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What is land? Assembling a Resource for Global Investment[1]

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Writing about the Indian district of Chotanagpur in 1921, a British colonial official William Archer was investigating the reaction of indigenous communities threatened with eviction because they had fallen into debt. They formed a movement to reclaim or hold onto this land, and distribute it among their followers.

> When asked 'Where are your title deeds?' ... [members of this movement] replied 'The answer is my spade, my axe, my ploughshare are my title deeds ... ploughing is the writing of the golden pen on golden land'. To the argument 'Your lands have been auctioned for arrears of rent and purchased by another', they replied: 'When a man buys a mat he rolls it up and takes it away; similarly unless the purchaser has rolled up my land and taken it away how can he be said to have purchased them? (Damodaran, 2002:93)

Three points are important here. First, what land *is* for a farmer is not the same thing as for a tax collector. Land may be a source of food, a place to work, an alienable commodity, or an object of taxation. Its uses and meanings are not stable and can be disputed. Second its materiality, the form of the resource, matters. Land is not like a mat. You cannot roll it up and take it away. It has presence and location. It has an especially rich and diverse array of "affordances" - uses and values it affords to us, including the capacity to sustain human life. Third, inscription devices - the axe, the spade, the plough, the title deed, the tax register, maps, graphs, satellite images, ancestral graves, mango trees – do more than simply record the presence of land as a resource, they are integral to assembling it as a resource for different actors. These devices have varied spatial and scalar coordinates, some of them enabling land to be manipulated from a distance, others demanding presence on the ground. These are the points I want to explore in thinking through what is land, and more specifically, how it is rendered available for global investment.

Resources, writes geographer Gavin Bridge, are "irreducibly social." They are also material. They are the "cultural category into which societies place those components of the non-human world that are considered to be useful or valuable in some way" (Bridge, 2009:1218-9).Their "resourceness" has no essential or intrinsic quality. It has to be assembled or "made

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1 This is a revised version of my Transactions keynote lecture presented in London in August 2013. I began developing these ideas in the context of a workshop on anthropological perspectives on natural resources organized by Tanya Richardson and Gisa Weskalnys and a conference on global land grabbing at Cornell in 2012, and presented them at colloquia in Madison and Bristol. Thanks to interlocutors and reviewers for sound advice.

up" (Hacking, 1986). It always includes a discursive element that “acts as a grid for the perception and evaluation of things” (Foucault, 1991b:82). It can wax and wane, or morph as technologies are added, values change, and material qualities shift. Thought of this way, what we call a resource or a "natural resource" is a provisional assemblage of heterogenous elements including material substances, technologies, discourses and practices (Richardson & Weszkalnys, 2014 ; Robertson, 2011 ; Li, 2007a ; Anderson & McFarlane, 2011 ; Foucault, 1980 ; Callon, 1986 ; Blomley, 2013 ; Mitchell, 2002 ; Bakker & Bridge, 2006). Exposing the apparent naturalness of a resource assemblage renders its made-up character available for critical reflection. What are the elements assembled? How is the assemblage stabilized, or made to cohere? Why does it take this form, and not another?

Assembling land as a resource may involve diverse actors, including villagers, scientists, investors, legal experts, and government officials. Such actors have distinct views on what land is (its ontology), what it can or should do (its affordances), and how humans should interact with it. Some of them approach land with a governmental rationality of the kind identified by Foucault, that is, a concern to secure "the right manner of disposing things" to optimize the health and wealth of populations at large (Foucault, 1991a:95). The spectrum of action and reflection concerning land cannot be captured if we define land narrowly, as ownable property. It may be privately owned, but for centuries much effort has been dedicated to *preventing* its privatization by surrounding it with customary injunctions, suppressing land markets, setting aside protected areas and so on. In this respect land is different from some other resources, such as diamonds, oil, or coal, where the range of debate about what a resource is, and what it should be made to do, is more confined. Land's diverse affordances make it especially challenging to assemble as a resource available for global investment, and yet this work is sometimes accomplished and investments proceed.

In this article I first address the question, what is land? I dwell on its materiality, its affordances, and the struggles that erupt over the "right manner of disposing things." Following this, I examine the inscription devices that have produced land as a resource available for global investment. Exploring this question became urgent in the context of the so-called global land grab or land rush, a spike in transnational farmland acquisitions that began around 2008 and still continues. Adopting an analytic of assemblage enables me to tease apart the elements that make such large scale investments thinkable, and the practices through which relevant actors (experts, investors, villagers, governments) are enrolled.

What is Land?

Indigenous highlanders in the Indonesian island of Sulawesi among whom I have carried out ethnographic research for the past twenty years have no word for land in their language. Their words refer to more specific qualities: soil (petu), primary forest (do'at), secondary forest (ulat), fallowed garden (abo), active garden (jo'ong), grassy patch (gio), barren zone (doilas), the head of a watershed (ompogan) which is the home of spirit owners of the earth and water (togu petu, togu ogo), and so on. These words convey assemblages of material substances and social relations. Primary forest, for example, means forest in which no one has ever taken axes to trees. Since highlanders consider the investment of labor to create individual property, when they note that a patch of forest is do'at, they are not just commenting on the enormous size of

the trees. They are noting that no one owns it yet, and hinting towards its potential for use, and future status as individual property when labor is applied. Ulat means both secondary forest and the property highlanders inherit from their ancestors which they hold in an undivided common pool, and use in loose rotation. Although I do not have space here to describe highlanders' land system in full (see Li, 2014), my brief summary is a reminder that the English word "land" carries cultural baggage that we need to make strange for the purpose of analysis. Not everyone has such a word, or lumps together the same set of material substances under one label. Nor do they assemble material and social relations into equivalent forms.

