ON SOLID GROUND

ADDRESSING LAND TENURE ISSUES FOLLOWING NATURAL DISASTERS

EN TIERRA SEGURA

DESASTRES NATURALES Y TENENCIA DE LA TIERRA

UN HABITAT
FOR A BETTER URBAN FUTURE

Early Recovery

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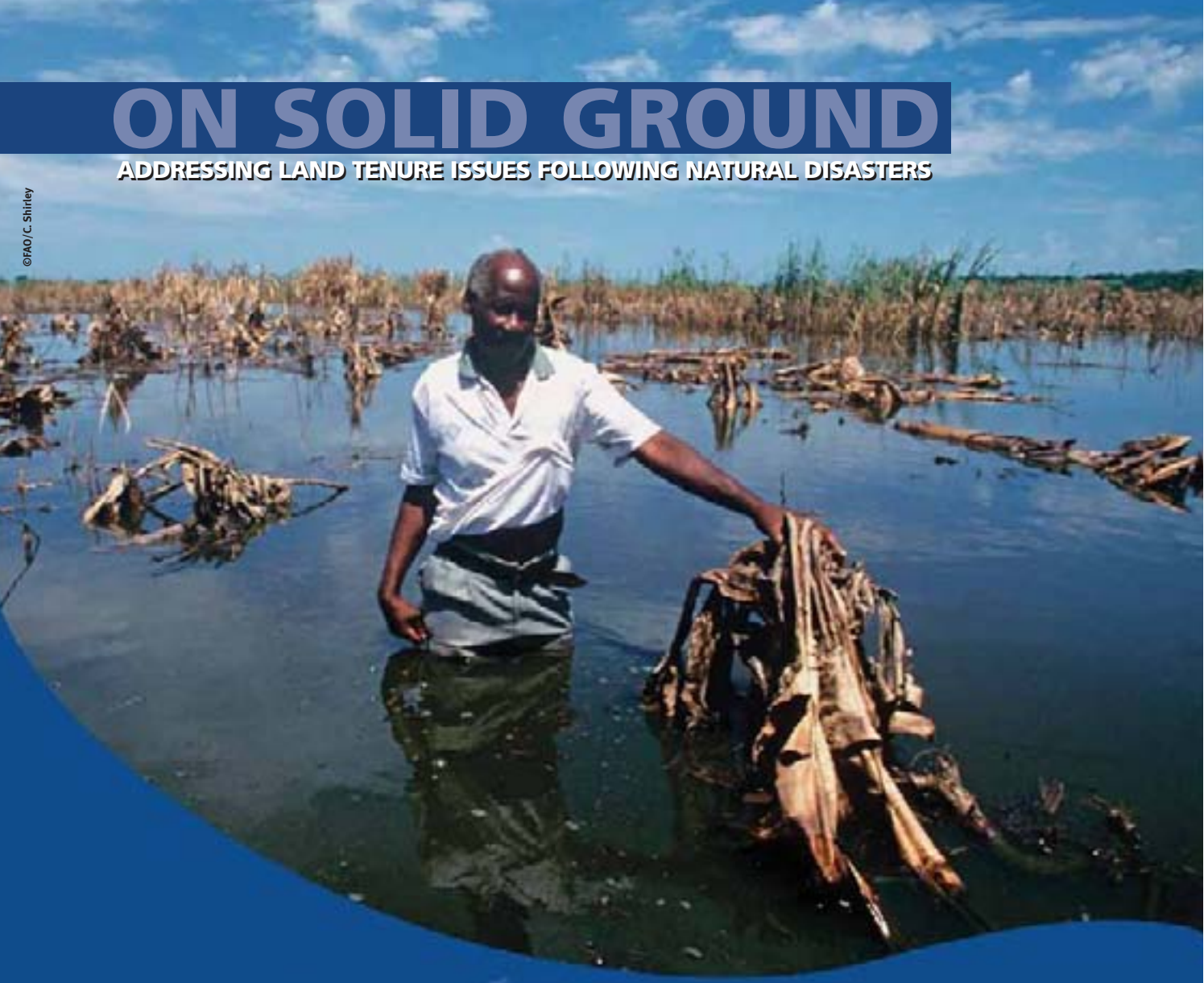

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Mozambique

THE FLOODS IN MOZAMBIQUE

Environmental context

Throughout its history, Mozambique has had to deal with cyclones and floods, and when these are severe they have a devastating impact. Apart from the immediate threat to human life, such natural disasters seriously impede economic growth.

There is no doubt that the Limpopo valley floods in 2000 were one of the worst flood disasters in Mozambique's history. At least 700 people died, and some 500,000 to 650,000 were displaced and temporarily sheltered in over 100 camps set up by the government. It is estimated that the total cost of the 2000 floods was equal to almost 20 percent of the country's gross domestic product, and slowed down the economic growth rate by 2.1 percent.

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Flooding over 30 years

Event	Impact
1978 – Limpopo	350 killed; 400,000+ affected.
1981 – Limpopo	500,000 affected.
1985 – Southern Provinces	500,000 affected.
1990 – Pungue-Sofala	12,000 displaced.
1996 – Southern Rivers and Zambezi	200,000 affected.
1997 – Central Rivers and Zambezi	300,000 affected; 78 killed.
1999 – Inhambane and Sofala provinces	70,000 affected; 100 killed.
2000 – Southern Rivers including Limpopo	2 million affected; 700 killed.
2001 – Zambezi	500,000 affected; 115 killed.
2007 – Zambezi	
2008 – Zambezi	

DISASTER MANAGEMENT BODIES CREATED THROUGH THE POLICY ON DISASTER MANAGEMENT

- **Coordinating Council for Disaster Management** (CCGC): the government body chaired by the Prime Minister responsible for policy decision making. It comprises the ministers of key ministries such as Foreign Affairs and Cooperation, Public Works and Housing, Transport and Communications, Health, Agriculture and Rural development;
- **National Institute for Disaster Management** (INGC): responsible for disaster management and the coordination of prevention activities, relief to disaster victims, and the rehabilitation of affected infrastructure. It falls under the Ministry of Foreign Affairs and Cooperation and has offices at the provincial level;
- **Disaster Management Technical Unit** (CTGC): responsible for coordinating sector and ministry early warning systems, defining national alerts and proposing declarations of emergency to the CCGC. It is chaired by the Director of the INGC and its members include Ministerial members of the CCGC, and representatives from the Mozambique Red Cross, UN agencies and NGOs.

Floods in 2007 were almost as severe. In all, over 400,000 people were said to have been affected by the severe flooding and the cyclone which struck Inhambane and Sofala provinces. The flooding led to 45 deaths, extensive crop damage, and the evacuation of around 163,000 people from low-lying areas. It was estimated that agricultural production in the affected areas had been reduced by 30 percent in the first quarter of 2007.

Government context

The flood events of 2000 were a first test for the implementation of the National Policy on Disaster Management which the government had passed in October 1999. This policy marked a shift from a reactive to proactive approach towards disaster management, aimed at developing a culture of prevention.

A central element of this mitigation strategy is securing land rights for communities that are exposed to frequent disasters of this kind, as well as in communities that can be identified as safe havens for displaced communities to settle temporarily in or permanently. Mozambique has strong tools to implement this strategy: the Land Law (1997), the accompanying Regulations (1998) and the Technical Annex on Community Land Delimitation (2000). These tools promote the involvement of local-level institutions in land access and management, with a focus on identifying and securing local land rights. This involvement in turn has a clear mitigating impact with relation to flooding generally.

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The Land Law, for example, already integrates customary and formal land access and management systems into a single Mozambican law. Customary practices and local land management institutions are formally recognized and given due place in the law. These institutions are strengthened through their involvement in land administration activities, and are consequently also better able to deal with other challenges, such as resettlement and other land issues created by serious flooding.

Decision-making on land management, including dispute resolution, continues to be primarily dealt with by informal but mostly legitimate institutions at the local level. Displaced people as well as those who receive the disaster victims often use these same institutions to take care of their problems and challenges. The legitimacy and relevance of these institutions is formally recognized by the National Land Policy of 1995, and given concrete form in the Land Law. Customary land rights exist and are recognized as such. Local people also accept these rights, which are based on the occupation and use of land. This offers major advantages in the absence of formal documentation. It also gives weight to oral testimony in case this is required and promotes finding local solutions to problems.

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Major land tenure issues

Early assessments were conducted in 2000 by the UN organizations and the World Bank, together with different government bodies, mainly line ministries. The best results were achieved when international organizations were working closely together with Mozambican institutions and local agencies.

The UNEP/UNCHS assessment took into consideration the fact that land tenure and housing rights may be a challenge in the emergency and recovery phases. A number of urgent tenure security issues were identified:

- the rights of flood displaced people who decide not to return;
- rights in resettlement areas;
- the rights of people returning to their areas without legal documentation;
- the rights of informal settlers affected by floods; and
- the rights of hosts where resettlement would occur.

Land tenure issues for the displaced

Strengthening tenure arrangements through visible occupation. Upon arrival in their area of resettlement, flood victims were registered by relief agencies or the state authorities, making them eligible for emergency assistance. It was also on this basis that plots of land were allocated in the resettlement villages. In a majority of cases, this registration, supplemented by an index map where each plot number corresponds to the name of a resettled person or family, is the only documentation that secures any tenure over the land and property.

Maintaining secure access to productive assets such as land in the area of origin, as well as employment, is a core livelihood strategy that flood victims have long used as part of a post-disaster response. Permanent occupation of land, or exercising highly visible land use, is an accepted way of establishing strong rights over land. This is part of the customary heritage of all social groups. Post-independence socialist governments

embraced this policy, on the basis that "land belongs to those who use and cultivate it", and indeed resettled flood victims have used this strategy to strengthen their tenure security. They have tried to occupy both the lands that they had to leave, as well as the newly allocated lands. When distances between the two sites are too great, families tend to split up and establish some form of presence on each plot. The 1997 Land Law also recognizes these 'acquired rights' as fully equivalent to the State Land Use and Benefit Right, or DUAT. However, these acquired DUATs do not have to be registered, with the result that their absence on official records creates vulnerability, which needs to be compensated for by strong local intervention that can support claims to long-standing occupants of land that has been abandoned during floods.

Resettlement on community land. Most people are resettled on community lands in rural areas. Resettlement locations on community land are identified by the local government authorities or district administrations, with the involvement of the local community representatives. The consultation is more likely to correspond with a decision taken after some "superficial consultation", rather than a decision based on negotiation. This fast action seems to be justified by urgency, but may result in friction and problems later between the resettled and the host community.

Resettlement on community lands in rural areas is a laudable policy, as it may offer at least a minimum of conditions to enable the displaced to engage in economic activities. Through the land law, local communities have established legal rights over these lands through long-term occupation according to local rules and customs. Local land management institutions, as well as a significant part of the community members, often have a clear idea of the position and extent of the community boundaries. The land policy and law embrace negotiations and community consultations as mechanisms for outsiders to obtain access to community land. The community, represented by a local land management body, agrees

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> « Resettled flood victims have tried to occupy the lands that they had to leave, as well as the newly allocated lands. When distances between the two sites are too great, families tend to split up and establish some form of presence on each plot. »

or disagrees with the request for access to land and the use of this land under certain conditions. The latter may refer to the duration of the right to use the land, but also to the benefits that this temporary transfer entails for the community.

For a number of resettlement places in the vicinity of towns, some sort of outdated town plan usually exists. These plans have no provisions for emergency resettlement. In the best case, areas earmarked as possible extension sites for town development could be used for the resettlement of flood victims. In practice this did not happen, mainly because local governments did not want to see their future prime land being permanently occupied by displaced people.

Trust in the state to guarantee land and property rights. The only security of tenure that resettled flood victims acquire over their land and house is based on trust in the local administrative state structures and whatever support may be found among the local communities. They are not issued any kind of certificate for the acquired plot; neither do they obtain a building license for the shelter or house. The state is still very much respected, at least in the southern parts of Mozambique, and this trust may provide certain levels of perceived tenure security. But, in other areas of Mozambique, the state did not acquire the land for resettlement through an "official legal" agreement from the host community. The host community could, in principle, question the validity of the resettlement site because they were not formally consulted. In this context the question arises as to why the state does not go through a legally binding process with the host community, such as an official community land delimitation, followed by a genuine negotiation of access to community land according to the Land Law. The lack of any preventive action combined with the urgency to act when a disaster occurs is probably the major reason why a negotiated agreement is substituted by a more imposed form of agreement.

Gradual strengthening of weak tenure arrangements. After several years, when initial gratitude has given way to real-life challenges, plot beneficiaries realize that they require a more direct form of tenure security. For instance, some individual households are now applying for (i) the registration of their plot as a formal certificate to secure the plot; and (ii) a (post factum) building license to secure the infrastructure on the plot. This pro-active registration process originates in the resettled community itself, as a response to a perceived feeling of tenure insecurity.

Lack of information. Information on the nature and costs of legal procedures to secure tenure seems to constitute a major hurdle for people. Very few are informed about the possibilities that the Land Law offers to initiate a land registration process. Local NGOs and other civil society groups do not seem to take up this challenge. It appears that the involvement of NGOs and others in emergency work is limited to providing relief immediately after a disaster, including the building of shelter. Securing the land on which this shelter is built seems to be less of a concern.

Emergence of parallel mechanisms for securing land. A significant number of people rely on the local authorities (administrative post level, or even lower) to obtain some sort of written declaration stating their ownership of land or infrastructure. The local authorities charge a fee for these services. The documents and the process of registration are all handled at district level. Given that the only legally recognized cadastre, outside of the municipality areas, is at the provincial level and that land rights must be authorized by the provincial government, these procedures do not seem to have any legal backing; however, they do appear to be legitimate for the incumbent and to the local authorities.

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Land tenure issues for the returnees

The imperative for tenure security in areas that are susceptible to floods. Resettlement often only gives flood victims an opportunity to acquire a residential plot in a safe haven. As a permanent option, resettlement is not generally useful for establishing a new livelihood. There is then a strong "push factor" away from the resettlement areas and back to areas of origin, where people encounter better conditions and established social networks for their livelihoods, and where they have their own acquired rights over land.

The bottom line is that displaced people want to continue having access to the fertile and productive lands they left when taking up residence in a resettlement site.

> « The Government has provided a re-settlement area. Houses have been built using local materials and there is a concrete school. However there are few jobs and people have returned to the floodplain in spite of the risk. The issue of employment and livelihoods for people in resettlement areas should be discussed between the Community and the District Administration. *(HR Wallingford, 2005)* »

Where there is a perceived risk that people may eventually lose access to these lands, they will not be encouraged to leave the areas when the floods arrive. Providing secure tenure to these lands of origin, while securing access to a residential plot in a safe haven is therefore key to any successful flood mitigation policy. Failure to achieve the two challenges simultaneously will result either in poverty and destitution or in continuous exposure to the dangers of recurrent floods.

The role of local institutions in providing security of tenure. People who return and exercise a permanent occupation of their land have not in general encountered any problems in re-establishing their rights. Infrastructure was not wiped out completely, leaving clearly visible indications of previous occupation. The local leadership, neighbourhood secretaries and other local dignitaries have played an important role in confirming previous occupation and ownership when required. It does not appear that the loss of documentation, mainly building permits in urban areas, has prevented re-occupation of property.

It is essential to highlight the existence of "the living cadastre", a local institution of mainly elder people who maintain mostly memorized records of local land use, transactions and ownership. The living cadastre plays an essential role in the normalization of post-disaster land occupation. Legitimacy and reliance on local structures takes on an important dimension when most land was allocated in an informal way, even by the state, and never documented.

Land tenure issues for the host communities

Recognition of host communities' needs and contributions vis-à-vis newcomers. Land issues and the tenure rights of host communities should also be addressed. The common practice is that resettlement occurs through the local government or district authorities, which alienate a part of the host community lands without following the necessary procedures as described by the law. Consequently, this land is re-distributed to flood victims, who, after some time, will procure some form of individual tenure security for the plots that

> Displaced people want to continue having access to the lands they left when they take up residence in a resettlement site. Where there is a perceived risk that people may eventually lose access to these lands, they will not be encouraged to leave these areas when the floods arrive.

the state allocated. This results in resettled people acquiring rights over land that may be perceived as being stronger than the rights of their hosts. This situation is exacerbated when community land rights are not delimited and registered.

In general, principles of solidarity are used and accepted by host communities in giving refuge to their brothers and sisters who have been the victims of a natural disaster. When this solidarity turns into unconditional alienation of their own land – undermining their own rights and imposing pressure on their own natural resource base, often without their consent, and without bringing any benefits – it is understandable that conflicts can arise. Again, this is exacerbated by the fact that emergency and recovery aid is channelled only to the resettled victims, but not to the host community members.

Unnecessary state interventions. In some areas of the country, there is evidence that certain government initiatives to secure land for the displaced have been at odds with a correct application of the land law and with local land management issues. There is little doubt that when rural communities have registered their land rights, through a legally sanctioned delimitation process, and have prepared a simple land use plan for the area, they are more likely to (i) accommodate victims of natural disasters, (ii) be more actively involved in encountering local and acceptable solutions for managing the resettlement; and (iii) benefit from recovery efforts. An enabling environment of local land management accountability is more likely to prevent disputes between hosts and newcomers than an imposed intervention from state authorities.

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> « Host communities often use and accept principles of solidarity when giving refuge to their brothers and sisters who have been the victims of a natural disaster. When this solidarity turns into unconditional alienation of their own land, undermining their own rights and imposing pressure on their own natural resource base, it is understandable that conflicts can arise. »

Loss or destruction of formal records

A major problem in this context is that the vast majority of existing land rights in rural areas have not yet been subject to any cadastral surveying, and these rights are thus not documented as official cadastral records. If these rights were recorded in 'normal times', an urgent and essentially reactive response to the allocation of land to flood victims could be avoided.

PREVENTING LOSS OF OFFICIAL RECORDS

National staff from different departments identified a number of simple measures to prevent a similar impact on formal records:

- Keeping official records in safer places is an obvious response to avoid future 'paper disasters'.
- The information flow between the provincial and national cadastre levels has improved, but there is no online connection with the central system, and the system itself is susceptible to virus attacks. In principle regular back-ups are made, but it is not clear whether there are standard procedures to do this, or if the back-ups are held off-site in safer areas.
- A number of logistic weaknesses have been identified, including: proper filing systems in closed filing cabinets (existing filing cabinets are not waterproof); the use of waterproof ink for handwritten documentation and registers; multiple copies of cadastral maps and other documentation; barred windows and doors in offices to prevent records from being carried outside the building by the flood waters.

In addition, all documented DUATs that were approved after 1998 have, in principle, been subject to a process of consultation with local leaders and authorities, as part of the legally approved procedures. This local consultation process leaves traces that can be tracked down when needed. When documents are destroyed by floods, there is usually a local reference who is able to confirm whether a person or entity has been through a process of acquiring a certificate.

This does not imply that lost documentation does not need to be restored, or that land rights do not require documentation. When land rights of communities are not made visible through delimitation and recording, it is difficult for community structures and members to exercise their rights vis a vis outsiders who may question these rights. Undocumented community land rights are easily encroached upon by outsiders who may acquire incompatible overlapping rights in bad faith. Documented individual certificates are also needed to access credit, secure investments, and avoid overlapping land rights.

It must also be noted that the recovery and restoration of records have not directly induced a systemic change. The lost or damaged records were restored as best they could be, but the recording system itself was not improved.

The recovery and restoration of cadastral data poses a question as to the legality of reconstructed data. Most of the damaged documents with original signatures have been copied, and there is doubt whether copied signatures have the same legal value as the originals. There is no knowledge about an eventual legal instruction dealing with this issue. In this context, oral testimony and other non-conventional forms of proof allowed in the land law become even more important,

and indeed the process of restoration of records offers a unique opportunity to give more prominence to these innovative aspects of Mozambique land legislation.

An enabling environment to prevent land disputes following a natural disaster

An examination of land rights and land issues in the post-disaster situations that Mozambique has faced reveals a common positive feature: major disputes and conflicts are generally absent. Some of the principle reasons are briefly described below and can serve to help prevent disputes from happening in the future.

Resilience to disaster. Over the past ten years, work on disasters has increasingly focused on the capacity of affected communities to recover with little or no external assistance. This requires a stronger emphasis on approaches that stress resilience rather than just need or vulnerability. Through recurrent disasters, it appears that the Mozambican people have established a high degree of resilience to the recurrent character of these disasters. Strategies to minimize risks of economic hardship have been developed over time. These include a diversification of agricultural production in time and space, having access to different types of lands and soils and making alliances with neighbours to secure this access. Losing one or two parcels due to the occurrence of a disaster is compensated by arranging for access to parcels in different locations.

Solidarity and social networks. Strong forms of solidarity remain part of Mozambican society. In rural areas there are many solidarity and mutual help systems.

> « Effective responses to a disaster require a stronger emphasis on approaches that stress resilience rather than just need or vulnerability. »

Absence of major ethnic, social and political differences. Mozambique is a multi-cultural society but has remained largely immune to confrontations or conflicts defined along ethnic fault lines.

Land availability. Post-disaster situations are not, as yet, being used by groups or individuals to grab land or natural resources, and in general there is a relative abundance of land for agricultural development. Private land concessions are an established feature in the Limpopo Valley and seem to meet the consent of local populations. Larger concession holders are not yet massively encroaching upon smallholder or communal land (although more recent reports indicate an increasing interest from the agro-fuel sector).

