

Understanding the links: land tenure, vulnerability, and climate-led disasters¹

Land tenure is a particularly important issue in Asia, a region most prone to natural disasters and the impacts of climate change, and home to the world's poorest who depend on land for their life and livelihoods.

However, public understanding of the links between climate change, disasters, and land tenure is still very limited, even among development organizations.

This issue brief is edited from the publication, "No Time to Waste: Climate action through secure land rights and sustainable land use," that seeks to train the spotlight on specific issues of land tenure, land use and climate change, and on how these issues are closely intertwined.

Context

The impacts that climate change brings upon human settlements and land use systems can bear heavily on people's land access and land tenure in ways that affect their livelihoods, well-being, and sense of security (Quan and Dyer, 2008). Extreme climatic events (such as typhoons, floods, and droughts) can erode or inundate homes and farmlands, render them unproductive, or challenge existing tenure relationships to the disadvantage of vulnerable groups, resulting in forced migration and displacement of populations. Communities may also gradually be detached from their former homes and lands as a result of slow-onset environmental degradation, such as sea-level rise, salinization of soils, and changes in weather patterns.

Those who are poor and lack land tenure rights are among the most vulnerable to the direct effects of climate change. Poverty forces people to cultivate marginal lands that may be too steep, too dry, too wet, or prone to erosion, or else to occupy fragile public lands or areas that are vulnerable to flooding, high tides, and storm surges. Moreover, the lack of tenure security

limits people's choices and diminishes their capacity to recover and rebuild when a disaster strikes.

However, even with the growing awareness on climate change, there is still limited understanding and response in addressing the nexus of the impacts of climate change, social and policy responses, and need for land tenure security.

For one, the links between land tenure and climate change may not be obvious. Tenure, or the relationship between people with respect to land, has traditionally been viewed from the perspective of an individual, family or community. Climate change, on the other hand, is often viewed from a global perspective and is attributed to the collective or human use or abuse of natural resources. The connection often becomes clearer only when viewed from a broader perspective, a panoramic view from which relationships can be observed.

Also, much of climate change discussions remain under the exclusive realm of scientists and governments (Limon, 2009).

Meanwhile, poor people are often left out of climate change discussions. Those without land or who are near landless are the most marginalized and voiceless, and thus, land tenure issues are rarely addressed or tackled. They are often treated as passive victims, rather than as potentially active responders in the fight against climate change.

Understanding the links: climate change and land tenure in the Asian context

Land rights may be held individually, or collectively in a family, a group, a community, or the State. Land may also be part of open-access regimes where specific rights are assigned with little or no operational tenure rules with respect to resource use and management (UN Habitat, 2019). Land tenure, on the other hand, refers to the way in which interests in land are held by people or entities such as the State. Land tenure systems consist of rules

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invented by societies to regulate behavior in relation to land. They define how rights to land are allocated within societies, the security of those rights, and how they are enforced (FAO, 2002). Land tenure rights, therefore, influence the way that land and natural resources are used and can impact directly on the environment and on climate change.

Inappropriate land development (such as mining, quarrying, logging, or large-scale plantations – often authorized through issuance of licenses and leases; as well as over-exploitation of forests – especially in open access regimes) can lead to massive deforestation, siltation of rivers, and toxicity of the soils. Extractive activities can cause the release of greenhouse gases (GHGs) that contributes to climate change; it also increases the exposure of people in the area to the impacts of natural disasters (e.g., mudflows, soil erosion, flooding and strong winds) when they occur.

Exploitation of forests, in some cases, is also driven by poverty among the marginalized sectors who suffer from tenure insecurity (i.e., poor settlers and smallholder farmers). Faced with limited livelihood opportunities and land-use options, many are forced to exploit forests in unsustainable ways, to meet their immediate needs (e.g., charcoal-making or timber-cutting).

Poor and tenure-insecure communities are at higher risk of experiencing the adverse effects of climate-induced disasters. Not only does poverty (along with land degradation) reduce the resiliency of communities to the effects of climate change, the lack of tenure rights limits people’s choices and diminishes their capacity to recover and rebuild from a disaster.

This is especially true for many Asian countries where there are large growing populations, high proportion of poor people living with tenure insecurity and landlessness, and with the highest frequency and magnitude of extreme weather events.

