Balancing The Numbers: Using Grassroots Land Valuation To Empower Communities In Land Investment Negotiations

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Abstract

Across Africa, Asia and Latin America, investors are increasingly approaching rural communities seeking land for logging, mining, and agribusiness ventures. Even in those situations where the investors have followed FPIC guidelines and undertaken a formal "consultation" with the community, these consultations are generally conducted in a context of significant power and information asymmetries. Part of the power imbalance comes from communities' lack of information about the value of community lands and natural resources. This paper describes a possible strategy for leveling such imbalances: a "Community Land Valuation" activity currently being piloted by Namati and its national partner organizations. The exercise aims to help communities understand the replacement costs of their common lands and natural resources, and thus be better prepared for potential future negotiations with investors. This paper discusses the Community Land Valuation activity, its initial findings, and the challenges faced. In undertaking and publicizing its "basic valuation" efforts, Namati aims to draw attention to the vast disparity between typical annual rental fees per hectare granted in land concession contracts and the actual value of the common lands to the communities who depend upon these lands for their welfare and survival. The paper concludes that while it is too soon to arrive at any conclusions, the initial data indicate that further research may lead to a finding that concessions with very low annual rental rates will further impoverish poor rural communities and adversely affect community members' ability to survive.

I. Context: Inequitable Land Deals

Across Africa, Asia and Latin America, investors are increasingly approaching rural communities seeking land for logging, mining, and agribusiness ventures. In response, international and national advocacy organizations are stepping forward to provide support to communities in negotiations with investors, often with a focus on ensuring adherence to international laws such as the right to free, prior, informed consent (FPIC).[2] Yet even in situations when investors have followed FPIC principles and conducted a formal "consultation" to seek community consent to their proposed business venture, these consultations are generally conducted in a context of significant power and information asymmetries. Communities are frequently pressured by high-level government officials to consent to deals that they do not fully understand or desire in their communities.[3] Community members may not be aware of the rental value of

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[2] United National Declaration of the Rights of Indigenous Peoples (UNDRIP) articles 10, 11, 19, 29, 30 and 32.

[3] For example, in Mozambique, in the vast majority of consultations, there is only one meeting which lasts a few hours, with no time allotted for a community to discuss the matter among themselves. The borders of the land being requested are rarely walked or physically verified. (Norfolk and Tanner, 2006, Tanner and Baleira 2006). Durang and Tanner report that: "Consultations between the investors and local communities seldom exceed half a day of dialogue…While the consultation should result in some compensatory benefit for local people, this is very much a secondary objective for the land administration services compared with the need to secure a community 'no-objection' and give the investor his or her new [right of land use and benefit within the time limit of] less than 90 days." (Durang and Tanner, 2004). Similarly, Calengo *et al*. conclude that such brief community consultations are merely used to give the "whole process a veneer of legitimacy by showing that local rights are apparently respected. In many cases however, it is clear that officials see their job as helping investors get the land they need, and do not accept that local rights are 'real' in the sense that they give locals secure private tenure that cannot simply be taken away." (Tanner 2007, Calengo *et al*. 2007 at 13-14). Tanner suggests that because consultations "are rushed, do not allow for adequate internal consultation, and are rarely accompanied by detailed agreements that allow for systematic follow up and monitoring," communities "participate" in consultations from an inherently defensive position. (Tanner, 2005 at 17).

In focus groups undertaken in 2009, community members in Mozambique themselves reported that their community was not included in the decisions to surrender their lands to investors. These focus groups described being summarily informed of the change in a community-wide meeting that did not allocate time for discussion or debate. For example, one focus group explained: ""There was a change in the use of the common areas, principally in the forest close to the sea. This area was wanted by foreigners. They came to our

their land on the national market (or even comparable markets in other nations), the expected annual profits the investor will gain from the venture, the overall net worth of the investors' company, and other financial information critical to negotiating a fair contractual agreement. They may not be apprised of the potential environmental damage that the proposed investment will wreak on their community, or the necessary strategies that the investor would be required to take to mitigate any damage. Communities may not even be informed of the total size of their common lands, and inadvertently agree to a concession that will cover close to 100% of their lands, thereby dispossessing them entirely. Finally, they may not be aware of the value they themselves are deriving from their common lands, and thus have difficulty calculating an appropriate rental cost that leaves them in an equal or better position than they were in before the investment.

As a result of such power and information asymmetries, investors frequently wrangle land concession contracts that include either no rental payments at all, or rental payments that are significantly below fair market value per hectare. For example, in his review of various large-scale land concession contracts, Cotula found that the leases governing these concessions contained either no rental payment at all or payments of $2 to $5 USD per hectare annually. One contract in Sudan requires the investor to pay only $0.07 USD per hectare per year. Only two of the contracts reviewed included provisions for land rental rates to be periodically adjusted for inflation. A number of contracts explicitly allocate the land for free, sometimes in direct contradiction to national laws requiring payment of rental fees. (Cotula, 2011 at 24-25)

In some cases, governments themselves impose unjustly low rental rates on their citizens as an incentive to attract foreign investment. In Sierra Leone, for example, the Ministry of Agriculture's *Investment Policies for Private Sector Promotion in Agriculture in Sierra Leone January (2009)* caps annual rental rates at $5 USD per acre or $12 USD per hectare. As a result, Addax Bioenergy, leasing land in northern Sierra Leone, pays $12 per hectare annually, while Quifel Agribusiness Ltd, leasing land in the same region, pays $4 per hectare with scheduled subsequent increases to $5, $6 and $8 per hectare over time. African Oil Palm Limited, leasing land in southern Sierra Leone, pays $2 per hectare.[4]

In Namati's work supporting communities to follow national legal procedures to seek formal documentation for their customary and indigenous land claims,[5] field teams work directly with community members, interfacing with communities and their leaders on a weekly basis. As such, they are often privy to the details of proposed and actualized investment deals. Analyzing this information, Namati and its partners – the Land and Equity Movement in Uganda (LEMU), The Sustainable Development Institute (SDI) in Liberia, and Centro Terra Viva (CTV) in Mozambique – have observed that there are actually two categories of land concessions being negotiated:

1) Concessions to large, multi-national companies. To varying degrees, these corporations are responsible to shareholders (who may care about corporate social responsibility), international standards such as the Ruggie Principles, and self-monitoring industry associations such as the Roundtable on Sustainable Palm Oil (RSPO); and

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community to procure land to build hotels, and the agents of the state told us to concede land to them because we are not properly taking advantage of these areas, because we do not have fields in them or coconut orchards and therefore it would be better to surrender the land to the investors. And we stood with no way out - they came to buy the land but do not build anything - they are taking a long time to build and we remain deprived of the ability to gather firewood, or to hunt and many other necessities."

Another focus group explained: "The entire community was summoned to meeting with investors, but it was not a discussion – the meeting was more to inform us that they were coming onto our lands because the forest didn't have even a coconut tree or a fruit tree, and so the amount paid for the land was very little; The community was not included in the discussion of this change, because the government agents said this parcel was not being effectively used by community members; The whole community was included in the discussion [of the concession], but our opinion didn't change anything, because the investors came with the negotiation already 'closed' by government administrators– they came to inform us that an investor was coming to occupy a part of our lands."