Informal but strongly legitimate land rights and local institutions. As previously mentioned, decision-making on land management, including dispute resolution, continues to be primarily dealt with by informal but mostly legitimate institutions at the local level. Both displaced people as well as those who receive the disaster victims often use these same institutions to take care of their problems and challenges.

Lessons learned for addressing land issues

The enduring role of 'traditional' institutions. 'Traditional' institutions for land management in the rural areas of Mozambique are the most important, enduring and flexible mechanisms for the majority of people to secure access to land and resolve conflicts. The hierarchy of traditional chiefs in the rural areas represents a repository of information regarding land allocations, boundaries and entitlements; in effect they are a 'living cadastre', and a point of reference for everyone.

Secure tenure to lands of origin, and access to safe haven. Displaced people want to continue having access to the lands they left. For them, the establishment of strong rights over these lands is essential. Where there is a perceived risk that they may eventually lose access to these lands, they will not be encouraged to leave them when the floods arrive.

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SUSTAINABLE RESETTLEMENT – AN ACTION PACKAGE

Sustainable resettlement is not limited to the basic needs and services in resettlement sites, but must also consider actions in the areas of origin which are subject to flooding. Providing secure tenure to these lands of origin, while securing access to a residential plot in a safe haven, is key to any successful flood mitigation policy. A failure to achieve the two challenges simultaneously will result either in poverty and destitution, or in continuous exposure to the dangers of recurrent floods. There are a cluster of activities that need to be considered, as part of a holistic package, in order to promote sustainable efforts of resettlement.

The Resettlement as a disaster mitigation policy. Resettlement on community land is probably the only way forward. A challenge is to turn resettlement, as a mitigation strategy for natural disasters, into something that responds to the needs of the potential victims. It is a voluntary process, and to make it attractive and successful, an enabling environment needs to be created. Looking at the traditional strategies of alliances between different communities might offer some insights into how best to manage this process.
Where people continue to live on flood-prone and vulnerable areas there is a need to discuss coping strategies with them and understand their needs for rehabilitation. The concerns of both men and women need to be incorporated into the rehabilitation and resettlement strategies.

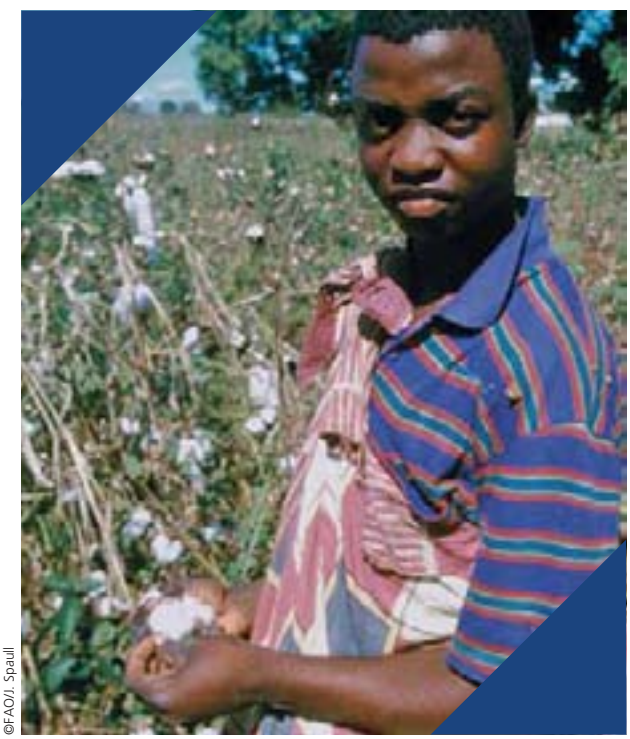
Securing land and property tenure for host communities. Resettlement brings stress to those who play host to the displaced. The present resettlement approaches on communal land can result in the permanent alienation of host community land. Why should a rural community host an important number of people, if they know that this will result in a loss of assets? It is essential that tenure security is established over the land and natural resources of the host community and that access to it is then negotiated through formal and legal processes. A community planning exercise is the only legal and legitimate approach to decide on a number of issues: location of resettlement villages, compensation for the customary land owners, conditions for accessing

other land and natural resources by the flood victims, and the needs and possibilities for the development of the resource base (new small irrigation schemes, development of new *machongo* areas).

Carrying out 'pre-emptive' community delimitation in both flood-affected and host communities, before the emergency strikes, can also pave the way for a more effective integration and resettlement process. Once again, the traditional model of alliances and integrated strategies for coping with floods can offer interesting lessons here, as precisely a kind of 'pre-emergency' strategy that facilitates an emergency response when it is needed.

Securing individual tenure for newcomers in resettlement villages. Many resettled people, particularly in the peri-urban areas, want to acquire strong forms of tenure security over their allocated plot, and over the infrastructure that is built on it. There is a fear that the state could reclaim what it has given to flood victims. Local community members who lost their lands to flood victims also continue to reclaim their lost access and productive assets (mainly fruit trees), albeit in a peaceful and low-key way. Individual security seems to be essential for a number of reasons: (i) the populations of resettlement villages are not necessarily socially coherent and homogeneous, and a strong organizational structure to well manage common property may be absent; (ii) collective ownership in resettlement villages has a legacy of failure and non-acceptance; (iii) it weighs heavily on a number of fundamental principles such as inheritance and the transferability of land and property; (iv) common property models in peri-urban resettlement situations do not necessarily provide tenure security for individual families.

Actions that strengthen local institutions. There is a strong imperative for local institutions to be actively involved in mitigating the impact of the floods generally, and particularly so in the areas of land access and management. The Land Policy, the Land Law and the accompanying Regulations and Technical Annex provide the rationale, the legal basis and the necessary tools for achieving this involvement. However it is still more common to find central or provincial state-driven approaches that tend to marginalize both the affected and the host communities. This is in great part due to the lack of capacity at a local level – within local government generally and particularly within land administration institutions, both at district level and within communities. The state could capture existing capacities by involving NGOS with specialized knowledge of land and natural resource management issues.



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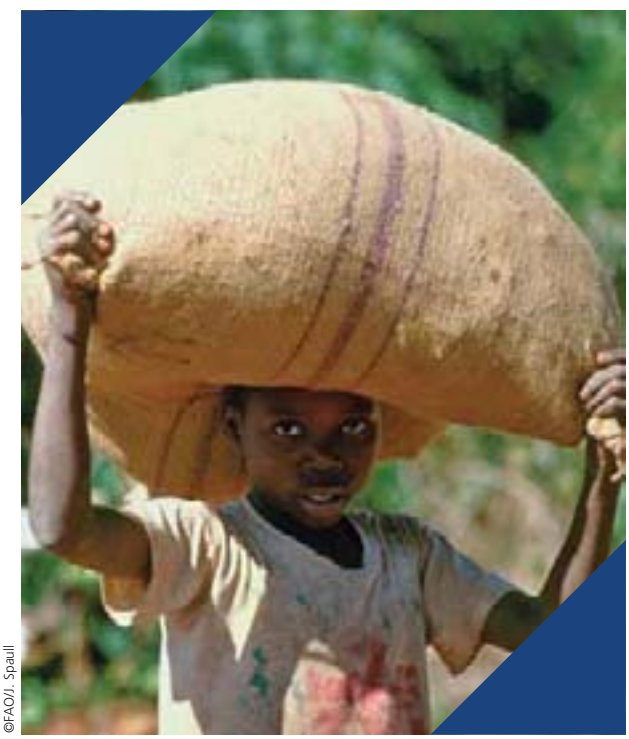

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Adopting better and more efficient cadastre systems. There is a need to improve both the organization and the protection of the cadastre. A generalized lack of capacity throughout the system and an uneven understanding of how the administration of the cadastre fits within broader land administration systems leave it vulnerable to the loss of valuable information and ambiguous demarcation situations. Once there is a more appropriate conceptual basis for the cadastral system, within a broader strategy for land administration that genuinely accepts the legitimacy of acquired customary and locally managed rights, the issues that have arisen in the post-flood context can be better addressed. The technical development of the system will only be sustainable once these foundations are in place.

Tools to address land tenure challenges. A number of tools can be used to address underlying land tenure challenges in a natural disaster context. Most of these tools are available in Mozambique, and some have even been developed in the country itself. There is no doubt that the present policy and legal framework to address land tenure and land use or territorial planning is by far the strongest tool.

AREAS FOR TECHNICAL ASSISTANCE

- Stengthening local institutions.
- Identifying appropriate resettlement areas in the event of new floods.
- Delimitation and issuing of DUAT titles.
- Local and government literacy on the Land law and regulations vis-a-vis floods and other natural disasters.
- Efficient cadastre and registration systems.
- Integrating land tenure issues into national and local emergency programmes.

NATURAL DISASTERS AND LAND TENURE GOVERNMENT INSTITUTIONS IN MOZAMBIQUE

NATURAL DISASTERS:
National Institute for Disasters Management

LAND TENURE AND RELATED INSTITUTIONS
Ministry of Agriculture (MINAG)
Land and Forests National Division (MINAG/DINATEF)
Planning and Development Ministry
Environmental Coordination Ministry (MICOA)
National Cartography Secretariat (CENACARTA)
Juridical and Judiciary Training Centre (CFJJ)

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EN TIERRA SEGURA

DESASTRES NATURALES Y TENENCIA DE LA TIERRA

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Honduras

LA AMENAZA HIDROMETEOROLÓGICA EN HONDURAS

Contexto ambiental

Honduras es un pequeño país montañoso de América Central, con estrechas franjas costeras abiertas al mar Caribe y al océano Pacífico. Situado en la ruta de tormentas tropicales y huracanes, según datos del PNUD el país es uno de los 20 más vulnerables del mundo en cuanto a inundaciones y el más vulnerable a los huracanes. A lo largo de su historia, las graves consecuencias de las amenazas hidrometeorológicas han causado en Honduras enormes pérdidas humanas, sociales, económicas y ambientales. En el último siglo, casi 5 millones de personas han resultado afectadas por los desastres naturales. Los más dañinos han sido los 19 huracanes que han asolado la región, causando la muerte de casi 25 000 personas.

Early Recovery

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Honduras

Honduras

Honduras

Honduras

HURACANES DE LOS ÚLTIMOS 35 AÑOS CON MAYOR IMPACTO SOBRE EL TERRITORIO HONDUREÑO

Año	Huracán	Impacto
1974	Fifí	8 000 fallecidos, 80% de la red viaria destruida, mitad de los cultivos arrasados, daños por un total de 900 millones de USD de 1974 (unos 3 700 millones de USD actuales).
1998	Mitch	1,5 millones de damnificados de una población de 6,2 millones de habitantes, 5 657 muertos, 8 058 desaparecidos, 12 272 heridos, 285 000 viviendas afectadas o destruidas, 60% de la infraestructura vial seriamente dañada con un total de 531 vías de comunicación inutilizadas, 189 puentes destruidos, 81 ciudades incomunicadas, 25 aldeas arrasadas, 70% de los cultivos destruidos o gravemente afectados, daños por 3 800 millones de USD.
2001	Michelle	6 fallecidos, 14 desaparecidos, 27 719 damnificados.
2001	Beta	60 483 damnificados, 237 viviendas destruidas y 954 dañadas, 11 000 personas sin hogar, 41 puentes destruidos o dañados, 30 carreteras inutilizadas, alrededor de 3 000 ha de tierra cultivable destruidas.

La vulnerabilidad histórica de Honduras a las amenazas hidrometeorológicas ha experimentado un drámatico incremento en las últimas tres décadas, con pérdidas nominales estimadas en 4 700 millones de USD, lo que equivale a la mitad del total de pérdidas registradas en la región de América Central. En 1998 el paso del huracán Mitch por el territorio hondureño, el peor desastre natural de los dos últimos siglos, afectó al 38 por ciento de la población y causó daños equivalentes al 72 por ciento del PIB. El huracán Mitch puso de relieve no sólo el elevado nivel de exposición del país a las amenazas naturales que deriva de su posición geográfica, sino también su alto grado de vulnerabilidad, producto de la interacción de las amenazas naturales con el inadecuado ordenamiento de los recursos ambientales, el perfil territorial y agroecológico de la región y una serie de factores humanos que configuran unas condiciones crónicas de riesgo.

Contexto institucional

El Gobierno de Honduras no cuenta con una política de Estado en materia de gestión de riesgos ni con una política de tierras que contemple específicamente a la población afectada por los desastres naturales.

EL HURACÁN MITCH

En los últimos días de octubre de 1998, América Central vivió el peor desastre natural de los últimos 200 años. Tras arrasar el enclave turístico de las Islas de Bahía, el huracán Mitch llegó a la costa norte de Honduras. Una semana de intensas precipitaciones dejó tras de sí ciudades inundadas, pueblos enteros sumergidos por el fango, la red de infraestructura pública inutilizada, los cultivos destruidos. Sus efectos se dejaron sentir tanto en las áreas rurales como en las urbanas y sólo en la ciudad de Tegucigalpa cerca de un millar de personas perdieron la vida. En todo el país hubo más de 15 000 muertos y desaparecidos y unas 285 000 viviendas quedaron destruidas o sufrieron daños, dejando a aproximadamente 1,5 milllones de personas sin hogar. Un siglo de degradación ambiental, pobreza, desigual acceso y distribución de la tierra y conflictos militares, junto con casi ocho meses de sequía debida al fenómeno de El Niño en 1997-98, contribuyeron a agravar los efectos del huracán causando una intensidad de las riadas e inundaciones mucho mayor que la que habría cabido esperar de una tormenta de esas características y acentuando la vulnerabilidad social y ambiental de la región.

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A nivel nacional, el contexto institucional de gestión del riesgo de desastres en Honduras presenta como características más relevantes su carácter reactivo y asistencialista. La respuesta ante las amenazas naturales consiste fundamentalmente en acciones post-desastre puntuales en situaciones de emergencia y en la ayuda de los organismos internacionales y de las redes oficiales de emergencia.

El organismo gubernamental que gestiona la prevención y la atención post-desastres a nivel nacional es la Comisión Permanente de Contingencias (COPECO), creada en 1990, cuyas acciones están más orientadas a brindar ayuda en situaciones de emergencia que a la formulación y aplicación de medidas de prevención, preparación y mitigación. Sin embargo, impulsado por la catástrofe causada por el huracán Mitch, el Gobierno hondureño ha iniciado un proceso de ampliación del marco institucional y de la gestión del riesgo en el que cabe destacar algunos avances importantes como el establecimiento del Programa de Mitigación de Desastres Naturales (PMDN), que tiene como objetivo identificar las áreas geográficas vulnerables, y la propuesta de ley de creación de una nueva estructura nacional basada en los conceptos de gestión de riesgos y vulnerabilidad: el Sistema Nacional de Gestión de Riesgos (SINAGER).

Un segundo modelo de gestión del riesgo es el modelo local. Recientes estudios han subrayado la importante función de las instituciones de ámbito local en la prevención de desastres y en la respuesta de emergencia. En este contexto destacan el Plan Municipal de Gestión de Riesgo, que incluye aspectos como la zonificación y las normativas de uso de la tierra en función del nivel de amenaza, y el Plan Estratégico Municipal, donde se contemplan las cuestiones relativas a las inversiones destinadas a la mitigación de desastres. Se ha propuesto asimismo la consolidación operativa descentralizada y la ampliación del Sistema Nacional de Áreas Protegidas de Honduras (SINAPH), el cual prevé la participación conjunta de los sectores locales públicos y privados y de la sociedad civil.

En relación con la política en materia de tierras, cabe destacar que el modelo de desarrollo de Honduras, especialmente el contenido en los marcos de política posteriores al huracán Mitch, muestra una fuerte dependencia de la captación de fondos externos, por lo que la ayuda oficial al desarrollo constituye un eje de trabajo fundamental para el Estado. Dentro de ese contexto, muchos de los proyectos negociados han incluido la variable de tenencia de tierras como un factor prioritario. Marcos estratégicos como el

Plan Maestro de Reconstrucción y Transformación Nacional (PMRTN) y la Estrategia para la Reducción de la Pobreza (ERP) son indicativos de la importancia concedida al tema de la tenencia de tierras. El PMRTN, cuyo objetivo primordial es la protección de los recursos naturales de las cuencas hidrográficas, asocia la tenencia de la tierra con la regulación de su uso. La ERP, por su parte, contempla el acceso a la tierra y su titulación por parte de la población pobre como factores clave para la creación de oportunidades y el empoderamiento de la población. Constituyen asimismo una prioridad los sistemas de información de la propiedad (SURE y SINIT), que desempeñan una función importante al facilitar datos sobre las características físicas de los suelos y los derechos sobre la tierra constituidos y registrados.

Vulnerabilidad y desastres naturales

Perfil territorial y agroecológico de Honduras

El perfil territorial y agroecológico de Honduras es el más variado de la región centroamericana. El 61 por ciento de la superficie del país está constituido por montañas escarpadas, con pendientes de más del 40 por ciento y, tras largos años de uso incontrolado, predominan los suelos inestables con una marcada erosión: más del 60 por ciento se encuentra en situación de riesgo de deslizamiento. La costa septentrional, por su parte, está expuesta a sistemas tropicales que se traducen en inundaciones. Tan solo algo más del 15 por ciento de la superficie del país son tierras cultivables. Honduras carece además de los ricos suelos volcánicos de las regiones vecinas. Por ello muchas familias rurales de Honduras conducen una existencia marginal en las laderas degradadas del interior montañoso del país.

La dinámica hídrica de Honduras marca también dos realidades diferenciadas y altamente contrastantes: la vertiente húmeda y la seca. La primera desemboca en el mar Caribe y se caracteriza por un flujo hídrico considerable, con un promedio anual de precipitaciones de 2 500 mm. Las condiciones de humedad han propiciado la producción primaria de banano y palma africana, así como las actividades pecuarias y turísticas. Es una región vulnerable a tormentas tropicales y huracanes. La vertiente seca, ubicada en el sur, desemboca en el océano Pacífico. En ella las condiciones climáticas secas y las prácticas productivas (algodón, granos básicos, cultivo de melón y sandía, ganadería extensiva y cría de camarón) han provocado la reducción de la cobertura boscosa y una marcada erosión de los suelos, haciendo de la región un territorio propenso a la amenaza de la sequía.

El mapa de riesgos derivados de las condiciones agroecológicas pone así de relieve tres elementos principales: un pronunciado riesgo de sequía y deslizamientos en la vertiente pacífica, un riesgo más acentuado de inundaciones causadas por sistemas tropicales en la zona de la cuenca del Caribe y un corredor central montañoso densamente poblado, con marcada erosión y mayores riesgos de deslizamientos.

> « Un enfoque que fortalezca la capacidad de las comunidades para afrontar los desastres naturales exige reforzar la resiliencia: resistir y absorber las amenazas y recuperarse de su impacto preservando las estructuras y funciones básicas. Y para ello es fundamental contar con derechos de la tierra reconocidos y registrados. »

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Los factores humanos

Los actuales patrones de uso de la tierra y desarrollo agrícola son el reflejo de medio siglo de funcionamiento de un modelo económico que ha concedido prioridad a las exportaciones agrícolas frente a la producción nacional de alimentos y al desarrollo de las comunidades rurales. La reforma agraria implementada en los años sesenta no avanzó al mismo ritmo que la tasa de crecimiento de la población y a mediados de los años ochenta el número de familias sin tierra era mayor que en el período previo a la reforma. En 1992, la Ley para la Modernización y Desarrollo del Sector Agrícola puso fin a la reforma agraria, inaugurando un período de políticas neoliberales en materia de tierras.

Actualmente, el 90,7 por ciento de los productores poseen fincas de entre menos de 5 ha y 10 ha, las cuales abarcan el 28,1 por ciento de la superficie agrícola total, con una media de 2,4 ha por productor. Los medianos productores, con fincas de entre 10 y 50 ha y un promedio de 37,4 ha por productor, son el 8,1 por ciento y poseen el 38,7 por ciento del total de las tierras agrícolas. Los grandes productores, con fincas de más de 50 ha, son solo el 1,2 por ciento pero concentran en sus manos el 33,2 por ciento del total de la superficie de uso agrícola, con una media de casi 209 ha por unidad productiva (Gráfico 1).

> « La vulnerabilidad ante los desastres naturales está estrechamente enraizada con condiciones sociales, económicas y ambientales preexistentes. No puede abordarse la gestión del riesgo sin tener en cuenta estos factores y, más en concreto, las cuestiones relacionadas con la distribución, uso y tenencia de la tierra. »

Se ha producido también (Gráfico 2) en las últimas décadas un fuerte incremento del número de unidades productivas de menos de 5 ha junto con un descenso del tamaño promedio de la unidad. Por el contrario, se ha registrado una disminución de las explotaciones

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de más de 50 ha con un aumento del promedio de tierra por unidad, lo que indica un acceso a la tierra muy limitado.

Los desastres naturales impactan así en un contexto de propiedad de la tierra concentrada en pocas manos y afectan de manera particularmente grave a una mayoría de pequeños agricultores que luchan por sobrevivir en laderas y tierras marginales. Siete de cada diez habitantes del medio rural son pobres.

El uso de la tierra

El 25,8 por ciento de la tierra bajo las diferentes formas de tenencia se destina a usos agrícolas. De este porcentaje, el 13,9 por ciento se destina a cultivos anuales y el 11,9 por ciento a cultivos permanentes. Las mejores tierras cultivables están destinadas a pastos naturales y la mayor parte se destinan a la ganadería extensiva.