Around 72 percent of the total frequency of intense natural disasters was recorded in Asia and Pacific between 1971 to 2020 (Thomas, et. al., 2013). Further, in 2006 to 2015 data of the Annual Disaster Statistical Review Reports, six of the top ten countries most hit by natural disasters are in Asia including China, India, Philippines, Bangladesh, Pakistan, and Nepal (Guha-Sapir, et al., 2016).

Poverty in Asia is closely associated with landlessness and the lack of tenure rights. In Bangladesh, almost 60 percent of the total households are functionally landless households and own only 4.2 percent of the land. In the Philippines, smallholders who depend on forests for their homes and livelihoods (an estimated 20 percent of the population) have no legal tenure rights over their forestlands.

In developing countries of Asia, poverty is prevalently rural and agricultural. Rural poverty is strongly linked to the lack of access to land, due to landlessness, insecure tenure or contested land rights.

In the coming years, climate change will heavily impact most heavily on agriculture – as rural livelihoods and livelihood assets become more exposed and vulnerable to changes in rainfall patterns. One of the most outstanding impacts of climate variability and extremes is the recent rise in global hunger and severe food crises by affecting all dimensions of food security – food availability, access, utilization, and stability (FAO, et al, 2019).

Natural disasters: land issues in vulnerability and resiliency

Understanding post disaster land issues and the interaction between vulnerability, disaster, and resilience may be illustrated as follows (see Figure 1).

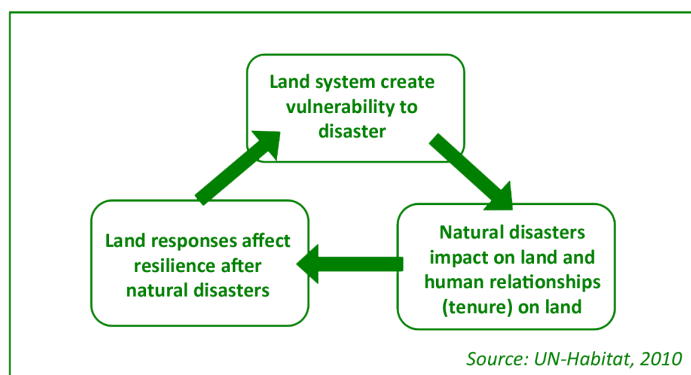


Figure 1. Understanding post-disaster land issues.

Land systems create vulnerability to disasters

Many poor families, having no access to better living conditions, are often forced to live in areas that are vulnerable to flooding, high tides or storm surges. They may cultivate hillsides that are prone to landslides and erosion. Others are compelled to make a living in harsh

environments that are too dry, too steep or too remote, with lack access to basic services.

And while the poor are aware of the risks to their homes to natural hazards, many are forced to accept or ignore such reality, given their lack of options, and in order to carry out their livelihoods.

The lack of tenure security further reduces the incentives and capacity for people to invest in housing improvements or to modify their living environment to protect their homes against floods, landslides, and disaster.

Natural disasters impact on land and human relationships (tenure) on land

Some natural disasters (erosion, landslides, flooding, salinization) can directly result in a significant loss of land – leading to loss of livelihoods, destruction of homes, and displacement of populations. Calamities also cause displacement indirectly, as land is submerged or eroded, landmarks are erased, known boundaries disappear, and legal documents are destroyed – thereby causing local land disputes or worsening existing ones.

Diminished capacity to recover and rebuild from a disaster. Women (especially those who are unable to inherit property) and holders of secondary rights (i.e., tenants, sharecroppers, pastoralists, and those who lease, use, or occupy land) become particularly vulnerable as the lack of documentation and formal recognition on the land and property rights of these sectors hinder their access to relocation options or compensation for property loss.

In reclaiming affected property, affected households with no secure tenure are likely to have greater difficulty in relocating or reclaiming their original occupied properties following a disaster (Eleazar, 2010). In some cases, those with no secure tenure may be prevented from returning to their areas, and from repairing and rebuilding their homes, especially if the land is later classified as a “high-risk” area.

People without secure tenure may also lose out on permanent shelter assistance. For instance, shelter programs in response to Typhoon Haiyan that hit the Philippines in 2013 potentially excluded informal settlers

as it required legal ownership or a long-term lease agreement over the land to be used to rebuild houses.

Displacement impacts on the ability of the people to resume their livelihoods. In most cases, the poor and vulnerable are forced to fend for themselves when a natural disaster strikes and lands and livelihoods have been permanently destroyed. They are forced to take on unfamiliar jobs or to resume their livelihoods in new places with no social networks or familiar forms of support, and where their presence and tenure rights may not be recognized.