Focus group participants voiced frustrations with the manner in which they were "consulted" when an investor came seeking land. One group said, " Usually, these people [investors] come 'trafficking influence' and the community feels intimidated and eventually accepts." Members of another focus group dismissed the entire idea of having had a choice: "The community has nothing to decide on the granting of land to a foreign investor, because when the investor arrives, he is received by the district level, and these questions are treated as only something for the leaders, or chiefs, who only later inform the people about the assignment of our land to the investor."

[4] The information on rent is found in formal lease agreements registered by these companies in Sierra Leone; personal communication, Sonkita Conteh, Namati Sierra Leone.

[5] See http://namati.org/protecting-community-lands/ for a complete description of Namati's community land protection approach.

2) Concessions to national elites, who frequently are themselves - or have ties to - government ministers, high-level armed forces personnel, and other powerful figures that operate with significant impunity within their countries.[6]

These "second tier" investors are often unaccountable to international principles and legal instruments, and often operate entirely outside national rule of law. In Namati's observation, these investors tend to employ some combination of four main tactics to secure community "consent" to their land concession requests: they may bribe local leaders; use fear and intimidation to coerce consent; make elaborate, unsubstantiated promises of future community prosperity that will stem from their investment; and/or portray themselves as a "child of the community" who therefore has a right to be granted land by local leaders. In all such situations, community leaders/members may feel they have no choice but to accept the land concession request. Often, as described in *Footnote 2*, community members feel that by the time they are being "consulted" they have no real option to deny the concession request.

In most "second tier" investor cases, the proposed concession agreements (when there are written agreements) generally include promises of benefits – the construction of schools, clinics, roads and wells, job opportunities for community members, etc. – but lack specific details concerning when and how benefits will be provided. Positively, in recent years these contracts have begun to include annual rental payments for the land. However, as described above, the offered annual rental payments are unconscionably low.

For example, in Duah, one of the communities where Namati and its partner, the Sustainable Development Institute (SDI) work, a former community resident now living in the United States arrived and began to negotiate for land under the company name "Lion Growth Ltd." The investor wanted land to establish a palm oil plantation and tree plantation "for commodity production." The investor asked the elders to sign a vague Memorandum of Understanding (MOU) that "confirm[ed] the willingness" of the "Chief and Custodians" to "support" the plantation's development. The MOU did not specify the terms of the investment, the land to be granted, the community's rights to use and inhabit the land, or any concrete proposals for provision of benefits. It asked for "a minimum of 20,000 hectares" – an area larger than Duah's total territory – under a "50-year renewable license." The MOU furthermore stated that the "Chief and Custodians" would be obliged to

> "Agree to a total land-lease terms of US $2.50/hectare/annum to be paid directly to the government and US $2.50/hectare/annum for undeveloped land, and a further US $5.00/hectare/annum for developed land, directly into the Community Development Fund for the period of the land-lease."

The MOU required that the "Chief and Custodians" agree to sign a formal lease and arrange for a transfer of title of the land. It also required signatories to not disclose its content to "any third party unless required to do so by law" and to agree that the company would have "total exclusivity over the Land" for one year. The investor convinced a small group of clan elders to sign the MOU.

Positively, community members called in SDI's field team, which was able to support the community to challenge its leaders to void the deal. (For a complete account of these events, see Kaba *et al*, 2014). Yet the experience prompted Namati and its partners to brainstorm how to empower communities to negotiate with potential investors more shrewdly and strategically. Because Namati and its partners generally work proactively with communities to document their land and natural resources claims *before* investors have arrived, the nature of the intervention provides the opportunity to undertake significant legal and technical education concerning potential investment deals.

[6] Namati's experiences have led us to believe that these 2nd tier investors are as significant a threat to tenure security as the large-scale land concessions granted to multinationals. Namati is currently undertaking a study of the prevalence of these deals, including who the investors are, and on what terms they are acquiring land from rural communities.

II. Namati's Pilot Solution: A Community Land Valuation Exercise

Although Namati has published a variety of "How To" guides for communities, such as the "*Community Guide: Getting a Fair Deal from Companies and Investors"* (SDI and Namati 2013) and integrated a intensive community training on "Empowered Interactions with Potential Investors" into the later stages of our community land protection approach,[7] it become clear that these tools did not sufficiently address the economic aspect of investment negotiations.

Over the course of our work, Namati has observed that communities frequently agree to land transactions without fully understanding the cost of losing their land. Communities may:

- Believe that the only way to "develop" or prosper is for an investor to come and build a business using community resources, creating jobs for community members in the process;
- Believe that the common land requested is "of little value" because no one is living or farming on it;
- Not have a good understanding of how much land belongs to the community, or believe that there is "endless" land for community use;
- Not have a good understanding of 1) how much their land is worth on the open market; 2) how much the land is worth to the investor; and 3) how much the investor will profit from using the community's land; and
- Not have a good understanding of how much the land is worth to the community itself.

As such, Namati felt it necessary to add an additional component its land protection approach: an activity designed to quickly and elegantly educate community members on the value of the land *to them*. Namati and its partners hypothesized that such an exercise could help increase leaders' (and community members') bargaining position during land concession negotiations with potential investors.

Most urgently, it was necessary to illustrate the economic value of common areas to communities. Communities depend upon communally-used and managed forests, water bodies, and grazing areas for their survival, yet it is precisely these land that are first to be allocated to investors, claimed by elites, and appropriated for state development projects. These lands are most at risk because land shared communally may look "undeveloped" or "unimproved" to untrained eyes and may even be considered by community members to be owned "by no one" even when, according to custom, it is owned and used "by everyone."[8] In many countries, weak legal protections for communities' customary or indigenous rights to their lands and natural resources exacerbate the situation, making common lands and forests especially vulnerable to unjust, opportunistic or forceful land acquisitions.

Yet common lands – forests, fisheries, grazing areas, etc. – are often the only bulwark that the poorest families have against starvation: multiple studies have shown that poor families rely most heavily on common areas for the provision of their basic necessities. (Qureshi and Kumar 1998, citing Jodha 1986, Iyengar 1989, Srivastava & Chaturvedi 1989, Pasha 1992, Beck 1994, Sahoo & Misra 1994, Qureshi & Kumar 1996) These poor families, which often have little or no land on which to farm, both subsist from and earn their livelihood on these lands, hunting and gathering basic resources both to consume and sell on the market. (Shackleton, *et al.* 2001).[9] It is not only the poor who rely on common lands, however:

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[7] Seehttp://www.namati.org/communityland

[8] In the United States and many European countries, an equivalent would be a public park, to which all residents have robust use rights, but may not consider themselves the "owners of."