Debido al acceso limitado a las unidades productivas y a los cambios en los usos agrícolas, muchos pequeños productores se han visto forzados a abandonar sus tierras y las tradicionales prácticas de barbecho. Por ello, muchas tierras agrícolas presentan un alto índice de degradación ecológica.

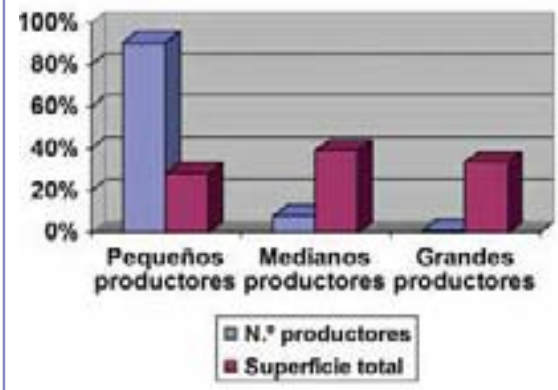
La tenencia de la tierra

Una de las variables más importantes para garantizar el desarrollo de las actividades productivas es el acceso a los activos y la seguridad de su posesión, en especial por lo que se refiere a los vinculados a la producción. En el caso de Honduras, dado el alto porcentaje de población rural, las cuestiones de tenencia de la tierra revisten una particular importancia. Las formas de tenencia de la tierra en las zonas afectadas por desastres son diversas, pero en general, la población que vive en tierras de alto riesgo no posee el dominio pleno de las tierras que ocupa.

La inseguridad de la tenencia

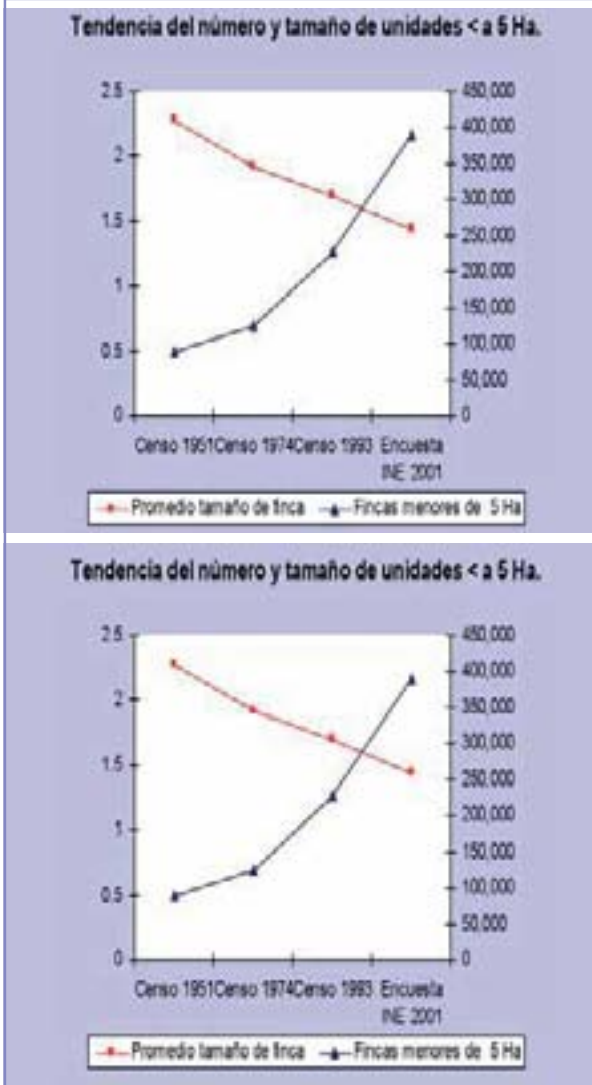
A pesar de que se están ejecutando programas finalizados a la titulación de tierras, como el Programa de Regularización Predial, la falta de seguridad en la tenencia sigue siendo uno de los problemas más complejos del país.

GRÁFICO 1
Distribución de la tierra agrícola



Fuente: FAO, Tenencia y desastres: retos y perspectivas. El caso de Honduras. Documento elaborado por la Carrera de Desarrollo Socioeconómico y Ambiente de Zamorano, 2008.

GRÁFICO 2
Cambios en el tamaño y número de explotaciones en fincas < 5 y >50 Ha. (1951-2001)



Fuente: FAO, 2008.

De la totalidad de la superficie nacional, solamente el 62,5 por ciento cuenta con dominio pleno, es decir los propietarios poseen la propiedad del bien con todos los derechos inherentes. Se estima que en el agro hondureño el 86 por ciento de las familias que tienen tierras en dominio pleno no las tienen registradas, lo que significa que el 70 por ciento de las propiedades del país no están inscritas en el Registro de la Propiedad. La falta de títulos definitivos de propiedad ha cerrado las vías de acceso al crédito, ha dado origen a conflictos agrarios, ha debilitado la propiedad privada en el sector rural y ha desestimado la inversión en el agro.

> « La causa principal de la deforestación es la expansión de la frontera agrícola, originada a su vez por la presión que ejercen el crecimiento demográfico, los cambios en los usos de la tierra, los programas de asentamiento y colonización, la distribución no equitativa de la tierra y los débiles sistemas de tenencia. »

Marco jurídico y tenencia de la tierra

En Honduras existe un marco jurídico dual para la legalización de las tierras según estén situadas en los predios rurales o urbanos. El marco legal existente determina además que las propiedades del Estado y las tierras nacionales y/o ejidales reciban un tratamiento diferenciado respecto a las tierras de propiedad privada y a las de propiedad de comunidades indígenas y afrohondureñas.

Esta dualidad en la legalización de tierras rurales y urbanas, la multiplicidad de leyes de referencia y la recurrencia de desastres naturales que afectan a la tierra han sido algunas de las causas de que las políticas posteriores al huracán Mitch, como el Plan Maestro de Reconstrucción y Transformación Nacional y la Estrategia para la Reducción de la Pobreza, contemplen sólo puntualmente las cuestiones de tenencia.
La complejidad de los procedimientos de formalización de los títulos de propiedad de la tierra y la ausencia

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de un marco legal unitario sobre la materia dificulta el registro de la propiedad y determina que las cuestiones de tenencia no queden contempladas de manera integral por las planes de políticas.

Derechos sobre la tierra y desastres naturales

Como consecuencia de los desastres naturales, las tierras pueden quedar afectadas por deslizamientos y derrumbes, escurrimiento y erosión acelerada, sedimentación de cauces y embalses e inundaciones de ríos. En el Código Civil de Honduras se establece el procedimiento de adquisición de tierras mediante accesión del suelo como consecuencia de fenómenos naturales y los trámites judiciales para legalizar las tierras así adquiridas. Si bien las instituciones que han participado en las actividades de reconstrucción no han señalado situaciones en que se hayan visto afectados los derechos de propiedad, posesión y tenencia por causa de alteraciones provocadas por desastres, sí han reconocido el vacío legal existente, que deja a la iniciativa particular el recurso a las instancias judiciales para solucionar eventuales controversias.

Sistemas de información catastral

Los sistemas de información han avanzado, pero se enfrentan todavía a retos importantes. La cobertura catastral, realizada en la década de los años ochenta, abarca solo ocho de los 18 departamentos del país (Santa Bárbara, Copán, La Paz, Cortés, El Paraíso, Comayagua, Yoro y Atlántida). En la actualidad, en el marco del Programa Administrativo de Tierras de Honduras, financiado con fondos del Banco Mundial, se está poniendo al día la información y ampliando la cobertura a otros municipios. El sistema de información sobre la propiedad (SURE y SINIT) es también una prioridad.

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Tenencia de la tierra y crédito

Tras el huracán Mitch se abordaron las consecuencias del desastre en los préstamos con garantía hipotecaria y el Gobierno de Honduras emitió varias leyes para aliviar la deuda y amortiguar los créditos, así como disposiciones para la readecuación de deudas. Sin embargo, debido a la falta de titulación, al mayor riesgo asociado al sector agrícola frente a otras actividades productivas y a la falta de rentabilidad por la bajada de los precios agrícolas, la banca comercial no apoyó activamente la financiación de las actividades del sector. En la actualidad los bancos aplican un trato diferenciado a las garantías hipotecarias sobre predios urbanos y rurales, ya que consideran que los inmuebles urbanos son una mayor garantía.

Lecciones aprendidas

En 1998 el huracán Mitch marcó un punto de inflexión en la atención posterior a los desastres y la tenencia de la tierra. Este fenómeno, por un lado, puso al descubierto que todas las zonas de Honduras, tanto las rurales como las urbanas, estaban expuestas a los efectos de la amenaza hidrometeorológica y que la capacidad de respuesta del país estaba sujeta a la asistencia y apoyo externos. Por otro lado, si bien la atención directa a los problemas de tenencia de la tierra quedó limitada prácticamente a la readecuación del crédito y la reubicación de los asentamientos, algunas acciones e intervenciones influyeron también en las cuestiones de acceso y tenencia de la tierra.

> « Los programas de reconstrucción podrían beneficiarse de políticas que reconocieran diferentes niveles de seguridad y distintos modelos culturales de tenencia de la tierra, tales como los sistemas de tenencia o propiedad comunitaria privada, que pueden suponer una alternativa a la propiedad individual. »

Sistemas de tenencia

En Honduras se reconoce la necesidad de un ordenamiento territorial adecuado para lograr un desarrollo sostenible, mitigar los desastres y reducir el riesgo, al desmotivar los asentamientos en zonas propensas a las amenazas.

Sin embargo, los esfuerzos de planificación no suelen pasar de meros ejercicios técnicos debido a las limitaciones de los sistemas de tenencia de la tierra y a la influencia política de los grandes propietarios de tierras.

La población pobre con un mayor grado de vulnerabilidad ante los desastres naturales suele carecer de títulos formales sobre la tierra y los esfuerzos finalizados a la titulación de tierras en situaciones post-desastre no han obtenido los resultados esperados.

Reasentamiento de desplazados de áreas urbanas

En las ciudades principales, como Tegucigalpa, la gran mayoría de personas que perdieron su hogar a causa del huracán Mitch eran pobres que vivían en asentamientos precarios de áreas urbanas marginales, localizados principalmente en laderas escarpadas y en zonas sujetas a inundaciones.

Tras el huracán, una serie de agencias humanitarias internacionales pusieron en marcha distintos proyectos de reasentamiento. A causa de la falta de propiedades y terrenos asequibles en el área urbana, buena parte de los proyectos tuvieron que ubicarse a considerable distancia del centro de la ciudad.

> « Generar y difundir entre la población información suficiente y oportuna acerca de los riesgos que corren al regresar a las zonas afectadas y de sus derechos de tenencia sobre la tierra que han dejado o que están ocupando es un factor fundamental para una eficaz gestión del riesgo. »

Generar y difundir información

En las labores de reconstrucción de la era post-Mitch en Honduras, la cartografía integrada sobre vulnerabilidad y riesgo y los datos proporcionados por los sistemas de información geográfica pueden calificarse de impresionantes. Sin embargo , se estima que alrededor de un 30 por ciento de las personas que vivían en zonas de alto riesgo antes del huracán Mitch han vuelto a dichas zonas. Disponer de información geográfica adecuada no conduce, por tanto, forzosamente por sí solo a una mejor toma de decisiones ni a su cumplimiento.

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EL PROYECTO CIUDAD ESPAÑA

El proyecto Ciudad España, un nuevo modelo de ciudad satélite, fue puesto en marcha por la Cruz Roja Internacional en cooperación con los gobiernos de Honduras, España, Estados Unidos de América, y la Cruz Roja Suiza para alojar a los desplazados por el huracán Mitch. Las viviendas se construyeron en las tierras proporcionadas por el Gobierno hondureño en una zona rural de colinas, a 32 km de Tegucigalpa. A pesar de que las casas están bien diseñadas y construidas y poseen todos los servicios necesarios como centro de salud, biblioteca y escuela, aproximadamente el 5 por ciento de los beneficiarios abandonó el proyecto y regresó a Tegucigalpa: muchos de los habitantes trabajan en la ciudad y la distancia entre los hogares y la fuente de ingresos representa un problema insalvable.

Fuente: Barnes y Riverstone. 2008. Exploring vulnerability and resilience in land tenure systems after hurricanes Mitch and Ivan, Universidad de Florida.

> Construir una comunidad no es sólo construir edificios y servicios. La viabilidad de los proyectos de reasentamiento debe necesariamente tomar en consideración la importancia sociocultural y económica de la tierra y exige, por tanto, la seguridad de su tenencia.

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RECONSTRUCCIÓN Y MODELO DE DESARROLLO

En el valle de Aguán, en el norte de Honduras, uno de los principales factores determinantes de la pobreza y la vulnerabilidad social es la desigual distribución de la tierra. Tras la disgregación de la mayor parte de las cooperativas agrícolas de la región, a principios de la década de 1990, tuvo lugar un proceso de creación de latifundios que dejó a muchas familias sin tierra.

En el año 2000, respaldadas por el movimiento de los CODEL que se había implantado en la región tras el huracán Mitch, 700 familias se unieron en el Movimiento Campesino de Aguán para abordar el problema del acceso de la tierra en la región. Aunque en la actualidad la cuestión sigue abierta, muchas de las familias del movimiento han recibido títulos sobre las tierras.

Fuente: Barnes y Riverstone. 2008. Exploring vulnerability and resilience in land tenure systems after hurricanes Mitch and Ivan, Universidad de Florida.

Desastres naturales y organizaciones de base: un nuevo modelo de desarrollo

Tras el huracán Mitch y, dados los conocidos casos de corrupción en la región de América Central relacionados con la gestión de los fondos de ayuda humanitaria, los donantes internacionales decidieron canalizar la ayuda a través de organizaciones no gubernamentales y religiosas. Algunos donantes decidieron además que para recibir los fondos de ayuda las comunidades debían organizarse en comités de desarrollo (CODEL) a fin de dar respuesta a sus necesidades mediante la participación popular. Los CODEL fueron asumiendo gradualmente funciones cada vez más importantes —desde recibir y organizar la distribución de la ayuda alimentaria o reparar y reconstruir los hogares hasta administrar los proyectos de agua potable y revisar la contabilidad de los entes gubernamentales municipales y locales— y siguieron creciendo en años sucesivos organizándose en redes más amplias.

El modelo de desarrollo y las prácticas agrícolas sostenibles

En Honduras, después de casi dos décadas de políticas neoliberales en materia de tierras, no se han registrado mejoras en los indicadores de concentración de las tierras y el número de campesinos sin tierra y de campesinos pobres en tierra ha aumentado. Entre los efectos del modelo de desarrollo actual cabe destacar el descenso de la seguridad alimentaria, una mayor dependencia de los alimentos importados, una creciente migración urbana y la degradación de las tierras agrícolas, factores todos ellos que contribuyen a aumentar la vulnerabilidad de los hogares rurales y los ecosistemas ante los desastres naturales.

> Los programas de respuesta y de reconstrucción en situaciones de desastre pueden constituir una oportunidad para lograr el empoderamiento de las comunidades y la buena gobernanza.

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Recientes estudios han demostrado que durante el huracán Mitch las tierras cultivadas con métodos agroecológicos en lugar de métodos tradicionales mostraron una mayor resiliencia ante las riadas y los corrimientos de tierras. Fomentar la adopción de métodos de cultivo ecológicos exige fomentar la seguridad en la tenencia de la tierra ya que estas prácticas suelen demandar el uso de una gran cantidad de mano de obra y la plantación de árboles y otros cultivos permanentes.

Orientaciones estratégicas

- Dotar a los entes locales de mecanismos de acceso a la tierra en caso de desastres naturales a fin de resolver las situaciones donde el reasentamiento de la población sea la única alternativa.
- Elaborar una estrategia que contemple de forma integral el tema de la tenencia de tierra asociándolo con la variable riesgo.
- Someter a revisión el marco legal y de políticas a fin de incorporar en ellos el tema de los desastres naturales en relación con la tenencia de la tierra.
- Mejorar la normativa aplicable a las formas de propiedad, posesión y tenencia de la tierra.
- Incorporar en la propuesta de ley de SINAGER y en los planes municipales de gestión del riesgo las cuestiones relacionadas con el impacto de los desastres naturales en la tenencia de la tierra.
- Reducir la vulnerabilidad de la población rural ante los desastres naturales facilitando el acceso y la seguridad de la tenencia de la tierra y promoviendo la resilencia de los sistemas y las comunidades.

DESASTRES NATURALES Y TENENCIA DE LA TIERRA
DIRECTORIO INSTITUCIONAL
GOBIERNO DE HONDURAS

DESASTRES NATURALES
Comisión Permanente de Contingencias (COPECO)
Instituto Nacional de Conservación y Desarrollo Forestal, Áreas Protegidas y Vida Silvestre

TENENCIA DE LA TIERRA
Instituto Nacional Agrario (División de Titulación de Tierras, Departamento del Catastro, Registro Agrario)
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EN TIERRA SEGURA

DESASTRES NATURALES Y TENENCIA DE LA TIERRA

Ecuador

EL ECUADOR: UN PAÍS CON ELEVADA VULNERABILIDAD

Contexto ambiental

DESASTRES NATURALES Y VULNERABILIDAD

El Ecuador se encuentra situado en una de las zonas de más alta complejidad tectónica del mundo, en el punto de encuentro de las placas de Nazca y Sudamérica. Es parte del denominado "cinturón de fuego del Pacífico", con una larga serie de volcanes en su mayoría activos que provoca una permanente actividad sísmica y volcánica y determinan una elevada vulnerabilidad.

El Ecuador está asimismo ubicado dentro del cinturón de bajas presiones que rodea el globo terrestre, en la zona de convergencia intertropical, un área sujeta a amenazas hidrometeorológicas como inundaciones, sequías, heladas o efectos del fenómeno El Niño.

Early Recovery

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RECUADRO 1. PRINCIPALES DESASTRES NATURALES EN EL ECUADOR (1982-2008)

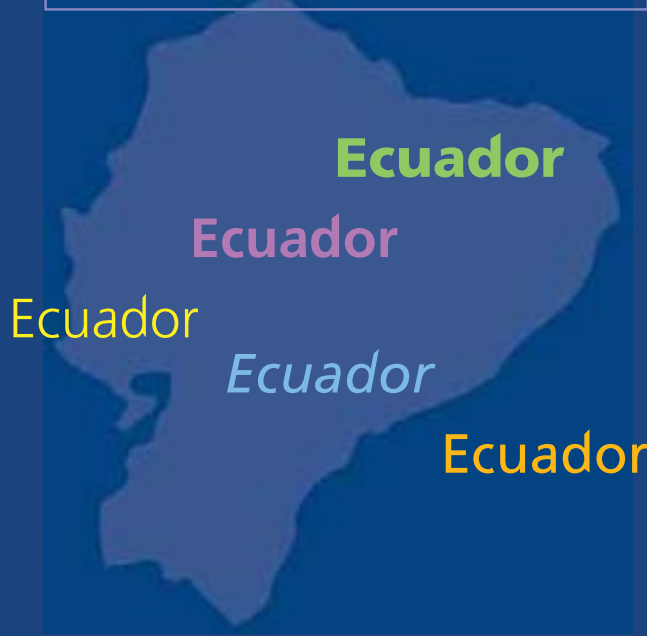
Desastre	Año	Principales efectos sociales y económicos
Fenómeno El Niño	1982	307 fallecidos, 700 000 afectados, carreteras destruidas.
Terremoto en la región Amazónica	1987	3 500 fallecidos, 150 000 afectados, rotura de oleoductos y daños estimados en 890 millones de USD.
Deslizamiento La Josefina	1993	100 fallecidos, 5 631 afectados, 741 viviendas destruidas, graves daños en cultivos, infraestructuras públicas y red vial, pérdidas económicas directas estimadas en 148 millones de USD.
Fenómeno El Niño	1997-98	293 fallecidos, 13 374 familias afectadas, daños estimados en 2 882 millones de USD (equivalente al 15% del PIB de 1997).
Erupción del volcán Guagua Pichincha	1999	2 000 personas desplazadas, daños en la salud y cierre del aeropuerto de Quito.
Erupciones del volcán Tungurahua	desde 1999	En 1999: 20 000 evacuados, pérdidas estimadas en 17 millones de USD en el sector agrícola y en 12 millones en el turístico. Desde 2001, 50 000 personas evacuadas y daños en la salud de los afectados por las emisiones de ceniza, graves pérdidas económicas.
Inundaciones en gran parte del país	2008	62 fallecidos, 9 desaparecidos, 90 310 familias afectadas, carreteras destruidas, 150 000 ha de cultivos perdidos, daños incalculables.

Fuente: Jordán & Asociados, Estudio: desastres naturales y tenencia de la tierra de los pobres, 2008.

RECUADRO 2. DESASTRES HISTÓRICOS EN EL ECUADOR

Desastre	Fecha	Total personas afectadas
Sequía	Marzo 1964	600 000
Inundación	08/04/1970	140 500
Inundación	Noviembre 1982	700 000
Inundación	04/08/1983	200 000
Terremoto	05/03/1987	150 000
Inundación	24/03/1992	205 000
Volcán	03/11/2002	128 150
Volcán	14/08/2006	300 013
Inundación	30/01/2008	289 122

Fuente: EM-DAT: The OFDA/CRED International Disaster Database, www.emdat.be – Universidad Católica de Lovaina, Bruselas, Bélgica, septiembre de 2008.



