Food security is the state of having sufficient quantity and quality of food to eat on a continual basis. It is consumption based, and may apply to individuals, families, or a nation, as in personal or national food security. The relationship between land tenure and property rights (LTPR) and food security may be direct; e.g., securing property rights in land or improving land access thereby enabling investment of land, labor and money in food production. The relationship may also be indirect; e.g., selling agricultural produce for sale or securing property rights for businesses that provide wages, earnings or income that enable farmers, owners and workers to buy food. Broadening access to resources and securing property rights are necessary conditions for agricultural and economic growth, but not sufficient. In addition, farmers and businesses require access to markets to buy inputs and sell produce at affordable costs, improved technology, affordable credit or finance, and technical knowhow. The essential problem in linking property rights with food security is how to sequentially and effectively integrate these factors in ways that help households, farmers, and businesses secure and obtain access to property rights, resources, and markets in order to improve food production and/or consumption.

Beyond food production and economic growth, land and related natural resources are also a safety net for securing livelihoods and subsistence when markets are weak or absent, or when coping with political uncertainty or disaster. In addition to securing food security through the mechanisms above, LTPR must also deal with issues of vulnerability that arise from threat of food deprivation; for example, vulnerability resulting from land grabbing by powerful interests; or vulnerability created by HIV/AIDS. Insecure LTPR affect all citizens but in particular women, the displaced, HIV/AIDS infected, and the marginalized by divesting them of land, property rights and resources that threaten their welfare and livelihood. The linkage between LTPR and food security thus engenders both food production, economic growth and vulnerability dimensions.

Food Security

Food insecurity, hunger and famine are the cumulative result of shortfalls in one or more sub-components of the food balance equation (Eicher): 

\[ C = (S^b - S^e) + Y + (G^r - G^g) + (F^r - F^l) + P - X + A \]

- \( A \) = Food Aid
- \( C \) = Food Consumption (Food Security)
- \( F \) = Food Lending (Borrowed, Lent)
- \( P \) = Food Purchases
- \( S \) = Food Stocks (Beginning, Ending)
- \( Y \) = Production (Food Self-Sufficiency)
- \( G \) = Food Gifts (Received–Given)
- \( X \) = Food Sales

Food production scientists emphasize the importance of technology adoption and production (\( Y \)) in securing access to food availability. Specialists in famine and food insecurity emphasize the role of entitlements (\( S, G, F, P, X, A \)) in securing food acquisition. Famine, according to Sen, is caused by various influences (drought, flood, inflation, lost employment, or conflict) that deprive people of entitlements to adequate food. Long-term policy must be geared to enhancing, securing, and guaranteeing these entitlements, rather than simply expanding food output. Enhancing food security for the poor thus requires livelihood strategies that enhance food production and secure value added and non-farm income growth with goals of improving the overall quantity and quality of food consumed.

Tenure Security

Tenure security is the perception of having secure rights to land and property on a continual basis, free from unreasonable interference from outsiders, as well as the ability to reap the benefits of labor and capital invested, either in use or when leased or rented to another. It has breadth, duration and assurance dimensions. Breadth refers to the number of rights or key rights held including rights of use, ownership, transfer and exclusion. Duration requires that the time horizon be sufficiently long to recoup income from investments; tenure insecurity is generally less an issue for short-term inputs that are repaid at the end of a season, then for long-term capital improvements requiring significant land or capital investment. Assurance implies that rights be held with reasonable certainty, subjectively if not statutorily in law.

Tenure insecurity in practice stems from having too few rights, inadequate duration of rights, lack of assurance in exercising rights, or high costs of enforcement. But there are also many instances in the world where land tenure and property rights are secure, but farm size is too small, fragmented, or poor in quality.
to earn a decent livelihood. Thus tenure security is closely intertwined with land access in tackling issues of poverty, marginalized farming or low productivity agriculture.

The literature on tenure security and food security focuses on rights in land and property, institutions or rules governing behavior, effectiveness of organizations responsible for governance, and incentives for investment and food production as illustrated in the Box A.

Tenure security potentially has both demand-side (incentives to farmers) and supply-side (incentives to lenders) effects. On the demand side, an enhancement in tenure security increases demand for medium to long term land improvements and, to a lesser extent, for movable assets (livestock, farm machinery) by increasing the likelihood of capturing investment returns, increasing certainty of asset ownership and reducing disputes over ownership. Demand for complementary short term inputs theoretically increases as a result of enhanced tenure security or derived from land improvements (water and soil conservation increasing fertilizer profitability) that in turn increase investment, yields and food production.