Conflicts over land. Natural disasters create opportunities for secondary land occupation and land grabs, due to population displacement. The sudden onset of many natural disasters creates the risk that abandoned land or housing will be occupied by persons other than their former owners or users. This creates tension as former residents and users return to their places of origin. Yet, those who will require adjudication or restitution are more likely to be without adequate and recognized land rights before the disaster, including tenants, informal landholders and women (UN-Habitat, 2010).

Land responses affect resilience after natural disasters

Land responses (or the lack of it) may affect people’s resilience after a natural disaster.

In many countries, humanitarian efforts aimed at reducing disaster risks and responding post-disaster have not adequately dealt with land tenure rights and property issues. Inadequate responses appear to be caused in part by a lack of clear understanding of tenure issues in the context of natural disasters, the lack of clear policy, the lack of allocated resources, and the limited capacity of frontline responders to deal with tenure issues.

When massive numbers of families need to be relocated and permanently resettled elsewhere in the aftermath of major disasters, several land tenure-related problems are often encountered, and need to be addressed – need for safe lands for relocation; eligibility criteria for relocation; and, the need for livelihoods and utilities in relocation communities.

Land tenure rights in climate change adaptation and mitigation

Land tenure security is crucial for climate change adaptation and disaster prevention. When there is tenure security, families invest better in their homes and farms. The specific type of tenure (i.e., being an owner, lessee, tenant, or agricultural worker) determines the range of options that farmers have in managing their farms – the farming system, irrigation, use of inputs, choice of crops, or when to plant. For example, tenant farmers with short-term leases may not use soil protection measures, plant trees or improve pastures.

Secure land tenure enhances resiliency insofar as it contributes to “improved food and water security, more sustainable livelihoods, reduced forced and unplanned human mobility that leads to landlessness, reduced environmental degradation, less poverty, reduced conflict over land and resources, etc.” These increase the resiliency of families and communities in the light of shocks and stresses brought by natural disasters and climate change.

When adaptation is applied at individual or family level, the scale is often limited by the amount of land that one has under control. Also, as individual adaptation is bottom-up, the outcome is the result of a multitude of small decisions that are made individually. Each household will implement adaptive actions depending on its location and use of the land, farming practices and crops, climate changes felt, and opportunities available. The result is an effective patchwork of varied responses across a landscape, rather than a uniform response (Ingram and Hong [Eds.], 2011).

Oftentimes, adaptation needs to be implemented in a larger scale, for which some level of organization is required. Land tenure security is a key factor that encourages people to protect and sustainably manage larger landscapes and forests on which their homes and livelihoods depend. A common example is the establishment of community forests, where communities are given user rights to forests, from which they grow food, gather resources, and obtain income. In turn, the families protect and manage forests from where they draw their household needs and livelihoods.

In Cambodia, one such case is the establishment of the Rokha Community Forestry (CFo) in Pursat Province, which also enabled forest dwellers participate in the Commune’s climate change adaptation and mitigation action planning (Te, 2021).

In Kyrgyzstan, communities of “user groups” play a central role in the planning and management of the country’s pasture, forest, and water resources, Local associations of water users, forest users, and pastoralists are seen as key players in the rapid response to, and prevention of natural disasters from climate change. The functioning of these user associations is enshrined in national laws of the Kyrgyz Republic – which increases the ability of the poor to adapt to climate change, and to contribute to its mitigation (Maratova, et al., 2021).

In Bukidnon, Philippines, the recognition of land rights of the *Talaandig* tribe through a Certificate of Ancestral Domain Title (CADT) has empowered the indigenous community to govern and protect its land and forests. In a span of 11 years, the forest cover of the ancestral domain increased from 45.8 percent in 2005 to 49.8 percent in 2016. Further, the recognition of their CADT and their legal persona (in the form of a registered indigenous organization) enabled the tribe to negotiate confidently with different stakeholders in the design and establishment of the Payment for Ecosystem Services (PES) in Mount Kalatungan. Under the PES, the MILALITTRA as the “seller” would provide “water regulation services through reforestation of denuded lands,” while downstream users would pay for the ecosystem services, which would also cover the costs of reforestation (Ravanera, 2021).

