

# Whose Forest Land Is It?

## Trends in Tropical Forest Land Tenure

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## I. Introduction

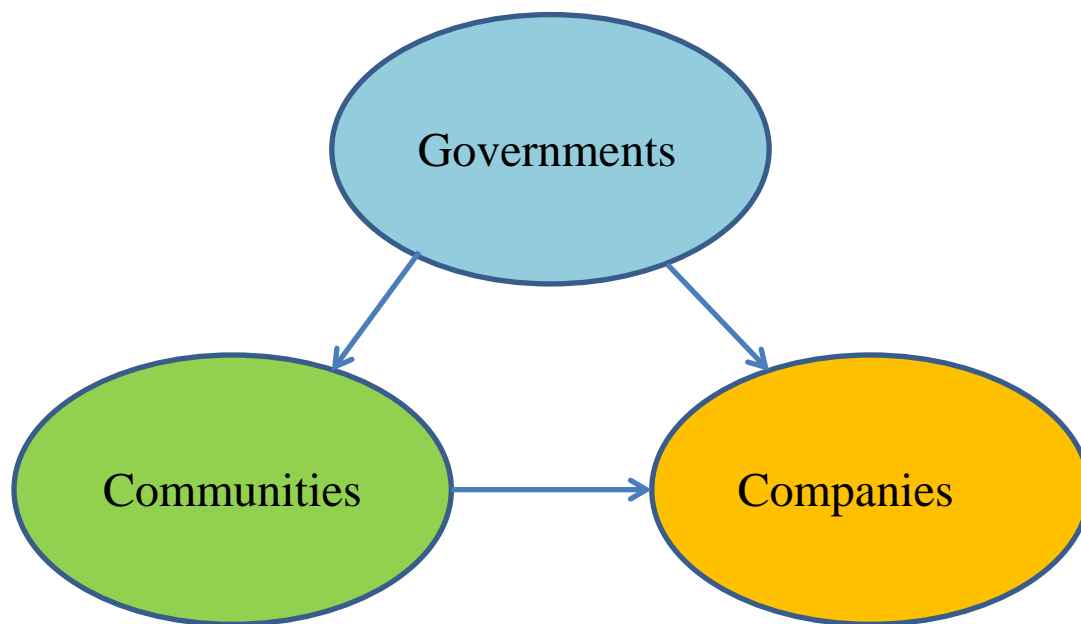
Recent years have seen dramatic changes in the ownership, use, and control of tropical land. But these changes in what is referred to as land tenure have not all gone in the same direction. On the contrary, there have been two clear but seemingly contradictory trends.

On one hand, large areas—particularly forestland—have been transferred from the control of governments to communities. Indigenous Peoples, for example, have had their traditional rights to land recognized in various legal ways (Hatcher and Bailey 2011; Sunderlin et al. 2008; White and Martin 2002). In some countries, this has involved quite significant amounts of land: a recent review by the Rights and Resources Initiative (2012) found that, “approximately 31 percent of the forests in developing countries are owned or designated for use by Indigenous Peoples and communities.” This represents an increase from 21 percent a decade earlier. While there are large differences in the “community tenure” of forests (in this context, the amount of forestland controlled by local communities) between continents—with the highest percentage in Latin America and the lowest percentage in Africa (Rights and Resources Initiative 2012)—the degree of control communities exert over their land has clearly increased.

On the other hand, considerable amounts of agricultural land in developing countries have been transferred from governments and communities to corporate, and often foreign, control. While these deals often involve long-term leases by governments rather than outright sales, the land involved is often being used by communities (whether Indigenous Peoples or recent colonists). This process has been described as “land-grabbing,” “the global land rush,” and “the global

farms race” (Narula in press; Kugelman and Levenstein 2013; Anseeuw et al. 2012a, 2012b; Cotula 2012; Graziano da Silva 2012).

One could look at these two processes as a single trend: the transfer of land tenure from governments to non-governmental entities, or “privatization. But this would obscure vital differences between corporations and communities, not only in terms of their wealth, political power, and relationship with the land, but also in terms of the main kinds of land involved (farmland or forest). The distinction is also important for subsequent land use since most forestland transferred to communities, particularly Indigenous Peoples, tends to remain forested, while forests transferred to corporations are often cleared and put into agricultural production (Ricketts et al. 2010). Thus, it is necessary to distinguish between at least three kinds of entities—governments, communities, and companies—and three directions in which land can be transferred among them. Figure 1, though admittedly oversimplified, shows these three main avenues for tropical land tenure change.