Around 1990, when highlanders planted a new crop, cacao, and started to treat land as a commodity and a site of investment, they had to invent a new word for it. They hit on the word *lokasi*, an awkward translation of the English word "location" via Indonesian. Lokasi named a new resource assemblage - a plot of land that was detached from neighbouring plots, and detached from the sweat of the person who first cleared the do'at and transformed its status. New modes of inscription emerged as well, but as geographer Nicholas Blomley insists (2013 ; 2014), these modes did not change something concrete into an abstraction. Rather, they reformatted the social relations with which the new resource was entangled, and extended the network of actors and devices connected to it. In the past, wielding an axe in the do'at inscribed property relations in a form highlanders recognized, but the meaning of the axe as an inscription device didn't travel well. Officials viewing the highlands from the coast, for example, did not acknowledge that wielding an axe produced both property and livelihoods. They called highlanders "forest-destroyers" and described their rotational cultivation system as "just moving around." As land-as-lokasi emerged, the network of actors extended to include neighbours and strangers bearing funds who could now purchase it, but it did not include actors operating at a distance. Unlike the farmers of Chotanagpur I cited above, these highlanders' were not beset by officials waving land titles or tax registers, nor did government agencies or large-scale investors seek to lay claim to their land. Their new resource assemblage stabilized over time, but it was not set in stone: a shift in one element – law, prices, or, in this case, a viral disease that started killing the cacao - could cause the assemblage to fracture. Next time I return to this research site, lokasi might no longer exist and the question "what is land" will surely be reposed.

Materiality

Building on this example, there are two core elements to land's material quality I want to emphasize. First, land stays in place. It is excludable and can be partitioned, but it cannot be removed. People can be excluded from it, but its extensive span makes it difficult to accomplish exclusion by means of a choke point (unlike an oil well or a gold mine, which is relatively confined). The mode of exclusion can be physical and forceful (hedges, fences, guns), regulatory (e.g. through customary or formal property law or land-use zones), or it can operate by means of a market mechanism which excludes people who cannot afford the price. It always includes a persuasive element, an attempt to defend exclusion in terms of its legitimacy (Hall et al., 2011 ; Blomley, 2007). When people concur on the proper uses and users of land, the costs of enforcement go down. But legitimacy can wax and wane, as people who concede to their exclusion at one point in time might change their position when land becomes scarce, a

new generation needs a place to farm, infrastructure or technology make land more valuable, or the transgression of spiritual or environmental ethics passes a threshold of tolerance. Land occupations, arson, mass mobilizations, and revolutions may be provoked. With land, it's never over.

Second, land's usefulness to humans depends upon exclusion: two people cannot occupy the same spot, and if the highlanders in my study could not exclude other users for long enough to harvest their cacao, there would be no point in planting it. Yet the range of human uses to which land can "legitimately" be put is huge: land can be source of food, fuel and fodder; a place to build a house; a home for spirits; a place to protect a forest, harvest water, or supply "environmental services;" ground to mine for minerals; or a source of profit through use or speculation. Indeed land supports every aspect of human and non-human life, so complete exclusion from its affordances is not possible. For the highlanders in my study, the landlessness that emerged when some peoples' cacao took up all the space came as a shock. Access to lokasi cost money, and not everyone could afford to buy it. Yet for these highlanders, as for many other people, land's life giving affordances made it an awkward, resistant, or incomplete commodity. Technically, it can be commodified but there is often push back (Castree, 2003 ; Prudham, 2009 ; Hall, 2013:90). The nearest parallel is water and for the same reasons: its life-giving quality means that full commodification, and with it the possibility of complete exclusion, is unacceptable because its human consequences are too severe (Bakker, 2007:442). It is not possible to evict all the people all the time. They must have a place to live, and food to eat. In Karl Polanyi's words, to treat land and labour only as commodities, and thus "to allow the market mechanism to be the sole director of the fate of human beings and their natural environment ... would result in the demolition of society"(1944:73). Hence regimes of exclusion are subject to continuing debate about what Foucault called "the right manner of disposing things."

Debating the "right manner of disposing things"

Many national constitutions have clauses that refer to the "social function" of land and the obligation of ruling regimes to manage land in terms of the public good. Every regime of exclusion has therefore to be legitimated, and can be contested. These are not just contests between rich and poor, but contests among philosophers, scientists and governmental authorities who debate what constitutes the public good in terms of many criteria: public health and hygiene, political stability, energy, pollution, species depletion, climate change, peace, development, prosperity, efficiency, and more. These matters were the subject of especially heated debate in colonial contexts, where injunctions to make land productive and profitable justified expropriation, while worries over native welfare and political instability suggested a more cautious approach (Li, 2007b ; Drayton, 2000). Such debates continue to animate land policies. In contemporary Southeast Asia, for example, land-titling programs designed to make land markets more efficient are balanced by laws that identify categories of people (sometimes labelled indigenous) and categories of land (often forested or sloping) for whom "the right manner of disposing things" does not include extension of the commodity form (Hall et al., 2011 ; Li, 2010).

Even when law and custom legitimate the private ownership or management of land, experts, officials, and rural people still debate the propriety of making a profit from it. The life-giving affordances of land, and its coincidence with national territory, tend to bring moral arguments to the fore. In 1797, Thomas Paine made an impassioned argument along these lines in his pamphlet on Agrarian Justice, in which he argued that "the earth, in its natural uncultivated state ... was the common property of the human race" (Paine, 1797). He thought it was legitimate for people who invested in land improvements to appropriate the additional value they generated, but they could not own the land itself. He devised a formula for collecting ground-rent on the land of England in perpetuity, and distributing it through an annual payment to all citizens upon reaching the age of 21. The distribution was not a charitable donation. It was based on the natural right of citizens to be compensated for their exclusion from portions of the national territory that had been excised for private use. There are contemporary iterations of this argument today, in programs for the distribution of the benefit stream from mineral resources to citizens as part of their "rightful share" of national wealth. Land taxes echo this idea.

Paine's essay was stimulated by his outrage at the inequality produced by the institution of private property in land in the so-called civilized nations. He noted that English paupers were worse off than they would have been in a state of nature, when nature's bounty provided for their support, as it did among native people in the Americas. His argument countered that of John Locke (Locke, 2005 [1689]:81) for whom improvements on the land made the land itself into fully private property. Locke went on to argue that people who failed to improve land, or used it inefficiently, could legitimately be expropriated. It was Locke's way of thinking that prevailed in colonial contexts, and still underlies land expropriation today. But arguments that justify exclusion on the grounds that land should be put to efficient use can backfire. Absentee landholders and speculators who lay claim to land often make no use of it at all. Paine and Polanyi were right to insist that the absolute right to own land is both strange and outrageous. The question of exclusion from land's affordances - who is being excluded, on what grounds, through what means - always demands critical scrutiny, and raises the question: why does anyone accept this? What makes exclusion stick? Why do your arguments and forms of inscription (lines on a map, or words on paper), prevail against my arguments, my modes of inscription (the axe, the plough, the presence of spirits), and my need to sustain myself?

