COMMON BENEFITS: IS COMMUNITY TENURE FACILITATING INVESTMENT IN THE COMMONS FOR INCLUSIVE AND SUSTAINABLE DEVELOPMENT?

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Abstract

With communities in many parts of the world achieving stronger, legally-recognized, collective rights over natural resources, important questions now arise regarding how communities can overcome perceived barriers to investment and deliver sustainable development. Normative economic theory posits conceptual and practical barriers to investment in commons-based enterprises. This paper considers evidence and draws on lessons from four countries—Guatemala, Mexico, Nepal and Namibia—to better understand the pathways emerging to deliver investment in the commons. We find that investment in community-owned resources is taking place, but that investment readiness develops over time, in stages, and is conditional on the level of assurance stakeholders have that the obligations of each party will be met. We also find that community rights have fostered investment that recognizes the social character of commons ownership, to deliver environmental and social returns, as well as profits.

Key Words: Commons, forest, investment, livelihoods, returns.
Introduction

The Investment Imperative
It has been estimated that to meet the internationally recognized Sustainable Development Goals, as much as USD 4.5 trillion per annum is needed in investments (UNCTAD, 2014). Investments in land are needed to increase productivity if we are going to meet the demands of a growing global population, while respecting the rights of local people and protecting the environment. To do this, significant restructuring of current production practices, technological innovation, regulatory reforms and new standards of supply chain management will be required. Changes in the standards and operating practices of investors and financial service providers will be essential. Investors are now realizing that ignoring the environmental and social impacts of their activities carries considerable financial and reputational risk. However, currently only a small fraction of banks, pension funds, insurers and multinational corporations are targeting sectors and regions in ways that advance sustainable development (OECD, 2017; OECD, 2016; RRI, 2012). Despite numerous promising initiatives (Clarmondial, 2017; EDF, 2017; Hamrick, 2016), there remain considerable perceived barriers to sustainable investment in land, particularly in contexts where natural resources are held and used in common.

Investing in the Commons
A significant portion of the world’s remaining forests, pastures and fisheries are managed by local communities or collectivities as Common Pool Resources (CPRs). These are often administered in accordance with customary or traditional rules, which may or may not be statutorily recognized. It is estimated that, globally, over 8.5 billion ha can be categorized as CPR (Wily, 2011). Importantly, under customary tenure arrangements, people gain access to the commons as a social right, derived from their membership in the local community or collective, unlike private property, where land rights are typically secured through market transactions and inheritance.

Neo-classical property rights theory predicts that investment in CPRs will be limited, compared to resources held under private or public tenure. Hardin (1968) famously argued that the absence of clear property rights, in situations where resources are held in common, leads to overexploitation as users engage in an unproductive race to capture resources before others (Cheung, 1970; Clark, 1976; Dasgupta & Heal, 1979; Gordon, 1954; Knight, 1924; Schaefer, 1957; Scott, 1955). This behavior increases transaction and enforcement costs, as users try to devise and enforce rules to reduce the externalities of
their mutual overuse (Coase, 1960; Demsetz, 1967). Productivity is also lower, because individuals have limited incentive to invest and increase private returns (North, 1990). Hardin’s “tragedy of the commons” ignited scholarly research which argued that Hardin had failed to distinguish between contexts where there was an absence of property - more accurately characterized as “open access” - and “common property” or “collective tenure”, where collective institutions define who has rights to the commons, regulate resource use and decide the distribution of benefits (Agrawal, 1998; Baland & Platteau, 1996; Ciracy-Wantrup & Bishop, 1975; Ostrom, 1990; Sethi & Somanathan, 1996; Taylor & Singleton, 1993; Wade, 1988).

Schlager and Ostrom (1992) developed ‘a conceptual schema for arraying property-rights regimes that distinguishes among diverse bundles of rights’; this has provided a framework to evaluate the strengths and weaknesses of common property regimes. The schema identifies five property rights: 1) access; 2) withdrawal; 3) management; 4) exclusion; and 5) alienation. Access and withdrawal rights are dependent on the exercise of management, exclusion and alienation rights (Ostrom, 1994). Though influential, the framework has had its detractors. In common property regimes, multiple and conflicting claims to resources often exist (Benda-Beckmann & von Benda-Beckmann, 1999; Fortmann, 1995; Peluso, 1996). This overlap can be legally based, as regulations recognize different sets of rights (legal pluralism) to different right holders (Benda-Beckmann et al., 2006). Equally within communities, social status can vary by wealth, class, gender and ethnicity, with different bundles of rights applying to different community members (Agrawal & Gibson, 1999; Agrawal & Ribot, 1999; Ribot, 2004). An increasing number of stakeholders are also playing a role in resource management, including private actors, NGOs, civil society and governments at the local, national and international level, with disparate interests and goals.