**Figure 1.** The main directions in which tropical land tenure has changed hands during the early twenty-first century.

The aim of this paper is to identify what has driven these trends in recent years (particularly with respect to tropical forests) and, insofar as possible, to predict whether they are likely to continue. The paper is deliberately short and restricted to only a few aspects of this complicated subject, on which the literature is already large and expanding rapidly. It does not focus in detail on any particular country. It looks only at the tropics, especially tropical forests. It does not consider the legal and human rights issues involved, nor does it consider the thorny issues of definition, nor undertake any detailed economic or political analysis. We examine theoretical and conceptual questions only briefly, to the extent they are necessary in interpreting the broad trends. All of these issues are examined in depth by more knowledgeable authors whose work we recommend (e.g., Narula in press; Kugelman and Levenstein 2013; Anseeuw et al. 2012a, 2012b; Cotula

2012; Rights and Resources Initiative 2012; German et al. 2011; Hatcher and Bailey 2011; Carneiro Filho and Braga de Souza 2009; Sunderlin et al. 2008; White and Martin 2002).

We *do* consider the implications land tenure changes may have for forest conservation, particularly in relation to climate change and the required scale of REDD+ (Reducing Emissions from Deforestation and Forest Degradation plus related pro-forest activities). Because community tenure tends to reduce deforestation and thus global warming emissions (Porter-Bolland et al. 2012; Ostrom 2010; Chhatre and Agrawal 2009; Agrawal, Chhatre, and Hardin 2008), governments that could receive REDD+ payments on the basis of national-scale emissions reductions have an incentive to transfer forestland out of their control to that of communities and Indigenous Peoples. These peoples have long been the main stewards of tropical forestland through collective, rights-based tenure systems, and have played a critical role in maintaining forests—often more effectively than governments (Porter-Bolland et al. 2012). The seemingly paradoxical situation that governments can benefit financially from REDD+ compensation by *not* controlling forestland has important implications for both land tenure policies and the design of REDD+ mechanisms.

Section II reviews the global economic and demographic contexts in which current land tenure changes are taking place, with an emphasis on trends affecting the drivers of these changes.

Section III considers some of the fundamental concepts useful in interpreting the relevant data, including political economy, the distinction between common property and open access, and the effect higher product prices have on the prices of factors of production. Sections IV through VI review the recently compiled global datasets on land-grabbing and tropical forest tenure and

some empirical results derived from them. Finally, section VII offers some interpretations of the trends we see in the data, and their implications for policies related to land rights, REDD+, and forest conservation.

## II. Global Context and Drivers

Dramatic changes in tropical land tenure are taking place in the context of important trends in the global economy, particularly the global food system. Each of these trends affect agriculture directly (and thus forests indirectly); some are new, while others are processes that have been under way for many decades, but have recently become more pronounced. They include:

1. The **globalization of agriculture**, with large amounts of crops and livestock flowing not only between Northern Hemisphere countries and from the Southern Hemisphere to the North, but also between developing countries with rapidly growing economies. An important effect of this trend is that food prices are now set by global markets.
2. **Rising agricultural prices**—a reversal in the twenty-first century of their previous many-decades-long decline in real terms (OECD-FAO 2012). This rise was particularly notable during the sharp price spike in 2007 and 2008, which was followed by a decline due to the Great Recession. However, prices for maize, wheat, and soy resumed their upward march in 2010 and are now again at record levels.
3. **Population growth**, with the planet's current 7-billion-plus inhabitants expected to rise to more than 9 billion by the year 2050.
4. **Changing diets**, particularly in developing countries, where eating patterns have been converging with those in the developed world. This “nutrition transition” (Popkin et al.



2012) is characterized by increasing per-capita consumption of meat, vegetable oils, and sugars.

5. **Expanding biofuel production**, principally from food crops such as maize, sugar cane, oil palm, rapeseed, and soybeans. This expansion is most dramatic in the case of corn (maize); the United States (the leading global exporter) now converts 40 percent of its crop into ethanol (Martin 2011). Though crops raised specifically for biofuels (e.g., jatropha) remain comparatively small in area, even they are now a factor in the energy sector's competition with food and feed for crops and cropland.

This is the context within which tropical land tenure has been changing, and these trends provide a starting point for understanding how and why it is changing. Indeed, a reasonable explanation of the global patterns of land transfer among governments, communities, and companies as depicted in Figure 1 is that they are being driven by these trends.