The linkages in the above box may never materialize for a variety of reasons—farmers lack clear and robust property rights, investment demand is weak because they are unfamiliar with the technology, investments are unprofitable or risky, input distribution systems are poorly developed, poorly functioning capital markets impede delivery of financial capital at affordable rates, or women/vulnerable groups lack secure property rights or resource access to protect assets, encourage participation in rental markets, or provide livelihoods. A number of global trends are also confounding the relationship between land tenure, property rights and food security, and creating demand for an expanded focus on land tenure and property rights action.

Global Trends Affecting the LTPR/Food Security Nexus

Development practitioners today are confronting a global dynamic that is unique in their lifetimes:

- **Growing Protectionism in Agricultural Trade.** Beginning in the 1980s, particularly in Africa, agricultural policy focused on distorted markets—government controls and low producer prices that impoverished farmers. Over the past two to three decades, there has been substantial reduction in tariffs and non-tariff barriers to trade, but protectionism is on the rebound. Until recently, Agricultural Ministers from the developing world lobbied for reduction of US and EU export subsidies in order to improve prices and incomes for their farmers. However, in the recently collapsed trade talks, negotiations partially failed because of China and India’s reluctance to further liberalize. As food prices surged in 2008, major rice exporters (Thailand, Vietnam) imposed trade restrictions to limit exports, not to protect producers, but to guard against food riots and price instability for consumers. Food price inflation has lead to social unrest and food riots in a wide range of countries from Egypt, Senegal, Indonesia, Haiti, and the Philippines among others. Since the 1980s, the gains to liberalization have dwindled, while the stakes of not feeding the urban poor and consumers have greatly risen.

- **Escalation of Food and Energy Prices.** The oil boom of the late 1970s had collapsed by the mid-1980s. Our foundational experience with market liberalization, trade policy, and markets occurred during a post oil boom when energy prices were low. Today, we are in unfamiliar territory—both high real food and energy prices. While oil prices have declined from their peak of $145/barrel in July 2008 to $40-$50/barrel presently, prices will again rebound after the global recession eases as a result of population growth, limits to resources, and rising commodity demand resulting from industrialization (in particular Asia and Latin America). High energy prices are increasing demand for bio fuels that broaden economic opportunity, but also compete with world food supply, worsening food price affordability. Taking land out of production for food crops, increases the risk of conflict if the poor or marginalized are squeezed off their customary lands by the state or investors. Alternative energy development (solar pumps for irrigation, carbon swaps, bio gas, methane recovery) will be a driver of agricultural growth in this new era of high food and energy prices, but at

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**Box A: Conceptual Model Linking Land Tenure and Property Rights with Food Security**

![Image](https://example.com/image.png)

Higher yields are possible even if households lack sufficient financial savings because of potential supply-side effects that affect access to financial credit, through possession of easily transferable land title enhancing the collateral value of land and improving the creditworthiness of the landholder. Tenure security may also positively affect land markets (sales and rentals) by clarifying and assuring rights in the transaction, and thereby increasing land value. De Soto and other development practitioners emphasize the importance of wealth created by secure property rights for economic growth, in both farmland and urban and peri-urban property.
the risk of rising food prices and land grabbing that worsens food and tenure security, particularly for poor and vulnerable populations.

**Box B: The Global Grab for Land and Resources.**

“Today’s food and financial crises have, in tandem, triggered a new global land grab. On the one hand, ‘food insecure’ governments that rely on imports to feed their people are snatching up vast areas of farmland abroad for their own offshore food production. On the other hand, food corporations and private investors, hungry for profits in the midst of the deepening financial crisis, see investment in foreign farmland as an important new source of revenue. As a result, fertile agricultural land is becoming increasingly privatized and concentrated. If left unchecked, this global land grab could spell the end of small-scale farming, and rural livelihoods, in numerous places around the world.”


- **Rapid Industrialization.** The emergence of China, India, and rapidly growing economies in Asia and Latin America in the past two decades has sharply increased global demand for and trade in commodities—food stuffs, minerals, and energy—but also resulted in increased foreign investment by multinational and parastatal firms and governments in resources beyond national boundaries. The outcome has generated economic growth in countries having bountiful natural and mineral resources, but at the risks of negative unintended consequences—expropriation without adequate or fair compensation, small resource holders divested of land and property without due recourse or adequate compensation, and a global grab for land and resources resulting from high food and energy prices and rapid industrialization (see boxes B and C).