There is now clear evidence that devolving ownership, use and exclusionary rights to communities, can provide incentives for communities to actively manage and invest in their resources, delivering equitable distribution of benefits and sustainable management outcomes. Dasgupta (2005) highlights that common property resources are sometimes the only assets to which the otherwise disenfranchised have access. Despite proven benefits, investment in enterprises operating in the commons remains limited.
Perceived Barriers to Investment

To enable investment, various barriers need to be challenged, mitigated or overcome. These are summarized below.

1. Common property is not subject to sale or purchase; hence resources cannot be used as collateral, and outside investors cannot hold shares (Antinori, 2000; Feder & Feeney, 1991). Alienation rights are the cornerstone of land markets, however, their use in common property systems varies depending on regulations. RRI (2012) reviewed 59 tenure regimes recognizing collective tenure rights in statutory regulations across the world. From the regimes analyzed, 14 were allowed to lease the land, and only six were allowed to use land as collateral.

2. Community institutions and traditional authorities don’t have the capacity or procedures necessary to negotiate and manage investment and commercial partnerships, despite experience managing community relations, aligning resource rights and adjudicating disputes internally.

3. The community and indigenous rights movement is skeptical and hostile toward commercial investors due to a long history of exploitation, uneven benefits and lack of formal recognition of ancestral/customary rights. In the absence of clear community rights, local or national governments have initiated and negotiated partnerships with commercial investors. Although infrastructure and services are often included in investment terms, local communities are typically treated as passive partners who must accept pre-determined terms (Vermeulen & Cotula, 2010).

4. Exposure to the global market may increase demand for resources and change community consumption patterns, eroding natural resources, traditional values and practices. Ciriacy-Wantrup and Bishop (1975) argue that, “in communal hunting and gathering societies, without markets on which to sell surplus, emphasis on sharing among members of the group tended to discourage accumulation…Institutions were effective in managing resources on a sustained yield basis”. However, communities may struggle to manage the competition and pressures of the global market.

5. The social character of the commons plays an important role in supporting the poor and marginalized members of the community (e.g. women, infirm and minority groups) and has been well documented (Angelsen & Wunder, 2003; Belcher et al., 2005; Sunderlin et al., 2005). When commercial investment enters, tensions may emerge between equitable benefits and profit, democracy and hierarchy, managerial efficiency and traditional customs, and management for conservation versus production (Antinori & Bray, 2004).
In the absence of a large body of evidence to the contrary, it’s likely that these normative assumptions about the risks and challenges of common property arrangements will perpetuate the argument that individual property rights are more likely to unlock the flow of capital to agriculture and forestry sectors (Feder & Feeney, 1991). Below we explore some of the literature associated with property rights, risk and assurance.

Antinori (2000) argues that approaches to “property rights theory share themes of risk, uncertainty and transaction costs”. Safitri (2015) and Banjade et al. (2017) reason that tenure security relates to: 1) legal recognition; 2) perception of rights; and 3) actual practice; while Place et al. (1994) define their three dimensions of tenure security as: 1) robustness - how many of the bundle of rights are held; 2) duration - the length of time for which a right is valid; and 3) assurance - the certainty with which the rights are held and enforceable for all parties. Place et al. (1994) go on to argue that absolute certainty of rights should provide incentives for long-term investment and resource conservation, however, “rights and duration are seldom absolutely present or absent. They are held with varying degrees of certainty at different points in time”.

Dasgupta (2005), in his economic evaluation of “common property resources” asks in what contexts stakeholders can be confident that others will do what they said they will do under the terms of an agreement. He identifies circumstances where promises may be credible: 1) “mutual affection” – when parties care about one another sufficiently; 2) “pro-social disposition” – when individuals keep their promise because others display trust in them; and 3) “incentives to keep promises” - when the temptation to break one's agreement is so great, there is need for socially constructed incentives. These include: a) external enforcement by an established structure of authority, b) reputation as a capital asset, and c) a social norm or rule followed by community members during a long-term relationship. In contexts where mutual affection and pro-social disposition may not exist between stakeholders, “incentives to keep promises” or clear and enforceable institutional structures are essential to support agreements, such as investments.