[9] As described by Qureshi and Kumar (1998): "These [common] lands provide an array of consumer goods including food, fibre, fuel, fodder, small timber, manure, medicinal herbs, building materials, artisanal raw materials, resin, gum, honey and spices, for subsistence use and sale. They also provide many services of value to the people, namely space for off season cropping, grazing, refuse disposal, animal keeping, public functions and crop threshing. (Qureshi and Kumar (1998), citing Jodha 1986; Arnold & Stewart 1991) Similarly, Campbell *et al*. (1997), report that: "Certain products are collected year-round, including medicines and game, but most products have a strong seasonal dimension. When household labour is relatively free of agricultural tasks, labour-consuming extraction of woodland products takes place: poles, thatching grass and fuelwood (the latter for storage piles), and households undertake craft and

studies have shown – and Namati has observed – that even the most relatively wealthy community members rely on communal land to gather wild foods and medicines, hunt and fish, graze their animals, collect wood for fuel, and source building materials. (Shackelton, *et al*. 2001**;** Gray and Altman 2006; Qureshi and Kumar, 1998**)**

When hundred of hectares of community common lands are leased for periods of 50 to 99 years to an investor at $4 to $12 USD/hectare, the entire community may become immediately less wealthy, rather than more wealthy. (Gundimeda and Sukhdev 2008) In the place of myriad resources that families may gather and use at no cost to promote their survival, health and welfare, they now have a small sum of money that cannot even begin to purchase the resources they need to survive at the local market. But to a group of impoverished community leaders, unaware of the value of their common lands, an annual contract of $4 USD/hectare for 20,000 hectares - $80,000 USD/year – may seem like a very attractive deal.

Accurate valuation of common lands and natural resources is a complex exercise dependent on a variety of factors and linked to regional markets. Land can be valued in a number of ways.[10] These include:

- The value of the requested land and natural resources *on the local market*, as compared to the value of other land that has been recently rented, leased or sold in the region;
- The value of the requested land and natural resources *to the buyer or tenant*, including what they would use it for and how much they would profit from it; and
- The *replacement costs of the requested land and natural resources* - how much it would cost for the community to acquire another piece of land or other resources to fulfill the needs that the land and resources in question are currently meeting.

Arriving at each of these values requires significant research and economic calculation. Such efforts are outside the realm of what is possible within a two-to-three hour rural community meeting. Yet how to demonstrate to communities – in a tangible, visceral and instantly understandable way - that their lands are worth far more to them (and to others) than $4 USD/hectare annually? To address the challenge of how to support communities to best understand the value of their land and natural resources, Namati contracted a professional valuer to provide expertise, quickly settled on replacement cost valuation as the simplest method of demonstrating to community members how valuable their land is, then began to design a simple, easily-facilitated exercise that can be fully carried out within the course of one community meeting attended by one- to two-hundred community members. To support its partners to facilitate the valuation exercise, Namati created a simple template designed to help a community arrive at a very rough estimate of the replacement cost of its lands and resources.

In recent months, Namati and its partners have been piloting this valuation exercise in communities across Liberia, Mozambique and Uganda. The aim of the exercise is to facilitate each community to very quickly grasp the inherent value of their common areas to *them* and thus give them pause before consenting to land concession agreements that offer very low rental rates. Because investment requests can come at any time, Namati's partners facilitate the "land valuation exercise" very early in the land protection process, usually during the second or third meeting after community entry. The exercise is designed to take no more than one to two hours.

During the valuation exercise, facilitators ask community members to:

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building activities. Women conduct fuelwood collection…while men undertake building, carpentry and woodcraft activities. In the rainy season there is less labour available but greater product diversity and abundance (e.g., mushrooms, many wild fruits, edible caterpillars, termites and honey are available). Opportunistic collection occurs while undertaking activities such as herding, firewood gathering or water collection. These products are largely collected by women and children, with the exception of honey collection, a trade dominated by men. Wild fruits may be found during the dry season or during the rains.

[10] A technical exploration of various land valuation methodologies is outside the scope of this paper.

1) List all the ways that community members use their common lands;
2) List all the main resources that community members gather from their common lands;
3) Assign a monetary value to each resource using a direct market valuation approach; and
4) Determine the composition of a "typical family" in the community;
5) Determine how much a "typical family" would have to spend to replace the quantity of each resource used on a weekly, monthly, and annual basis.

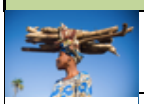
To begin the valuation exercise, the facilitator provides necessary background information, then helps guide the community to identify various local natural resources that are gathered, used and consumed by a "typical family." To make the exercise interactive, participatory and enjoyable, meeting participants are asked to name or "shout out" all the basic natural resources used. After the group has exhausted its list, the facilitator asks women, youth, and elder groups to add any missing items to the list. The list is read out loud and accepted by the community.

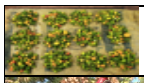
After the group considers the list complete, the participants are then asked to discuss and agree upon the unit of measurement, price if purchased on the local market, and consumption rate (daily, monthly, seasonally, and yearly) for each of the goods. Due to time constraints, facilitators lead communities to undertake this full analysis for only six to ten of the listed community natural resources.

The total annual replacement cost of the six to ten goods discussed is then summed to arrive at the annual replacement cost for a "typical family." The facilitators then ask the leaders how many households live in the community (if they do not have access to this information from recent census data) and multiply the cost to a "typical family" by the number of families in the community as a whole. Facilitators have found that the exercise works best when multiple community members with cell phones and a basic facility with math are asked to do the calculations on their phones. This strategy makes the exercise more participatory and ensures against mathematical errors, as community members can catch each other's miscalculations.

The basic valuation worksheet used by facilitators to guide the discussion is represented below in Box 1. For a more detailed explanation of Namati's pilot valuation activity, see facilitation instructions (from a forthcoming "Global Facilitator Guide") below in Appendix A.

Box 1: Basic Valution Worksheet

Community Name:			**Country:**				
Collected/Gathered and consumed by one "typical family"	**Basic Unit (bundle, kilo, etc.)**	**Units used/ week**	**Cost per unit**	**Cost per week**	**Cost per month (x4)**	**Cost per year (x12)**	**Total per year in USD (& notes)**
 Firewood							
 Thatch/roofing material							
 Protien (meat from hunting/fishing)							
 Fodder to feed animals							

	Wild Vegatable #1							
	Wild Fruit #1							
	Other*							
	Other							
	Other							
	Other							
	Other							
Total cost of foods and resources gathered by one "typical" family:								

**Add extra lines as necessary for any resources named by the community as gathered for household consumption.*

Total per year in National Currency:	Total # of families in the community	Total community gets from the common lands per year in national currency	Exchange rate of national currency to US Dollar	Total Community gets from Land per year USD

Invariably, the number arrived at is astronomically high, and incites gasps, exclamations, and animated conversation. In communities that have already granted a portion of their common areas to an investor, the reaction is generally stunned silence, followed by anger and outrage. Following the calculations, the facilitators lead a discussion about the kinds of activities – ceremonies, celebrations, cultural festivals, etc. – that take place on the common lands and cannot be valued on the market. They may also discuss the idea of the community's common lands as a "free supermarket" critical to a household's ability to feed and clothe its children, build its home, etc.