It is important to note the different directions in which these five trends are currently moving. Some have accelerated (globalization and biofuel production) or even flipped from decline to growth (prices), while population growth has slowed substantially in recent decades and diet changes may do so in the coming decades. The current population trend is consistent with expectations of a very slowly growing, stable, or even declining world population after 2050 (Bongaarts 2010). Similarly, the pace of diet change in developing countries is likely to slow as eating patterns continue to converge with developed countries; in Latin America and China, per-capita meat consumption is already at about three-fourths the level of industrialized nations (Gerbens-Leens et al. 2010). Thus, although there will be continuing pressure on land from

population growth and diet change, it is likely to decrease by the late twenty-first century compared with what we experienced in the late twentieth century.

### **III. Some Fundamental Concepts**

This paper's purpose is not to review the theory underlying how political economy affects land tenure, but a few of that theory's fundamental concepts provide us with a basis for predicting how the global trends considered in the last section will affect land tenure.

The first comes from economics: the tendency for increases in the price of a product to lead to increases in the prices of the factors used to produce it. Applied to agriculture, this means that as crop and livestock prices rise, so does the price of the land used to produce them. In the United States, for example, the recent spike in corn, soy, and wheat prices has been matched by a similarly rapid spike in the price of farmland (Nickerson et al. 2012).

The second concept is that of political economy itself: that economic change depends not only on prices, costs, and markets, but also on the use of political power to gain economic advantage (Gilpin 2001). This expresses itself in speculation, rent-seeking, and the manipulation of government by elites for their own private gain.

A third important idea is the distinction between common property and open access. The Nobel Prize-winning economist Elinor Ostrom, critiquing the concept of the "tragedy of the commons," pointed out that many traditional systems of common land tenure limit access and use to members of the community, and have well-developed systems to regulate how intensively the

land will be exploited (Ostrom 2010). Thus, one tends to see overexploitation and environmental damage in situations that lack community regulation—in other words, where access to resources is effectively open to outsiders. One could add, combining this point with the previous one, that what is supposed to be open access in principle—for example, land held in trust by government for the benefit of the people as a whole—may often turn out to be “elite access” in practice.

Keeping these three ideas in mind, we will now examine the recent data on land tenure changes in the tropics, particularly changes in forestland tenure.

#### **IV. What Do the Global Data Show?**

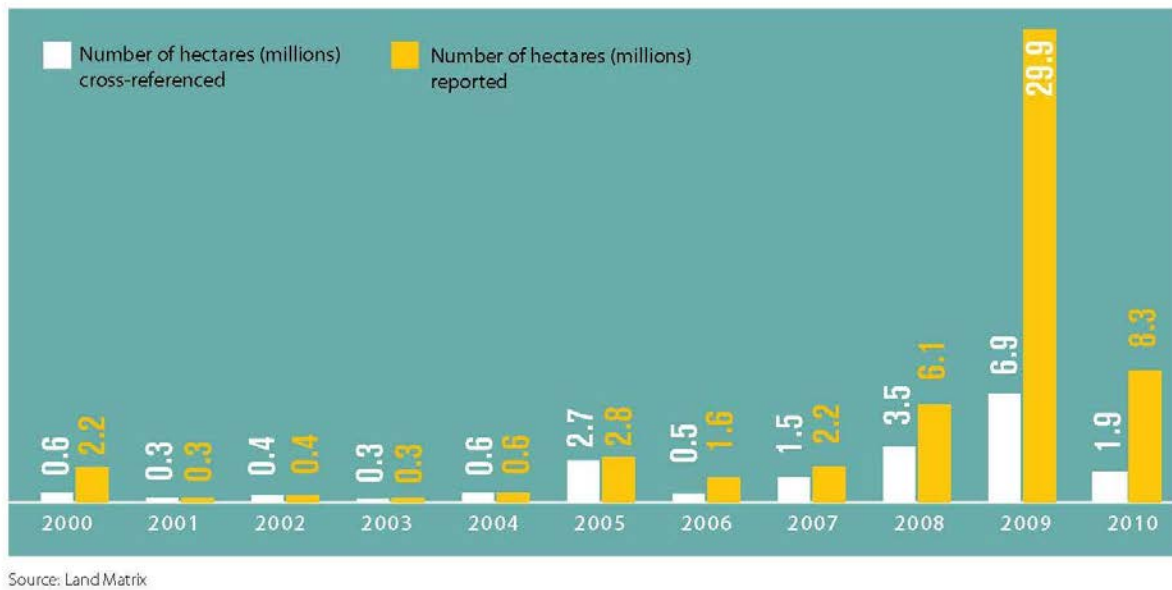
While quantitative evidence on land tenure change is both difficult to gather and subject to complicated issues of definition, some excellent recent reviews do enable us to see some current trends and—with much less certainty—project how these trends might continue or change in coming years. For example, the Rights and Resources Initiative’s work on forest tenure (Hatcher and Bailey 2011; Sunderlin et al. 2008; White and Martin 2002) and the International Land Coalition’s work on land-grabbing (Anseeuw et al. 2012a, 2012b) have not only provided global assessments of trends but also encouraged further research by making their data publicly available on the Web (at [http://www.rightsandresources.org/documents/country\\_data.php](http://www.rightsandresources.org/documents/country_data.php) and <http://landportal.info/landmatrix>, respectively).