Baynes et al. (2015) posits that developing bonding social capital (which enables communities to undertake collective action and form internal agreements) and bridging social capital (enabling communities to liaise effectively with the outside world and form durable external agreements) will support the development and success of community initiatives and enterprises. Ciriacy-Wantrup and
Bishop (1975) further argue that community enterprises should be evaluated in relation to three decision-making levels: 1) operating (or primary) level, which determines inputs, outputs and similar decisions made by the operating sectors of the economy; 2) institutional (or secondary) level, which regulates decision making on the operating level; and 3) policy (or tertiary) level, which as the highest level of governance changes the institutions of the secondary level. This echoes Shlager and Ostrom’s (1992) operational vs. collective choice rules. Paudel et al. (2012) also argue that, “at certain times, local level community organizations have united with similar organizations to form what we call secondary-level organizations including federations, cooperatives, networks, associations”. These secondary organizations, through their function of uniting communities, hold great decision-making power and social capital, and can shape the regulatory and institutional context to reduce risk and support investments and financing for communities.

This paper argues that rights devolution “triggers” changes in the level of assurance and decision making for stakeholders, and over time delivers new investments. The institutions, incentives and investments that emerge over time provide insights into the “assurance” problem (Runge, 1985).

**What This Paper Will Do**

This paper seeks to examine three hypotheses:

1. Barriers to commons-based investment are not insurmountable, and investment in community-owned resources is taking place.
2. Investment readiness develops over time, in stages, and is conditional on the level of assurance stakeholders have that the obligations of each party will be met.
3. Community rights have fostered investment that recognizes the social character of commons ownership, and delivers environmental and social returns, as well as profits.

The paper uses the authors’ extensive experience and expertise to select and review literature from four case study regions considered to be some of the most successful collective tenure models. Guatemala, Mexico and Nepal devolved forest rights to communities, while Namibia devolved rights to wildlife. The authors explore what investments are taking place and seek to explain why, using the Realist Synthesis Framework. Finally, we respond to our hypotheses by analyzing the impact investments are having, and how they are shaping the future of communities and their environment.
The collective property arrangements studied are:

1. Community Forest Concessions (CFCs) in Guatemala
2. Ejidos and indigenous communities in Mexico
3. Community Forest User Groups (CFUGs) in Nepal
4. The Community-Based Natural Resource Management (CBNRM) model in Namibia.

For simplicity, we use the term Community User Group (CUG) to refer to the group of individuals that has been granted the bundle of rights. However, we acknowledge that the four country case studies differ considerably in terms of the rights received. Differing from communal forest organizations, community enterprises (CEs) or community forest enterprises (CFEs) refer to the organizational structures that communities have established to commercialize production (Bray & Merino, 2002, p. 9). In addition, although we acknowledge the importance of environmental, social and political capital investments, in this paper we focus our attention on the origin and volume of financial investments.

Social and Institutional Context of the Four Case Studies

Guatemala

Guatemala’s indigenous population (60% of the country’s total population) is overwhelmingly poor in terms of income measures, quality of life indicators and access to assets such as land (IWGIA, 2015). Recent data on land concentration indicates that Guatemala has one of the world’s highest Gini indices\(^1\) on land access (0.84) (INE, 2002). Agriculture remains the main economic activity, employing over 40% of the population, and the search for land has drawn people to forest areas, increasing degradation and deforestation. Guatemalan regulations recognize two forms of property (DL.106, 1963) - public and private. Forestland covers about 67% of public land. Forested regions had for many decades remained relatively unpopulated and unexplored. However, recent efforts to promote agricultural expansion through colonization and privatization have led to significant growth in the number of forest settlers. The northern region of Petén includes about 80% (2.8 million ha) of Guatemala’s remaining 3.5 million ha of forests; and 75% of the national protected area system.

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\(^1\) The Gini coefficient is a measure of statistical dispersion. It represents the income or wealth distribution of a nation's population, and is used to measure inequality.
In 1985, constitutional reforms modified the definition of claimants and claims over forest and land rights (Monterroso & Barry, 2012). The Mayan Biosphere Reserve (MBR) in Petén became the largest protected area (2 million ha) in the country (Decree 5-90, 1990). The MBR fulfills important protection and connectivity functions, and contains over 34% of species registered in the country (Véliz, 2008). The establishment of the MBR was an attempt to change forest values and use, introducing conservation as the overarching goal. The shift towards conservation interests was followed by the finalization of the Peace Accord negotiations related to land rights in 1996, following the end of a 36-year civil war. These efforts recognized historic and recent settlement of communities, and guaranteed access and rights to resources in protected areas, while simultaneously supporting the new national forest and biodiversity conservation agenda and avoiding a complete alienation of the industrial timber sector.