III. Other Efforts to Value Common Lands and Natural Resources

There is a limited but rich literature concerning valuation of resources collected, hunted and gathered by communities from common areas. Research undertaken in the 1990's and early 2000's focused on the financial value of non-agricultural resources gathered within the overall household economy. These studies analyze the valuation data collected according to a range of indicators, including:

- **The percentage of the population that gathers staple items on a regular basis.** Shackleton *et al.*'s desk review of various South African studies revealed that:

  > A large number of rural households are still dependent on natural resources for a range of basic living requirements. Across most studies to date, the most commonly used resources and the main contributors to total value…are indigenous wood for fuel and fencing ([gathered by] between 70–100% of rural households), wild fruits (72–100% of

households), wild herbs (93–100%), medicinal plants (50–100%), wood for utility items (90–100%), grazing for livestock (30%) and thatch, clay and sand. Within these uses, rural dwellers can readily list between 150 and 300 plant species procured regularly for household use (Shackleton *et al* (2001)…. Across all studies reviewed, the most commonly used products and main contributors to value are fuelwood, construction wood, wild fruits and herbs, and fodder.

More recent data indicate that in South Africa, "most rural and a significant proportion of urban South Africans continue to use fuelwood as a key energy source for cooking (e.g. … 92% of households in the rural areas of Bushbuckridge); approximately 75% of the population use medicinal plants for medicinal or cultural reasons; and millions of urban and rural households make use of wild edible herbs." (Shackleton, 2009)

- **The percentage of household sustenance made up of hunted/gathered resources**. Shackleton *et al*.'s desk review reports that:

  > In Caprivi, Namibia, wild foods provide up to 50% of household sustenance during the non-agricultural season (Ashley and LaFranchi, 1997). In Zimbabwe, wild products contribute as much as 35% of average household income, increasing to 40% for poorer households (Cavendish, 1999).

- **The quantity of resources gleaned, gathered or hunted by community annually.** For example, Turpie reports the aggregated household consumption data across the Rufiji Delta and Floodplain in Tanzania:

  > Grasses, sedges and reeds are used by many households for making fences, mats, chicken coops, grain storage containers and in house construction, but in small quantities relative to other wetland areas. About 23,000 bundles of grass, 1,600 bundles of sedges and 19,000 bundles of reeds are harvested annually … Palms are an important resource in the study area, and the lala palm (milala) and wild date palm (ukindu) are particularly important. Their leaves used for making sleeping bags, mats, drying mats, baskets, bed ropes, hats, food covers, fans, ornaments, brooms and grain silos, with all but the latter being ubiquitous in the households of the study area … Some 40,000 bundles of milala and 2.2 million small bundles (vichanga) of ukindu are harvested annually in the study area...A high proportion of households harvest food and medicinal plants for home consumption…forming an important fallback during the famine season. About 1,720 tons of wild foods are harvested annually. At least 24 species of medicinal plants are used, with an annual harvest of about 98 tons. Almost all households collect fuelwood from the forest or mangrove areas as a source of energy. It is estimated that over 2.5 million bundles or logs of fuelwood are harvested annually, with very little of this being sold... Hunting is carried out throughout the study area… An estimated 160 tons of game and 51,000 birds are hunted annually…Wild honey is collected throughout the study area from woodlands and mangroves, and hives are also kept to a limited extent. The estimated annual harvest is 32,000 litres of honey, about half of which is sold locally.

- **The annual value of the resources gathered and hunted by household or individual.** A few examples of the various methodologies used for determining the value of resources collected from the common lands and final valuation figures are as follows:

  - "The income generated by common lands in households was estimated by imputing the value of the biomass resources collected from common lands and benefits obtained from the activities based on them. The biomass resources, namely food items, fibres, fuelwood, dung and fodder were collected largely for home consumption; thus, economic return from them was derived by adding up their imputed values. The imputed value of a biomass resource was estimated by multiplying its quantity with the prevailing village price of the resource involved. The total income derived from common lands by a household was

estimated by adding the imputed values of food items, fibre, fuelwood, dung cake and fodder collected from common lands, imputed value of fodder grazed on common lands, and the money earned from stone quarrying…. Common lands provided means of 3520, 961 and 90 kg of fodder, fuelwood and cattle dung, respectively, to households in the study area during 1994–95….An average household had an economic return of Rs. 5565 per year (1US$ Rs. 42.40, July 1998) from common lands in the study area during 1994–95. (Qureshi and Kumar 1996)

- "The value of wild resources harvested by Indigenous People [in the study area of New South Wales, Australia] is estimated to be between $468 and $1,200 per adult per annum. Expressed as a proportion of the gross income of the Indigenous population, the value of the wild resources harvested is between 3% and 8%. While the value of wild resources harvested appears to be only a relatively small proportion of total income, it is a significant contribution to the dietary intake of a relatively poor community. For those households with a very active and successful harvester, the value of wild resources consumed constitutes a far higher proportion of household income than is the case when total estimated return is averaged across the entire community." (Gray and Altman, 2006)

- "Natural resources in the study area [the Rufiji Delta and Floodplain, Tanzania] are estimated to have an economic direct use value of $10.3 million per year. The total net financial value (net value to households in terms of home consumption and cash income) of natural resource use is estimated to be $9.2 million, or $575 per household per year, of which a large proportion is realised as cash income. Over 70% of this value is attributable to the area's fisheries… In summary, natural resource use by households in the study area is worth over $10 million per year in terms of gross financial value of production, and net economic value." (*Turpie, 2000).*

- Shackleton *et al*'s desk review concludes that: "Wild resources may provide up to 20% of cash income to poor households against 5% for better-off households. Direct use-values of wild resources can be high: gross values of US$194 – US$1114 per household per year were estimated across seven studies in South Africa (Shackleton et al., 2000).

Because of the range of methodologies employed to assess household and community reliance on common lands for food, fuel and other resources, it is difficult to compare the data or do a cross-national analysis. However, the various studies generally arrive at a few over-arching conclusions, namely:

1. **Poorer households rely more heavily on common areas than wealthier households:** Almost every study reviewed found that poorer households relied most heavily on the common areas for necessary household resources. Qureshi and Kumar (1996) find that "These [common] lands further help to alleviate the problem of poverty by providing income especially to poor households, to reduce unemployment through generating employment and to improve the ecological system through sustainable use and management (Jodha 1986; Pasha 1992). Citing various studies, Shackleton et al, 2001 also report that: "There is evidence that poorer households and more 'deep rural' households use a greater diversity of resources, and more of each resource than more 'well off' or less isolated households They are also more dependent on the resource base as a backstop in times of need. (McGregor, 1995; Cavendish, 1996; Campbell et al, 1997; Shackleton et al, 1999a)."