Clearly, assembling land as a resource available for some purposes to the exclusion of others requires a great deal of complex cultural work. In addition to the hard and ongoing work of legitimation, which I have just discussed, it involves the deployment of technologies to make land productive, metrics to adjudicate between more and less "efficient" uses, and inscription devices that make land into a resource for different actors. In the next section I explore the assemblage that renders so-called "frontier," "marginal" or "underutilized" land visible, and available for global investment.

Rendering Land Investible

Before 2008, around 4 million hectares of farmland were acquired each year by institutional investors, domestic and foreign, for large scale corporate agriculture. In the period 2008-2009 there was a spike: 56 million hectares in new land deals were announced in the media. About

half the deals and two thirds of the total area (40 million hectares) were in Sub-Saharan Africa (Deninger et al., 2011:xiv). Although data sources have been problematic, and not all the announced projects moved forward to acquisition, there was undoubtedly an increase in investor interest and in actual land deals, with areas ranging from 50-250 thousand hectares (Hall, 2013:96 ; Anseeuw et al., 2012 ; Cotula, 2012 ; Scoones et al., 2013).

The immediate causes of the "land grab" usually highlighted in the literature are the spike in food prices in 2007-8 and moves in a few countries to restrict rice exports to ensure sufficient domestic supply. The threat of export restriction led importing countries like the Gulf states to become nervous about how they could feed their rice-eating migrant workforce, and to consider ways to by-pass global food markets by engaging directly in food production. A second stimulus was the market crash in 2008 that caused hedge funds and other large institutional investors to look for "safe" places to put their money (Anseeuw et al., 2012 ; Cotula, 2012 ; Fairbairn, 2013). But transnational investment in farmland has been sustained long past the market turbulence of 2008, so we need to look more broadly at how land is being identified, inscribed, and made available for investment, and what induces investors to put their money into farms far away.

Statistical Picturing

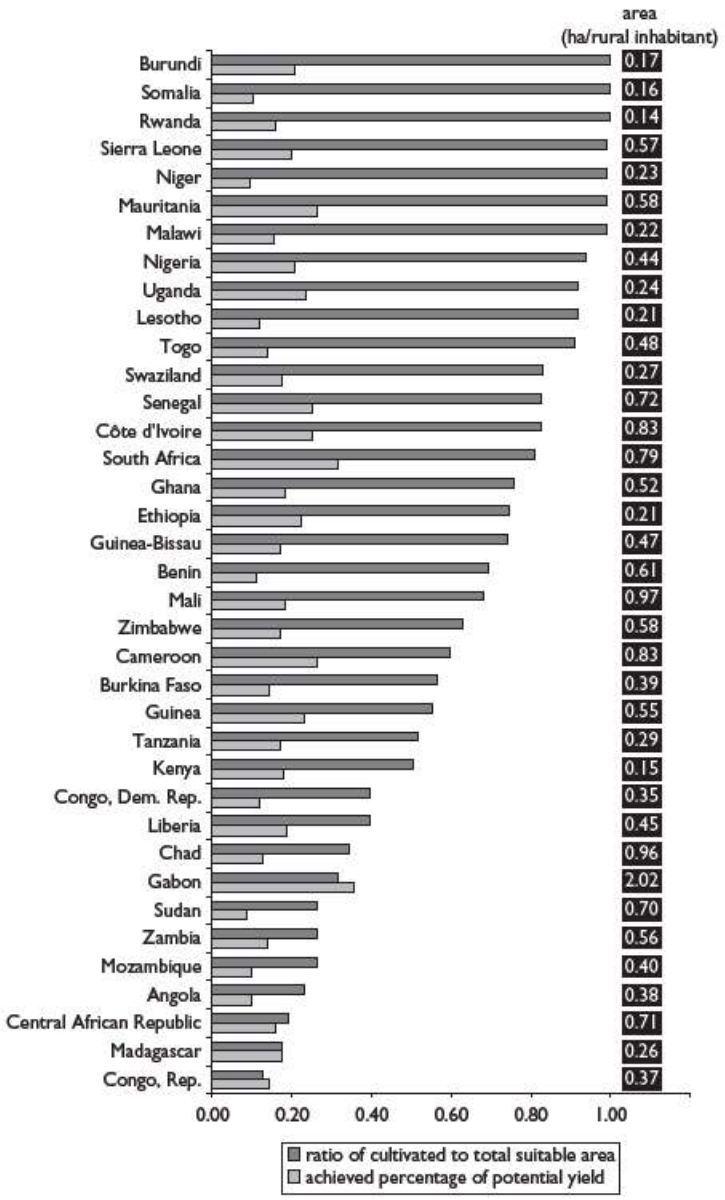
The land identified as a resource available for global investment is classified as "underutilized" or frontier land, or sometimes as marginal, idle or waste land. Frontiers, as many scholars have noted, are artifacts of technology and imagination. Specifically, as Gavin Bridge argues, frontiers are imagined (and constructed) as sites of "bountiful emptiness." They are "fecund" spaces, "empty but full"(Bridge, 2001:2154). That is, they are empty of people, histories, and claims, but full of potential for new and improved use. To classify land as underutilized requires discounting current uses. It also requires a new regime of distinction, in which a diverse array of land types in a great many places is homogenized and aggregated under a new label: their underutilization. This process, which David Demeritt calls "statistical picturing," is one in which scientists and other experts play a prominent role. Demeritt traced the role of statistical picturing in producing the US nation's forests "as a whole," together with the "normal forest," "annual allowable cut," and "maximum sustainable yield," categories of thought and action which induced people to see, measure and calculate in new ways (2001:439). In a similar vein, Nicholas Blomley discusses the role of the map, the survey and the grid in making-up land for investment in colonial situations. He notes that surveying techniques were first developed by the English for use in Ireland, where 2.5 million acres were to be seized in retaliation for the 1641 uprising. Surveying enabled this vast expanse to be seized in the mind well before it was seized on the ground and put to new use (2003:128). Crucially, statistical picturing devices enable the kind of action-at-a-distance that assembling land as a national, colonial and global “resource” requires. Land still cannot be removed from the place where it is located, but with these devices in place, it can assembled in new forms, and differently disposed (Elden, 2005:9; Elden, 2010).

The statistical techniques and inscription devices that enable global investments in land weren't invented in 2008. "Underutilized land" as a category has existed in many national land systems since colonial times, making relevant maps and numbers readily available to be drawn into the global land investment assemblage (Baka, 2013 ; Borras et al., 2013). The work of

aggregation on a global scale has been carried out over several decades by expert staff in agencies such as the FAO and the World Bank. It is assembling the elements that produces something new. A close examination of a World Bank report titled *Rising Global Interest in Farmland* (RGIF report) (Deninger et al., 2011) will serve to illustrate the creativity involved.