Community concession contracts are legal agreements between the state and an organized group of people living in a given community. These 25-year concession contracts allow concessionaire members rights to manage and extract timber, non-timber forest products and implement ecotourism activities in protected areas. Community access and settlement rights were conferred on condition that production of high-value timber species was heavily regulated and certified. The evolution of the community forest concession system took place in three main stages: 1) establishment of the protected area; 2) formalization of community concession contracts; and 3) development of the community forest enterprises (Monterroso, 2015).

- 1985: Constitutional reform laid the groundwork for environmental regulations, including establishment of the national protected area system.
- 1990: Decree 5-90 established the Mayan Biosphere Reserve (MBR), reorganized northern Petén into management zones, modified land use patterns and redefined land tenure rights.
- 1994: Policy regulated the creation of community forest concessions within the MBR (modified in 1998 and 2004).
- 1996: Peace Accords included a requirement that at least 100,000 ha would be turned over to organized communities for natural resource management within protected areas.
- 1994–2002: Formalization of twelve contracts with community-based organizations; certification of community forest areas.
- 1998: Emergence of secondary-level (institutional-level) community organizations and enterprise activities; national community concession policy document followed by specific provisions.
Mexico

Mexico is considered one of the top 12 mega diverse countries in the world. Deforestation estimates vary considerably (from 75,000 ha/year to 1.9 million ha/year) and there are few substantial intact forest masses left, but according to FAO (2010), around 33% of the country remains under forest cover (more than 64 million ha), 80% of which is found within social property arrangements. Mexico presents a unique case where much of the country's forests have now been formally recognized as common property, after successive degrees of control that began with the Mexican Revolution in the early 1920s (Bray & Merino, 2002). There are two types of tenure regimes and forms of common pool resource management in Mexico - indigenous communities and ejidos.

As opposed to other common property regimes in Latin America which are based on traditional and indigenous forms of managing commons, "Mexico is rich in indigenous forms of common property management... these indigenous forms were both overlaid and imitated by the massive agrarian reforms that came out of the Mexican Revolution in the second decade of the 20th century" (Article 27, National Constitution of 1917, reformed in 1992) (Bray & Merino, 2002, p. 19). Nowadays, roughly half of Mexico has been formally recognized as ejidos and indigenous community lands. According to INEGI (1997) approximately 9,000 communities have forests in their lands - some of which still remain as intact forest masses. According to Bray et al. (2007) over 2,300 communities had permits to carry out forest management and extraction activities between 1992 and 2002 - including over 430 indigenous communities and more than 1,800 ejidos - and Hodgson et al. (2013) argue that around 3,000 communities have developed community forest enterprises.

Mexico's tenure reform is grounded on a history of redistribution that resulted in a massive state-directed transfer of natural forest assets. Changes in rules over management of forest resources have been driven by government policy and formally constituted organizations. While both ejidos and indigenous communities are considered private lands, especially agrarian plots, the Mexican government for many years retained usufruct rights over the forestlands. Usufruct rights to forests were extended to ejidos in the 1992 constitutional reforms, and new provisions were included to give ejidos the right to title their agricultural land as private property, although not common forest lands.
Bray (2013), Bray & Merino (2002), and Bray & Torres-Rojo (2006) organized the history of community forest management in Mexico into three main periods (see also Bray et al., 2005): 1) state-led industrial forest exploitation; 2) pro-community focused forest policy; and 3) pro-community control of timber management activities.

- 1930s - 1970s: State-led industrial forest exploitation; communities considered lacking in the capacity to manage timber forest products.
- 1970s - 1992: Pro-community focused forest policy; inception of a national program of forest development activities.
- 1986: Pro-community control of timber management activities on communal lands (after recognition of communities usufruct rights to forests in constitutional reforms).
- 1992–2000: Coordinated efforts to promote community forest management.
- After 2000: Coordinated and effective grassroots and civil society movements concerned with community forest management.

**Nepal**

Nepal is highly diverse, biophysically, climatically and ethnically (HMG/N, 2004; CBS, 2007). Over 25% of the total population still lives below the poverty line, and the incidence of rural poverty (27.43%) is almost twofold of that of urban areas (15.46%) (CBS, 2011). With economic growth heavily skewed toward sectors such as banking, insurance and real estate, the productivity and success of sectors like agriculture and forestry have dwindled, perpetuating a vicious cycle of poverty for forest-dependent communities (Upreti & Adhikari, 2006). This is especially alarming, considering that 60.43% of the population relies on agriculture and forestry for their livelihoods (CBS, 2013). Migration from rural areas to cities and emigration to foreign countries for employment has become commonplace (CBS, 2014) with remittances constituting 27.7% of Nepali Gross Domestic Product (GDP) in 2014/15 (GoN, 2016). Likewise, CBS (2011) found that 78.9% of remittance payments are used for consumption, with less than 1% being re-invested in businesses.