   Similarly, Twine et al.'s 2003 study of 100 households in South Africa found that:

   > The mean annual direct-use value of indigenous bio-resources, averaged across all households…was highest in the poorest of the three villages. Poor households relied most heavily on 'essential' natural resources such as wild foods, whereas comparatively wealthy households used a wider range of resources and utilized greater amounts of 'luxury' items, such as wooden utensils and poles… In households that harvest these resources instead of buying them, direct-use value represents financial savings that can

be spent on other important goods and services, such as food and school fees…. The mean annual direct-use value of resources at both the household and per capita level was highest in Mabins, the poorest of the three villages in terms of employment rates and ownership of cattle. It suggests that poorer rural communities rely more heavily than richer ones on natural resources, and supports the view that using them is an important buffer against poverty."[11]

2. **Common lands are a critical source of resources necessary for household survival**, playing, as explained by Qureshi and Kumar (1998), *"*a vital role in maintaining the ecological balance and making it possible for the people to subsist (Jodha 1986; Bardhan 1993; Swallow et al. 1997)…" Similarly, Shackelton *et al* report that:

> "Holistic assessments of the economic value of land-based livelihoods on communal land can yield surprising results. For example, Adams et al., (2000) recently estimated that their aggregate value in South Africa in 1999 was US$2 billion per annum, or around 2.5% of GDP. These findings are in sharp contrast to stereotypes of communal lands as backward, unproductive and degraded. These data do not contradict research findings which show that poverty is deepest and most widespread in rural areas, but they do allow us to understand better why access to 'natural capital' remains a crucial source of livelihood, and often the safety net of final resort." *(Shackleton et. al 2000)*

3. **Common lands are significantly undervalued by standard economic assessments**. Shackleton *et al.* reason that "Given that the value of goods and services derived from the full spectrum of land-based activities [has not been calculated or] … captured in regional or national statistics…this perpetuates the perception of communal rural areas as being unproductive and contributing little to the national welfare and economy. *(Shackleton et al. 2001)*

4. **Lacking common lands, communities will be less able to meet basic survival needs, and may therefore become more impoverished.** For example, an analysis undertaken by Gundimeda and Sukhdev concludes that:

> "[T]he most significant beneficiaries of forest biodiversity and ecosystem services are the poor, and the predominant economic impact of a loss or denial of these inputs is to the income security and well-being of the poor. An "equity" focus accentuated this finding even further, because the poverty of the beneficiaries makes these ecosystem service losses even more acute as a proportion of their livelihood incomes than is the case for the people of India at large. We find that the per-capita "GDP of the poor" for India … increases from US$60 to US$95 after accounting for the value of ecological services, and also that if these services were denied the cost of replacing lost livelihood, equity adjusted, would be US$120 per capita – further evidence of the "vicious cycle" of poverty and environmental degradation. (Gundimeda and Sukhdev 2008, cited in The Economics of Biosystem Diversity (TEEB) Report at 31)

Similarly, Qureshi and Kumar caution that because "the common lands in [studies] contribute substantially to the sustenance of rural people, more especially the rural poor… their continued availability is absolutely crucial for the survival of the poorest sections of the population… [and as such], if some effective measures are not taken within the immediate future, the continuing problem will further exacerbate impoverishment and environmental degradation. (Quereshi and Kumar, 1998)

The complexity of economic analysis undertaken in the studies cited is far beyond the technical depth of

[11] *Consumption and direct-use values of savanna bio-resources used by rural households in Mametja, a semi-arid area of Limpopo province, South Africa; W. Twine, D. Moshe , T. Netshiluvhi and, V. Siphugu, South African Journal of Science 99, September/October 2003 at 467-473*

Namati's pilot intervention.[12] **However, a review of the literature indicates that to date, little work has been done linking common land valuation efforts to the terms of concession negotiations.** In undertaking and publicizing even the most broad-stroke "basic valuation" efforts, Namati aims to draw attention - both the attention of community members (and their leaders) as well as the attention of the global community - to the vast disparity between typical annual rental fees per hectare and the actual value of the common lands to the communities who depend upon them for their welfare and survival.

IV. Findings to Date; Challenges Faced

Despite efforts to keep the pilot replacement cost valuation exercise relatively straightforward, Namati and its partners encountered significant challenges to the exercise's intended simplicity. The most substantial challenge has been community members' desire to list and calculate the value of a combination of resources generated/used in the following four ways:

Types of Resources	
Gathered from community land for **household consumption**	**Gathered** from community land for **sale/livelihood**
Grown on private/family land for **household consumption**	**Grown** on private/family land for **sale/livelihood**

Combining all these kinds of goods into one basic replacement cost valuation resulted in inaccurate calculations. The potentially lost value of income earned from selling cash crops cannot be combined with the cost of having to purchase basic necessities gathered from common areas on the market: arriving at the value of the "lost" cash crop income involves factoring in the cost of inputs, labor, opportunity costs, transport costs, etc. For example, when a community calculates the amount of firewood used by a typical family per week, they must think about how much they would have to spend on fuel if they no longer had a communal forest in which to find wood. This is a very different kind of economic analysis than calculating the amount of money a typical family earns by farming and selling a standard cash crop like maize or cassava. Conflating these different categories of resources into one simple calculation is tantamount to "comparing apples and oranges."

Relatedly, pastoralist communities initially addressed loss of grazing lands by calculating the value of selling their animals on the market, rather than more accurately calculating the costs of either 1) purchasing fodder like hay or grass that would necessarily replace grazing lands, or 2) renting other lands upon which to graze their livestock.

As a result of these challenges, while the valuation exercises undertaken were wildly successful at opening community members' eyes to the vast differences between offered rental prices for land concessions to investors and the actual market value replacement costs of the resources gleaned from the common lands in question, the actual data gathered to date is not scientifically rigorous.

[12] Namati recognizes that for certain products a direct market approach is not entirely accurate. As well-explained by Gray and Altman in regards to their study of indigenous fishing communities in New South Wales, Australia: "One approach that has been widely used is to use market prices to calculate the replacement value of the wild resources harvested. If market prices are not available the prices of reasonably close substitutes can be used as proxies. It must be stressed that this does not necessarily equate to the economist's concept of economic value. This is because the market prices do not necessarily reflect an individual's willingness to pay. If wild resources were not harvested, then the same equivalent goods might not be purchased at market prices, but rather a cheaper substitute might be purchased. Many Indigenous families have relatively low incomes, and they might not accord the same relative values as the market does to particular resources. The clearest example of this is abalone meat, which retails at over $100 per kilogram. Indigenous people would rarely, if ever, purchase abalone, or indeed the more expensive fish species which they catch, at market price. There are differences between families/ households in the amount of wild resources consumed. For those households containing a very active harvester the value of wild resources consumed may constitute a much higher proportion of household income than is the case when averaged across the entire community." (Gray and Altman 2006). To address this challenge, Namati has tried to limit the valuation exercise only to very basic staples that families rely on daily.

An additional challenge has been calculating the value of building materials, which are primarily gathered from common areas in the communities where we work. Homes may be built every ten or twenty years, with frequent repairs made. How to calculate the value of resources gathered every few years? For example, a home might be built, then need to be re-thatched every year, and a roof pole replaced or new mudding added to the walls every couple of years. Initial efforts to calculate the value of such construction and renovation have to date proved both erroneous and too complex to undertake during community meetings. A temporary solution of valuing only roofing thatch has been found, as community members across all communities report annual re-thatching.