The RGIF report divides the total global sum of potential arable land (3 billion hectares) into two parts, a cultivated part (1.5 billion hectares), and an uncultivated part covered by grassland or forest. It further divides the cultivated part into the part yielding well, according to the criterion of dollar-value efficiency, and the part which is yielding poorly. These two areas together, uncultivated and under-cultivated, form the global stock of underutilized land. The RGIF report proceeds to quantify underutilized land on different continents, locate it on maps, and assign dollar values to the "yield gap," (the divergence between actual versus potential yields). These maps, graphs and tables are extraordinary feats of assembly work. They produce and enable a new way of thinking about "underutilized land" as a singular thing with qualities and potentials that can be rendered commensurable according to different criteria, and made available for comparison (and investment) at continental and global scales. Their effects should not be underestimated. As Foucault observed, discursive regimes are not just words (or diagrams), they "induce a whole series of effects ...They crystallize into institutions, they inform individual behavior, they act as grids for the perception and evaluation of things" (Foucault, 1991b:81-82). Hence we need to pay them close attention.

Figure 1



Source: Authors' calculations based on Fischer and Shah 2010.

Figure 2

	5 crop total	Maize	Soybean	Wheat	Sugarcane	Oil palm
Sub-Saharan Africa	94,919	44,868	38,993	3,840	6,023	1,194
Latin America and the Caribbean	93,957	28,385	37,716	11,043	15,021	1,793
Europe and Central Asia	43,734	3,851	419	39,464	0	0
East and South Asia	3,320	465	443	1,045	500	867
Middle East and North Africa	2,647	0	10	2,637	0	0
Rest of World	24,554	5,741	5,289	12,747	722	55
Total < 6 hours to market	263,131	83,310	82,870	70,776	22,266	3,909
Total	445,624	156,828	137,711	88,149	41,176	21,760
Total cultivated 2008	520,411	161,017	96,870	223,564	24,375	14,585

Source: Fischer and Shah 2010.
Note: Assessments are based on fewer than 25 persons/km^2 and less than six hours to market. 2005 output prices are used to determine gross revenue.

Figure 3

Commodity and country	Land expectation value (US$/ha)
Oil palm	
Indonesia	4,800
Plantation forestry	
Argentina	3,125
Brazil	5,250–8,300
Colombia	5,400
South Africa	2,900
Uruguay	750–1,400
Sugar	
Brazil	3,750
Kenya	8,000
Mozambique	9,750
Tanzania	11,000
Zambia	18,500

Source: Authors based on Marques 2009 and World Bank 2009a for Brazil; World Bank 2009a for Zambia; Mitchell 2010 for Kenya; Locke 2009 for Mozambique; Mitchell 2010 for Tanzania; Fairhurst and McLaughlin 2009 (adjusted) for Indonesia; and Cubbage and others forthcoming for plantation forestry everywhere.

Note: Values for all countries except Brazil are imputed. For Mozambique, sugarcane-ethanol is irrigated and (optimistic) yields are from the business plan. For Tanzania, sugar is irrigated. For Indonesia, the figure is based on palm oil price of US$600/t. For Uruguay, production is targeted at marginal lands. For Brazil, market rental rate is paid in kind converted at 8 percent. For Kenya, sugar is rainfed; high prices due to import protection. For Zambia, sugar is irrigated, high prices due to European Union access.

Figure 4

				Suitable noncropped, nonprotected			
					Nonforest with population density of		
	Total area	Forest area	Cultivated area	Forest < 25/km²	< 25/km²	< 10/km²	< 5/km²
Sub-Saharan Africa	**2,408,224**	**509,386**	**210,149**	**163,377**	**201,540**	**127,927**	**68,118**
Angola	124,294	57,941	2,930	11,502	9,684	6,625	4,561
Burkina Faso	27,342	2,072	4,817	452	3,713	1,040	256
Cameroon	46,468	23,581	6,832	8,973	4,655	3,205	1,166
Central African Republic	62,021	23,496	1,879	4,358	7,940	6,890	5,573
Chad	127,057	2,280	7,707	680	14,816	10,531	7,061
Congo, Dem. Rep.	232,810	147,864	14,739	75,760	22,498	14,757	8,412
Congo, Rep.	34,068	23,132	512	12,351	3,476	3,185	2,661
Ethiopia	112,829	8,039	13,906	534	4,726	1,385	376
Gabon	26,269	21,563	438	6,469	954	927	839
Kenya	58,511	3,284	4,658	655	4,615	2,041	935
Madagascar	58,749	12,657	3,511	2,380	16,244	11,265	6,572
Mali	125,254	3,312	8,338	582	3,908	776	28
Mozambique	78,373	24,447	5,714	8,247	16,256	9,160	4,428
South Africa	121,204	8,840	15,178	918	3,555	1,754	649

(continued)

Source: Fischer and Shah 2010.
Note: "Suitable" means that at least 60 percent of possible yield can be attained for any of the five rainfed crops considered here (wheat, oil palm, sugarcane, soybean, maize). Countries are included if they have a total of at least 3 million ha of forested or nonforested suitable area for areas with population density < 25/km². Suitable ha per cultivated ha area based on nonprotected, nonforest suitable area where the population density of the grid cell is < 25/km², < 10/km², or < 5/km².

Figure 1 shows the ratio of currently cultivated land to land suitable for cultivation in selected African countries. Rwanda, for example, is using almost all its potential farmland, Madagascar less than 20%. The second line of each pair shows the "yield gap," defined as "the share of potential output achieved on areas currently cultivated," also around 20%. The basis for calculating the potential yield is the dollar value that could be produced by planting this land, evaluated pixel by pixel, with one of five cash crops in global demand: wheat, maize, soybean, sugarcane and oil palm, of which the latter four can be used for either food or biofuel (Deninger et al., 2011:75-86). Visually, the graph is spectacular: it seems to demonstrate the catastrophic inefficiency of African agriculture, and the massive potential for improvement and profit. Embedded in the "yield gap," but not made explicit in the graph, is also a crop-gap: thousands of cultivars currently used for food, fuel and fodder disappear into a single metric, their dollar-value inefficiency in comparison with the big five.