- **Food Price Dilemma.** Farmers are food buyers and sellers, and the majority of poor farmers around the world consume more than they produce. High world food prices are hurting both consumers and farmers who are food deficit households. Higher farm prices are no longer the panacea for income growth. In addition, food security will need to be driven by a technology and market focus that lowers real input costs and improves productivity. The Asian green revolution, touted for accelerating agricultural growth, cannot be easily replicated because high energy prices have driven up the costs of its main driver, fuel for machinery and oil for nitrogen based fertilizers. Concerns about biodiversity protection further limit prospects for crop area expansion. The technological gains of tomorrow in food productivity will need to achieve high yields while minimizing the energy cost in agriculture and restoring biodiversity to halt greenhouse gas emissions. Such strategies will require increased emphasis on clean water management, genetics, integrated pest management, low input technology, and broadening access to factors of production (land tenure security, financial capital, and labor).

**Box C: Global Grab for Land, Minerals and Resources**

Land Tenure and Food Security

What then are the priorities for LTPR in a pro-poor investment strategy:

1. Focus on broadening access of women, vulnerable groups and indigenous populations to land and property, particularly those affected or marginalized by globalization to protect assets and expand access to economic opportunity.

2. For the poorest of the poor, continue food aid and safety net programs, but invest in secure rights and other enabling conditions that create pathways out of poverty.

3. Invest in legal reforms and institutions (rule of law) that secure individual and group access and rights to land and property in order to improve incentives for economic growth and restore or protect individual and community assets (see Boxes D and E for Ethiopia and Timor Leste).

4. Support rights awareness, and the effectiveness of organizations that deliver rights, starting first and foremost in areas where demand is manifest by potential or real economic growth opportunities (Boxes D and E).

5. Undertake redistributive, market driven land reform to broaden access to land and productive resources to redress historical injustice.

6. For resource poor farmers situated on marginal or fragile lands, that are too small in size to achieve sustainably high yields, invest in new forms of group ownership (New Age Cooperatives, Company, and equity sharing models) and governance structures that can compete in markets, gain access to technology, provide stable incomes, achieve economies of size, and broaden access to investment opportunities (Box F).

7. Focus on market integration; property and financial markets; and factor, input, and commodity markets.

Box D: Ethiopia - Strengthening Ethiopian Land Tenure Policy and Administration Program

USAID’s ELTAP project sought to regularize and improve methodologies of land certification and administration, promote rights awareness, reform land law and legal enforcement, and undertake training and commissioned studies for policy formation. This project culminated in June 2008 with a number of notable results; 855 men and 269 women trained in land certification and administration systems and methodologies, 704,754 parcels registered and 146,824 households benefiting from improved LTPR, and legal and policy reforms strengthening LTPR promulgated in Amhara, Tigray, Oromia and SNNP regions. A new project in August 2008 will extend this work to pastoral regions, continue work on legal and policy development, and with land certification. Work in ELTAP regions will focus on high potential investment areas to broaden smallholder access to commercial opportunities while work in pastoral zones will focus on mitigating conflict over land and natural resources.

Box E: Strengthening Property Rights in Timor Leste

As the people of Timor Leste (East Timor) begin to build an independent future, they are moving forward with two critical aspects— reducing conflict and clarifying land rights—to help restore buildings, commerce, infrastructure, and livelihoods lost in the conflict. USAID’s Strengthening Property Rights in Timor Leste project is assisting the Government of Timor Leste with 1) land policy, law and regulations to clarify and strengthen people’s rights in land and property; 2) support public information awareness to increase people’s understanding of their rights and responsibilities in law; 3) strengthen the country’s cadastre, land registration, and land administration system to connect rights in law with rights of land and property holders on the ground; and 4) assist national and regional governments with mediation and reconciliation that reduce conflict over resources and provide people with effective legal protection.

Box F. Search for New models of Land Consolidation to Link Smallholders with Investors

In Rwanda, subsistence farming on increasingly tiny plots on fragile land is not sustainable, nor able to meet the food security needs of the country. The government wants to increase yields and value added to address widespread poverty and low productivity. To do so, it wants to welcome investors and promote agribusiness, land use consolidation, controls on land use and new models of group ownership (cooperatives and corporate models). But such bold changes also risk disenfranchising small holders of rights, income, and the land they rely on for subsistence.

The Government of Rwanda is not alone in seeking solutions that connect land holders and outside investors. In Colombia, indigenous communities have secure land rights protected by powerful international lobbies, but lack capital and access to high value markets. They are reaching out to private investors, who they both want and distrust. The passage of the land law in Mozambique in the late 1990s was meant to create incentives for both investors and communities, but presently investors are still confounded by overlapping rights and tenure insecurity, while only a few community lands have been demarcated and rights protected in ways that open up opportunities for attracting private investment through leasing arrangements. Twenty years ago, the emphasis in land policy was on equity, social justice, and tenure security, particularly for smallholders. Today, in face of persistent poverty and low agricultural productivity, there is rising demand for solutions that build partnerships between smallholders, communities and investors.

Selected References


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