Even in cases where community land rights are not legally recognized, social cohesion and collective action can improve people’s resilience in coping with natural disturbances and in averting disasters. The Bulupayung SeTAM Peasants (Union) in the southern coast of Cilacap Regency, Central Java has been taking care of its mangrove forests, despite being mired in agrarian conflict with a State-owned company. In fact, the case itself shows how climate adaptation efforts can help to strengthen a community’s own land claim (Maulana, et al., 2021).

Also, securing tenure rights of women is key for their social and economic well-being and in climate change adaptation. Women’s empowerment is crucial in challenging existing power relations, cultural practices, knowledge systems, and adaptive strategies in ways that can improve protection of the environment and overall resilience to natural disasters. Women’s concerns for nutrition and food security, economic stability, security of shelter, health, safety, and family well-being all represent significant areas for adaptation (UN-Habitat, et al., 2019).

Towards a rights-based approach to climate change

The impacts of climate change on people and land, and their implications on human rights, is illustrated by Limon (2009) through Figure 2.

CLIMATE IMPACTS	IMPACTS ON PEOPLE AND LAND	HUMAN RIGHTS IMPLICATED
Sea level rise <ul style="list-style-type: none"> • Flooding • Sea surges • Erosion • Salinization of land and water 	<ul style="list-style-type: none"> • Loss of land • Loss of clean water • Damage of coastal homes, infrastructure and poverty • Salinization of land and water 	<ul style="list-style-type: none"> • Self-determination (ICCPR; IESCR, 1) • Water (CEDAW, 14; ICRC, 24) • Adequate and secure housing (ICESCR, 12) • Culture (ICCPR, 27) • Property (UDHR, 17)
Temperature increase <ul style="list-style-type: none"> • Drought • Reduced water supply • Coral bleaching and impact of fisheries 	<ul style="list-style-type: none"> • Food and water insecurity • Impact on agriculture • Changes in traditional fishing livelihoods 	<ul style="list-style-type: none"> • Life (ICCPR, 6) • Means of subsistence (ICESCR, 1) • Adequate standard of living (ICESCR, 12)
Extreme weather events <ul style="list-style-type: none"> • Higher intensity storms, floods • Sea surges 	<ul style="list-style-type: none"> • Dislocation of populations • Containment of water supply • Food crisis 	<ul style="list-style-type: none"> • Life (ICCPR, 6) • Water (CEDAW, 14; ICRC, 24) • Means of subsistence (ICESCR, 1) • Adequate and secure housing (ICESCR, 12)

Figure 2. Climate Impacts on People and Land, and Human Rights Implicated | *Adopted from Limon, 2009*

There is need for a rights-based approach to climate change. Limon (2009) says that linking climate change with human rights would humanize climate change discussions; amplify the voices of the poor and marginalized; level the playing field; and, construct better policy responses (at both the national and international level).

Ensor et al. (2015) argues that human rights principles enable resilience practices to have a greater pro-poor emphasis by changing the balance of power in favor of the marginalized (see Figure 2). This includes addressing

the needs of those who are in the frontlines of the impacts of climate change, including peasants, indigenous peoples, pastoralists, small farmers, fisherfolk, and poor urban dwellers, who, paradoxically, may have also contributed to it the least.

A rights-based strategy could seek to have tenurial and property rights recognized and enforced by the different legal and land administrative provisions. This includes legal recognition of tenure security and property rights on land currently managed under various types of customary and informal tenure. This would provide different starting points for improving adaptive capacity and resilience especially for the poor and vulnerable.

A rights-based approach would also compel States and other duty bearers to address land tenure issues and to re-establish tenure security for affected families and communities in the event of climate-induced disasters.

However, while climate change raises questions for broader land policy, land tenure is not addressed in several international instruments. International instruments on climate change and natural disasters like the UNFCCC, Paris Agreement and the Sendai Framework do not provide explicit references to tenurial rights (La Viña and Tan, 2017). Instead, the Voluntary Guidelines on the Responsible Governance of Tenure of Lands, Fisheries and Forests (VGGT) is one of the few international documents that expressly mentions the linkages of land tenure rights to climate change (Sec 23), natural disasters (Sec 24) and conflict (Sec 25). The UN Sustainable Development Goals (SDGs) specifically recognize the role of land (as a cross-cutting theme) in sustaining human development through SDGs 1, 2, 5, 11, and 15, while Goals 1, 2, and 5 specifically address community land rights. SDG 13, meanwhile, specifically focuses on the need for climate action. Although the specific targets and indicators of SDG 13 makes no specific mention of tenure rights, the SDGs as a whole address both the need for tenure rights and climate change response.