El país, además, por sus condiciones geomorfológicas y el efecto de la actividad humana es propenso a procesos como deslizamientos, avalanchas de lodo y erosión cuando se producen episodios climáticos de intensas lluvias.

En las últimas décadas, el Ecuador ha sido escenario de fenómenos naturales de considerable magnitud que han afectado de manera particularmente grave a la población más vulnerable: la población pobre de las áreas rurales (Recuadro 1). En el Ecuador, un 36,3 por ciento de la población se sitúa bajo el umbral de pobreza, porcentaje que asciende a un 61,5 en el área rural.

La tendencia de los desastres naturales en el Ecuador muestra un aumento gradual del número de fenómenos y de la gravedad de su impacto, en particular de las inundaciones, sequías y temperaturas extremas: de los 29 desastres naturales de gran escala que han afectado al país en los últimos veinte años, el 59 por ciento tenía origen climático.

Si bien el número de víctimas mortales causadas por los desastres naturales ha experimentado una disminución progresiva, existe un incremento significativo del número de damnificados, así como de la gravedad de las pérdidas socioeconómicas y ambientales. Los desastres históricos que han afectado a un mayor número de personas en el Ecuador aparecen representados en el Recuadro 2.

Los desastres naturales, sin embargo, no son el simple resultado de las amenazas geofísicas o hidrometeorológicas o de un perfil territorial vulnerable: su probabilidad

de aparición y su impacto se ven incrementados en gran medida por factores fruto de actividades humanas, capaces de generar también a su vez nuevas amenazas. Así, en el Ecuador la topografía irregular, sumada a una deforestación significativa causada por la conjunción de los fenómenos naturales y la acción del hombre, provoca una alta vulnerabilidad en las poblaciones que se asientan en esas zonas. El problema no se da sólo en las áreas rurales sino también en las ciudades, ya que los asentamientos urbanos marginales suelen ubicarse en zonas de alto riesgo por la deforestación. Sin acceso a la tierra ni la seguridad de la tenencia, la población vulnerable no tendrá posibilidad de mejorar sus medios de vida.

> « La vulnerabilidad ante los desastres naturales está estrechamente enraizada con condiciones sociales, económicas, ambientales y de seguridad de tenencia de la tierra preexistentes. El riesgo no puede evaluarse ni puede abordarse su gestión sin tener en cuenta estos factores y, más en concreto, sin realizar un pormenorizado análisis de las cuestiones relacionadas con la tierra (distribución, uso y seguridad de la tenencia). »

Tierra y vulnerabilidad

En el Ecuador, el proceso de reforma agraria que se inició en 1964 no ha desembocado en una distribución de la tierra más equitativa: las mejores tierras siguen aún concentradas en pocas manos. La Ley de Desarrollo Agrario de 1994 tenía como propósito impulsar los procesos de modernización sectorial y consolidar una nueva estructura de concentración de la tierra apoyada por el sector empresarial. Cobraron así especial relieve las variables económicas productivas y se dejaron de lado las sociales, culturales y ecológicas, a la vez que se privilegió el mercado de tierras como estrategia para mejorar la eficiencia y los niveles de producción y productividad en el campo, limitando el acceso de los pequeños campesinos a la tierra. En consecuencia, los pequeños productores se vieron forzados a ocupar las tierras de altura y los suelos de menor calidad y alta erosión, con la consecuente degradación de los

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> « La distribución no equitativa de la tierra y la falta de seguridad en la tenencia hace que los campesinos sin tierra se concentren en zonas marginales de alto riesgo, lo que aumenta su vulnerabilidad y genera al mismo tiempo nuevas amenazas naturales. »

páramos, bosques de neblina y las fuentes de agua. No obstante, la nueva Constitución de 2008, ha dado un importante paso adelante al establecer en el artículo 282 que "el Estado normará el uso y acceso a la tierra, que deberá cumplir la función social y ambiental. Un fondo nacional de tierra, establecido por ley, regulará el acceso equitativo de campesinos y campesinas a la tierra. Se prohíbe el latifundio y la concentración de la tierra, así como el acaparamiento o privatización del agua y sus fuentes".

Tenencia de la tierra y gestión de riesgos

La Ley de Desarrollo Agrario de 1994 establece, como una de las políticas para el fomento, desarrollo y protección integrales del sector, la garantía de la seguridad en la tenencia individual y colectiva de la tierra. No obstante, en el Ecuador sólo un 68,4 por ciento de las tierras agrícolas tiene título de propiedad, mientras que un 6,7 por ciento son explotadas sin poseer ningún título de propiedad o contrato de arrendamiento y sin pagar renta alguna.

Durante el evento de El Niño de los años 1997-98, la prioridad del Gobierno se centró en la reconstrucción de las obras de infraestructura física, principalmente vías, puentes, centros escolares y de salud, así como en la instalación de albergues para el reasentamiento temporal de los desplazados, entrega de raciones alimenticias y vituallas, y envío de brigadas de salud. Lo mismo sucedió tras el desastre de "La Josefina" o las distintas erupciones del volcán Tungurahua: las intervenciones públicas han concedido en todos los casos prioridad a la organización post-desastre y la atención de la emergencia y no han contemplado las cuestiones relacionadas con la tenencia de la tierra.

Es innegable, sin embargo, que la tenencia de la tierra y los derechos de propiedad sobre ella resultan indispensables no sólo para el desarrollo económico y social sostenible y la mitigación de la pobreza, sino también para la gestión del riesgo y la reducción del impacto de los desastres naturales. El alto nivel de inseguridad en la tenencia hace que, con frecuencia,

la población vulnerable asentada en zonas de riesgo se resista a abandonar su lugar de residencia a pesar del peligro para no perder sus derechos sobre la tierra. Asimismo, la falta de títulos de propiedad impide que, en muchos casos, la población afectada pueda acceder al crédito usando la tierra como garantía. Por su parte, los gobiernos deben disponer de información fiable sobre la propiedad de la tierra a fin de planificar las medidas de respuesta en casos de emergencia y reducir la vulnerabilidad de la población ante los desastres.

Marco político e institucional

Hasta el año 2008, la responsabilidad de prevenir, evitar, reducir y reparar los efectos de las catástrofes, tanto de origen natural como humano, estaba a cargo de la Dirección Nacional de Defensa Civil, que a través del Sistema de Defensa Civil, formado por organismos del sector público y privado, ejercía una acción permanente de protección a la población y sus bienes, si bien ante fenómenos naturales de gran magnitud, como el represamiento de la Josefina o el fenómeno de El Niño, la falta de un sistema nacional integral de gestión del riesgo obligó a delegar la atención de emergencias a una serie de organismos creados para tal fin (CORPECUADOR, COPEFEN y CPOE). Las intervenciones se orientaron de manera prioritaria a la atención y mitigación posterior a los desastres, así como a las tareas de rehabilitación y reconstrucción.

Desde mayo de 2008, sin embargo, frente a los desastres naturales, la institución responsable es la Secretaría Técnica de Gestión de Riesgos, adscrita al Ministerio de Coordinación de Seguridad Interna y Externa, la cual ha asumido las competencias, atribuciones y funciones de la Dirección Nacional de Defensa Civil en materia de gestión de riesgos con un enfoque integral que contempla, entre otros aspectos pertinentes, las cuestiones de acceso a la tierra y de la seguridad de su tenencia. En la actualidad, la Secretaría Técnica de Riesgos está en pleno proceso de fortalecimiento institucional.

Un paso fundamental en materia de gestión de riesgos ha sido su incorporación en el marco de la nueva Constitución de la República del Ecuador, aprobada mediante referéndum por el pueblo ecuatoriano en el año 2008. En el Título VIII, Capítulo primero, Sección novena ("Gestión del riesgo") se establece que:

> "El Estado protegerá a las personas, las colectividades y la naturaleza frente a los efectos negativos de los desastres de origen natural o antrópico mediante la prevención ante el riesgo, la mitigación de desastres, la recuperación y mejoramiento de las condiciones sociales, económicas y ambientales, con el objetivo de minimizar la condición de vulnerabilidad [...]" (Art. 389)
>
> "Los riesgos se gestionarán bajo el principio de descentralización subsidiaria, que implicará la responsabilidad directa de las instituciones dentro de su ámbito geográfico" (Art. 390).

Asimismo, la nueva Constitución contempla de manera explícita uno de los grandes retos pendientes del Ecuador:

> "Establecer un sistema nacional de prevención, gestión de riesgos y desastres naturales, basado en los principios de inmediatez, eficiencia, precaución, responsabilidad y solidaridad" (Art. 397).

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La propuesta de un modelo descentralizado es de particular importancia, ya que en el Ecuador las instituciones públicas responsables han mostrado un profundo desconocimiento de la realidad local. Es preciso, por tanto, que los entes locales asuman la responsabilidad de la estrategia de gestión de riesgos en función de las condiciones específicas de cada zona, en especial por lo que se refiere a las cuestiones de acceso y tenencia de la tierra en las que cuentan con una experiencia relevante.

A nivel internacional, es importante mencionar que el Ecuador participa en el Comité Andino de Prevención y Atención de Desastres (CAPRADE), del cual ha asumido la presidencia pro tempore en septiembre de 2008.

Frente a los avances en el marco político e institucional en gestión del riesgo, el Ecuador no ha experimentado un progreso paralelo en el contexto de la política de tierras. La responsabilidad de la materia recae en un complejo y fragmentado marco institucional en el que participan el Ministerio de Agricultura, Ganadería, Acuacultura y Pesca (MAGAP) a través del Instituto Nacional de Desarrollo Agrario (INDA), el Ministerio del Ambiente (MAE) y el Ministerio de Desarrollo Urbano y Vivienda (MIDUVI). Esta fragmentación impide que un organismo asuma el liderazgo en la formulación y aplicación de una política de tierras que apoye procesos de desarrollo sostenibles.

En el ámbito local, sin embargo, los gobiernos locales, consejos provinciales, municipios, juntas parroquiales y organizaciones no gubernamentales están desempeñando una importante función en el manejo y administración de la tierra (acceso, legalización de la tenencia) en favor de la población afectada por los desastres, y existen experiencias interesantes a nivel local, si bien focalizadas y de pequeña escala, que pueden servir de enseñanza y referencia para el diseño de mecanismos y políticas destinadas a la gestión del acceso y la tenencia de la tierra en relación con los desastres naturales.

A pesar de los recientes avances, una de las prioridades del Ecuador, tal y como menciona la misma Constitución, sigue siendo la creación e implementación de un sistema nacional descentralizado de gestión integral del riesgo. Para ello se hace necesario fortalecer las capacidades de la institucionalidad existente, aplicando las lecciones aprendidas y vinculando así la gestión del riesgo con la tenencia de la tierra.

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Lecciones aprendidas

El carácter reactivo ante los desastres

En el Ecuador la respuesta del Estado ante los desastres producidos por fenómenos naturales adversos en las últimas décadas ha sido de carácter reactivo, focalizando la atención en las intervenciones post-desastre en situaciones de emergencia y, en particular, en las labores de rehabilitación y reconstrucción de viviendas e infraestructura física.

Dentro de este esquema, las acciones orientadas a garantizar el acceso y la legalización de la tenencia de la tierra después de los desastres naturales no han tenido carácter prioritario. Las pocas iniciativas en este sentido han sido obra de organizaciones no gubernamentales y de la Iglesia católica, con el apoyo puntual de la cooperación internacional, la sociedad civil y el sector público.

Actualmente, sin embargo, el nuevo marco político e institucional concede prioridad a un enfoque integral descentralizado del riesgo, con responsabilidad directa de las instituciones locales. En este contexto, las cuestiones relacionadas con el acceso a la tierra y la seguridad de su tenencia cobran particular relevancia para reducir la vulnerabilidad de la población, en especial de la población pobre, ante los desastres naturales.

Viabilidad de los procesos de reasentamiento

La distancia de la fuente de ingresos

La evacuación y traslado voluntario de la población residente en zonas de riesgo es ya por sí misma una acción difícil, pero resulta aún mucho más complicada por la resistencia de los habitantes de estas zonas a abandonar sus tierras y sus animales, que en muchos casos constituyen su único patrimonio y sustento familiar. En la primera erupción del volcán Tungurahua, tras la declaración del estado de máxima alerta, se decidió evacuar a los habitantes de las zonas de alto riesgo. En muchos casos las familias fueron obligadas a la fuerza a abandonar sus parcelas llevando consigo tan sólo las escasas pertenencias y los pocos animales que podían ser trasladados en los vehículos y camiones del ejército. Al no poder trasladar a los animales de granja, los campesinos optaron por abandonarlos o venderlos a precios muy inferiores los precios de mercado.

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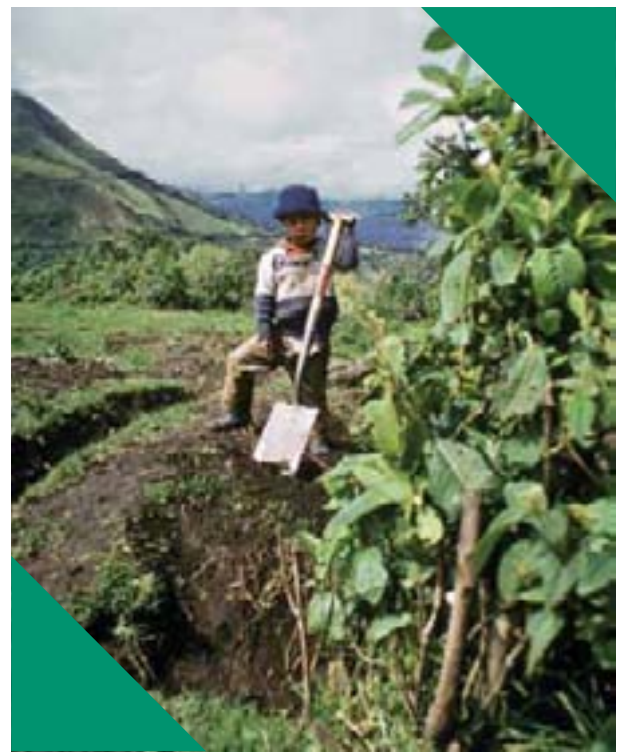
Las acciones post-desastre suelen prestar atención prioritaria al problema de la reconstrucción y la atención de emergencia, dejando en un segundo plano el acceso a la tierra, que en la mayoría de casos constituye la única fuente de ingresos de las familias afectadas. En consecuencia, las familias desplazadas, al no disponer de medios de producción para la actividad agrícola ni otra alternativa de empleo, regresan a las zonas de riesgo a pesar del peligro para tratar de cultivar la tierra, atender a los animales y proteger el patrimonio familiar cuando no ha sido destruido, mientras que, cuando lo han perdido todo, emigran a las ciudades o fuera de la zona de riesgo en busca de alternativas de subsistencia para la familia.

El respeto del hábitat natural

La tierra no es sólo un bien económico. El traslado a albergues temporales o a reasentamientos definitivos afecta profundamente el estado anímico y emocional de los miembros de las familias evacuadas y, en particular, de los más vulnerables: los ancianos, los niños y las mujeres. La situación se hace aún más crítica cuando los damnificados son trasladados a sitios con características geográficas y culturales totalmente diferentes a las de sus lugares de origen. Tras los desastres naturales, la vida comunitaria se debilita significativamente, ya que en ocasiones los miembros de la comunidad son evacuados a lugares diferentes. La planificación de las acciones antes, durante y después de los desastres no considera como un factor relevante las características socioculturales de la población afectada, lo que repercute en problemas de adaptación y participación en la nueva vida comunitaria. Para los campesinos la tierra no sólo constituye el medio de producción esencial, sino que además es la base y el sentido de la vida social, por cuanto allí se integra la familia y la comunidad y se construyen simbólicamente las identidades, a través del trabajo directo en la parcela y la asimilación

> « Construir una comunidad no es sólo construir edificios y servicios. La viabilidad de los proyectos de reasentamiento debe necesariamente tomar en consideración la importancia sociocultural y económica de la tierra y exige, por tanto, la seguridad de su tenencia. »

> « Durante la erupción del volcán Tungurahua, las poblaciones de Bilbao y Sucua, situadas en las faldas mismas del volcán, fueron evacuadas y trasladadas a 100 km de distancia, a una zona con un ecosistema, un sistema de producción y unas características culturales muy diferentes. Sin duda este hecho fue una de las causas del alto número de familias que regresaron a sus lugares de origen o emigraron a otras ciudades o países. »



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cultural del territorio. Es por tanto imprescindible garantizar los derechos de propiedad sobre la tierra de la población afectada, así como promover su participación en la nueva vida comunitaria.

La falta de voluntad política

Durante el manejo de las crisis, se ha puesto de relieve una falta de decisión política de las autoridades locales para aplicar los mecanismos de expropiación de tierras, lo cual ha obligado a retrasar la ejecución de los programas de reasentamiento de las familias afectadas por los desastres naturales.

Así, por ejemplo, los compromisos e intereses de ciertos alcaldes de la zona de riesgo del volcán Tungurahua han sido un factor limitante para lograr acceder a tierras que permitan la adecuada reinserción económica de la población afectada. Asimismo, en el proceso de compra de tierras para los reasentamientos de los afectados por la erupción del volcán, resultó evidente la falta de voluntad de las autoridades locales para aplicar la ley que faculta a los municipios para declarar de utilidad pública las tierras necesarias para la construcción de obras destinadas a la comunidad o la negativa de exoneración de impuestos de alcabalas (el impuesto de alcabala es el tributo que se cancela por las transferencias de inmuebles urbanos o rústicos a título oneroso o gratuito, cualquiera que sea su forma o modalidad. La transferencia puede darse mediante una venta – título oneroso – o en forma de donación – título gratuito –).

La especulación sobre la tierra

Uno de los efectos colaterales de los desastres naturales es el aumento indiscriminado del costo de las tierras en lugares cercanos a las zonas afectadas. Ello es consecuencia no sólo de la escasa disponibilidad de tierras, sino también del afán de ciertos dueños de tierras agrícolas de aprovechar la coyuntura a su favor, con la connivencia en ciertos casos de las autoridades locales.

La necesidad y urgencia de adquirir tierras para el establecimiento de los reasentamientos definitivos de los damnificados genera una demanda inusual de grandes extensiones de terreno, lo que causa una alteración del mercado y de los precios de las tierras. Ello es asimismo consecuencia de la carencia de planificación e identificación de terrenos adecuados para los reasentamientos, así como de la falta de

> A pesar del peligro, durante los procesos eruptivos del volcán Tungurahua los campesinos evacuados regresan a sus parcelas, al menos de forma temporal, como un mecanismo para garantizar, a través de la ocupación física, la tenencia de sus tierras. Este hecho, sumado al sentido histórico de la propiedad y al apego a la tierra dificulta aún más su reasentamiento definitivo y su aceptación del desarraigo y dificulta la gestión del riesgo.

voluntad para aplicar la legislación y los mecanismos que facultan al Estado para expropiar tierras con fines sociales, como es el caso de riesgo eminente ante un fenómeno natural. Se hace necesario asimismo establecer mecanismos que aseguren que la tierra no sea confiscada ni se otorgue a través de actos fraudulentos y que eviten la especulación sobre la tierra tras los desastres naturales.

La seguridad de la propiedad de las tierras

El reasentamiento de la población afectada requiere claridad por parte de las autoridades sobre la garantía de la propiedad de la tierra en las zonas de desastre y en los nuevos reasentamientos. Sin embargo, en términos generales, las instituciones públicas envían al respecto mensajes contradictorios y poco claros a la población en lugar de generar y difundir información suficiente y oportuna al respecto.

La falta de títulos de propiedad constituye además un obstáculo para que la población afectada por los desastres naturales pueda acceder a las iniciativas públicas y privadas relacionadas con el crédito para la recuperación productiva o la adquisición de nuevas tierras o viviendas, así como para poder vender o ceder al Estado la propiedad sobre la tierra afectada por el desastre.

> La seguridad de los derechos de tenencia sobre la tierra es un factor fundamental para una eficaz gestión del riesgo.

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Por otro lado, recopilar y analizar la información sobre tenencia de la tierra resulta sumamente complicado cuando falta la seguridad en la tenencia de la tierra. El acceso a información fiable sobre la propiedad de la tierra es fundamental en la planificación institucional y en las tareas de reconstrucción tras los desastres naturales.

La cooperación de los sectores público y privado

La colaboración entre el sector público y el privado de manera coordinada y concertada en busca de un objetivo común es la relación más eficaz para el manejo de desastres y cuestiones de tenencia de la tierra.

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El convenio entre el Ministerio de Agricultura, Ganadería, Acuacultura y Pesca (MAGAP) y el Fondo Ecuatoriano Populorum Progresso (FEPP) para la adquisición de tierras destinadas al reasentamiento de la población afectada por la erupción del volcán Tungurahua constituye una interesante experiencia de cooperación entre el sector público y una ONG. El convenio establece la responsabilidad del Estado de financiar la adquisición de tierras, mientras que el FEPP apoya el proceso de identificación y selección de las familias afectadas y su reubicación en una zona fuera de peligro en condiciones que les permitan su reactivación productiva y una adecuada reinserción socioeconómica con una tenencia de la tierra segura. La colaboración ha permitido aprovechar al máximo la experiencia y conocimientos en materia de gestión de tierras del FEPP, los recursos financieros aportados por el Estado y la participación de las comunidades.

Orientaciones estratégicas

- Fortalecer y crear capacidades en la institucionalidad existente.
- Promover el proceso de descentralización mediante la transferencia de responsabilidades a los entes locales.