Figure 2 shows the area of land on different continents that is suitable for these five crops. More explicitly than Figure 1, it directs the viewer to think of land in terms of (only) these five crops, and offers two points of entry: select your crop then chose your continent, or choose your continent, then select a crop that grows well there. It flags land that is less than six hours to market, hence ready and waiting for investors to come. Figure 3 furthers this way of thinking by assigning "land expectation values" per hectare, based on returns from "actual ventures" (Deninger et al., 2011:40). It invites a potential investor to select both country and crop according to how much money they can expect to make. Figure 4 captures the RGIF report's core dividing and aggregating practices, quantifying land that is suitable for cultivation but not forested or protected (to avoid interference with conservation agendas),

"noncropped" (definition not supplied), and with low population density, hence few people who will need to be moved out of the way. Its way of dividing space addresses constituencies that want to be sure large scale land deals are good for both people and the environment: only left-over, underutilized land is the focus here. Read closely, the figure is disjunctive: can it really be true that 201,540 square kilometres of land in Sub-Saharan Africa with 25 people per square kilometer living on it is “noncropped”? If that is so, how do the people survive?

The RGIF report is not written with one voice. A close reading of the text reveals some ambivalence about the reason for producing this "data," and the story it is intended to tell. The declared purpose of the report is to identify the countries "vulnerable" to land-grabbing in order to forewarn and protect them. But the report also addresses potential investors, by showing them where to put their money, and how much they can expect to make from their investment. The report argues that investment "done right" can be a win-win proposition, but worries over whether this can be accomplished. It notes that promises corporations make to provide jobs and infrastructure routinely evaporate or fail to replace the value of the land and livelihoods that were taken away, a troubling interruption of the win-win narrative that dominates in the report overall. Indeed the report is full of tensions and inconsistencies, numbers that show one thing, narrative that says another, as the awkward character of land as a resource for the supply of both life and profit leaks into the text (Li, 2011).

Inscription devices, ways of seeing, counting, classifying, and rendering some things visible while occluding others exceed the motives, interests and intentions of the actors that produce them. The authors of RGIF report do not see themselves as vanguards of a global capitalist class, but as scientists involved in finding facts, conducting analysis, and doing their part to identify "the right manner of disposing things" in the global public interest, with particular concern for the poor. Claiming or indeed aiming simply to represent what is given - data - they nevertheless created something new, notably grids or frameworks into which "data" can be inserted (Mitchell, 2002 ; Demeritt, 2001:443-5 ; Robertson, 2011). In ways both intended and unintended, these actors, grids and devices assembled land as a resource available for global investment. But to actually enroll investors, and encourage them to put their money in farms faraway, more work needs to be done. To explore this dimension, I turn to the temporality of the global land rush, to ask why the rush?

Why the Rush?

I favour the term land rush over land grab, because what is distinctive about the intensified interest in global farmland since 2008 is its temporality and scope, not the mechanisms, processes or impacts of land acquisition, which have a long history. The virtue of "rush" is to put it in a series with other land rushes, gold rushes and crop booms (Alden Wily, 2012 ; Hall et al., 2011). The characteristic feature of a rush is a sudden, hyped interest in a resource because of its newly enhanced value, and the spectacular riches it promises to investors who get into the business early. Hence the rush. Do it now before others spot the value, and the profit margins decrease. Fund managers call this the "first mover advantage" (Daniel, 2012:705).

My focus in this section is on the private investment funds that are the major players presently involved in acquiring farmland in faraway places, with scores of funds now offering opportunities for investors from pension funds and hedge funds to "high net worth

individuals" and small investors who can buy shares in farmland funds, some of them pinned to specific ventures in actual places, some of them not located by address (White et al., 2012 ; Daniel, 2012 ; Cotula, 2012 ; Fairbairn, 2013).
Creating a rush for a class of resources (land, gold, the South Sea Bubble in 1720, tulips in Holland in 1636) demands a spectacle that grabs the investor's imagination. Anthropologist Anna Tsing (2000) explored the role of spectacle in her analysis of a Canadian mining scandal. In 1996, a group of Canadian mining companies under the name Bre-X claimed to have discovered fantastic gold reserves deep in the Borneo jungle, and investors flocked to buy stock, pushing up the share price on the Toronto stock exchange. It turned out the claim was fraudulent, but the question Tsing puts at the heart of her analysis is why so many people found it plausible enough to spend C$6 billion buying shares. As she shows, conjuring the plausibility of such a find required the stock promoters to emphasis the deep, dark, loneliness of the jungle, and to overlook the presence of thousands of artisanal miners who had been working for decades in the area. It also called upon Canadian traditions of "frontier" investment, especially in mining, which are spurred by the cultural myth of the lucky find, and the idea that being bold and early can bring huge rewards. As Tsing explains, Canadian companies called "mining juniors" routinely rely on conjuring the spectacle of hidden treasures and huge finds in order to attract investment funds. With these funds in hand, they can look to see if anything is actually there. Spectacle or what she calls the "economy of appearances," is an essential component of the economy of finance and, sometimes, of actually functioning gold mines.

In the case of the global land rush, websites prepared by private investment funds are key sites in which spectacles designed to attract investors are produced. These investment funds typically seek to raise capital in the order of 100 -500 million dollars (Daniel, 2012). Somehow, they must convince potential investors of the sure, rapid, rising, and hitherto under-recognized value of farmland. They do this by highlighting crises and scarcities that carry with them enormously profitable opportunities for those ready to seize them. Their main form of spectacle is a series of graphs with neo-Malthusian messages about the rise in global population, increasing hunger and demand for food, and potential global farmland which is not just limited in its extent, but declining due to urban sprawl and other non-agrarian land uses. Together, these graphs conjure a perfect storm in which food prices and land values can only rise. Graphs also show the rapid rise in the price of farmland in different parts of the world to confirm that it is indeed an "undervalued" asset, equivalent to stumbling onto a gold find in the Borneo jungle. These are what investment analysts call "market fundamentals" and they seem to indicate that you cannot go wrong with farmland (Cotula, 2012:662-7 ; Fairbairn, 2013). Whether you plan to use it, hold it, or flip it soon for speculation, the graphs go sharply upwards.[2]

But there is still a problem. Population and food needs actually rise steadily not spectacularly, so why the rush? Why rush into land now? The narratives need to point to a temporal switch, a dramatic shift that makes land valuable in a spectacularly new way. You have to find the gold. Enrollment of investors unaccustomed to putting their money into farmland far away

[2] For an example, see the series of graphs at http://www.landcommodities.com/index.cfm?fuseaction=main.dspInvestmentFundamentals. Last accessed 16 January, 2014

demands drama. One dramatic narrative focuses on changing food tastes and rapidly rising affluence in the Asian giants, India and China. Another narrative focuses on the changed legal regime, suggesting that the land currently being targeted was always valuable, but it was not investible because of unfriendly governments and excessive risk. Now the risk has been reduced due to new global legal instruments, 3000 bilateral investment treaties, and insurance, notably insurance against political risk provided by the World Bank Group through the Multilateral Investment Guarantee Agency (MIGA) (Daniel, 2012 ; Cotula, 2013). As one fund manager put it, if problems arise "you'll have the World Bank on your side" (Carter, April 19, 2010).