In many countries, existing laws on climate change and natural disasters still do not address land tenure issues.

A 2017 review of Philippine laws on climate change and natural disasters found that, while these laws natural contain broad policy declarations that recognize the importance of tenure rights, their operational provisions lack clear protections for tenure rights and the enjoyment of these rights in the event of disruptions due to climate change and disasters (La Viña and Tan, 2017).

Similarly, in Bangladesh, the relationship between land tenure issues and disasters has not been reflected and integrated in several key policy frameworks, such as the Poverty Reduction Strategy Paper, the National Plan on Disaster Management 2008 to 2015, and the Standing Order on Disasters (Shaf, 2010).

Ways forward

Inadequate responses to disaster events often stem from a lack of clear understanding of tenure issues in the context of natural disasters and the impacts of climate change. There is lack of clear policy, and limited capacity of local governments and frontline agencies to deal with tenure issues.

It is important that land tenure issues be addressed in early efforts at building resilience and disaster preparedness. Also, climate change adaptation needs to be mainstreamed into national planning and policy frameworks, including land policy. These strategies should aim to deliver adequate tenure security, as this is necessary to provide people with the rights, resources and incentives for good land and resource management, and reduced vulnerability.

Climate change also raises questions for land policy in addressing wider issues of land access and redistribution, land use, management of common property resources, environmental protection, resettlement in the face of natural calamities and hazards, and potential conflicts to which climate change may be contributing.

Hence, this paper outlines four major recommendations: a) building a better understanding and appreciation of land tenure issues in climate change discussions; b) inclusive governance and the need to re-frame the policy discourse on climate change; c) addressing land tenure rights and security in the context of natural disasters; and, d) ensuring an engaged stakeholder participation.

Build better understanding of land tenure issues in climate change discussions

Stakeholders should:

- Humanize climate change discussions. Focus on climate change as an issue of humanity – in terms of lifestyles, consumption behaviors, and inequalities – and in the kinds of choices and sacrifices that societies will have to make.
- Amplify the voices of the poor and marginalized. Using a human rights lens and framework will help to bring focus on those who are disproportionately affected by climate change.

Civil Society Organizations should:

- Raise concerns and discuss with stakeholders on the need to address land tenure issues in climate change responses, and in natural disaster policies and programs.
- Provide platforms for CSOs and communities to improve the documentation of field cases in support of public awareness and advocacy on the need to address land tenure rights in climate responses.

Inclusive governance and the need to re-frame the policy discourse on climate change

Ensure a rights-based framework towards climate justice:

- Governments should undertake a review of major national laws on climate change and natural disasters on whether they explicitly address the links between climate change and disasters and tenure rights. Governments should adapt a framework that ensures the protection of tenurial rights in the face of natural and man-made hazards.
- Utilize the Voluntary Guidelines on Responsible Governance of Tenure of Land, Fisheries and Forests in the Context of National Food Security (VGGT) and the SDGs (specifically indicators 1.4.2, 5.a.1 (a), and 5.a.1 (b); and target 2.3) as a references to improve tenure policy and legal frameworks in relation to climate change strategies.
- For longer-term climate change adaptation and disaster preparedness, land use planning at local level should be guided by scientific hazard mapping

studies, a national policy on land use, and a policy on ensuring land tenure security for those likely to be affected by land use plans.

- While many governments include agriculture as a priority for adaptation within their Nationally Determined Contributions (NDCs), very few address issues of tenure security and land governance. Governments should include clear commitments that recognize and strengthen tenure of vulnerable communities in their NDCs and National Adaptation Plans.
- Ensure that a gender perspective, including efforts to ensure gender equality, is included in all planning for climate change mitigation and adaptation. The rights of children, older persons, minorities, migrants, and others in vulnerable situations must be protected.
- Building transparent and accessible land administration systems (that can contribute to both risk reduction and recovery efforts) requires expanding and verifying available information based on land use, land tenure and ownership.
- Improved land governance should be a part of climate change adaptation. Land tenure should be a central consideration in vulnerability/risk assessments and in adaptation planning processes.
- Finally, the tasks of building disaster preparedness and resilience should also focus on ensuring tenure security for all. This may include the need to reassign tenure rights, towards broader development goals of ensuring greater land equity, redistribution, and tenure security.