> « Prioridad: creación e implementación de un sistema nacional descentralizado de gestión integral del riesgo que reduzca la vulnerabilidad de la población ante los desastres naturales. »

- Vincular las cuestiones del acceso a la tierra y la seguridad de la tenencia con la gestión del riesgo y la reducción de la vulnerabilidad e integrarlas en el nuevo marco político e institucional existente.
- Incluir en los planes post-desastre medidas que afronten los problemas de la titularidad de la tierra y asegurar su tenencia para evitar la especulación.
- Impartir capacitación a la población vulnerable de las zonas de riesgo y a las autoridades locales y nacionales sobre la gestión de riesgos y los aspectos de acceso y legalización de la tenencia de la tierra en situaciones de desastres naturales y difundir información oportuna al respecto.

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- Revisar y actualizar la legislación en materia de tenencia de la tierra en situaciones de desastres naturales a fin de garantizar a la población más vulnerable el acceso, legalización y registro de la tenencia de la tierra.
- Regularizar los derechos informales sobre la tierra.
- Promover los procesos de identificación de zonas seguras para la reubicación temporal o definitiva de la población desplazada por desastres naturales. Estas zonas deberán poseer además características ambientales, socioculturales y económicas similares a las de los lugares de origen.
- Actualizar y modernizar los registros de propiedad de la tierra, digitalizándolos para evitar que corran el riesgo de dañarse por efecto de los fenómenos naturales.
- Fomentar la colaboración entre el sector público y privado en la gestión del riesgo vinculada a la tenencia de la tierra.

DESASTRES NATURALES Y TENENCIA DE TIERRAS
DIRECTORIO INSTITUCIONAL
GOBIERNO DE LA REPÚBLICA DEL ECUADOR

DESASTRES NATURALES
Ministerio de Coordinación de la Seguridad Interna y Externa (Secretaría Técnica de Gestión de Riesgos)
Secretaría Nacional de Planificación y Desarrollo – SENPLADES
Dirección Nacional de Defensa Civil
Comité de Prevención del Fenómeno El Niño (COPEFEN)
Corporación Ejecutiva para la Reconstrucción de las Zonas Afectadas por el Fenómeno de El Niño (CORPECUADOR)
Consejo de Programación de Obras de Emergencia (CPOE)

TENENCIA DE TIERRAS
Ministerio de Agricultura, Ganadería, Acuacultura y Pesca (MAGAP)
Ministerio del Ambiente (MAE)
Instituto Nacional de Estadística y Censos (INEC)
Ministerio de Desarrollo Urbano y Vivienda (MIDUVI)
MAGAP – Instituto Nacional de Desarrollo Agrario (INDA)
MAGAP – Programa de Regulación y Administración de Tierras Rurales (PRAT)

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ON SOLID GROUND

ADDRESSING LAND TENURE ISSUES FOLLOWING NATURAL DISASTERS

Bangladesh

ERODING RIVERS, ERODING LIVELIHOODS IN BANGLADESH

Environmental context

Bangladesh is the most densely populated country in the world. Its 144,000 square kilometres are home to an estimated 150 million people. About 45 percent (2004) of them live below the national poverty line and around 36 percent are living on US$ 1 per day. Agriculture contributes largely to the national economy, with 60 percent of employment provided by the agricultural sector (including crops, livestock, fisheries and forestry) in 1995/6. Rural poverty is highest but urban poverty is growing.

Early Recovery

UN HABITAT

FAO FIAT PANIS

FREQUENCY OF DISASTERS DURING 1990-2007

CYCLONES	EARTHQUAKES	FLOODS	LAND SLIDES	TORNADOS	WIND STORMS
10	2	28	2	6	26

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THE MOST SEVERE FLOODING IN MODERN HISTORY

In September 1998, Bangladesh saw the most severe flooding in modern world history. Two thirds of the country was underwater, 1,500 people died, 30 million were homeless, and damages totalling US$ 1,200 million were incurred. One of the reasons for the severity of the 1998 floods was the serious forest and soil degradation throughout the watershed catchment area (up and down stream), which increased water run-off.

Bangladesh is also among the most disaster-prone countries in the world, Between 1970 and 1998, the country experienced 170 large-scale disasters. The frequency and intensity/scale of floods have increased, with eight major floods between 1974 and 2004. With the current climate change, triggered by man-made disasters (e.g. deforestation, soil erosion) it is expected that the scale, intensity and frequency of disasters will continue to increase. This means that people in Bangladesh will have to cope with the impacts of floods, river erosion, cyclones and other natural disasters on a more regular basis.

The geographical setting of Bangladesh makes the country particularly vulnerable to natural disasters. The mountains and hills bordering almost three-fourths of the country, along with the funnel shaped Bay of Bengal in the south, have made the country a meeting place of life-giving monsoon rains, but also subject it to the catastrophic ravages of natural disasters. The country is located in the low-lying Ganges-Brahmaputra river delta, which is one of the most fertile plains in the world. At the same time it is extremely vulnerable to floods, river erosion and cyclones, as well as politically motivated conflicts over water issues since most rivers originate outside of the country. Upstream activities such as deforestation increase the magnitude of damages caused by floods.

The task of sustaining the very limited resource base – land, in particular – is aggravated by population growth, poverty and over-exploitation, with consequent environmental degradation. This in turn adds to the country's vulnerability to natural disasters, especially floods and river erosion, which have a high impact on land tenure and land use issues.

Flooding. Many parts of Bangladesh are flooded every year by heavy rainfall and the overflow of river banks. Most parts of the country are less than 12 metres above sea level, and it is believed that about 50 percent of the land would be flooded if the sea level were to rise by 1 metre.

Due to high population pressure and skewed land ownership patterns, farming households and settlements, primarily poor ones, are increasingly pushed onto marginal land in high-risk flood areas. One important example of such marginal, flood-

prone areas are the highly unstable chars (temporary state-owned lands within and adjoining the major rivers). As these chars can be 'new' land arising from sand deposits, land ownership of these areas is at times highly disputed.

River erosion. River erosion is a serious threat that people living along the rivers and the coastal areas have to face on a daily basis. Given the population density and unequal land distribution, many poor rural people are forced to live in flood- and erosion-prone areas along the rivers and the coast. It has been estimated that at least 20,000 families become homeless due to river bank erosion every year, and are forced to migrate within the locality or to urban areas, thus contributing to the growing number of urban poor. When river erosion occurs very fast and suddenly, people can lose everything overnight. In other instance, river erosion is more gradual and people have time to move their assets but loss of cultivatable land and homestead is inevitable.
River erosion is sometimes referred to as the silent tsunami, given the magnitude of its consequences. For example, between 1981 and 1992, 728,000 people were displaced by river erosion, or an average of 64,000 people each year. In char areas, the figures are even higher: more than 250,000 people become victims of land erosion every year, and annual economic losses are estimated at TK 1,000 crore (about US$ 145,350). Many of the people losing their land have no other options than moving to major urban centres, and some end up as pavement dwellers, with even a slum shack beyond their reach. The Centre for Environmental and Geographic Information Services (CEGIS) has calculated that 155,280 hectares of land have been eroded between 1973 and 2007. Moreover, CEGIS forecasts that in the coming years, about 29,000 people living along the major rivers will lose their homes and land each year. What is most worrying is the increasing frequency and intensity of the erosion in recent years.

> « River erosion also affects national borders. According to a government estimate, the country has already lost nearly 15,000 hectares of its land due to erosion caused by 15 common rivers with India and Myanmar. »

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Cyclones. Cyclones are very strong winds combined with intense rainfall. The 1991 Gorky Cyclone took the lives of 120,000 people and caused serious damage to survivors' livelihood assets and community infrastructure. The recent super cyclone SIDR in 2008 affected more than 9 million people in the southern districts of Bangladesh and caused serious damage to houses, infrastructure, peoples' assets and standing crops. The number of deaths was considerably less due to more effective early warning systems in place and a wider availability of cyclone shelters. However, the number of cyclone shelters is insufficient to

FLOODING, RIVER EROSION, CYCLONES... AND MORE

- Droughts. Although Bangladesh is a high-rainfall country, droughts occur; the drought in 1973 contributed to the severe nation-wide famine in 1974. Often coinciding with seasonal drought is the Monga period, when food stocks run out and there are virtually no job opportunities in October and November before the main harvest season in December. The situation becomes worse if preceded by a devastating flood. Thousands of poor people go without adequate food for weeks. According to estimates by the World Food Programme, 80-90 percent of people (20-30 million) affected are agricultural day labourers who are then forced to take consumption loans and migrate to other areas for work, leaving behind their families. They can also be forced to give up sharecropped and/or owned land, leading to a further concentration of land ownership.
- Earthquakes. The occurrence of small-magnitude earthquakes in Bangladesh is quite frequent. Earthquake records indicate that more than 100 moderate to large earthquakes have occurred in Bangladesh since 1900, of which more than 65 took place after 1960. Fifteen new epicentres have been identified inside Bangladesh since January 2001. This clearly indicates an increased frequency of earthquakes in the country.
- Landslides. Landslides often occur in the hilly areas in and around Chittagong and the Chittagong Hill tracts, triggered by incessant monsoon rains, forest deforestation and hill cutting. Although the links between deforestation, unsafe housing development practices in hilly urban areas and landslides are known and recognized, the government is not taking any action.

accommodate the number of people in need of them. Besides, poor people living in high-risk areas usually live too far from the shelters. At times, the land they used to farm or live on might have disappeared or been damaged in such a way that it is no longer suitable for cultivation. Families also run the risk of losing their title deeds and no longer being able to prove their ownership of the land.

Major land tenure issues

Land ownership and landlessness

About 28.7 million households – about 88.4 percent of all households in Bangladesh – live in rural areas. Therefore, for most Bangladeshi people, land and agriculture-based livelihoods are fundamental. Ownership of land determines the status of an individual in rural society. Land-rich people enjoy political power and yield considerable social influence. Today, there are essentially four classes of agricultural landowners in Bangladesh:

- People who own homestead land only but have no land for cultivation;
- People who own homestead and agricultural land and take lease land to increase their farm area;
- People who own agricultural land but lease out part of it because they cannot manage all the land; and
- People who own agricultural land but lease all of it to others for cultivation (sharecropping or money arrangements).

There are no up-to-date figures on land distribution and average farm size, but approximately 80 percent of farm households are classified as small (between 0.02 and 1.0 hectares, with an average farm size of 0.35 hectares) and they account for about 40 percent of the agricultural land area.

The measurement of landless in Bangladesh differs according to the definition found in the statistical sources. The Land Occupancy Survey (LOS) of 1977 and 1978 and the national survey on Land Occupancy carried out by the Bangladesh Bureau of Statistics in collaboration with USAID, developed and distinguished three categories of landless households:

- Landless I – Household with no land whatsoever
- Landless II – Those who own only homestead but no other land and
- Landless III – Those who own homestead and 0.2 hectares of 'other' land.

The 1978 LOS found 29 percent of rural households who owned no cultivatable land. In 1983-1984 the Agricultural Census reported a total of 8.7 million rural landless households. More recently the preliminary report of the 2008 Agricultural Census found 3.26 million rural households as landless (11.4 percent of the total rural households) and 7.9 million rural tenant households (27.8 percent of all rural households).

The increase in landlessness can be greatly explained by river erosion, which is causing an increasing number of households to become landless, forcing them to migrate to urban areas or settle on other marginal and disaster-prone land.

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Distributing khas *land*

Many rural households have become landless after cyclones, floods and river erosion. Floods often render their lands unsuitable for cultivation and inhabitable. Cyclones are often accompanied by floods and cause the land to be washed away, along with the destruction of dams, irrigation canals, houses, etc. After losing their farm and homestead land, people have to find new land and often settle on so-called *khas* land, which is officially state-owned land often located in marginal areas along the coasts and rivers. Settlement on and allocation of *khas* land is often highly disputed and highly insecure from a legal tenure perspective.

Since its independence, the Government of Bangladesh has enacted many laws and policies regarding the distribution of *khas* land. However, the laws, supporting regulations and policies are complicated and their implementation is not always enforced. In 1972, after a catastrophic cyclone in the coastal areas, the Land Administration and Land Reforms Division began to rehabilitate the landless by creating seven cluster villages in the chars in Noakhali, Lakshmipur and Feni districts. In 1987, the Ministry of Land launched the Land Reforms Action programme, an initiative to strengthen and

ADDRESSING THE LANDLESS AND RIVER EROSION

The *Sikosti-Poisti* Act (Dilluvion-Alluvion Act), formulated initially during British rule, was adopted with some amendments in 1972, soon after independence. The act stated that if any land lost by river erosion and reappearing later on due to changes in river courses (accretion) would be owned by the government and declared as *khas* land (state-owned land) for redistribution to poor and landless families. The spirit of the Act was to rehabilitate poor landless people as well as minimize land grabbing and associated violence often seen in flood plains and coastal areas. However, the Act could not be enforced as the land was taken away from landless people by influential local elites and large farmers. Often lengthy litigations discouraged many displaced landless farmers from filing a case and they lost their claims to their legitimate rights. Consequently, the *Sikosti–Poisti Act* was amended in 1994 by stating that the accreted land should go back to the previous owner provided it was developed within 30 years. Although this amendment seemed a way forward, there were challenges in identifying and measuring the actual location or site. Moreover, the 30-year clause is too long for poor farmers. Often they prefer to sell the submerged land to large land owners at below-market prices. This amendment of the Act has led to many conflicts, lengthy litigations and often armed violence centred around old and newly accreted areas of land.

enforce previous resettlement programmes for distribution of *Khas* and unoccupied state-owned land to landless families. Several resettlement programmes such as Adarsha Gram (AG), Asrayan and Abashan have been implemented, and some are ongoing. The beneficiary families are selected through the local administration and then settled in communities ranging from 30-300 families. The families are provided with government *khas* land for homesteads, agricultural and community purposes and resources for income generation, production and community development. *Khas* land is legally reserved for distribution to landless households as defined above. However, some groups of landless households are excluded, such as households headed by unmarried women or widows with only daughters or no children at all. In addition, the government has imposed ceilings (60 Bighas, or about 8 hectares) on land ownership to redistribute land from holdings above the "ceiling" to the landless or those with holdings below an efficient farm size.

So far progress in redistributing khas land has generally been mixed due to vested interests of the landowning class, lack of political will, the inefficiencies in the way the local and national administration are organized, and the absence of an updated, systematic and universally accepted source of information on land resource availability and land rights. Given the legal and administrative complexities and associated transaction costs, it is very difficult for poor, often illiterate people to go to court and file land litigation cases. Many landless families cannot 'afford' these delays and lengthy processes and are forced to migrate to other rural or

KHAS DISTRIBUTION – THE NUMBERS

The estimated amount of total identified *khas* land in Bangladesh is 1.2 million hectares, although some claim this to be an underestimation. In 2001, official sources claimed that about 44 percent of 325,000 hectares of agricultural *khas* land had already been distributed among the landless families. However, discrepancies arose when checked at the local level. For example, figures for Noakhali district put official estimates at 67 percent of available land redistributed, while direct enquiry at the local level showed a target fulfillment of only 17 percent by mid 1990. In several other cases, while distribution was shown to have been completed on paper, reality showed that no actual transfers had taken place.

Gaps and obstacles in accessing Khas land in rural areas

Steps	Obstacles/Gaps
Identification	• A large portion of land is not surveyed and/or not recorded
	• Illegally occupied by influential people
Notification	• Allegations are very common that such notifications are only passed on to contacts, friends and relations with some interested parties not finding out at all, or until it is too late
Application	• Illiterate people cannot fill in the form and cannot apply themselves and depend on others to help creating obligations toward their 'helpers'.
	• A fee is often demanded for providing, completing or accepting the form
	• False applications from large land owners
List names	• Applications are (often falsely) screened out for being filled out incorrectly
Selection	• Bribes are sometimes paid to pass the selection stage by legitimate and illegitimate applicants
Recording	• Bribes must be paid at each stage
Distribution	• The number of applications exceeds the available plots and many are unsuccessful
	• Certificates are only handed out after payment of bribe
	• Land is given to ineligible people
Utilization	• Powerful people already own the land and block access and/or file a competing claim (often supported by false documentation)
	• Rich or influential people demand a share of the produce
Follow Up	• Powerful people bribe officials to swing outcome in their favour and/or threaten the recipient from proceeding
	• Recipients cannot afford to proceed with case because of high expenses

Source: Reports of Care-Bangladesh and Political Economy of Khas Land in Bangladesh by Abul Barakat

urban areas in search of viable livelihood options. In addition, continuing river erosion affects the resettlement programmes as some of the rehabilitated villages have disappeared. And one must not overlook the highly disaster-prone agro-ecological environment in which these programmes have to operate.

Besides the challenges of land tenures issues, resettlement programmes have a number of other weaknesses:

- They often lack an understanding of living and livelihood patterns of the affected populations, which is reflected in the structural design and spatial arrangements of shelters and homesteads.
- The location of resettlement villages is often far away from local markets, commercial hubs and access to services like health, government services and credit facilities. Remoteness limits the scope of livelihood options and income-generating opportunities.
- Settlements are at times not well planned and often take up grazing grounds of nearby villages, leading to conflicts over resource use and scarcity of locally available livestock fodder.

Effective policies for those who lose their land due to natural disasters

Although the Land Reform Ordninance of 1984 included provisions to protect people from being evicted from their homesteads and recognized the rights of sharecroppers, there are no proper and effective policies in place for people who lose land due to river erosion or floods.

There are several reasons for the lack of progress in the formulation of a realistic land policy vis-à-vis natural disasters, and its effective implementation:

- **Land constraints.** In Bangladesh per capita availability of cultivable land stands at a miniscule .09 hectares, indicating a very limited scope for any comprehensive redistribution of land. Insufficient appreciation of the overall land constraints has led to an ineffective attention to redistributive land reform. Important issues like the optimal utilization of public or state land resources including urban land have been relatively neglected. In addition to the already existing landless households, the opportunities for resettlement of households affected by natural disasters are limited.
- **Regional variation in land resources.** There has been a general lack of awareness of the regional variation with regard to land resources and land problems. An important example is the availability of khas land for redistribution to the rural poor. Bulk availability of khas land is concentrated in relatively regional few pockets. A successful implementation of khas land redistribution demands a concentration of efforts in these identifiable regional pockets rather than a single approach for the whole country.
- **Bottlenecks for the implementation of land reform.** The history of implementation of land reform has been full of failures and bottlenecks. Arguments like lack of political will are insufficient explanation for such failures. The inefficiencies both in the system of land administration and the associated court process, and in the work of ex-officio authorities in key decision making positions on land reform programmes, could be at the root of such implementation failures.

  The issues of implementation failures and land violence call for a land administration reform besides redistributive and tenure reforms. Land governance should be a key issue in such land administration reform, which should also consider issues related to disasters and land tenure and be linked to current disaster management and response frameworks and policies.
- **Absence of any centralized system of information on land resources and land rights.** While a great deal of information exists, it is scattered and/or

> « Flaws in the land administration system also contribute significantly to another little appreciated source of rural misery, namely pervasive land violence. Land violence is already very much part of daily reality but tensions and violence are further aggravated after more households have lost land due to floods and river erosion. »

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duplicated in various land-related offices. In addition, land record documentation is sometimes damaged or destroyed by floods and cyclones. Because of such fragmentation in information keeping, routine scrutiny of ownership information does not take place at the time of registration. This allows for the registration of numerous false land transfers, followed by court cases. The bulk of civil and criminal litigations in the country arise from such conflicting claims of ownership. The absence of an up-to-date, systematic and universally accepted source of information on land resource availability and land rights is a significant challenge to the successful implementation of land reform programmes handling of land disputes. Technologies such as GIS and satellite mapping (including of newly accreted and reclaimed land) could be used for collecting and maintaining information on land resources and tenure issues and also made available at local levels of administration.

Government context

Land reform legislation for khas lands

Two major land reform legislations were passed in 1972 and in 1984. The new independent government of Bangladesh introduced a land settlement policy for the landless and marginal farmers. Before liberation in 1971, land revenues were the largest single source of income of the provincial government. Therefore the land settlement policy was guided by considerations of income revenues rather than those of equity and social justice. Khas lands were settled upon payment of salami (deposits), which were more or less equal to the market price of the land. Only rich and influential people, who could pay, obtained such land settlements in their own names or in the name of their henchmen. Currently, khas are settled free of salami to the landless people as defined in the land settlement policy.

Another important provision with respect to security of tenure is the prohibition of eviction of agricultural tenants from their homestead land. Previously, tenants could lose and be evicted from their homestead lands after a court auction, e.g. to recover outstanding debts. Other major changes were exemption of land taxes for families owning less than 25 bighas (about 3.2 hectares), legal recognition of sharecroppers and introduction of minimum wage for agricultural labour. Unfortunately, there is little dissemination of this legislation. A survey in 1991 showed that nearly 90 percent of the rural population was unaware of the tenancy reforms of 1984.

Land administration and management

The present-day administration of land is divided between two Ministries: the Ministry of Land; and the Ministry of Law, Justice and Parliamentary Affairs. The Ministry of Land is formally responsible for conducting cadastral surveys and maintaining land records, for implementing land reform legislation and safeguarding tenants' rights. The Department of Land Registration under the Ministry of Law, Justice and Parliamentary Affairs records changes arising through sale, inheritance or other forms of transfer, reports changes to the Ministry of Land, and collects the Immovable Property Transfer Tax. Other agencies

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playing a more minor part in the administration of land include the Ministry of Forests, the Fisheries Department, the Directorate of Housing and Settlement, and the Department of Roads and Railways.