Other researchers have added valuable global and regional assessments using both these and other datasets (Narula in press; Cotula 2012; German et al. 2012; RAISG 2012; Scherer 2012; Deininger and Byerlee 2011; Carneiro Filho and Braga de Souza 2009). In this paper we

generally rely on the analyses of other researchers, supplemented by our own where more recent data are available.

## V. The Land Rush Data

The trend of the global land rush is clear in Figure 2, whether viewed in the context of land deals reported by the media (which does not imply these transactions were actually completed) or land deals that have been confirmed by cross-referencing with other sources.



**Figure 2.** Global land acquisitions over the past decade.

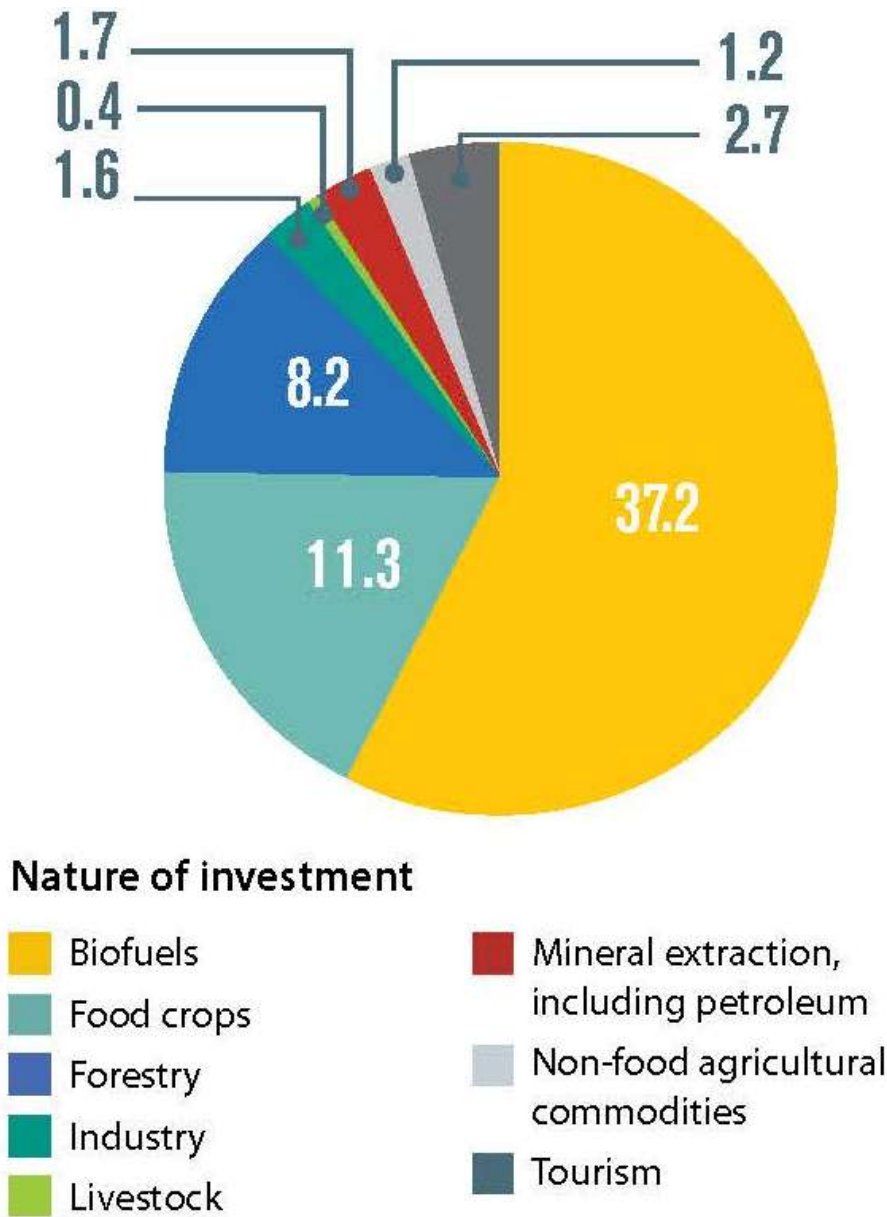
Source: Anseuw et al. 2012a.