To address these challenges, Namati and its partners have arrived at a "standard basket" of six or seven resources that are used by community members cross-nationally. These include: fuel (firewood), fodder for livestock, hunted protein (game/fish), a frequently consumed wild vegetable, a frequently consumed wild fruit, and a building/roofing material used every year (thatch). In regions where water is scarce, water for household use is also part of this basket. Communities are encouraged to calculate the replacement value of many more goods gathered or hunted for household consumption; this is simply a recommended standard list to allow for cross-community comparison.

Although most communities brainstormed lists of dozens of natural resources gathered from their common areas, an attempt to strip the exercises down to only the most basic resources gathered for household consumption rendered the following data:

Community Name	Country	Number of resources tallied	Total per year in USD per family	Total # of families in the community	Total estimate of how much value the community gets from their land per year in USD
Licaca	Mozambique	6	1,232	283	348,480
Ligogo	Mozambique	5	1,341	~1,000	1,341,000
Madonga	Mozambique	2	1,344	~2,200	2,956,800
Coguno	Mozambique	2	280	~1,660	464,800
Chacane	Mozambique	6	2,288	~1,500	3,432,000
Siahn	Liberia	9	1,425	133	189,525
Dorbor	Liberia	6	3,038	165	501,270
Dowein	Liberia	10	2,979	417	1,242,243
Jowein	Liberia	12	2,585	548	1,416,580
Awita	Uganda	6	896	340	304,640
Anyomorem	Uganda	4	1,140	~1,400	1,596,000
Burlobo	Uganda	4	797	743	592,171
Abunga/Aboti	Uganda	17	305	~500	152,500
Barodir	Uganda	3	1,043	1,197	1,248,471
Averages		7	1,508	863	1,394,352

See Appendix B for three full examples of valuation exercises completed.

Yet the attempt to make the math "cleaner" by reducing the exercise to only one of the four "categories" of resources (excluding resources gathered from the common lands for sale, and all crops grown both for household consumption and sale/livelihood) significantly undervalues the loss of lands in a concession that might indeed encompass both common areas and some or all households' lands.

Other challenges faced in the course of piloting this basic replacement cost valuation exercise included:

- **Determining the "typical family**": Perhaps unsurprisingly, Namati's partners reported lively debates in every community concerning the size of a "typical family." In Liberia, when communities cannot agree, facilitators suggest an average household size of seven people, (two parents and five children), which is at the low end of the family size spectrum in the region, but can help to ensure more conservative calculations.
- **Varying frequency of use**: Communities are frequently challenged by goods that are not always consumed daily, weekly or monthly with regularity. Some items are consumed seasonally, or used on an as-needed basis. To address this, facilitators adjust the calculations accordingly – for example, if the "typical family" uses up a certain quantity of honey every three months, then the per unit costs are only multiplied by four, rather than weekly or monthly. Seasonal resources are calculated only for those months that they are in season.
- **Varying units of measurement**: Oftentimes a good sold at market may come in various "units," depending on the vendor: what is sold in a "pile" may also be sold in a "bag." To address this, the facilitating teams supported the community to agree upon the most "usual" unit of sale.
- **Price consistency**: Prices of certain staple good may vary across time, becoming cheaper when in season/abundant, and more expensive when out of season/scarce. Similarly, market prices may be cheaper when sold from one community member to another, and more expensive when sold to someone from another community.

A final challenge worth noting is that Namati's valuation exercise fails to account for two kinds of significant and important value categories: ecosystem services[13] and intangible cultural, spiritual and social resources such as ceremonial sites, spiritual areas, and burial sites.[14] Failing to include these analysis significantly reduces the actual value of the common lands.

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[13] The robust field of "ecosystem services" valuation (Costanza et al., 1997; Daily, 1997), attempts to quantify the value of flourishing ecosystems - such as fresh air, clean water, lack of erosion, etc. – that are also the product of thriving common areas such as un-developed grazing lands, water bodies, forests, etc. As described by Turpie (2000) these include such services as "flood attenuation, groundwater recharge, sediment retention, inputs to agriculture, water purification, nursery functions, micro-climate regulation and carbon sequestration. More specifically, The Millennium Ecosystem Assessment identifies four broad categories of ecosystem services:

- **Provisioning services**: products obtained from ecosystems, like food (crops, fruit, fish), fiber and fuel (timber, wool), biochemical, natural medicines, and ornamental resources (shells, flowers)
- **Regulating services**: benefits obtained from the regulation of ecosystem processes, like air-quality maintenance (ecosystems contribute chemicals to and extract chemicals form the atmosphere), climate regulation (land cover can affect local temperature and precipitation), water regulation (ecosystems affect the timing and magnitude of runoff, flooding, etc.), erosion control, water purification/detoxification, natural hazard protection, bioremediation of waste
- **Cultural services:** non-material benefits that people obtain through spiritual enrichment, cognitive development, recreation, etc. Includes spiritual and religious value, inspiration for art and folklore, social relations, aesthetic values, cultural heritage values, recreation, and ecotourism
- **Supporting services**: necessary for the production of all other ecosystem services, including soil formation and retention, nutrient cycling, primary production, water cycling, production of atmospheric oxygen, and provision of habitat.

[14] For example, a 1997 study in Zimbabwe found that in focus group discussions with community emmbers: "Non-market values such as water retention, rain-making functions, inheritance value, aesthetics and the prevention of soil erosion were ranked highly…The role of woodlands in providing water resources and as the place for rainmaking ceremonies was particularly highlighted. Respecting and preserving sacred areas according to the wishes of the ancestral spirits was said to be essential for good rainfall. …The different gender groups had slightly different perspectives, the women stressing woodlands as sites for rainmaking ceremonies, the men emphasizing inheritance, spiritual and aesthetic values, and the boys giving more value to direct use values. The boys' group related their ranking to the ecological functions of woodland areas (water retention, soil erosion protection), reflecting their exposure to environmental education at school, while the women and men preferred to relate environmental service values more directly to issues of spirituality and sacredness; a more traditional, "non-scientific" interpretation of ecological function and value. *"Local-Level Valuation Of Savanna Resources: A Case Study From Zimbabwe," B. M. Campbell, M. Luckert, and I. Scoones Economic Botany 51(1) Pp. 59-77. 1997*

Namati and its partners are quite aware that these valuation exercises are rudimentary: because they must be conducted with the community's participation over the course of a one- to two-hour meeting, their simplicity means that they can only be used for awareness-raising purposes. However, more rigorous economic valuation of the actual replacement costs of common areas should be able to make a strong case that concession agreements that offer as little as $4 USD/hectare per year are unconscionable, as there is a significant chance that they will further impoverish community members.

V. Analysis and Conclusions

Given the challenges that Namati and its partners faced while piloting a community-led replacement cost valuation activity, any analyses and conclusions are still preliminary. However, the averages represented in the chart above (and in the case examples below in Appendix B) indicate that further research may lead to a finding that concessions agreements with very low annual rental rates will further impoverish poor rural communities and adversely affect community members' ability to survive. Averaged across 14 communities, calculating only an average of 7 items gathered or grown for household use, the average replacement cost of common lands shared by an average of 863 households is $1,394,352 annually. In a hypothetical situation in which an investor requests a 1000-hectare concession of community common lands, remunerated at $4 USD/hectare per year, the rental cost would total $4,000/year. Even if Namati's basic method of replacement cost valuation is wildly inaccurate (failing to include certain goods and services while over-valuing others), the data indicate a differential of more than 100 times the hypothetical rental fee.