The third and arguably most spectacular mode of enrollment highlights the so-called yield gap I discussed earlier: the huge untapped potential of idle lands, awaiting only technology and capital to make them productive. Technology and capital are the magic mix that account for why land is about to become suddenly vastly more valuable than it was just yesterday, or a few years ago. Economy of scale is a crucial notion here, the idea that efficient and productive technologies can only be applied at a large scale, which accounts for why they aren't already in use. The drama of this narrative requires overlooking previous attempts at large scale, high tech agriculture that failed: this has to be the first time, the pioneering move. In this vein *The Economist* published an article titled "The Miracle of the Cerrado" in Brazil, where mechanized farming based on new varieties of soy, and policies that favour efficient corporations over "inefficient hobby farms," has produced fantastic yields, and furnished a model that could be ripe for export to Africa (August 26, 2010). The photo that accompanied the Brazil story showed a dozen tractors moving in unison to plough straight furrows on an apparently limitless stretch of otherwise-empty land.

Images of deficiency also do powerful persuasive work. Consider the image of African agriculture presented in the World Bank report *Agriculture for Development* (2008). In the very first line of a tome with 365 pages, the scene is set by "An African woman bent under the sun, weeding sorghum in an arid field with a hoe, a child strapped on her back—a vivid image of rural poverty." This image of the chronic backwardness of African agriculture (and the presumed suffering of its people) links up with well-worn narratives of Africa as a sleeping giant, a dark (and empty) continent (Ferguson, 2005:10 ; Baglioni & Gibbon, 2013:1561). Only African land could be so spectacularly "undervalued" that a UK-based land investment firm seeking to draw in US$2.7 billion could advertise expected "target risk-adjusted returns [of] +25% per annum from combined soft commodity production yields and land price appreciation" (White et al., 2012:60 ; Daniel, 2012:706 ; Fairbairn, 2013).

Profit is not the investors' only draw. A striking feature of the global land rush is the prominence of moral arguments and references to the social value of investment. Fund managers, investors and expatriates tasked with running massive farms who were interviewed by journalist Fred Pearce (2012) expressed the desire to help to feed hungry people, make economies to grow, build infrastructure, and create jobs. These arguments are not cynical. They reference investors' awareness of the life-giving affordances of land, the element that distinguishes it from gold or diamonds. Pension funds in particular are concerned to show their corporate social responsibility, and "try to do the right thing"(Carter, April 19, 2010). National governments also justify their support for large scale transnational investments in

terms of their contribution to the public good. To do good, investments have to land somewhere and create something of value. Hence in addition to capital, other elements need to be enrolled

Landing Somewhere

It is important to recall that not all investments in global farmland are designed to land somewhere. Some of them operate more like Ponzi schemes, in which the gain comes from the increased share price as more investors are enrolled. Some of them do not proceed beyond lines on a map, and shares in a vault. For decades, farmers in colonial Rhodesia had no idea that foreigners had acquired their land, as no one put up "private property" signs, or attempted to exclude them from their customary use (Moore, 2005). But land speculation and absentee landlordism are not practices contemporary national governments in the receiving countries can defend: farmland investments are supposed to deliver on promised productivity, infrastructure and jobs. Some investors share these commitments. But landing is a risky business.

Material risks are among the more obvious. In addition to problems of infrastructure, pricing, climate, and the character of crops, the ground itself can push back. In 2008, spurred by images like that in the Economist showing rows of tractors in Brazilian cerrado, investors arrived in Laos to start work on the tens of thousands of hectares the Lao government had promised them. "The dream was Brazil," but large expanses of empty, flat, terrain suitable for tractor farming do not exist in this rugged, mountainous, well-peopled place (MacKinnon, 22 November, 2008). Hectares serialized and rendered comparable on a graph look quite different when investors actually encounter them (Edelman, 2013). Governments that approve deals in the name of the public good can also be pushed back. In Madagascar a government fell due to public outrage over the lease of 1.3 million hectares to a Korean firm intending to plant oil palm and corn (Burnod et al., 2013). In Indonesia a plan to grow food for Saudi Arabia had to be dropped in favour of food to enhance Indonesia's national self-sufficiency (McCarthy et al., 2012).