Nepal remains a patriarchal society, characterized by discrimination based on gender, caste and ethnicity. Discrimination, inequality and oppression, coupled with economic grievances rooted in the poor performance of the government, contributed to a decade of armed conflict (1996-2006), emanating from the Maoist’s “People's War” (Gravingholt et al., 2013). Forest management in Nepal has seen a gradual progression towards diverse types of community-based arrangements.
• Pre-1970s: State control of forests alienated local people, exacerbated mistrust between state agencies and the public, and accelerated deforestation.

• Late 1970s: Introduction of the National Forestry Plan in 1976 initiated the “handing over” of forest management to the local (Panchayat) governments (Fox, 1993) with the aim of reducing deforestation and degradation, and improving access to forest resources.

• 1982: Participatory discourses and increased international pressure led to the Decentralization Act, which further empowered the Panchayat to manage local resources (Regmi, 1984) and attracted donor support (Hobley, 1996).

• 1987: Early community forestry leaders began to advocate for the transfer of rights to local communities. The first national community forestry workshop was organized to devise new frameworks, policies and strategies to support community forest management (Shrestha & Britt, 1998).

• Late 1990: The Panchayat system was overthrown, and a multi-party parliamentary system established which strongly supported the devolution agenda.

• 1993: Parliament passed the Forest Act, which legalized diverse forms of community-based forest management, and recognized CFUGs as a self-governing, perpetual and corporate institutions, that could acquire, possess, transfer and manage movable or immovable property (Article 43, HMG/MoLJ, 1993).

Namibia

Namibia is classified as a middle-income country, but suffers from acute income inequality and high unemployment. A large part of the population still lives in rural areas and is highly dependent on natural resources for their livelihoods. Namibia is predominantly arid, and precipitation varies considerably across the country. The dryland forests are recognized as a valuable yet threatened ecosystem that plays a key role in supporting livelihoods in the region (Okitsu, 2005). Existing or traditional forms of resource use, such as agriculture, are of limited profitability (Mendelsohn et al., 2011). Only large farms or those with the resources to employ irrigation, fertilizers and labor are able to produce surpluses for cash income (Mendelsohn et al., 2011). In addition, difficulty accessing markets makes the sale of any surplus from small farms challenging. As such, per capita expenditure in rural homes is about three times lower than in urban homes. A consequence of low rural incomes is a high rate of emigration to urban areas. The rural population is in need of new and consistent sources of cash income to build household assets and local infrastructure.
Rural development has been a key objective of the Namibian government since independence from South Africa in 1990 (Benkenstein et al., 2014). Greater equality of land distribution is one way of improving income inequality, and the government has been working to better balance land ownership through redistribution and tenure reform. Throughout the 1970s, rural poverty, civil war, drought and limited incentives to protect wildlife resulted in the decimation of Namibia’s wildlife and environment. Meanwhile, customary natural resource governance practices had been undermined by colonial policies, racially discriminatory legislation, poaching and environmental stress (Benkenstein et al., 2014). In 1996, the Government of Namibia set out to address twin goals of environmental protection and rural economic development through community-based natural resource management (Boudreaux, 2010).

- Pre-independence: White commercial farmers had the right to manage and benefit from wildlife on their freehold land, establishing precedent for black communities to claim similar rights in the post-independence era.
- 1980s: A community game guard system in the northwestern Kunene region was established (Long, 2002) which worked with community leaders and the Ministry of Environment, to employ local Namibians in patrolling communal lands and reporting poachers.
- 1995: The Policy on Wildlife Management, Utilization, and Tourism in Communal Areas ensured that the same rights to manage wildlife that applied to freehold land also applied to conservancies on communal land. The policy was supported by the passing of the Natural Conservation Amendment Act (NCAA) (Government of Namibia, 1996).
- 1998: The National Communal Area Conservancy Program was launched, and the first four communal conservancies gazetted, covering approximately 16,800 km².
- 2002: The Communal Land Reform Act (Act 5) clarified the powers of Traditional Authorities and Land Boards in the administration of communal lands.
Methods

The authors made use of a broad range of data and information sources from field visits, workshops, interviews and document analysis. A large amount of scientific and grey literature on the social, economic and environmental impacts is available, and donor reports provided a particularly rich source of information on financial investment, as well as aggregate financial data from associations. However, in-depth data on investments in CUGs is severely limited, as private enterprises are not obliged to publicly disclose their activities. In Mexico and Guatemala specifically, records regarding private sector investments start only recently. The reliability of available data is also called in to question, as it rarely takes into account unofficial costs that may be necessary in certain contexts (e.g. payments to government officials), which stakeholders may be unwilling to disclose.