The area acquired began to grow rapidly in 2005, peaking in 2009 and then declining substantially in 2010 (though this last drop could be partly due to data not yet being available).

The preponderance of the land involved was in Africa, with a notably small amount in Latin America. In the majority of cases (51 of 90), the state was the previous legal owner, with the

remaining cases divided about equally among private smallholders, communities, and private companies (Anseeuw et al. 2012a).

While data on crop production for food and biofuels are not easily separated (Anseeuw et al. 2012b), Figure 3 shows the importance of biofuels in land acquisitions. Forestry is less important, and it is worth noting that acquiring land for forestry is not the same thing as acquiring forestland: much—perhaps most—of the land acquired for forestry may be already cleared land.



Source: Land Matrix

**Figure 3.** Global land acquisitions by sector (in millions of hectares), using cross-referenced data only.

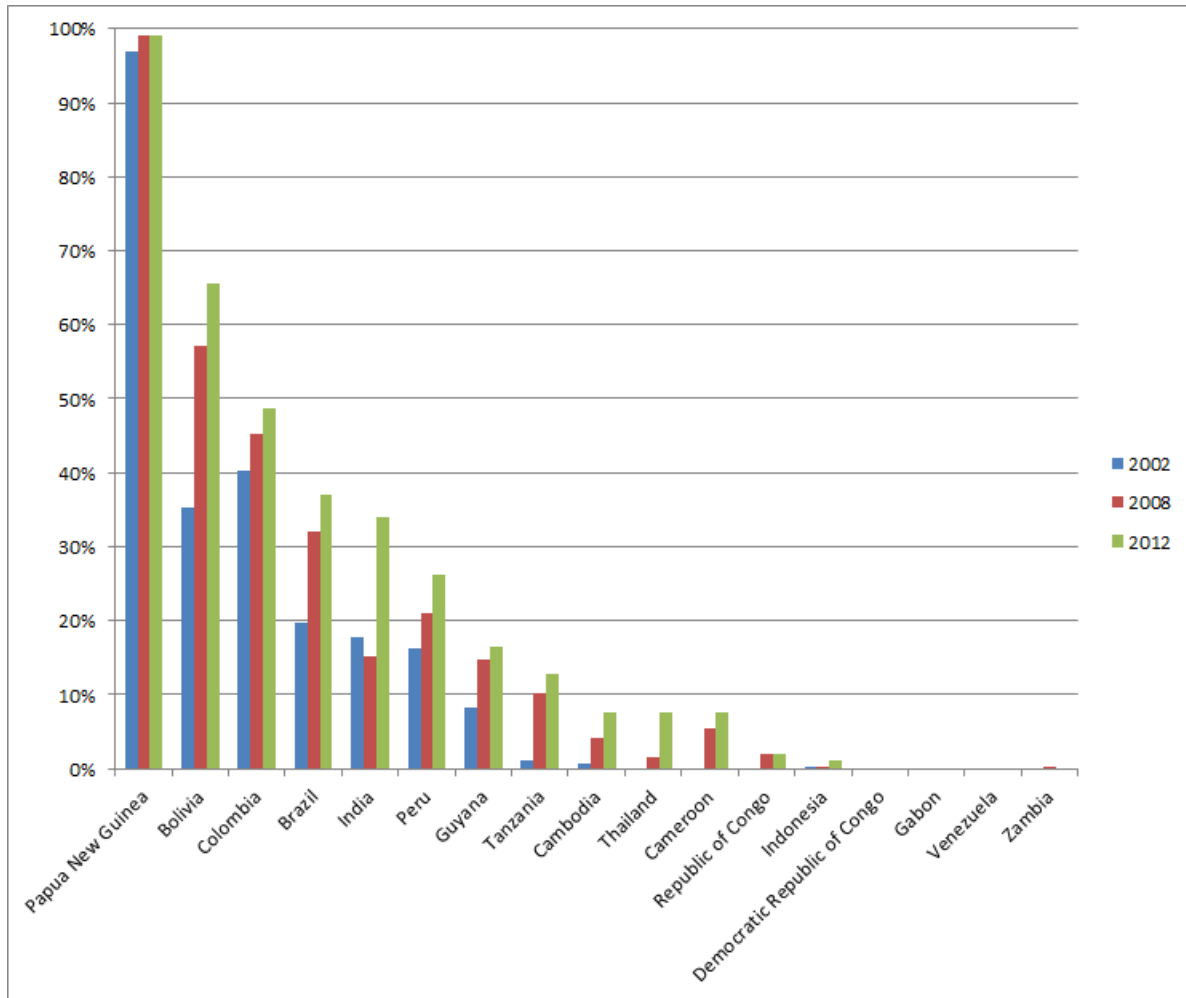
Source: Anseeuw et al. 2012a.