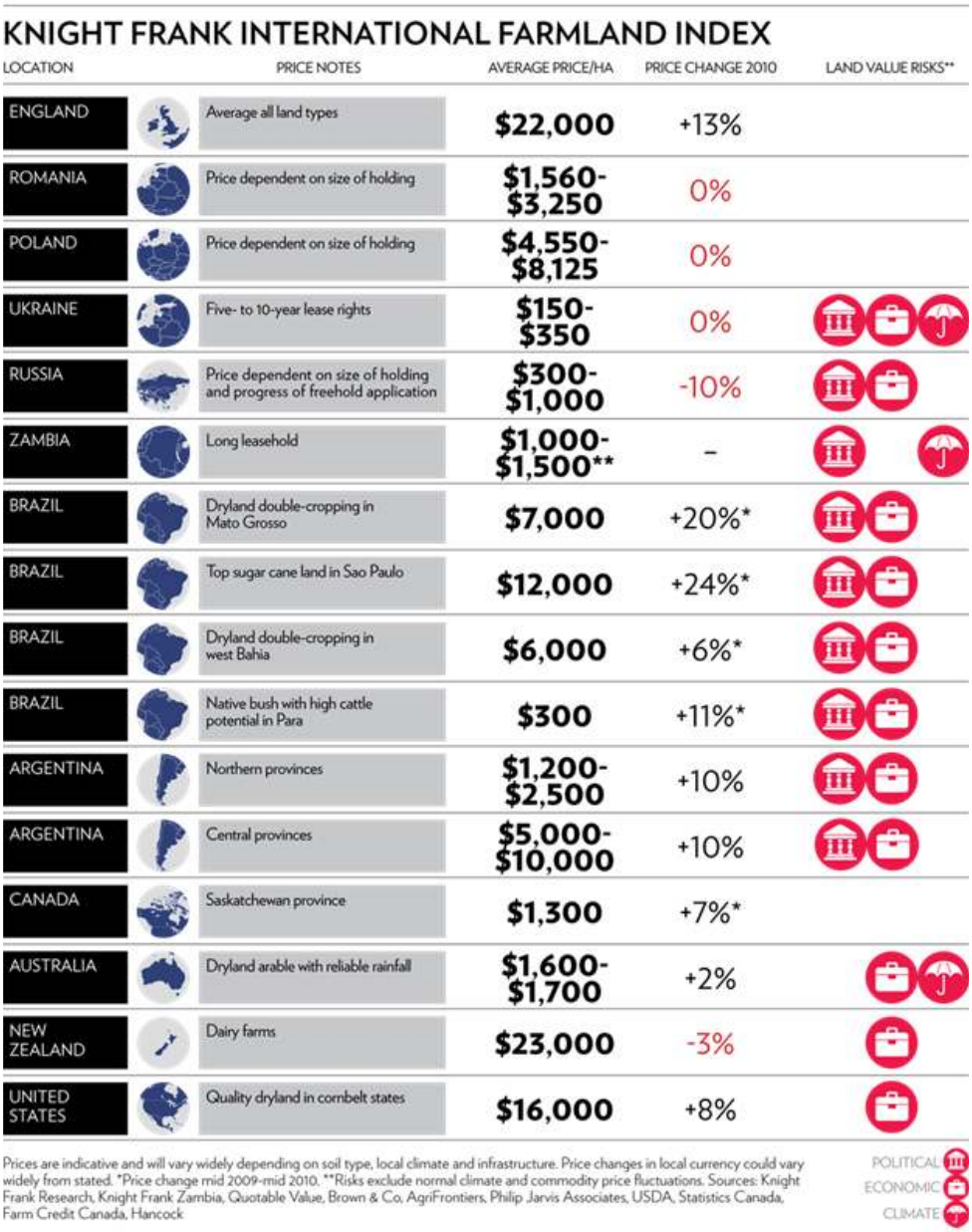
Calculating Risk

For investors deciding where to land, risk is a normal part of investment. The key calculation is the ratio of risk to profit. Risk can be enrolled into the global farmland assemblage so long as it can be identified, and calculations applied. Some of the risks for global investors are noted upfront in the promotional material prepared by investment funds, or creep into their texts in more ambiguous ways. Climate change, for example, is mentioned as a source of increased profit as food becomes scarce, but an investor might be wary of acquiring land that could become arid, or prone to flood. Funds that promote agricultural investment as "green," sustainable, and virtuous do so in a global media climate in which large scale agriculture, especially for biofuels, is the subject of widespread critique and some boycotts, another red flag. Material elements - the long time horizons for returns from agriculture, and way investments are locked in – make persuasion especially important. Investment funds need to

acknowledge risks, while clearly indicating that farmland investment is hugely profitable if you make the right moves.

Rather like the World Bank documents I analysed above, a document prepared by the global land broker Knight Frank discusses the complex risks associated with farmland. Accompanying the text is a figure showing risks versus rewards on a novel, graphic grid (Knight Frank, 2011). The grid classifies risk into three discrete types (political, economic, or climate), and finds them absent or present in a particular country. By setting risks out in serial form, albeit schematically, and setting them alongside numbers, the figure suggests both authority and calculability. It encourages the potential investor to think it might be possible to compare both risks and rewards on a global scale. It provides just the kind of information investors need when deciding where to put their money. No doubt actual investors would do a good deal more investigation, but the figure already does important work.

Figure 5 From (Knight Frank, 2011).



Political risk can arise from many sources. Indeed it is intrinsic to the emplacement, and the multiple affordances of land I outlined earlier. As soon as investment lands somewhere, current users will need to be excluded, by more or less forceful means. Farmers might acknowledge a "yield gap" but attribute it to government failure to invest in smallholder support, and use it to fuel political demands. There will always be politicians seeking votes, and experts with different frameworks for evaluating "the right manner of disposing things." With land, as I mentioned, it is never over. Nevertheless, sufficient stability can sometimes be achieved for investments to proceed. How is this done?

Law, Coercion, Consent

Law is often envisaged as the key mechanism for producing stability in land transactions, but in the global land investment assemblage, law plays a highly ambiguous role. Although experts in the World Bank and other agencies have long argued that fluid land markets and the legal certainty fostered by individual land titles are essential for releasing the full economic value of land (World Bank, 2003 ; Hetherington, 2012 ; de Soto, 2000), there is no market for land on the enormous scale envisaged in some recent land deals. Land titles would be a hindrance as investors would need to negotiate with each owner individually, and offer a market price. Also counter to the argument that "rule of law" and clear rights to land are prerequisites for investment, large scale land deals feed on fuzziness. Ironically, it is not functioning land markets and clear legal inscription that enable large-scale farmland investment but their opposite. The World Bank's RGIF report found that would-be investors targeted countries where the land rights of rural people were insecure, not titled, not formally recognized, or weakly protected (Deninger et al., 2011). These were mainly countries in sub-Saharan Africa, Asia and the Pacific where land is held under ambiguous tenure regimes that classify it as state land while also giving some recognition to the customary rights of land users. Partial recognition provides ample opportunity for land deals to be signed off by unaccountable political elites, who may overlook customary rights entirely. Alternatively, they may require the investor to offer some compensation, though seldom a sum equivalent to the value of the land on informal local land markets. Investors often see the payments as a market transaction that legitimates exclusion in market terms, while landholders see the transaction as coerced (Hall et al., 2011). Hence land markets and law are not entirely absent, but the commodification of land and its legal inscription are incomplete, creating the ambiguity that enables land deals to proceed.

Seldom are ruling regimes prepared to recognize that customary landholders have the right to "free, prior and informed consent" in relation to large-scale land deals, including the right to reject them, as required by the UN Declaration on the Rights of Indigenous Peoples (United Nations, 2007). Partial recognition also means that consent can become a means of dispossession, when a “customary chief” who claims to have jurisdiction over communal land signs off on a land deal without consulting the people affected. Instead of protecting landholders from land alienation (often the goal of the collective tenure regimes, both colonial and contemporary), communal tenure can provide a convenient "one-stop-shop" for large scale investors (Borras & Franco, 2010 ; Li, 2010).