Realist synthesis framework

The paper uses the realist synthesis framework to organize, synthesize and analyze results across the selected case studies. The realist synthesis framework is based on the premise that social change is a function of individuals interacting with the social structure in which they are situated. A policy intervention may change individuals’ access to resources and opportunities, and thereby change their decisions (Wong et al., 2013). However, while changes in statutory regulations take place, it is the effectiveness of the implementation of that regulation, that will determine the ability to use, manage and benefit from the right. The policy intervention therefore does not produce the outcome in itself. Instead it is the reasoning and decisions of individuals or “mechanisms” (see Table 1) following the intervention that create change (Durham & Bains, 2015).

[insert Table 1 here]

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2 Nepal included a review of academic and grey literature, donor/government reports and field visits. Namibia included a review of academic literature, government and donor reports, but the majority of data was collected from documents like the annual report of the Namibia Association of CBNRM Support Organizations (NACSO). Mexico included a review of literature, and donor/government reports analyzing ejidos/agrarian communities and community forest enterprises. Guatemala included a review of literature, workshop and field visits, and a review of the available dataset on donor financing of the MBR.
Results: Investments

The following section discusses the origin, volume and mechanism of investments from international donors, NGOs, government, CUGs (including re-investment in CE’s) and private investments, for each of the four case studies.

Guatemala

Substantial investments from IGOs and NGOs\(^3\) were key to establishing the community concession model in the MBR (Gray et al., 2015). Between 1990 and 1996, USAID provided about USD 50 million, while the Inter-American Development Bank invested about USD 80 million and the German Development Bank provided USD 20 million (Gomez & Mendez, 2005). These funds strengthened public institutions involved in protected area management and supported provision of technical assistance. After 2000, investments shifted towards sustainable forest management activities (accounting for 30% of total funding) and the promotion of secondary-level (institutional-level) community forest organizations\(^4\), to build organizational, processing and commercialization capacities. After 2010, funding was considerably reduced (now accounting for 20% of total funding) and channeled toward the development of non-timber forest products (NTFP) value chains, strengthening existing value chains and scaling-up CFEs. The development of institutional and legal frameworks for REDD+, and other ecosystem service mechanisms related to tourism and biodiversity conservation, were also prioritized (Starr et al., 2016).

Government investments in the forest and environmental sector have been not been significant\(^5\) to date. Bovarnick et al. (2010) calculated that public financing in the national protected area system represented less than 1% of the GDP in 2009; this has targeted capacity building, policy implementation and enforcement. Public investments in CONAP (the National Protected Area Service) were approximately USD 1 million in 2017; this could be considered an indirect investment in the MBR, however the amount is modest, given the vast conservation area in Petén.

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\(^3\) This analysis is based on data collected by PRISMA (2016) which accounts that approximately USD 300 million were channeled into the system between 1989 and 2016.

\(^4\) ACOFOP (The Community Forest Association of Petén) was established in 1998 as a secondary-level organization which includes all community forest concessionaire organizations; FORESCOM (Community Enterprise of Forest Services Ltd.), the community-based secondary-level enterprise, includes seven community forest organizations.

\(^5\) Public investment in the forest sector is done through the National Forest Incentive Program (PINFOR), and focuses on promoting reforestation activities via plantations. While the program is active in Petén, it is conditional on land ownership, which means that the program is not operational in protected areas.
Community concessionaire investments over the last 10-15 years have focused on increasing rights over other ecosystem services and the development of local governance systems, including financing the protection of concession boundaries. Investments from communal concessionaire organizations vary depending on specific bylaws. For instance, cooperatives have established that at least 20% of net income should be invested in social development needs (e.g. health and education); 40% should be re-invested to cover production costs, and 40% should be distributed as dividends to members (Monterroso, 2015).

ACOFOP (2005) estimates that since 1995, concessions have had more than 2,000 direct beneficiaries (members), 3,000 indirect beneficiaries (non-members), and have created over 50,000 daily paid employment opportunities. Lesser-analyzed investments include investments in social mobilization and organization. Investments in secondary-level organizations, including community-based enterprises (FORESCOM), have been key in improving forest governance (Paudel et al., 2012; Taylor, 2012; Taylor, 2010).