Land administration covering legal and fiscal cadastre is run through the administrative units of the country. The country is divided into six divisions headed by Divisional Commissioners.

The six divisions are divided into 64 districts, headed by a collector who is also the District Magistrate and Deputy Commissioner. The collector is responsible for the entire land revenue administration in the district, approving settlement of government land and changes in classification of land according to their usage and acquisition of land for development. The districts are further divided into 465 sub-districts, the upazila, which is the basic administrative unit. The central government at this level is represented by the Upazila Nirbahi Officer who, among other tasks, supervises the revenue administration in the area. There are several Tahsil offices in each Upazila, which are local field units for collecting land revenue.

Institutional arrangements related to disaster management and land tenure

The Ministry of Food and Disaster Management (MoFDM) is responsible for coordinating national disaster management efforts across all agencies such as the Disaster Management Bureau, and the Directorate of Relief and Rehabilitation. The MoFDM is responsible for coordinating early warning management systems, coordinating immediate relief operations and recovery and rehabilitation programs. The Ministry is supported by donors and several UN agencies that provide technical support and funding assistance, and also a number of national and international NGOs. A series of inter-related institutions, at both national and sub-national levels have been created to ensure effective planning and coordination of disaster risk reduction and emergency response management.

> « No major institutions or line agencies are responsible for land tenure issues, although land tenure issues are crucial issues in many natural disasters. »

Other ministries such as the Ministry of Agriculture and the Ministry of Public Works and Housing are called upon for certain disaster responses (for example, the Ministry of Public Works and Housing in relation to earthquakes – for coordinating reconstruction efforts and ensuring a proper implementation of the building code). The Ministry of Agriculture is responsible for research and extension activities to support the farmers during droughts.

Strengthening the response

Creating guidelines that specifically address land tenure and disasters. The National Disaster Management Plan 2008-2015 outlines guidelines and procedures for Union Disaster Management Plans (UDMP) for each Union, outlining both disaster risk reduction strategies and emergency responses. Union Disaster Management Committees must conduct participatory community risk assessments with particular attention to specific vulnerable groups within communities. However, the guidelines developed for the community risk assessment do not include issues around land tenure and disasters. Although the Union and Disaster Management Committees should be responsible for monitoring and maintaining primary contact with landless families

National Committees on Disaster Management and Responsibilities			
Level	**Committees**	**Headed by**	**Activities**
NATIONAL LEVEL	National Disaster Management Council (NDMC)	Prime Minister	To formulate and review disaster management policies and issue directives to all concerns
	Inter-Ministerial Disaster Management Co-ordination Committee (IMDMCC)	Minister in charge of the Ministry of Food and Disaster Management	To implement disaster management policies and decisions of NDMC/Government
	National Disaster Management Advisory Committee (NDMAC)	An experienced person having been nominated by the Prime Minister	To carry out advisory activities
	Cyclone Preparedness Program Implementation Board (CPPIB)	Secretary, Ministry of Food and Disaster Management	To review preparedness activities in the face of initial stage of an impending cyclone
	Disaster Management Training and Public Awareness Building Task Force (DMTATF)	Director General of Disaster Management Bureau (DMB)	To co-ordinate disaster related training and public awareness activities of the Government, NGOs and other organizations
	Focal Point Operation Coordination Group of Disaster Management (FPOCG)	Director General of DMB	To review and co-ordinate activities of various departments/agencies related to disaster management. Also to review the Contingency Plan prepared by concerned departments
	NGO Coordination Committee on Disaster Management (NGOCC)	Director General of DMB	To review and co-ordinate activities of concerned NGOs in the country
	Committee for Speedy Dissemination of Disaster Related Warning/ Signals (CSDDWS)	Director General of DMB	To examine, ensure and find out the ways and means for speedy dissemination of warning/signals among people

during pre- and post-disasters period, due to lack of resource and policy guidelines, this is not happening. They only certify landless families in response to a specific khas land resettlement programme.

Their duties and responsibilities in relation to land tenure issues could be strengthened as follows:

- During participatory community risks assessments, include information on land ownership distribution and reasons for landlessness and identification of landless families and those vulnerable to losing land due to future disasters.
- Capacity building and preparedness measures should include identification of available land for rehabilitation at the union/ward level.
- People living in areas identified as risk spots should submit copies of their land titles to the upazila and district administration as proof of their ownership. In the event of loss of property, they could claim for rehabilitation.
- During reconstruction of shelters, agencies should make sure that beneficiaries have safe and secure places in their homes to store their valuables including land deeds, maps etc.

Reducing vulnerability to disasters. While it is impossible to prevent natural events such as the SIDR Cyclone and major floods, it is possible to reduce vulnerability to disasters of people living in disaster-prone areas. Initiatives such as early warning systems showed their merits during the SIDR cyclone in 2007, as the death toll of around 4,000 was far less than the previous major cyclone in 1991, which caused 120,000 deaths. Disaster preparedness programmes make communities aware of their needs and teach them how to cope with disasters, not only in terms of saving their own lives but also in identifying ways of protecting their livelihoods. They must be directly engaged in the design and management of early warning systems (including choice of message dissemination) and construction of locally appropriate infrastructure such as multi-purpose cyclone shelters and well-maintained embankments.

Strengthening Disaster Management Committees. DMCs at district, upazila and village or levels should take the main lead in planning and implementing community-based disaster preparedness plans to disasters likely to affect their areas. The DMCs should have a broad membership that includes community representatives such as fishers and farmers. In addition, the government must accelerate its efforts to tackle chronic vulnerability by guaranteeing access

to essential services including health, education, water, and sanitation during any type of disasters, giving priority to the vulnerable and poor.

Considering land tenure in resettlement programmes. Post-disaster rehabilitation support, including land tenure, require more attention from policy makers and coordination among government bodies and local institutions. For example, during early recovery stages, agencies in charge of resettlement planning and programmes must determine that the resettlement areas identified are not located in hazardous zones and that the lease deeds for land ownerships are clear and registered to ensure tenure security for the resettled households. Also the beneficiary households should be well identified and belong to the most affected and needy category of households. Too often, resettlement programmes are not implemented with care, causing problems during implementation and for the long term. For example, people are again affected by natural disasters because they have been resettled in marginal, disaster-prone areas or land titles deeds registration is disputed, leading to land settlement disputes or violence.

Capturing the relationship between land tenure issues and natural disasters in key policy frameworks. The relationship between land tenure issues and disasters is not reflected and integrated in several key policy frameworks such as the Poverty Reduction Strategy Paper, the National Plan on Disaster Management 2008-2015 and the Standing Order on Disasters. In practice, there needs to be a stronger link between land distribution and resettlement programmes and disaster preparedness and rehabilitation programmes.

LAND TENURE AND RELATED INSTITUTIONS

Ministry of Land
Ministry of Law, Justice and Parliamentary Affairs, Department of Land Registration
Ministry of Forests, Fisheries Department, Directorate of Housing and Settlement, and the Department of Roads and Railways
National Disaster Management Council (NDMC)
Inter-Ministerial Disaster Management Co-ordination Committee (IMDMCC)
National Disaster Management Advisory Committee (NDMAC)
Cyclone Preparedness Program Implementation Board (CPPIB)
Disaster Management Training and Public Awareness Building Task Force (DMTATF)
Focal Point Operation Coordination Group of Disaster Management (FPOCG)
NGO Coordination Committee on Disaster Management (NGOCC)
Committee for Speedy Dissemination of Disaster Related Warning/ Signals (CSDDWS)

PARTICIPATORY DISASTER MAPPING

Participatory disaster mapping is a valid tool in supporting and planning community-based disaster preparedness programmes. Maps are drawn by the communities highlighting important information about major forms of land use, land ownership patterns, physical structures (such as houses, schools, clinics, water wells, markets, important roads), disaster-prone/vulnerable areas (e.g. steep slopes, flood-prone areas, ground water conditions) and environmental issues. These maps should be widely shared and easily accessible by the communities and can serve as a first step in the planning process for disaster preparedness programmes. Such programmes will be able to address issues on projected population growth, infrastructure development needs, main sources of income and include environmental components such as conservation areas. These maps and plans can also be used as an effective tool to help communities become more aware of the major disaster areas in their communities, the implications and possible plans to mitigate their occurrence and impact.

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ON SOLID GROUND

ADDRESSING LAND TENURE ISSUES FOLLOWING NATURAL DISASTERS

FAO/R. Faiduti

Indonesia

INDONESIA – AN ARCHIPELAGO BESET BY NATURAL DISASTERS

Environmental context

Indonesia is the largest archipelago in the world, comprising an area of about 1.9 million square kilometers. Around 60 percent of its population of 240 million lives on the island of Java, which constitutes only 6 percent of the landmass. About 70 percent of the land area in Java is under intensive use, which is much higher than the second-ranked island of Sumatra with about 20 percent. These more densely populated regions are also the ones exposed to the biggest threats of natural disasters.

Early Recovery

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3 Worst Natural Disasters – number of people killed

Disaster type	Date	No Killed
Tsunami	26-Dec-2004	165,708
Earthquake	27-May-2006	5,778
Earthquake	12-Dec-1992	2,500

6 Worst Natural Disasters – number of people affected

Disaster type	Date	No Affected
Earthquake	27-May-2006	3,177,923
Wild Fires	Oct-1994	3,000,000
Flood	23-Dec-2006	618,486
Flood	9-Feb-1996	556,000
Wave/Surge	26-Dec-2004	532,898
Flood	27-Jan-2002	500,750

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Many parts of Indonesia are prone to natural disasters. Between 2003-2005 alone, the national disaster agency (Bakornas) counted 1,430 incidences, including flooding, landslides, earthquakes, tsunamis and volcanic eruptions. The country also has more than 500 volcanoes, 128 of which are active. Furthermore, many parts of the country are susceptible to drought. The result is crop failure and uncontrolled bush fires that exacerbate forest fires. Added to this is the fact that there are more than 5,000 rivers, of which 30 percent cross high-density population areas, posing flooding hazards.

Indonesia's natural disasters are caused by largely uncontrollable forces such as the movement of tectonic plates or the eruption of magma through the earth's crust. However, exposure and vulnerability to disaster risks are more controllable. Exposure to risk is increased by poor spatial planning – for example, lack of necessary protected green zones, poor water flow management and poor natural resource management. Environmental degradation from human activities compounds the many natural risks posed by Indonesia's environment. Logging, mining, and the creation of large plantations have reduced the natural environment's capacity to withstand the challenges posed by nature.

Government context

Under Basic Agrarian Law (BAL) of 1960, land became a national asset and is controlled by the state on behalf of the people, and made available for distribution to all citizens under various forms of tenure, from freehold to leasehold. Under the Law, absentee ownership is prohibited but not strictly enforced, as is the limitation of size and number of individual holdings. In addition, foreign private ownership, except the right to temporary use, is also prohibited.

In legal terms, the National Land Authority (BPN) is the primary provider of land administration services and has sole authority over the surveying of non-forest land areas and the granting of land title certificates in Indonesia. It also has the legal authority to confirm land boundaries for parcels that are either not registered, or registered but lacking a letter of measurement or mapping. The Ministry of Forests is

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responsible for the administration of all other land areas and the Ministry of Mines administers concessions for resource development on land and at sea. Under Indonesian law, the state has a right of control over land and natural resources. As it is interpreted, the state's right of control allows the state to claim all land that is not residential or subject to constant forms of use (so-called "free state land"), and all land subject to customary rights that are not recorded in the land register (so-called "not free state land"). Taken together, this claim to state land potentially encompasses all land in Indonesia other than land parcels registered in the national land titles register.

There are an estimated 80 million parcels of land in the country. However, in the 45 years since the registration of land rights was established under the BAL, only 30 million parcels have been registered. At least 75 percent of all "recognized" property titles in Indonesia remain unregistered. This means that there is a very vague dividing line between unregistered (but recognized) titles and unrecognized occupation-based interests.

A localized land documentation system exists across Indonesia. These are letters acknowledging physical control and customary ownership when land is sold or inherited, or when parcels are divided. These documents are prepared by the village head or the sub-district head, and are often witnessed by representatives of the parties involved. In theory, copies of these documents should be forwarded to BPN, but in practice the parties involved

DISASTER MANAGEMENT POLICY

In 2006, Indonesia issued a national action plan for disaster risk reduction (DRR) that seeks to:

- •ensure that DRR is a national and local priority;
- identify, assess and monitor disaster risks and enhance early warning;
- use knowledge, innovation and education to build a culture of safety and resilience;
- reduce underlying risk factors; and
- strengthen disaster preparedness for effective response.

In March 2007, the national parliament approved the Disaster Management Law that codifies this plan, sets out responsibilities for DRR as well as disaster response at the local and national levels, and modernizes institutional arrangements for disaster management.

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often forego BPN involvement to limit transaction costs. As a result, a large number of localized land documents exist but are not included in the formal land agency records. As far as state land is concerned, its definition and extent in Indonesia is not clear. State agencies are not required to register their land interests with BPN or to engage BPN to survey the boundaries of those interests. The de facto control of large land areas lies with the Ministry of Forestry and the military.

Available statistics indicate a considerable inequality in the distribution of land in Indonesia: about 69 percent of the land area is owned by just 16 percent of the population. This inequality is particularly evident in highly populated regions, where the amount of land available to households is barely sufficient to make a living. In fact, the average parcel size of a rural holding on the crowded island of Java is shrinking from what is already a non-viable 0.85 hectares.

Major land tenure issues

The status of land tenure at times of disasters is fragile. With a high dependency on land and with a depleting resource base, few communities in disaster-prone regions have found sustainable routes to maintain their access and rights to land areas. For the poorer communities, the added pressure caused by natural disaster can prove to be an almost insurmountable burden that eliminates their livelihood options,

> « When disaster strikes, the poor are often the least able to defend their livelihoods or to establish legal tenure rights over the resource. Therefore, it is important that security of tenure be established and asserted so that they can make long-term investments in sustainable livelihoods and resource management. Post-disaster operations need to deal early with a number of land tenure issues. »

inadequate as they might have been. The communities are further burdened as their land tenure status is often unclear in modern legal terms.

Temporary or permanent resettlement

People have to be relocated from disaster prone areas when the likelihood of a natural disaster increases beyond a critical level. These relocations can be temporary, or resettlement might be permanent when an area is considered unsafe.

In the case of temporary resettlements as with the eruption fears of Mount Kelud in late 2007, temporary shelter is provided and services offered to the affected population. Although there are always questions about the adequacy of accommodation and services, the temporary loss of income is usually balanced with the acquisition of a secure place. If areas do become uninhabitable or uncultivable, or simply off-limits due to hazards, the selection of relocation sites is more often driven by the availability of land rather than by a consideration of peoples' genuine livelihoods.

Restitution of property rights

In situations like the tsunami disaster in Aceh, families were forced off their land. At the same time, in many cases all records that could prove their occupancy of the land in pre-disaster times were destroyed. Moreover, upon return to their original housing and farming plots, families were sometimes faced with questions about the legal status of their land. Families settling in undisputed or on what was – and still is – state land find themselves being treated as illegal

RESETTLEMENT AFTER THE FLORES EARTHQUAKE IN 1992

The Northern Part of Flores Island was hit by an earthquake and tsunami disaster in 1992, which killed 1,712 people. The Indonesian government prohibited the people from living in the tsunami prone site and provided resettlement locations for those who were forced to move. The adaptation to the new environment was very difficult for the victims, and some resettlement sites were abandoned within a few years. Many people have moved back to the original location, although it is still prohibited. Those who continue to live in the resettlement sites are those who did not have land at the original location. They continue to live in the resettlement not because their fear of tsunamis, but because they have no place to live except the resettlement site.

Source: Relocation Process At Resettlement Site After 1992 Flores Earthquake And Tsunami Disaster, in: Journal of Architecture, Planning and Environmental Engineering, No.556/2003.

RECONSTRUCTION OF HOUSES IN ACEH

In Panggong village, Aceh Barat, 36 households were refused housing offered by an international NGO because their pre-tsunami houses had been built on land allegedly owned by the district government. Although they had been living on the land for 40 years, the district government claimed that the householders had only received a revocable license to occupy. In a similar case reported by UNDP, in a tsunami local fishers in an unidentified village had lost their houses and their land records, including evidence of land and building tax payments. They had no land title certificates. The district government wanted them to relocate, ostensibly for safety reasons, and argued that the fishers were living on state land. As a result, the fishers and their families were reportedly moved several kilometres inland to a location that made it difficult for them to access their primary source of livelihood.

Source: Fitzpatrick, D. Managing Conflict and Sustaining Recovery: Land Administration Reform in Tsunami-Affected Aceh, Oxfam, 2007.

settlers and facing eviction. Regardless of the actual legal status, this additional hardship and the uncertainty faced by affected families increase their vulnerability.

Compensation

There have been many reported disputes over the payment of compensation for the acquisition of land by the government both before and after the tsunami. These disputes involve allegations that certain landholders were not parties to the compensation agreements; or that payments have either been delayed by disputes or not forthcoming at all. In one case in Blang Pidie, Abdya District, landowners allege they are still waiting for more than half of the promised compensation payments for land that the government had been acquired in 2004.

Land as a collateral to finance disaster recovery investments

Land titling is important to ensure that the beneficiaries of the housing have sufficient security of land tenure. In the longer run, it is also important for economic recovery and development. Many disasters occur in areas that have not been part of systematic titling efforts; hence, there is little proof except for locally kept ownership documentation. Little research has been conducted to determine the importance of actual title certificates for obtaining finances for emergency recovery. The success of immediate relief measures might depend more on social networks rather than on formal documents. However, for long-term reconstruction initiatives, proper land tenure documentation will certainly be beneficial.

The vulnerable status of women's rights

All natural disasters tend to have a disproportionate impact on women. Women who are primary caregivers, with greater responsibility for household work, will have less time and capacity to mobilize resources for recovery.

RE-ESTABLISHING SMALL-SCALE BUSINESSES

In early 2006,one tsunami victim in Aceh Besar applied to BPN for replacement land title certificates. As of May 2007, he had not received the replacement certificates despite a number of a follow-up requests through his local village and sub-district heads. He runs a highly successful cafe that employs six local people, and wants to borrow money to expand his business. But he cannot borrow significant amounts from the banks without a certificate.

Source: Managing Conflict and Sustaining Recovery: Land Administration Reform in Tsunami-affected Aceh, Oxfam International Policy Paper, November 2007.

COMPENSATION AFTER A MUDFLOW DISASTER

One and a half years after the eruption of a mudflow volcano forced the relocation of around 3,000 families, buried four villages and 25 factories, and inundated around 300 ha, plans for compensation of victims has started to take shape. A presidential directive paved the way to pay for the damage to livelihoods. In addition to payments for daily allowances and moving expenses, documents have been prepared on land and building transactions.

Ownership of the disaster area is expected to be transferred to a private company. While the payment amounts may or may not reflect the previous market value of the land, families will still face difficulties in establishing livelihoods in new places. Moreover, regardless of the legal agreements, the payments to be received are regarded by many as a compensation for the loss of income rather than from the sale of land. As in other disasters, families would certainly like to return as soon as conditions allow.

Source: article in Jakarta Post, December 8, 2007.

> The aftermath of disaster is the time when women most need land for recovery. Women who lacked land before a disaster, or who accessed land through a deceased husband or relative, will need specific programmes to support their rights to land.

They are less likely to participate in the public sphere in which relief is organized and delivered. They may be overlooked if relief efforts target programmes at household heads, or focus on primary employment as the sole source of livelihoods. And if these relief efforts also fail to collect gender-disaggregated data, the disproportionate impacts on women may not even register in monitoring mechanisms.

Disaster-induced displacement removes women from kinship structures that provide basic forms of social insurance against poverty and violence. Displacement also removes women from location-specific income, including access to common property resources. After displacement, some returning women lose access to land because prevailing social or legal norms mediate their entitlement to land through a deceased or missing husband or relative. This is particularly true for women who are widows, or who stand to inherit land from a deceased relative.

Inheritance entitlements

In Aceh, Syariah courts provide mobile courts at the village level. According to Syariah law, widows and female children have inheritance rights to land. Therefore, widows and female children who obtain inheritance rights over land must register their rights under their name. Under-age heirs, including orphans, who have inheritance rights to land can have their rights registered in their respective name with the assistance of a guardian. A guardian has custodial

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responsibility for the land on behalf of the heir(s). The authority of guardians includes the handling land registration and does not entitle them to execute the transfer of rights over the land to other parties. The rights over land will be transferred to the heir when she/he has been declared to be of age.
As of December 2006, 328 custody cases had been legalized by the Syariah court. However, there are cases reported in which custodians take advantage of the entitlements of orphans, for example by pocketing rents on the house belonging to orphans under their custody.

Land acquisition and reconstruction

Land acquisition has been a key issue to reconstruction in Aceh because it failed to facilitate the rapid and conflict-free assembly of land for resettlement and infrastructure. The law and practice of land acquisition by the government causes significant conflict across Indonesia. These conflicts stem from procedural weaknesses, particularly in relation to consensual negotiation with landholders, and substantive failures to pay market value for acquired (or "released") rights to land. Both issues are inconsistent with international standards for the compulsory acquisition of rights to land for public purposes.