The UN requirement that consent be prior is especially important because of the material qualities and affordances of land. If investors, backed by the army and police, arrive at midnight to bulldoze standing crops, especially perennials like rubber, they have created new "facts on the ground" that change the consent equation. Landholders may be coerced into giving their "consent" after the fact, but the results are often unstable. Arson, land re-occupation and other forms of push-back may erupt immediately, or years, even decades later (Borras & Franco, 2013). Rapidly creating new facts on the ground is not only a tool of coercion. Investors may need to act quickly for other reasons as well. Investors who have only seed money in hand often need to put some crops in the ground quickly, in order to attract investment funds. Rather like the mining juniors described by Tsing, these “under-capitalized capitalists” rely on the “economy of appearances” to enrol capital (Oya, 2013:1551). Hence they

may try to bypass slow processes like obtaining licenses and securing consent in order to produce a show-case plot, and hope the other elements will then fall into place (Burnod et al., 2013:363).

Enrolling villagers?

Villagers do sometimes consent to land investments, and concede to their own exclusion, at least provisionally. Their reasons are complex. In the cases I have studied, which involve the development of massive oil palm plantations in the Indonesian island of Kalimantan, villagers know full well that they will lose access to much of their customary land, and they resent it bitterly. Nevertheless, they consent because the arrival of a plantation means they will finally get access to a road. With access to a road, they reason, they can convert some of their remaining (sadly reduced) land to oil palm smallholdings to increase their incomes, while retaining some land under their established food and cash crops, rice and rubber. Their desire for roads has a specific history. In Indonesia as in much of Sub-Saharan Africa, budget constraints under "structural adjustment," combined with the neoliberal promise that private investment is the way forward, have led the government to abandon remote populations and leave infrastructure provision to its "partners" in the private sector. The circle is a vicious one. Local governments receive little or no revenue from plantation corporations, so they do not have the funds to build roads. Hence villagers are driven into the arms of the corporations as the only source of the infrastructure they so desire. Without roads, villagers argue, they cannot become full national citizens and modern subjects: no road means no schools, no school teachers, no motorbikes, no cell phones, indeed none of the attributes they associate with "normal" village life. Signing over their land is the price they have to pay for the road. Hence the abandonment of remote populations and the end of development planning understood as "nation building" are part of the farmland investment assemblage (Sassen, 2013:41-2).

The people on the spot, "villagers" as I have called them, are of course diverse and gender, class, generation, ethnicity, and place of origin are among many possible lines of fracture. People who are already landless may favour corporate investments in the hope of more jobs and better wages. Oil palm corporations try to avoid evicting people from their homes, since eviction is guaranteed to galvanize villagers to form a united front, it produces a media spectacle, and it may draw in NGOs and politicians eager to expose wrong-doing. Their preferred strategy when land is sufficient is to "enclave" villages, leaving the residents in place, and if possible leaving them with enough land for their current use. This tactic postpones the problem of how people will survive with little or no land. It becomes the problem of the next generation. Parents often express the hope that a new school will give their children the opportunity to work outside agriculture. The "local community," in short, is not singular, and the potential for enrolling villagers may be bigger than first appears.

Conclusion

In considering the question "what is land?" I stressed its materiality, its multiple affordances, and the quality it shares with other resources: its intrinsically social character. I deployed an analytic of assemblage to explore the elements that make land a resource for different actors, and the work it takes to pull a resource assemblage together and make it cohere. Farmers in Chotanagpur in 1921 disputed not only the right of officials to sell their land, but the ontology

that sale presupposed: for them, land was not the kind of thing that could be sold, because it stayed in place. Drawing on my research among indigenous highlanders in Indonesia, I stressed the non-essential quality of resource assemblages. Theirs shifted when a new element was added (cacao), requiring them to invent a term, lokasi, for a socio-material entity that did not exist before.

Land's life-giving affordances place it at the center of philosophical and technical debates about how to secure "the right disposition of things." Such debates are centuries old, and have many protagonists, from Locke and Paine to colonial officials seeking to balance native welfare and profit, and their contemporary counterparts in national land agencies, indigenous rights movements, and the World Bank. Land's material emplacement means that the people on the spot usually have a say, if not through democratic processes then through the exercise of force, as they resist eviction, reoccupy disputed land, and insist on their right to a patch of ground on which to build a hut, and plant some food.

In the past decade, assembling farmland as a resource for global investment has been the work of many actors who draw on discourses, inscription devices and modes of calculation that are already to hand: the map, the grid, the survey, the statistical picture or graph, and images captured in photos or conjured with words, like rows of tractors, the deep dark jungle of Borneo, or an African woman labouring with a hoe in the hot sun. Pulled together, these devices produce an expanded capacity to envision "underutilized" land as a globally important asset capable of producing food, profits, and a reduction of poverty as well. Investment managers seeking to raise capital for global farmland funds use similar devices, while paying particular attention to the calculation of risk. Laws that might seem to mitigate investor risk (contracts, treaties) are part of the assemblage, although their capacity to prevail in the context of local or nationalist push back is not guaranteed. When investment funds land somewhere, they inevitably encounter people on the spot who must be excluded, but may also be enrolled.

There are many potential lines of fracture in the resource assemblages I have described. If promises of high returns do not materialize, investors might lose interest. Perhaps licenses and funds cannot be secured, the intended crop does not grow well or suffers from ecological or price collapse. The land would still be there, or more accurately, the ground would still be there, but it would no longer be a global "resource" of the kind that attracts investor attention. National populations may become disaffected: no infrastructure came, the promised road wasn't built. Science and scientists can become dissident, or fail to communicate with the public in the ways they intend. This was the fate of US forest maps drawn up in the nineteenth century. They could signal "look how much progress we've made colonizing the wild frontier" or "look at the extent of our destruction" (Demeritt, 2001:440-2). Ecologies can also bite back, as they did in the Sulawesi highlands where most of the cacao that provoked indigenous highlanders to make up lokasi has been killed by an incurable virus (Li, 2014). These and other contingencies can cause land to be understood, valued, used, inscribed and transacted in new ways. It can also be seen as no longer valuable at all. The unmaking of a resource and its afterlife is another topic worth some attention.

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