Going forward, Namati and its partners will work with an economist and a professional valuer to craft a more accurate method for capturing replacement costs – one that factors in the four main types and uses of goods brainstormed by community members. Once a proper methodology has been established, Namati will share the strategy widely to allow other NGOs to facilitate this exercise, with the eventual goal of gathering and analyzing data from across the world to better inform community members, policy makers, and investors.

However, it is important to remember that the original aim of the valuation exercise was not to attain precise, accurate data, but rather as a means of illustrating to communities the very high value of common lands and natural resources *to the community members themselves*. In the course of our work, we have found that when asked to identify local "natural resources," community members first tend to talk about gold, timber and other resources valued in a cash economy. Only after being prompted do they begin to list such "common things" as thatch, water, or plant medicine as natural resources. In the communities where Namati's partners have piloted the valuation exercise, community members have been astounded by the resulting replacement costs. They have been quick to begin using the "free supermarket" analogy - using that phrase even once or twice while debriefing a valuation exercise appears to foster a new conception of local resources in community members' minds. The field teams have reported that directly after undertaking this exercise, community members expressed feeling more cautious about agreeing to potential investments, more emboldened to demand benefits from land deals, and more adamant about imposing limits or restrictions on investors' actions. Viewed in this light, the pilot exercise is proving to be effective. It may also have longer-term conservation/sustainable natural resource use impacts.

The - albeit imprecise - data may have other uses as well, including

- **Challenging international conceptions that undeveloped land has little worth**, and thus requires investment to "unlock" its value. As described above, the commons appear to function as a significant safety net against abject poverty; well-accepted statistics that the rural poor in various nations "live on less than $1 USD/day" do not account for the thousands of dollars worth of resources that families gather annually from local common lands at no cost. Should these common lands be privatized, the $1 USD/day figure would truly reflect their resource base: a poor family without access to a diverse, abundant common area would likely starve, freeze, and have no

shelter – as food, fuel and building materials currently cost hundreds of dollars per year to purchase in the local market.

- **Convincing national governments to change their imposed caps on rental payments to communities** (as in Sierra Leone). While clearly designed to attract investment, state imposed limits on rental fees for investors contribute to the impoverishment of their citizens. As made clear in "*Growth without Development: an Economic Survey of Liberia*" (Clower et al., 1968), increased international investment does not automatically lead to local prosperity. Artificially imposed rental payment caps eliminate the possibility of authentic, properly-negotiated contracts between communities and investors. Communities that are aware of the actual value of their lands and empowered to negotiate with investors as equals may broker concession agreements that bring authentic prosperity and development to rural communities.

- **Avoiding future conflict**: as Namati's partners have observed, communities that have accepted investments at very low annual rental rates have later realized that they have lost far more than they have gained and become angry. Concession agreements that pay communities a fair market value for their land – factoring in the replacement costs of necessary natural resources and livelihoods – may reduce investor-community tensions, sabotage, and violent conflict over the long term, making investments more profitable.

Finally, Namati's community land protection approach includes a variety of additional activities and efforts designed to ensure that communities are better prepared to negotiate with potential investors on a more level playing field. Namati recognizes that land valuation must be bolstered by legal literacy, access to independent, competent legal support, equitable transparent community decision-making, and a supportive and responsive policy framework. The valuation exercise is just one component of a variety of tools and resources that Namati and its partners offer communities, including:

- A pilot "Early Warning System" in Liberia (soon to be scaled up), in which communities who have been approached by investors can call a toll-free hotline for immediate information and legal support;[15]
- A "How To" Guide for communities that describes how they can prepare themselves for future negotiations with potential investors;
- A "How to" Video for communities that illustrates how they can best prepare themselves for negotiations with potential investors; and
- Rigorous legal education concerning Free Prior Informed Consent (FPIC), and other rights established in the United Nations Declaration on the Rights of Indigenous Peoples.

While the valuation exercises address the lack of information that leads to inequitable concession agreements, these resources aim to address the power asymmetries that lead to coerced or inauthentic consultations.

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[15] The objectives of Namati and SDI's Early Warning System are to:

1. Provide legal education and capacity-building to raise awareness about communities' negotiating powers in the face of investors' requests for land;
2. Ensure participatory, accountable, informed and transparent community-wide decision making when determining whether to cede land to investors;
3. Support communities to negotiate for and receive fair compensation from investments undertaken on community land;
4. Create a database of investment requests which may be used to gather and analyze information about the content and type of investment negotiations taking place at the community level, so as to craft an informed policy advocacy strategy;
5. Gather information concerning best practices for supporting communities to negotiate with investors; pioneer and assess various creative, adaptable strategies that engage communities, companies, and governments to ensure equitable investments and lasting peace; and
6. Ensure greater community autonomy and prosperity in investor relations, and reduce conflict between communities and investors.

Namati's efforts aim to help level information asymmetries, support communities to thoughtfully accept or reject investors' proposals, ensure communities' fully informed consent to investment deals, and support the negotiation of fair contracts that will lead to authentic community prosperity and development. Prepared with more information about the value of their lands, communities can better evaluate the balance of costs and benefits of a proposed land deal, demand benefits that share the profits of investments more equitably, and ensure that the terms of concession agreements serve community interests.

Appendix A:

How to Facilitate a Simple Valuation Exercise

1. **Generate a list of resources that community members get from the common land**. First, using a chalkboard or large piece of paper, make a chart that has 7 columns. (See the *Basic Valuation Worksheet* to see how this looks.) Get community members to "shout out" or brainstorm all the main uses of the common land, as well as all natural resources that can be found on the land. For example, if the common area includes forests, people may "shout out" such things as:

- Hunters hunt for animals in the forest!
- Women gather wild mushrooms!
- People gather thatch for the roofs of their houses!
- People gather traditional medicines for healing sickness!
- Women gather water from streams, rivers and springs!
- People gather honey from wild bees!

Write down everything that people say in the column on the left side of the board or big paper. Keep asking people to shout out uses of the common areas until no one can think of any more uses of the land or resources found there.

Now, pick the most-used resources that every household gathers on a daily or weekly basis from the common lands. Choosing 7 to 10 resources to focus on tends to work best, but if community members have interest and energy, feel free to continue for all the resources listed. Ask each of these questions about each resource.

2. **Determine the unit of measurement for each resource**. Ask people how each resource gathered is sold or bought in the market. For example, by kilo? By bundle of three? (Here, you are looking for people to arrive at a common unit of measurement.) Write all answers in the column titled "Basic Unit."

3. **Determine how many units of each resource are used each week**. Ask people to estimate how much a "typical" family gathers or uses every week. Ask them to "shout out" the answers. For example:

- How often does a family hunt for meat? How much meat, on average, do they get and eat every week/month by unit?
- How many units of wild fruit or vegetables do women generally gather each week?
- How often do people gather wild honey? What quantity of honey can someone get each time he or she goes to gather it? How much honey does the typical family consume or sell every week?