Institutional capacity

Institutional responsibilities go beyond the delivery of emergency relief. What is required are structures that minimize the potential negative effects, and allow for a quick and sustainable return to development.
The institutional environment in Indonesia is not yet fully equipped to quickly and sustainably deal with all aspects of land issues. Even under regular circumstances, progress in titling and registration is not as quick as desirable. The process already employs all resources available to an institution like BPN, and leaves little room to address other challenges. Even when financial constraints are eased by an inflow of foreign donor aid, there are no clear guidelines in place on how to address land issues, nor are there enough human resources or expertise available to cope with the additional work without neglecting other duties.

> « The need for quick responses to emergencies requires a well-organized organizational structure with clear roles and responsibilities within an administration that also has the necessary financial and human resources to deal with disaster impacts. »

> « The cross-cutting issue in all disaster management and recovery issues is the importance of good governance. »

Good governance

The main responsibilities and burden in post-emergency situations lie on government institutions. However, the temptations created in emergency situations pose a challenge to all stakeholders, including those outside government. Ensuring a well regulated, simple and transparent process in addressing land issues becomes crucial, in particular when it comes to defending poor and vulnerable people's rights and interests. Oversight and management by an independent body can provide a safety mechanism to facilitate the implementation of rule of law and regulations.

Lessons learned for addressing land issues

Pre-disaster measures

Titling efforts in areas where natural disasters might potentially displace people would facilitate the provision of adequate compensation for resettlement and the reconstruction of public infrastructure. While titling and registration might be


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PRIORITY ACTION

An immediate step for Bappenas and BPN should be to encourage and empower local communities in disaster-prone areas to prepare their own local plans documenting land ownership and identifying areas for eventual resettlement, and inform people about their rights and obligations. Recognizing and acknowledging that the resilience of local communities is best strengthened when land matters are primarily dealt with by applying customary principles will be an important step in this process.

the preferred options to secure ownership documentation in disaster-prone areas, resource constraints and resistance from local owners will prevent this from being a viable option in the short and medium terms. However, an immediate measure that could be initiated by local governments is the drafting of maps that indicate occupancy and ownership of land. The lack of even such simple evidence has proven a major obstacle to the quick response for housing or reconstruction assistance. Any ownership documentation needs to be stored in a safe place where damage or destruction can be avoided. Back-up documentation is also necessary.

Identifying relocation sites and having (local) government control them could help the sites be situated close(r) to original settlements. The National Action Plans prepared by Bappenas provides for such plans to be drawn up by local governments. However, advance preparation of such plans is still largely lacking. This puts additional stress on local government institutions (and affected families) in times when multiple disaster-related problems require simultaneous attention. The preparation of such plans should become part of local governments' duties, either as a stand-alone plan or as part of land use or emergency planning.

Generating land and valuation maps could avoid compensation quarrels. The reconstruction of infrastructure and houses in Aceh involved substantial acquisition of land. In the absence of generally accepted maps or databases on land values, negotiations with owners over values and compensation required additional attention. Considering again the resource constraints within the potentially responsible institutions, this remains a long-term objective.

Information campaigns that explain to families in disaster-prone areas what their rights and obligations are would make for fairer and more efficient rehabilitation and recover processes. There are no clear communication strategies to explain to households their rights and responsibilities. Better information about the importance of ownership and occupancy documentation, formal and informal, and information about institutional responsibilities in case

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of disaster should be communicated to households in potentially dangerous areas. The preparation and communication of respective material and information should be a priority for BPN and local governments.

Incentives should be created for voluntary resettlement to safer areas. This will only work when appropriate incentives and services are provided at destination sites. To ensure that social networks are not entirely damaged, relocation sites need to be close to original settlements. In addition, it needs to be ensured that squatters do not occupy endangered areas again. The new land reform programme initiated by BPN should prioritize disaster-prone areas, offering alternative sites for voluntary resettlements.

Post-disaster measures

Quickly restoring property rights through community-driven adjudication. In disaster areas where no official documentation of ownership and occupancy is available, a quick method for (re-) adjudicating plots is required. Community-driven adjudication of land rights has proven to be relatively successful. While there was no generally prescribed methodology at the local level, community-driven adjudication generated sufficient documentation and certainty for housing providers to begin reconstruction. In practice, the first document generated by this method – the signed statement of ownership – provided sufficient "legal" authority for most forms of house reconstruction. BPN should explore and decide in which ways such a community-driven adjudication process could be formalized to provide a sufficient legal basis for reconstruction efforts.

Verifying land tenure rights through (informal) documentation and confirmation with local authorities. Determining local ownership through landowner lists prepared by the local government can provide the tenurial basis to start rebuilding. In Aceh and Yokyakarta, many housing providers went ahead with localized evidence of land records, usually in consultation with local authorities and (sometimes) the district chief or city mayor. Delays and disputes would have been much worse if there had not been

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a significant trust in the evidence provided through community consultations and local authorities. While such localized systems will probably not replace a formal registration system in the long term, they can provide sufficient evidence to greatly facilitate rehabilitation and reconstruction efforts. A review carried out by Oxfam (November 2007) on land administration issues in post-tsunami Aceh confirmed that community land-mapping helped prevent land grabbing and speculation and reduced land disputes.

Ensuring that women are not deprived of their land rights. All post-disaster restoration of land ownership needs to follow an approach that safeguards and strengthens the rights of vulnerable groups. In post-tsunami Aceh, the government placed women at the centre of a long-term, sustainable shelter strategy that called for measures to protect women's right and claims over family (or marital) land holdings, and to eliminate customary and traditional barriers to women's access to land, property and housing. Pre-titling information campaigns were launched that promoted joint titling of land holdings, and local institutions and judges of Syariah Courts were trained on inheritance and guardianship issues. In addition, titling procedures required the direct and active participation of women in community land mapping

SUGGESTED PRIORITY ACTION

It is important for the government to prepare guidelines and action plans to address post-disaster land issues. The official recognition of community- and customary land rights-based mechanisms would help to identify solutions for land tenure problems more quickly. Bakornas or Bappenas could elaborate respective guidelines for BPN and local governments to follow. Once ownership documents are available at local level, referring to in the event of disputes should be made a standard procedure. A fast review by BPN officials might need to take place to ensure that local practices and documentation safeguard the rights of vulnerable groups, in particular woman and children (orphans).

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and in the decision-making process. Joint titling of land holdings was made mandatory.

Using a participatory approach to resolving land conflicts, and building on existing networks. The strengthening and empowerment of local communities and their leaders is as important as formal documents and regulations in resolving land conflicts. In situations where formal institutions are overburdened with the multiple impacts of natural disasters, reliance on trusted existing social networks is the best option for avoiding conflict or quickly resolving it. Having a participatory and transparent process to empower and, where necessary, re-establish local leadership, is also crucial.

NATURAL DISASTERS AND LAND TENURE GOVERNMENT INSTITUTIONS IN INDONESIA

Disaster management agencies in Indonesia are organized hierarchically, from the national level down to the district and sub-district level (not all areas are divided into sub-districts).

- ***National level:*** BAKORNAS PBP, the National Coordinating Board for Disaster Management and Internally Displaced Persons Affairs
- ***Provincial level:*** SATKORLAK PBP, the Implementation Coordinating Unit for Disaster Management and IDP Affairs
- ***District/municipality level:*** SATLAK PBP, the Implementation Unit for Disaster Management and IDP Affairs
- ***Sub-district level:*** Local disaster management Task Force

National Planning and Development Agency (Bappenas)
Bappenas' main task in natural disaster situation is damage assessment and analysis and organization of required reconstruction aid. It operates through its local government units, which are also involved in spatial planning, i.e. in officially demarcating potential zones for protection or resettlement.
Bappenas also hosts a UNDP-supported unit that deals with disaster risk reduction. The unit produced a "National Plan for Disaster Risk Reduction". The community disaster risk reduction plans are expected to include maps indicating disaster prone areas and allocated relocation sites for affected households. However, this is still in the planning stage.

National Land Agency
The National Land Agency (Badan Pertanahan Nasional – BPN) is responsible for administration of all non-forest land in Indonesia. It was established in 1988 as a separate agency in response to land issues impacting on development, with specific responsibility for recognition, registration and administration of property rights and transactions.

Aceh and Nias Rehabilitation and Reconstruction Board – BRR (Badan Rehabilitasi Dan Rekonstruksi NAD-NIAS)
Responding to the magnitude of the tsunami disaster in Aceh and Nias, the Government of Indonesia established a separate board that deals exclusively with coordinating the rehabilitation and reconstruction work. All government and donor assistance is coordinated by BRR. BRR cooperates, and provides direct implementation assistance to local governments.

The State Ministry of Environment - Kementerian Lingkungan Hidup (KLH)
Neither the State Ministry of Environment nor its local branches are directly and actively involved in post disaster, land related rehabilitation or coordination work. Their very limited involvement in land and disaster issues are through the spatial planning exercises that can be influenced through environmental considerations.

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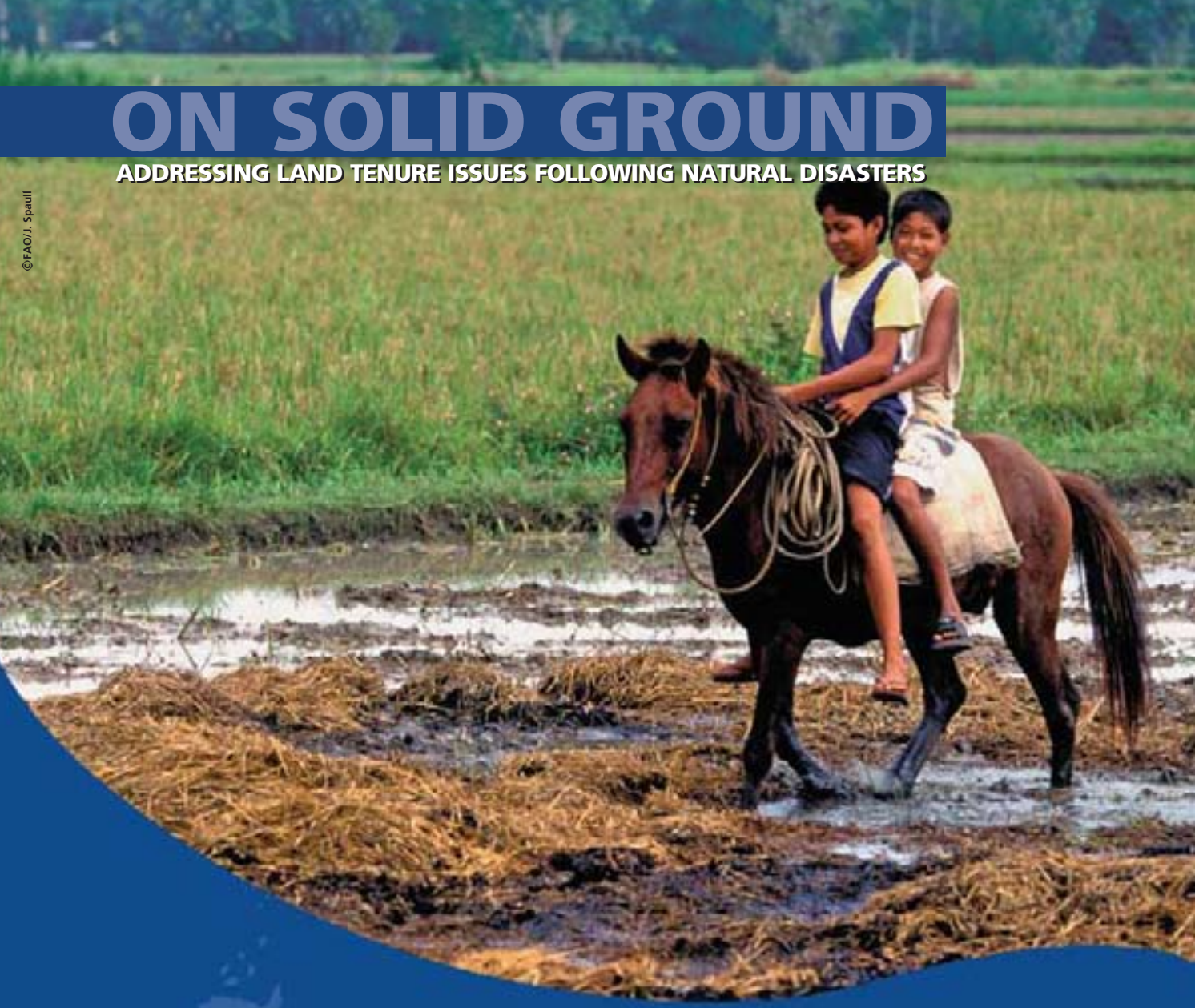
ON SOLID GROUND

ADDRESSING LAND TENURE ISSUES FOLLOWING NATURAL DISASTERS



Philippines

NATURAL DISASTERS OF ALL KINDS RANK HIGH IN THE PHILIPPINES

Environmental context

The Philippines is the second largest archipelago in the world, consisting of over 7,000 islands. Its location in the north-western Pacific Ocean places the country in the direct path of the world's number one tropical cyclone generator which brings destructive floods, landslides and storm surges. It also sits on the edge of the "Pacific Ring of Fire," where the islands experience periodic earthquakes and volcanic eruptions. According to the International Red Cross, The Philippines is the fourth-most disaster-prone country in the world.

Early Recovery

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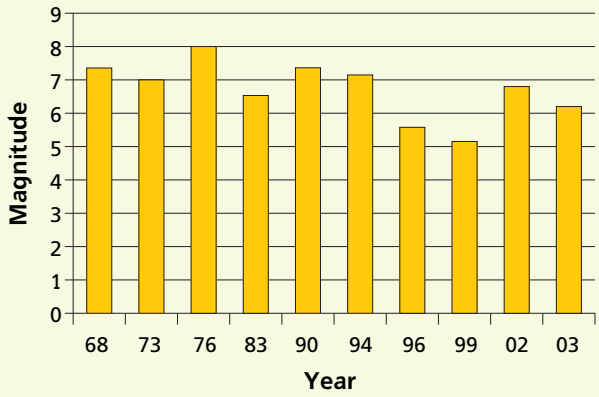
FIGURE 1
Magnitude of Destructive Earthquakes1 1968-2003



Note: 1990 figure is average of 3 earthquake magnitude.

FIGURE 2
Landslide Incidents, 1981-2006

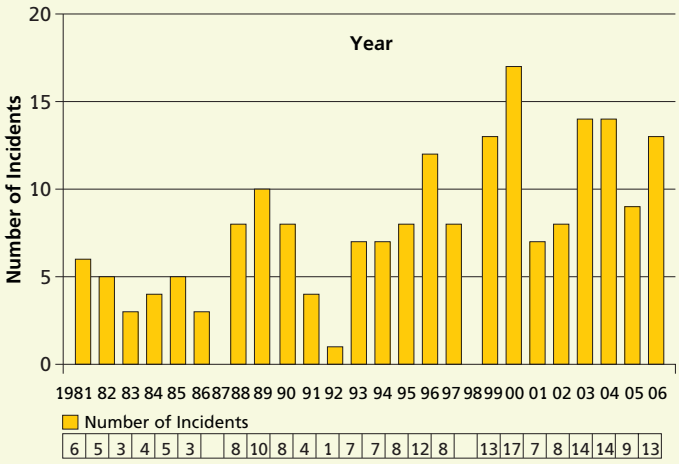
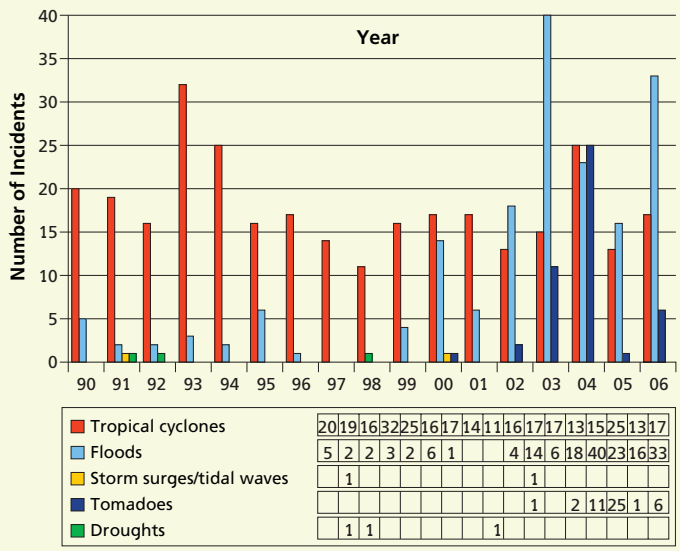


FIGURE 3
Climate/Weather-Related Hazard Occurrences, 1990-2006



Volcanic eruptions. There are about 220 volcanoes in the Philippines, of which 22 are considered active. Eighteen years after Mt. Pinatubo erupted in June 1991, mudflows continue to threaten the rehabilitation of the 364 *barangays* (villages) in the 'rice granary' of the country, and the 1.2 million people who live there.

Earthquakes. Tectonic earthquakes are found to be more destructive than volcanic ones. By 1991, an average of five earthquakes a day occurred in the country. During the next 13 years (1992-2004), a slight increase to six a day was recorded. The Luzon earthquake of July 1990 was the most destructive, causing the death of 1,283 people and affecting 1.3 others.

Tsunamis. Tsunamis are often caused by volcanic eruptions and earthquakes (at magnitude 7 in the Richter scale). In the Philippines most are caused by the latter.

Landslides. Most of the country's provinces are at risk of earthquake-induced landslides. From 1981 to 2006, the government monitored 194 landslide incidents. The Guinsaugon landslide of December 2003 killed 154 people and displaced 3,811 families.

Tropical cyclones. Tropical cyclones (or typhoons) are regarded as most destructive of all natural hazards in terms of the largest number of people affected and the value of total damage. From1990-2006, 303 tropical cyclones hit the Philippines, or an annual average of 18 cyclones. During Typhoon Uring, about 6,400 people died and the entire Ormoc City was submerged.

Flooding. Tropical cyclones combined with heavy rains often produce flooding and flashfloods. Between 1990 and 2006, 175 flood occurrences, or an average of ten per year, were reported. In this period, there were more flooding incidents than any other hazard, killing 5.523 people and affecting over 5.2 others.

Tornadoes. Mindanao is the area most at risk of tornadoes, having been hit 20 times from 2000 to

TABLE 1 – **The Impact of Major Natural Disasters in the Philippines, 1990-2006**

Disaster Type	Freq	Casualties			Population Affected		Houses Damaged	
		Dead	Injured	Missing	Families	Persons	Totally	Partially
Volcanic eruption	6	958	201	23	339,149	1,619,029	44,247	68,451
Earthquake	9	1,394	3,566	329	262,174	1,444,913	27,276	88,661
Landslides	142	735	387	81	15,422	75,147	719	1,574
Tropical cyclones	139	12,274	15,184	4,524	15,422,872	76,638,345	1,430,039	4,224,617
Floods	175	5,523	685	1,364	1,107,405	5,253,367	9,234	35,828
Tornado	46	14	72	54	7,227	38,950	652	1,364
Drought and El Nino phenomenon	3	0	0	0	2,143,941	9,739,938	0	0
Total	**520**	**20,898**	**20,095**	**6,375**	**19,298,190**	**94,809,689**	**1,512,167**	**4,420,495**

Source: Data obtained from National Disaster Coordinating Council, Office of Civil Defense.

2006, followed by Western Visayas provinces, which experienced eight tornados in the same period. During this period, 46 tornadoes have struck the country, claiming the lives of 14 people, injuring 72 and leaving 54 missing. Almost 38,000 people have been affected.

Between 1990 and 2006, the Philippines experienced 520 disasters from seven major natural hazards, which killed 20,898 people, injured 20,095 and left 6,375 missing. About 1,230 people were killed each year. These disasters affected 19,298,190 families (about 95 million people), which suggests that many had been repeatedly hit, particularly by tropical cyclones, floods and/or landslides during the same period.
The economic impacts of natural disasters on the country have been measured in terms of direct losses to agriculture, public infrastructure and private property. Between 1990 and 2006, average annual direct damage to the country as a consequence of major natural disasters was estimated at about 0.2 percent of the country's gross domestic product.

> « The main difficulty in dealing with disaster consequences on land tenure and property lies fundamentally in the lack of awareness about the importance of land tenure and property in a disaster context. »

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Major land tenure issues[1]

Disasters cause undue displacement of affected households, thereby resulting in either temporary or permanent changes in land tenure and property. The

[1] In the Philippines, there has been no study to examine the direct impacts of natural disasters on land tenure and property. Existing literature only refers to land tenure in relation to poverty in the context of the poverty-disaster nexus. This section, therefore, draws on the views of government and non-government officers who have been involved in disaster relief and mitigation activities, and experiences of some disaster-affected people from the Province of Albay in Bicol Region.

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SO MUCH UNTITLED LAND

Between 2002 and 2004, the Land Administration and Management Project (LAMP) of the Department of Environment and Natural Resources (DENR) funded a series of studies on land laws, land markets, tenancy and land tenure. Their key findings give a clear picture of the country's current land use and tenure issues:

"[...] some 60% of the real property of the country is informal. Considering that some 46% of the Alienable and Disposable (A&D) lands are untitled, and much of the Forest domain is occupied and used by persons without secure rights, it can be seen that this figure of 60%, although extremely high, is not unreasonable. Any country with so much wealth remaining informal, can expect that the economy would have a limited contribution from the property sector. In addition to securing ownership for the remaining 46% of A&D land parcels, LAMP has proposed in the land laws and the tenancy study reports that secondary rights be registered, such as long term leases.