At the household level, investments into housing, education and other productive activities (such as agriculture) vary, based on membership status and residency. Between 2000 and 2010, income from commercial forests in two community concessions increased household income by 33% (Monterroso & Larson, 2013). Recent data by Stoian et al. (2015) showed that in non-resident concessionaire organizations, income from community forest enterprises varied between 5% to 45% at the household level, while in resident communities, income ranged between 19% and 58%, dramatically reducing the incidence of poverty in forest-reliant households.

CFE capitalization has allowed nine concessions to invest in a shared lumber mill, adding value, creating jobs and diversifying livelihood opportunities (Stevens et al., 2015). The creation of FORESCOM, has allowed market development for lesser known timber species, provided technical assistance and up-scaled industrial timber processing. Five CFEs have recently accessed over USD 1.5 million worth of credit from a blended finance mechanism that involves the Multilateral Investment Fund (85%) and a commercial bank (15%), and is channeled through an NGO (Hodgon & Lowenthal, 2015). This credit is used as working capital for technical assistance, legal compliance, administration and value-added infrastructure. Until now, USD 750,000 has been repaid and additional loans have been accessed (Rainforest Alliance, 2017). Another initiative, promoted by Rainforest Alliance and using funds from USAID Development Credit Authority and a commercial bank (BANRURAL), leveraged USD 13 million in credit for commercialization activities, working capital and expansion of NTFP value-chains.
(xate-palm) (Rainforest Alliance, 2017). These two initiatives provide evidence of increased compliance, improved participation and administrative capacities among CFEs (Hodgon & Lowenthal, 2015). To date, nine community concession contracts remain active (51% of the multiple-use zone (MUZ), around 350,000 ha).

**Mexico**

In Mexico, most investment in community forestry has come from the national government, with some international donor intervention. Bray and Merino (2002) argue that government policy in the community forestry sector has been divided between those who believe that communities should be in charge of producing timber and those who believe communities don’t yet have the skills to manage production, thus requiring state intervention. Public investments in the 1960s supported partnerships between communities and logging companies (Asociación en Participación) where communities were obligated to supply to one logging company. Although negotiating conditions were unequal, considerable resources were invested in increasing community capacity. In 1970, the National Indigenous Fund (FONAFE) allocated resources to promote ejido organisations, ejido unions (Moguel, 1990) and new timber parastatal enterprises. According to Antinori (2000), investments in infrastructure and human capital by parastatals was key to the evolution of communities into forest enterprises. During this period, national forest production increased by 21% (Bray & Merino, 2002).

Following the Forest Law of 1994, a national program (PRODEFOR) was established, which developed the institutional and regulatory framework for community forest enterprises. The government financed forest management plans, subsidized technical studies, provided forestry extension services and invested in roads (Antinori, 2000). In 2001, the National Forest Commission (CONAFOR) was created to promote management and conservation activities in Public Forests; this remains the most important institution supporting the community forest sector. PROCYMAF (Conservation and Sustainable Forest Management Program) was established to promote sustainable forestry and resource conservation, and strengthen the community through training and technical assistance. It was initially set-up as a project in Oaxaca, with funding from the Mexican government and the World Bank, but continued for two more funding phases (supported with USD 23.6 million of funding between 1998 and 2003, and USD 28 million between 2003 and 2010) which allowed the project to become institutionalized within CONAFOR (World Bank, 2010).

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6 wholly or partly controlled by the government.
Returns include capacity development and institutional strengthening of 475 communities, certification of 40 communal forests (spanning over 800,000 ha) and sustainable forest management of over 1.5 million ha (World Bank, 2010).

Community forest enterprises emerge when a manager and managerial council are established, and formal business operations are established in order to generate income (Bray & Merino, 2002). In Mexico this often includes a group of communities that establish a joint-venture association. Production is organized by work groups or among a number of different communities (Zabin & Taylor, 1997). Inter-community partnerships were only possible after 1992, when regulations changed and communities were given the right to manage and commercialize forest products (Antinori, 2000).

Mexican CFEs have been criticized due to “mismanagement, high costs, inefficient sawmills and other industries, and exploitation by outside forces” (Aguilar et al., 1990; Antinori & Bray, 2005). However, according to Bray, Antinori and Merino, the size and complexity of Mexican CFEs calls for differentiation, in terms of who pays for the logging team, and whether communities are formal managers (Antinori, 2000; Antinori & Bray, 2005; Bray, 2013; Bray & Merino, 2002). There are five categories of CFE: Potential producers (48%); Stumpage communities, that contract management activities to third parties (32%); Primary producers, holding management plans, permits and conducting primary processing (11%); Producers with processing and marketing capacity with some sawmill infrastructure (8%) and Producers with industrialization and commercialization capacity (1%) (Hodgon et al., 2013, p. 5). Profits from community enterprises are re-invested commercially (new equipment, diversification) or in public goods (potable water systems and clinics). An analysis of CFEs in Oaxaca showed that between 76% and 100% of logging jobs provide direct employment to members of community (Antinori, 2000), however, this reduces as more specialized skills are required.