Promote climate-responsive land policies:

- Policies should ensure equal land rights for women and remove barriers to women's participation in sustainable land management. Some steps may include improved spending on health, education, training and capacity building for women, financial support and program dissemination through existing women's community-based organizations.
- Indigenous people's rights to land should be legally recognized and protected to foster food security and sustainability of existing knowledge about land use, which can increase opportunities for adaptation and mitigation.
- Customary approaches to the management of land and resources should be supported, including the seasonal migration of pastoralists.

- Recognize and, where relevant, record land tenure rights for those living in informal settlements to improve their access to infrastructure, services, and the formal economy.
- Use mitigation programs to improve tenure security. Forests, watersheds, drylands, and other agricultural lands could provide important environmental services for mitigation but are often held under insecure tenure. In such cases, providing tenure security could be used as an incentive or a reward for participation in environmental protection, and in sustainable use and management of resources.

Address land tenure rights and security in the context of natural disasters

- Include land tenure issues when conducting impact and vulnerability assessments that investigate both biophysical and socioeconomic factors – to ensure that land tenure issues are addressed in the planning of adaptation programs, and in the prioritization of investments.
- Governments should address tenure in disaster prevention and preparedness programs, and ensure that tenure concerns are addressed in relief and rehabilitation programs.
- Promote and use participatory disaster mapping for supporting and planning community-based disaster preparedness programs.
- Governments should provide means to resolve disputes over local tenure rights. Where people are unable to return to their place of origin, they should be provided with resettlement with secure access to alternative land, fisheries, forests and livelihoods in ways that do not jeopardize the rights and livelihoods of others (VGGT, Sec 24.5).
- Post-disaster reconstruction should be informed by the way land is accessed, used and controlled. This may include developing an inventory of potential relocation areas with assessments of their tenure and hazard risks; conducting vulnerability assessments; determining what processes are acceptable alternatives to documentary proof of land ownership or occupancy; and, conducting community-based enumerations of local residents based on local forms of tenure that existed, immediately after a disaster. Such documentation may help prevent the escalation of land disputes and will facilitate rehabilitation, reconstruction and resettlement where necessary.

Ensure an engaged stakeholder participation

- Ensure the full involvement of local stakeholders (particularly those most vulnerable to climate change including indigenous peoples and local communities, women, and the poor and marginalized) in the selection, evaluation, implementation, and monitoring of policy instruments for land-based climate change adaptation and mitigation.
- Ensure full participation of local stakeholders not only in the assessment of local climate vulnerabilities but are also in the co-designing of resilience actions.
- Provide mechanisms to actively address land use that leads to land degradation and over-exploitation of land and water resources.
- Make adaptation and mitigation plans publicly available, transparently financed, and developed in consultation with affected groups. ■

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Land Watch Asia (LWA) partners prepared case studies that served to illustrate the links between climate change impacts and land tenure.

Bangladesh	Association for Land Reform and Development (ALRD)
Cambodia	STAR Kampuchea (SK)
India	South Asia Rural Reconstruction Association (SARRA)
Indonesia	Konsorsium Pembaruan Agraria (KPA) or Consortium for Agrarian Reform
Kyrgyzstan	National Association of Pasture Users (Kyrgyz Jayity), National Union of Water Users Associations of the Kyrgyz Republic (NUWUA)
Nepal	Community Self Reliance Centre (CSRC)
Philippines	Xavier Science Foundation, Inc. (XSF)



Founded in 1979, the Asian NGO Coalition for Agrarian Reform and Rural Development (ANGOC) is a regional association of national and regional networks of civil society organizations (CSOs) in Asia actively engaged in promoting food sovereignty, land rights and agrarian reform, sustainable agriculture, participatory governance, and rural development.

33 Mapagsangguni Street, Sikatuna Village, Diliman, 1101 Quezon City, Philippines
Email: angoc@angoc.org | Website: www.angoc.org



Land Watch Asia (LWA) is a regional campaign to ensure that access to land, agrarian reform and sustainable development for the rural poor are addressed in national and regional development agenda. The campaign involves civil society organizations in Bangladesh, Cambodia, India, Indonesia, Kyrgyzstan, Nepal, Pakistan and the Philippines. ANGOC is the regional convenor of LWA.