The data examined thus far have been global, not just tropical, and apply to all kinds of land. On the other hand, these data focus on foreign land-grabbing and thus may exclude important changes in tenure that involve only domestic actors. In Indonesia and Malaysia, for example, national companies or national subsidiaries of regional companies predominate in the clearing of tropical forests to make way for palm oil plantations, so this kind of tenure change may not be well represented in the data.

Also, transfers from government to corporate ownership may involve lands that are legally state-owned but in reality have long been occupied and used by communities or individual smallholders. In effect, these lands are being transferred from communities to corporations, but will not be depicted as such in the data.

## **VI. The Tropical Forest Tenure Data**

While the predominant tenure change globally appears to be from governments to companies, a quite different story emerges in the studies of the Rights and Resources Initiative: that land is going from governments to communities, as initially described in White and Martin 2002 and reiterated by Sunderlin et al. 2008, Hatcher and Bailey 2011, and Rights and Resources Initiative 2012. We analyzed the most recent (2012) set of complete data, for tropical countries only, and confirmed this trend. However, the trend is only evident in certain countries, most notably in Latin America (Figure 4).



**Figure 4.** Percent of forest in community tenure for 2002, 2008, and 2012, excluding non-tropical countries (e.g., the United States, Russia, Canada, China) and countries lacking complete data for all three years. Community tenure here combines the categories of “Reserved for communities and indigenous groups” and “Owned by communities and indigenous groups.”

Source: Rights and Resources Initiative 2012; downloaded from

[http://www.rightsandresources.org/documents/country\\_data.php\\_on\\_January\\_2](http://www.rightsandresources.org/documents/country_data.php_on_January_2), 2013.

The increase in the amount of forest in community tenure does not appear to have slowed between 2002–2008 and 2008–2012. However, there is little sign that countries which had not



already begun shifting forestland into community tenure in the first period were starting to do so in the second, including the second- and third-largest tropical forest nations: Indonesia and the Democratic Republic of the Congo, respectively. (Recent policy changes in Indonesia may now be altering this situation.) Five of the six Latin American countries show substantial increases in community tenure between 2002 and 2012, but only two of the six African countries do.

An interesting difference between the two periods appears when one compares the shifts among all three tenure categories:

- reserved for or owned by communities and indigenous groups
- government-administered
- owned by individuals and companies

The total amount of tropical forest in community tenure increased in both periods, from 228 million hectares to 295 million to 339 million. Government-administered forestland decreased in the first period but increased in the second (923 million hectares to 677 million to 708 million), while individual and corporate ownership first increased but then decreased (84 million hectares to 219 million to 136 million). Thus, community forestland increased at the expense of government land in the first period, then at the expense of individual and corporate land in the second.

## **VII. Interpreting the Trends**

So what is driving these changes in tropical land tenure? In an economically globalized world, the return of agricultural prices to record highs certainly seems to be translating into increased corporate demand for agricultural land in the tropics. It does not seem valid to ascribe these

recent changes to population growth, since growth rates have been decreasing and have fallen considerably from their mid-twentieth-century levels. Rather, increased demand for agricultural land has been generated mostly by changing diets and the boom in biofuels. Thus, four of the five trends we identified earlier—price increases driven by changing patterns of food and fuel consumption on a global scale—are driving the general shift in agricultural land tenure.

