were assisted through NGO projects, which also worked with local and central governments to get land to reconstruct on that was close to the urban areas and livelihoods (Arslan & Johnson 2010). It was through these small projects that landless people were able to leave the transitional housing settlements.

In Aceh, two years after the 2004 tsunami, almost 20,000 of the 70,000 individuals remaining in transitional shelter had been renters and squatters prior to the disaster. The plan was to close all transitional settlements by June 2007 (two and half years after the disaster), so the renters and squatters required permanent solutions. Initial policies, which offered cash compensation to renters and squatters had not solved the problem because the money was too little for them to access a durable housing solution. Thus, a revised policy was designed which stipulated that renters and squatters would receive free land and housing. The areas of Labuy and Neuhue, near the capital of Banda Aceh, were designated as resettlement sites specifically for this group. In addition assistance was provided to 1,000–2,000 renters elsewhere who bought land but required financial assistance to build a house (da Silva 2010).

6. Conclusions and recommendations

It is now well accepted that large-scale disaster-induced displacement can be both a consequence and a cause of major social inequities. Gaps and unfairness related to the availability and use of land are often well engrained prior to major disasters, and are only exacerbated in their aftermath. In such cases, full success in disaster recovery, including durable housing solutions for the displaced, will require a close look at fundamental legal and social issues. This is a process that requires a good deal of time and consultation.

In the meantime, however, it is also plain that early recovery, and particularly the immediate health, livelihood and well-being of displaced persons, often depends upon the rapid and equitable provision of emergency and transitional shelter solutions. This is a period in which maximum flexibility should be possible, where international norms are strong, and where governments and the humanitarian community can and should be performing better. Regulatory barriers are playing a large role in holding them back. While caution is warranted to guard against steps that might undermine the long-term interests of the state or the rights of those affected, the positive examples discussed above show that appropriate temporary solutions can be found to meet urgent humanitarian needs. Moreover, a good deal of international guidance is already available to help governments, humanitarian organizations and other stakeholders to implement those solutions.

Based on consultations with practitioners, it appears that what is needed now is a more proactive approach, with a focus on preparedness. Without prior planning and discussion, simply bringing out the relevant international manuals after a disaster has struck is unlikely to be sufficient. As auxiliaries to the public authorities in the humanitarian field, National Societies are well placed to assist their governments to begin such discussions. Moreover, as global convener of the Global Shelter Cluster for natural disasters, the IFRC has the opportunity to link them with practitioners from across the humanitarian spectrum.

Concretely, we offer the following proposals for moving forward:

- National Societies and their governments, with the support of the IFRC and interested partners (such as the UN, NGOs, academic institutions and/or regional organizations), are encouraged to cooperate in informal “audits” of the national regulatory environment for providing post-disaster shelter, drawing on the problem areas described in this report and other international guidance documents. These audits could be used both to identify any gap areas in the regulatory framework and also to compile information about the existing procedures for the use of shelter agencies in future disasters.
- Where not already in place, governments are encouraged to consider developing specific measures related to post-disaster shelter, such as:
 - procedures for rapidly assigning and temporarily requisitioning land for emergency and transitional shelter,
 - procedures to overcome gaps in official titling systems, such as upholding (at least on a temporary basis) verification of land occupancy rights derived by humanitarian organizations on the basis of community-based participatory land mapping and flexible documentation (and potentially on the basis of an international certification as described below) and/or signed agreements between humanitarian organizations, beneficiaries, putative owners (if different) and local officials,
 - expedited mechanisms/procedures for resolving land rights disputes in the post-disaster setting and upholding tenure security, potentially including an independent ombudsman,
 - simplified building standards particular to emergency and transitional shelters, which facilitate incremental building,
 - legal and/or policy measures to ensure equitable treatment of displaced persons in the provision of shelter assistance and their broad participation in decision-making,
 - protective measures to guard against the heightened risk of corruption in post-disaster construction, which are also flexible enough not to unduly delay operations, and
 - measures to ensure proper facilitation and regulation of international disaster assistance (drawing on the IDRL Guidelines)
- An international certification should be developed based on existing best practice for a process of participatory land mapping aimed at determining land and property occupancy rights for the purpose of post-disaster shelter, when official titling systems are absent or incomplete. The goal would be to provide governments with a level of comfort in recognizing the results of such maps when carried about by certified organizations, on the basis of which they might then uphold the maps under domestic law.
- Working with National Societies and partners in the Global Shelter Cluster, the IFRC will work to raise attention to the specific regulatory issues related to emergency and transitional shelter and to deepen existing research into gaps and best practices.