The land tenancy study showed that there are about 2 million ha of farms (estimated 1 million parcels of farm lands) for which agrarian reform beneficiaries have yet to receive formal long-term leases... the LAMP land laws study of 2002 suggested that long term leases could provide immediate tenure security in the absence or while awaiting the protracted process of transferring full ownership."

severity of impact differs in terms of: (i) whether those who are affected have secure or no secure tenure to their property, (ii) whether the disaster has caused lasting damage to the property; and (iii) the capacity of the affected people to recover their lost property, or to restore and improve their tenure security, which mainly defined by their socio-economic status.

People with secure tenure are more confident to reclaim their property if the damage is not permanent. In the case of households affected by landslides from Mt. Mayon resulting from Typhoon Reming, those with titles immediately returned to their properties, knowing that the title records kept at the Register of Deeds (RoD) would prove the location of their boundaries. Moreover, because houses on titled properties are more often built of stronger construction materials, finding the exact locations of the properties is not difficult because of the high probability that parts of the structures will still be intact after the disaster.

In contrast, affected households with no secure tenure are likely to have greater difficulty in relocating or in reclaiming their original occupied properties following a disaster. This is more pronounced in farmlands, and in locating the original location of their dwellings. In the absence of boundary marks and permanent structures, returning to the property is made easier by community recognition of each others' rights to occupancy, as neighbors help each other in reestablishing the original boundaries of their formerly occupied properties based on trust. This sense of cooperation is strong among affected community

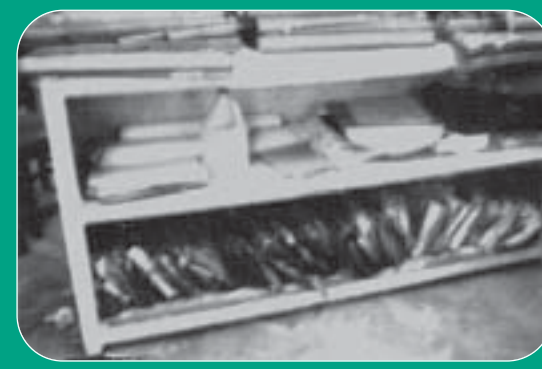
members immediately after the disaster, as they share a common experience and willingness to help each other in coping with its after-effects. However, the possibility of boundary dispute may arise once the parcel boundaries are re-delineated by surveys.

Where the damage to land is permanent, affected people, regardless of their tenure, often find themselves eased out of their original communities and relocated to government-designated resettlement sites. This is particularly true for informal settlers, who have no choice but to accept moving to the resettlement sites in order to establish new dwellings and engage in other livelihood activities. However, in many cases, the relocation sites do not provide better alternatives to their former way of life. For instance, families from Aurora, Quezon that were affected by the 2004 landslides triggered by four consecutive typhoons were advised that their original community was no longer suitable for habitation. Yet people find the relocation site too far away from their original area, forcing them to alter their livelihood from fishing to farming.

Administrative and legislative constraints to land titling

Absence of a complete cadastre. The different land offices do not have complete records of all rights to land. The presence of many agencies involved in land titling and land administration has led to duplication and overlaps of records, in some cases resulting in issuance of double titles over the same property. There is no comprehensive set of maps that supports the title records issued, thereby increasing the probability of overlapping titles. In the context of rehabilitation after a disaster, this situation aggravates the probability of issuing multiple titles on the same property.

Absence of control points maintenance programme. Many of the control points installed in the past decades throughout the country have been damaged or destroyed for varied reasons. The government does not have an active monitoring and maintenance program to reestablish the control points. In the case of the Mt. Pinatubo eruption, for instance, the National Mapping and Resource Information Authority (NAMRIA) has not been successful in receiving the funds necessary to reestablish the primary control points required to guide the subsequent cadastral surveys for relocating the parcel boundaries of property owners.



Land survey records damaged by Typhoon Reming in Albay in November 2006, consisting of:

- Cadastral maps for surveys for the whole province
- List of survey claimants for surveys, and
- Technical descriptions of surveys.

Source: DENR PENRO/CENRO, Legaspi City, Albay.

Lost, damaged or destroyed land records. Most DENR field offices have incomplete and outdated land records due to loss and theft during frequent transfers, and damage caused by fire, floods and vermin infestation. The DENR provincial office in Albay, for instance, lost 2,445 cadastral maps and other land survey records when the roof of its office building collapsed during Typhoon Reming. Reconstitution of records is difficult and costly as the DENR does not maintain a systematic filing system for its records. This situation is true in many parts of the Philippines. In order to resume the processing of applications for original title, land claimants have to reconstitute their documents if they were damaged or lost at the DENR. For many affected families that have lost their homes and properties, this takes an

enormous amount of time as the documents have to be reconstructed and/or secured again from other government offices.

Costly and lengthy process of title reconstitution. This is a legal process whereby the owner files petition in Court to reconstitute the title records which were lost or damaged at the RoD. The owner shoulders all related costs, including legal fees, which are estimated to be about PhP 20,000.00 (about US$ 460). The process can take months to complete, considering that the RoD does not have a complete cadastre. Experience from the World Bank- and the AusAId-funded LAMP reveals that one of the causes of double titling is judicial reconstitution, wherein the Court issues new title copies for records that have been lost or destroyed.

Costly and lengthy process of securing title copies. Property owners who have lost their copies of titles have to secure a second owner's copy at the RoD. This is also a purely legal process whereby the owner petitions the Court to grant the RoD authority to issue a second owner's copy. This process is initiated by the owner, who shoulders all associated expenses. The process can take months to complete, and expenses can reach about PhP 10,000.00 (about US$ 230).

Costly process of relocation of parcel boundary marks. This process is initiated and paid for by the property owner concernerd. The Geodetic Engineers of the Philippines has set standards for this service, which costs the property owner an average of PhP 10,000.00 to 12,000.00 (about US$ 230-277). The government does not have a programme to support affected families in relocating their parcel boundaries following a natural disaster.

Presence of many erroneous surveys. The relocation of boundary marks is made complex by the presence of many erroneous surveys. The experience of LAMP is that an additional process had to be introduced – survey validation – to determine whether the quality of survey works warrant the issuance of titles. This has been necessary due to poor survey practices, and lack of monitoring and supervision of survey works. One outcome is the increased probability of misplacement of boundary marks.

In disaster risk management efforts, land tenure issues will come into play in different ways, depending whether efforts are focused on disaster prevention and mitigation, disaster response, or recovery after a disaster.

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SPECIAL CHALLENGES OF INFORMAL SETTLERS

Informal settlers face a different set of challenges, since there are no records as basis for reclaiming their former occupied areas. This information is preserved in the minds of elders and community members. However, in case of death of elders and community leaders, this information is difficult to reconstruct. In addition, those who have no secure rights to land before a disaster are at risk of being permanently displaced to the relocation sites offered by the government. In many cases, the sites are unattractive and do not correspond to their pre-disaster situations. Most of the resettlement sites are densely populated, far from original sources of livelihood, lack basic facilities and services, and offer an entirely different socio-economic environment that forces people to adapt to different traditions, livelihoods and lifestyles. As a result, these people are compelled to return to their former lands, even if the land has become unproductive due to the damage caused by the disaster; or else they are compelled to find other suitable areas where they can start a new life and sustain their culture. All these circumstances make them highly vulnerable to another disaster, thus perpetuating the cycle of poverty and vulnerability.

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Disaster prevention and mitigation

Absence of comprehensive spatial information. The absence of comprehensive spatial information before land titling results in the issuance of titles to properties located in vulnerable areas. For example, in Albay, several titles were issued along the flanks of Mt. Mayon, even along the 6.0 kilometres declared as a permanent danger zone by the Philippine Institute of Volcanology and Seismology. This is also the case of the Ginsaugon landslide tragedy. The absence of comprehensive hazard maps for all types of hazards resulted in a misguided land classification system as well as land use and development policy. An entire barangay, where the land had been declared alienable and disposable and hence subject to private property, was almost wiped out when the slopes of a hill collapsed after hours of continuous heavy rains.

Dense settlements in vulnerable areas. The presence of dense settlements in vulnerable areas is partly a function of weak enforcement of land use policies, and partly a result of uncontrolled urban growth and lack of access by rural landholders to land resources. Uneven investments which favour the highly developed regions, burgeoning population growth, and lack of livelihood opportunities in the rural areas pull people out of the provinces. These conditions bring about an artificial scarcity of land and intensification of human settlements in the urban areas which force many people to inhabit the drainage

> « In the context of land tenure and disaster prevention, there is a need for hazard mapping to be completed to guide future development, and for land development regulations to be formulated and strictly enforced in the whole country. »

systems, easements, areas under the bridges, and even the high-risk coastal areas. In rural areas, uneven distribution of land encourages informal occupation of public lands and upsurge of seasonal farm labour on large privately owned lands, while the absence of widespread land tenure instruments over open-access areas leads to unsustainable land use and degradation in critical watersheds, danger zones, protected areas and marginal lands susceptible to high degrees of erosion.

During the emergency response phase

Condition of survey and records infrastructure. Government agencies are mandated to immediately assess the impacts of the damage after a natural disaster (Presidential Decree 1566 issued in June 1978, which is the current legal basis for disaster management arrangements in the Philippines). However, no assessment has been made of the conditions of survey and records infrastructure after a disaster and the land tenure status of affected households. There are no reports on the damages to survey controls, parcel boundary marks and land records held by the government agencies, which are important in determining the support that affected persons may require for their rehabilitation.

On the part of the affected families, no systematic information is gathered on the value and size of the affected properties, their locations and the corresponding land tenure. Reports are more focused on damages to government properties that require funding for repair and/or reconstruction. Estimates of affected private properties have mainly considered damaged houses and related structures. At best, resettlement sites with free core houses and some basic facilities are given to all affected families regardless of their previous land tenure status. These weaknesses affect the ability of the government and other organizations to plan for recovery, relocation, or rehabilitation of affected communities and households following disasters.

During recovery and preparedness phase

Lack of public policies. The key issue is the absence of any support to land tenure issues following a natural disaster, particularly as a response to poor, vulnerable and food-insecure households. No clear public policies exist to facilitate the recovery and rehabilitation of affected lands and other related properties. At present, affected families are left on their own to locate their properties, restore boundary marks, reconstitute lost

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> It has become evident that the poor, vulnerable and food-insecure households show high risk-taking behavior because the advantages of disaster-prone areas (open access, low cost, proximity to employment and low transport cost) are perceived to outweigh the risks.

records, and/or reestablish farmlands. Support for disasters is limited to immediate relief and finding relocation sites for those affected.

Lack of awareness of procedures. For those who have the means, perhaps the major impediments to returning to their property are the lack of awareness about the procedures involved in surveys and title reconstitution, and lack of access to records. Studies by LAMP have highlighted the lack of transparency high costs of the land administration system, which encourages landowners to stay out of the formal system or secure the services of third parties who are familiar with the procedures. The latter contributes to the added high cost of land transactions.

For the poor households with no secure tenure, the main impediment is returning to the property or finding a suitable place to live and practice their livelihood following a disaster. Life in resettlement sites is difficult for these untenured families because most of the sites do not include agricultural lands for farming and other livelihood activities. For example, in Legazpi City, the victims of Typhoon Reming have been housed in dwellings of about 12 m^2 each in size, with no farmlands. Moreover, standards set for determining appropriate resettlement sites mainly consider lower risk of the areas to hazards.

Government context

At the national level

The National Disaster Coordinating Committee (NDCC), placed under the Office of Civil Defense of the Department of National Defense, is responsible for carrying out preparedness, mitigation, response

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IMPROVING LAND ADMINISTRATION SERVICES AT THE NATIONAL LEVEL

In order to provide better land administration services, government agencies would have to improve their records system, enhance public understanding of the procedures, and streamline the processes to be more transparent and client-responsive. They would also need to develop more preventive approaches to be better placed to serve the needs of affected families when a disaster strikes. These would include:

- providing for better security of records – back-up copies, more systematic organization of records to improve public access, regular updating, and improved consistency in records among agencies;
- identifying alternative areas for agricultural production for affected families; and
- relocating vulnerable communities in safer areas and providing secure tenure and farms.

Improvement in awareness of land tenure and resource access issues is also important so that these agencies and other humanitarian organizations can identify and implement more responsive programmes for marginalized and vulnerable households.

and rehabilitation. However, its mandate does not cover assistance in resolving land tenure and related natural resource access issues. At most, assistance is limited to providing resettlement sites for affected households and giving them support in the construction of dwellings and issuance of titles over these properties. The support does not include providing farmland for families. Thus, for example, marginalized farmers continue to live and work in the foothills of Mt Mayon, disregarding dangers from volcanic eruptions, because it provides them an opportunity to produce food without secure land titles, People only obey evacuation orders when the highest level of alert is reached.

The search for cultivable land, therefore, rests with the affected family. Some people approach government agencies, such as the Department of Natural Resources (DENR), to try to participate in their regular programmes for titling and tenure security. However, when a family is displaced, the chance of securing a title on public land is non-existent because one of the primary criteria for a title is proof of occupation for at least 30 years. There is no special programme designed to provide farmlands with secure tenure to poor rural households that lost their farms after a disaster.

Land-related government agencies (for example, NAMRIA under DENR, and the RoD under the Department of Justice), do not have programmes to support disaster-

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stricken communities in coping with land tenure and property issues. This is mainly because their programmes are aligned with the approved budget, which does include responses to the requirements of disaster after-effects.

At the local level

The NDCC structure is replicated at the local level – at each region, province, city, municipality and barangay. At the municipal level, the LGUs are expected to provide direct support to the needs of affected communities within their jurisdiction, with assistance from the field offices of national government agencies. Under the Local Government Code of 1991, the local government units (LGUs) are required to set aside 5 percent of their estimated revenue from regular sources as Calamity Fund. This amount is used for relief, rehabilitation, reconstruction and other works and services. Again, this amount does not cover support for addressing land tenure and related natural resource access issues. As part of the LGU mandate, land use planning is undertaken by the municipal and provincial governments. However, this activity is not always informed by risk assessment and hazard mapping. Very few LGUs have active programmes to relocate disaster-prone communities and informal settlers and provide them with secure tenure in safer environments. Few cities and municipalities have the capacity to prevent settlement in disaster-prone areas, particularly by informal settlers. Moreover, local land use policies, rules and regulations, when they exist, are seldom enforced. In some cases, LGUs allow the entry of informal settlers as a deliberate vote-raising strategy, even in more high-risk areas.

The performance of LGUs in disaster management varies greatly. They are expected to draw up risk management plans, but may not put them in practice. When plans do exist, they focus largely on relief and rescue operations. Given their fiscal and manpower capacity, it is difficult for many LGUs to incorporate land tenure and natural resource access issues into their disaster management plans, or into their local development plans. To date, very few LGUs have been successful in implementing disaster prevention or flood control measures, and in relocating highly vulnerable households to safer environments.

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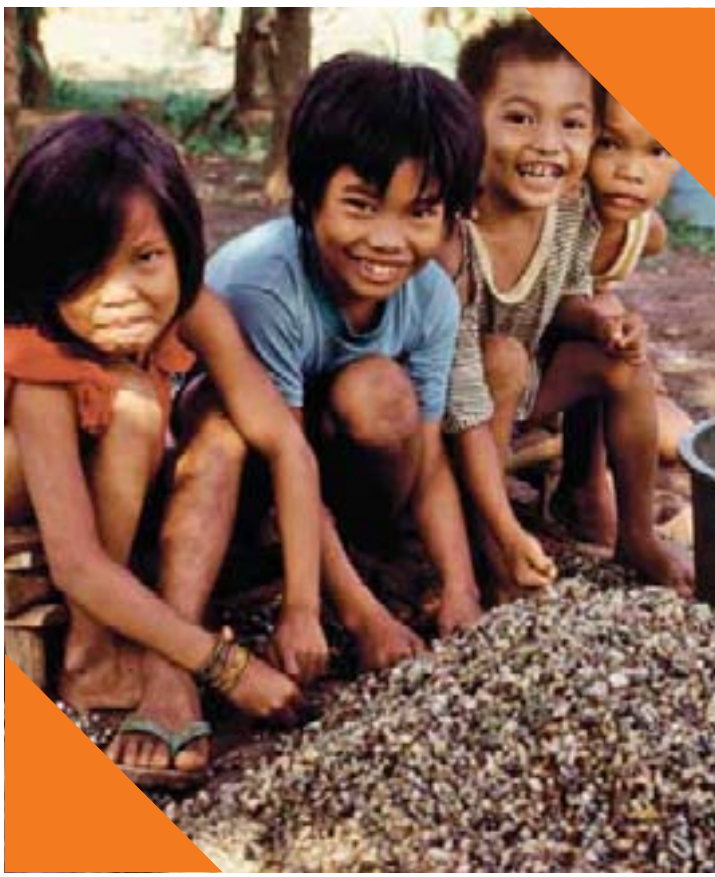

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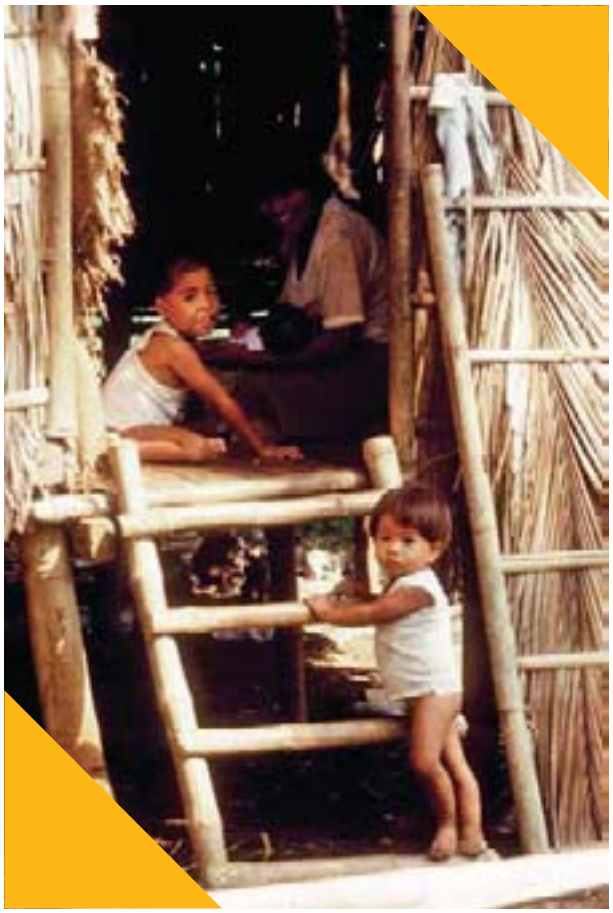

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A word about poverty and vulnerability

Provinces and regions with high poverty incidence are more vulnerable to natural hazards. A recent study conducted by the Word Bank and NDCC reported that the country's poverty incidence was 26 percent in 2000 and is highly concentrated in rural areas, where about 77 percent of poor people reside. Two-thirds of them rely on agriculture, fishing and forestry for their livelihood. The absence or lack of land tenure is a central issue among poor people, forcing many to live and work in high-risk areas, such as in the danger zones of the six most active volcanoes and practically all deforested mountains, riverbeds, low-lying flood plains and coastal areas in the country. While most of the poor are now aware of the risk and vulnerability of these areas to natural hazards, they have no choice but to remain close to their source of livelihood. As a result, informal settlements including resettlement sites have gradually expanded in high-risk areas in more recent years.

Repair or reconstruction of poorly constructed houses becomes a frequent activity of poor people after every disaster. Lack of secure tenure also reduces their incentive to invest in housing improvements, permanent agricultural production systems, or safeguards to protect their farms and fishing grounds against floods, landslides, droughts, etc. This desolate condition weakens their capacity prepare for disasters, or adapt and recover after such events. For example, the study reported that after the 1991 Ormoc flood, 24 of the 30 families returned to their original areas because they had no other place to live, although they recognized the dangers of living on the banks of the river. In other cases, families returned to their areas due to proximity to place of work and other means of livelihood, even when resettlement sites were made available to them. Surprisingly, neither the affected families nor the support organizations had given attention to land tenure issues following disasters.

NATURAL DISASTERS AND LAND TENURE GOVERNMENT INSTITUTIONS IN THE PHILIPPINES

NATURAL DISASTERS:
National Disaster Coordinating Committee (NDCC)
Centre for Disaster Response (CDRC- NGO

LAND TENURE AND RELATED INSTITUTIONS
Ministry of Agriculture
Department of Environment and Natural Resources (DENR)
Registrar of Deeds (RoR)
Local Government Unit Assessor Office
National Mapping and Resource Information Authority (NAMRIA)
Department of Justice (DoJ)
Asian NGO Coalition (ANGOC)

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« These briefs have been elaborated in the framework of the collaboration of FAO and UN-HABITAT, as part of the Natural Disasters Initiatives under the Inter-Agency Standing Committee for Humanitarian Assistance work. Their objective is to raise awareness of key government and humanitarian actors on the importance of addressing land tenure issues in natural disasters. Each country brief conveys information allowing to better understand the key role of secure land tenure and access when dealing with natural disasters vulnerability of the poor, women and men. This folder contains six briefs on: Bangladesh, Ecuador, Honduras, Indonesia, Mozambique, and the Philippines. »

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