People will generally argue amongst themselves until they come up with an "average" amount that a "typical family" uses.

> **Challenge → "Typical family."** Often, the idea of a "typical" family is very hard for people to conceptualize. To address this, you might want to ask people how many children couples in the community usually have and how many grandparents live with the couple. Then, depending on their answers, you might offer that the "typical family" includes, for example, two parents, four children, and one elderly grandparent. Each community may define a "typical family" differently.

Ask communities to think about the non-economic uses of their common lands, such as: a gathering place for celebrations, the site of religious or spiritual ceremonies, the location of graveyards, etc.

4. **Determining cost of the unit on the market**. Ask the community how much one unit gathered or used would cost on the open market if they had to buy it in town. For example, if a family had to buy the kilo of meat they got from hunting, how much would that cost to buy? Or if a family had to buy thatch to repair their roof, how much would a bundle of thatch cost in the market? If a family had to buy firewood, how

much would the firewood they use every week cost in the market?

5. **Find out the cost per week.** Now is where the math begins. Multiply the cost of the unit (a kilo, a bundle, etc.) with how many units a "typical family" uses per week. For example, if a "typical family" uses one bundle of firewood every day, and a bundle of firewood costs $1 in the market, then a "typical family" would have to spend $7 a week on firewood if they could no longer access their common forest to gather firewood. Write down the costs calculated in the chart.

> **Challenge → Non-weekly use**. Sometimes a "typical family" will only gather and use a resource once a month, or once a year. For example, if people gather honey an average of four times a year, and use that honey for a few months until it runs out, then factor that into the "amount of money spent per year" column only. Find out the "unit" of honey, how much that unit costs to buy in the market, and then multiply that cost x4 (instead of all of the other math in the chart) and put that calculation in the final yearly column.

6. **Find out the cost per month and per year**. Multiply the cost per week x 4 to get the cost of having to buy that resource in the market per month to a "typical family." Enter it into the table. Then multiply that number x 12 to find out the annual cost to a family in the final column.

> **Challenge → The calculating the cost of building materials**. Most families rebuild their homes once every few years. To address this, go through the various resources necessary to building a home. But then divide that number by the average number of years that a house lasts. For example, if the cost on the market to buy all the materials needed to build a house totals $100, but the family only builds a new house every 10 years, then the total cost per year to build a house is $10.

7. **Calculate the total cost per year for one family.** Add up the cost per year total for the resources discussed by summing everything in the final column.

Community members are often shocked by the high numbers arrived at by the conclusion of the valuation exercise. To make sure that they understand how the total value was calculated, it is important to do all calculations in front of the community.

8. **Calculate the total cost per year for the whole community**. Now, ask the community how many families/households live in their community and use the common areas. Write down the total number of households in the community. Now multiply the total cost per year for one "typical family" by the number of families or households living in the community. This number is the "Replacement Cost" of their land and natural resources. It is often a very large number! This is how much value per year – at least – that the community gets from its common lands.

9. **Find out the cost in US Dollars.** Often, investors offering to lease or buy land will come offering a rental fee or sale price in US Dollars. For this reason, it is important to calculate the "replacement cost" of the natural resources gathered from the common areas both in the national currency as well as in US Dollars. Come prepared to the meeting with the current exchange rate. Multiply the total cost to the community in the local currency by the current exchange rate.

After completing these calculations, it is useful to take a moment ask community members to envision what their lives would be like if they no longer had access to their community land. Ask questions like:

- If you did not have your community land, where would you get firewood/thatch/wild fruit and meat?
- If you did not have your community land, how would you earn money to buy each item at the market?
- If an investor approached you looking for land, would you consider selling or renting the land? If yes, for how much per hectare/year?

When debriefing the exercise, you might introduce the community to the idea that their common lands are like a "Free Supermarket" where they can take whatever they need but do not need to pay for anything

Materials needed: 1) A calculator; 2) big pieces of paper or a chalkboard and 3) pens/markers/chalk.

Appendix B: Examples of Community Valuation Exercises

Community Name	Ligogo		Country:	Mozambique			
Collected and consumed by one "typical family"	Basic Unit (bundle, kilo, etc.)	Units used per week	Cost per unit (Meticais)	Cost per week	Cost per month (x4)	Cost per year (x12)	Total per year in USD
 Firewood							
 Meat from hunting							
 Fish	1	7	120	840	3,360	20,160	Only consumed half the time
 Vegetable #1*							
 Herbal Medicine							
 Coconuts	1	21	10	210	840	10,080	
 Thatch	bundle	50	100			5,000	re-thatch roof(s) 1x/year
 Reeds	bundle	60	50			3,000	
 stakes	bundle	25	80			2,000	
Total cost of foods and resources gathered by one "typical" family:				1,050	4,200	4,0240	1,341

Total # of families in the community	Total community gets from the common lands per year in national currency	Exchange rate of national currency to US Dollar	Total Community gets from Land per year USD
1,000	40,240,000	30	1,341,333

Community Name: Siahn				Country: Liberia				
Collected and consumed by one "typical family"		Basic Unit (bundle, kilo, etc.)	Units used per week	Cost per unit (Liberian Dollar)	Cost per week	Cost per month (x4)	Cost per year (x12)	Total per year in USD
	Firewood	bundle	6	50	300	1,200	14,400	
	Fufu	plastic bag	1	400	400	1,600	19,200	
	Meat from hunting	body	1	500	500	2,000	24,000	
	Greens	bunch	6	10	60	240	2,880	
	Pepper	cup	7	35	245	980	11,760	
	Kola	bucket	0.7	300	210	840	10,080	
	Plantains	bunch	2	150	300	1,200	14,400	
	Palm oil	bottle	1	60	60	240	2,880	
	Cane Juice	bottle	1.5	200	300	1,200	14,400	
Total cost of foods and resources gathered by one "typical" family:					2375	9500	114,000	1,425
Total # of families in the community		Total community gets from the common lands per year in national currency		Exchange rate of national currency to US Dollar		Total Community gets from Land per year USD		
133		15,162,000		80		189,525		

Community Name: Chacane			Country: Mozambique				
Collected/Gathered and consumed by one "typical family"	**Basic Unit (bundle, kilo, etc.)**	**Units used per week**	**Cost per unit (meticais)**	**Cost per week**	**Cost per month (x4)**	**Cost per year (x12)**	**Total per year in USD (& notes)**
Firewood	bag	7	15	105	420	5,040	
Thatch/roofing material	pairs	1	50	60	240	2,400	
Protien (Meat from hunting/fish)	Kilo	10	120	1200	4800	28,800	
Vegatable #1	bag	3	15	45	180	2,160	
Fruit #1	Unit	49	10	490	1960	23,520	
Total cost of foods and resources gathered by one "typical" family:				1,900	7,600	61,920	2,064
Total # of families in the community	Total community gets from the common lands per year in national currency		Exchange rate of national currency to US Dollar		Total Community gets from Land per year USD		
1,500	92,880,000		30		3,096,000		

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