For tropical forestland specifically, however, the story seems quite different. Though there were net transfers from governments to individuals and companies in the early 2000s, transfers have recently shifted back in the opposite direction. Overall, tropical forestland has continued to shift to community tenure throughout this period (although it has not yet begun in some countries).

Where this shift has occurred, the underlying reasons would seem to be political rather than economic. For example, effective campaigning to recognize the rights of Indigenous Peoples has created pressure for land tenure transfers from government to community control (Rights and Resources Institute 2012). National-scale REDD+ programs have also created an incentive for such transfers (see below), but these programs are recent in origin. Their effectiveness will depend on their scale, since the benefits of national or provincial programs will go to governments while those of local projects are likely to go to private entities. International decisions about the design of REDD+ can therefore lead to either positive or negative outcomes for both governments and communities.

It should be noted that not all tropical regions are experiencing the same trends. In Latin America, for instance, there is little indication of agricultural land-grabbing, and forestland is

generally moving from government hands into community tenure. This has been accompanied by major decreases in deforestation rates, most notably in Brazil, where Amazon deforestation was down 75 percent in 2011–2012 compared with the 1996–2005 average (Boucher et al. 2013), but also to some extent in other Amazon countries (RAISG 2012). This is consistent with findings that community control tends to conserve forest as well or better than government-administered protected areas (Porter-Bolland et al. 2012; Hatcher et al. 2011; Ricketts et al. 2010; Chhartre and Agrawal 2009).

On the other hand, land-grabbing is most evident in Africa, where substantial amounts of forestland are being transferred from government control into corporate hands. Shifts of forestland to community tenure are occurring in only a few countries. In Southeast Asia, the other large tropical forest region, the situation seems to fall between those of the other two regions.

As forestry shifts more and more to plantation production, where yields are much higher than in natural tropical forests (Elias et al. 2012), the profitability of logging in natural forests is decreasing. However, a new opportunity has been opened up by the shift in focus of REDD+ policies from a project-based carbon market focus to national-level fund-based compensation. The shift away from carbon markets has been driven by the lack of movement toward establishing cap-and-trade programs in industrialized countries (particularly the United States), and the exclusion of REDD+ credits in those markets that do exist (such as the European Union Emissions Trading System), both of which have dampened corporations' expectations of income from the control of forestland. In contrast, the development of national-scale REDD+ programs

following the 2005 United Nations Framework Convention on Climate Change meeting in Montreal has made it possible for governments to benefit financially by reducing deforestation. Brazil, for example, has received \$670 million in REDD+ compensation and Guyana has received \$115 million—far more than any carbon market payments to private entities (Boucher et al. 2013; Government of Guyana 2012).

Furthermore, governments need not own the forestland to receive this compensation—they only have to reduce emissions from deforestation on a national scale. Transferring forest tenure to communities, which can be just as effective in reducing emissions as maintaining direct government control, thus becomes an attractive political-economic strategy, especially to governments in Latin America and Southeast Asia, where the potential to reduce emissions is greatest because deforestation rates are high and the carbon densities of forests are large. In Africa, on the other hand, less deforestation and less-carbon-rich forests make the potential compensation considerably lower.

In conclusion, the recent trends in tropical land tenure—the shift of agricultural land from government to corporate hands for food and biofuel production, and the transfer of forests from government administration to community tenure—can be interpreted as responses to the globalization of agriculture. Land-grabbing has been driven by changing diets and increasing demand for biofuels around the world, which have reversed the twentieth century's downward trend in farm prices and made agricultural land more valuable. This pressure is likely to continue in the short and medium term as diets continue to change and population continues to grow (though more slowly). Over the longer term (i.e., into the latter half of the twenty-first century),

the question of whether government policies continue to favor expanded biofuel production will become increasingly important.

Tropical forestland, on the other hand, will have increasing relative value—in terms of national-level REDD+ compensation rather than timber production or project-level carbon market payments. This is quite compatible with a political-economic strategy of transferring forestland to community control, which can yield the same REDD+ compensation to governments as direct control and has been shown to have other environmental, social, and cultural benefits. REDD+, therefore, can have an important influence on land tenure in the tropics, and could create incentives for governments to favor either communities or corporations in land transfers, depending on the scale at which REDD+ has been implemented.

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