Bibliography

Arslan, Hakan and Johnson, Cassidy, Turkey: Can Small Actors Overcome the Absence of State Will? in Lyon M, Schinderman T, with Boano C. eds. Building Back Better. Delivering People-centred Housing Reconstruction at Scale (2010)

Bologna, Roberto Strategic Planning of Emergency Areas for Transitional Settlement, Proceedings from the International Conference on Post-Disaster Reconstruction, "Meeting Stakeholder Interests" Florence, Italy, May 17-19, 2006 (2006).

Brookings Institution-London School of Economic Project on Internal Displacement, A Year of Living Dangerously: A Review of Natural Disasters in 2010 (2011)

Centre on Housing Rights and Evictions, In Search of Equality: A Survey of Law and Practice related to Women's Inheritance Rights in the Middle East and North Africa (MENA) Region (2007)

Committee on Economic Social and Cultural Rights (CESCR), General Comment No. 3: The nature of States Parties' Obligations (1990)

Committee on Economic Social and Cultural Rights (CESCR), General Comment No. 4: The Right to Adequate Housing (1991)

da Silva, Jo, Lessons from Aceh, Key Considerations in Post-Disaster Reconstruction (2010)

da Silva, Jo, and Batchelor, Victoria, Indonesia: Understanding Agency Policy in a National Context, in Lyon M, Schinderman T, with Boano C. eds. Building Back Better. Delivering People-centred Housing Reconstruction at Scale (2010)

Displacement Solutions, Regulatory Obstacles to Rapid and Equitable Emergency and Interim Shelter Solutions and Natural Disasters (2011)

FAO, Draft Voluntary Guidelines on the Responsible Governance of Tenure of Land, Fisheries and Forests (2011)

Habitat International Coalition (HIC), Still Waiting - Housing Rights Violations in a Land of Plenty: The Kobe Earthquake and Beyond (1995)

Guidelines for the Domestic Facilitation and Regulation of International Disaster Relief and Initial Recovery Assistance, Resolution 4, 30th International Conference of the Red Cross and Red Crescent (2007)

Guiding Principles on Internal Displacement, U.N. Doc. E/CN.4/1998/53/Add.2 (1998)

Harper, Erica, International Law and Standards Applicable in Natural Disaster Situations (2009)

Inter-Agency Standing Committee (IASC), Operational Guidelines on Human Rights and Natural Disasters (2006)

Internal Displacement Monitoring Centre (IDMC), Displacement Due to Natural Hazard-Induced Disasters (2011)

- International Institute for Sustainable Development (IISD), Addressing Land Ownership after Natural Disasters: An Agency Survey (2006)
- IFRC, Disasters in the Americas: The Case for Legal Preparedness (2011)
- IFRC, Legal Issues from the International Response to the Tsunami in Indonesia (2007)
- IFRC, Legal Issues from the International Response to the Tsunami in Sri Lanka (2006)
- Johnson, Cassidy, Kernels of Change: Civil Society Challenges to State-Led Strategies for Recovery and Risk Reduction in Turkey, Environment and Urbanization, 23 (2) (forthcoming)
- Kaelin, Walter, The Protection of Internally Displaced Persons in Situations of Natural Disaster (2005).
- Mooney, Erin, The Concept of Internal Displacement and the Case for Internally Displaced Persons as a Category of Concern, Refugee Survey Quarterly (Fall 2005)
- Noji, Eric, ed, The Public Health Consequences of Disasters (1997)
- ODI, Mapping the Risk of Corruption in Humanitarian Action (2006)
- Payne, Geoffrey et al, Innovative Approaches to Secure Tenure for the Urban Poor (2001)
- Pinheiro Principles on Housing and Property Restitution for Refugees and Displaced Persons (2005)
- Practical Action and IFRC, PCR Tool 11: Defining Standards for People-Centred Reconstruction (2011)
- Qazi, Usman, Pakistan: Implementing People-Centred Reconstruction in Urban and Rural Areas, in Lyon M, Schinderman T, with Boano C. eds. Building Back Better. Delivering People-centred Housing Reconstruction at Scale (2010)
- Red Cross/Red Crescent Climate Centre, Climate Guide (2007)
- Rolnik, Raquel, Report of the Special Rapporteur on Adequate Housing as a Component of the Right to an Adequate Standard of Living, and on the Right to Non-Discrimination in this Context, UN Doc. No. A/HRC/16/42 (2010)
- Shelter Centre, Transitional Settlement and Reconstruction After Natural Disasters (2008)
- Transparency International, Preventing Corruption in Humanitarian Operations (2010)
- UN Disaster Response Office, Shelter After Disaster: Guidelines for Assistance (1982)
- UN Habitat, Land and Natural Disasters: Guidance for Practitioners (2010)
- UN Habitat, Land and Conflict: A Handbook for Humanitarians (Draft 2009)
- World Bank, Safer Homes, Stronger Communities A Handbook for Reconstructing after Natural Disasters (2010)
- Yonder, Ayse, Women's Participation in Disaster Relief and Recovery (2005)