Investments by the CUGs include improvement of public goods (e.g. road infrastructure, education and health) and promotion of value-chains (e.g. trucks, cranes and sawmills). Government and parastatal organizations have, in some cases, been key to the acquisition of sawmills, especially before 1986 (Antinori, 2000), however, communal funds represented 75% of the sawmill acquisition. Household level investments into housing, education and health come from the distribution of profits, as well as work bonuses and other incentives. While calculations by Antinori and Bray (2005) vary regarding the type of income CFEs generate, those communities that are able to develop value chains and invest in secondary
products derive 30% of income from CFEs, while those that sell round-wood or sawn-wood derive 19% and those that sell standing trees (stumpage communities) receive just 15%.

While reviewed literature makes reference to private sector investments, particularly parastatal investments in infrastructure and capacity building during 1970s and 1990s, there was no information found on investments after the change of regulation in 1992.

**Nepal**

Donor funding has played an important role in strengthening community forestry institutions in Nepal, and the success of community forestry has encouraged additional funding. Agriculture, forestry and fisheries draw the largest portions of development aid (GoN, 2002) as they contribute significantly to employment, rural livelihoods and the national economy. Agriculture and forestry\(^7\) is estimated to provide one-third of the total GDP of Nepal (MoF, 2014; MoF, 2015; NPC, 2013). Donors have provided over USD 237 million to the agriculture and forestry sectors, between the early 1980’s and late 2000’s (Hobley & Jha, 2012); this includes USD 40 million from the UK’s Department for International Development, as part of its Multi Stakeholder Forestry Programme (MSFP), USD 28 million from the Swiss Agency for Development and Cooperation, and USD 29.5 million from the Government of Finland (DFID). In 2015/16, foreign aid contributed approximately USD 125 million to the Ministry of Forests and Soil Conservation (MoSFC) in support of 12 major forestry projects, making up 23.5% of the total ministry budget (MoFSC, 2015). Such funding, which is often channeled through NGOs and government agencies, has been used for technical training and workshop activities, capacity building and infrastructure development.

A study by Koirala et al. (2013) based on 14,571 CFUG estimated that annual income for all CFUGs came to over USD 49 million, equating to USD 137 per CFUG household. CFUGs have built natural, financial and social capital through re-investment in forest management plans, forest protection, infrastructure, education and health care for their members. The rural population has benefitted from an increased supply of forest products, as well as public goods such as clean water, soil fertility and climate stabilization.

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\(^7\) Although the contribution of the forestry sector to Nepal’s GDP is yet to be quantified on a national scale (MoFSC, 2016), it was estimated that it alone accounted for 15% of the GDP in 2009 (FAO, 2009).
CFUGs have begun using their proprietary rights to attract investment in forest-based enterprises, such as timber processing, tourism activities and small companies processing and marketing non-timber forest products (e.g. essential oils, fruit juice). Statistics from the Department of Industry (DOI, 2016) indicate that 395 agro- and forestry-based industries\(^8\) were registered between 1990 and 2016; of these, 231 were approved for foreign direct investment, valued at roughly USD 38 million.

Nepal’s Forest Investment Program (FIP) has used blended financing to channel investments to a range of activities, including enhanced environmental services through nature-based tourism in accessible locations outside protected areas. Investments into ‘hill stations’, homestays, small-scale infrastructure (trails, viewpoints, waste management, energy), and capacity development for homestay owners cost over USD 1.5 million, finance which was provided by government, the community and FIP investment plan as well as over USD 11 million from private investors.

Forest Management for a Forest-based Economy (one of five projects within FIP) is focused on the preparation and implementation of timber utilization plans, provision of equipment, establishment of community-private partnerships and establishment of timber enterprises. It is also focused on the reform of regulations for timber harvest, sales, utilization and transport, and change in fiscal policy to provide commercial loans for forestry. Over NPR 1 million of the USD 26 million invested came from private investors, however, little detail could be found on the origin or scale of these investments, nor what returns investors are receiving.

Nepalese SMEs are also proving successful\(^9\). By 2016, there were 14,708 micro- or cottage-based enterprises with a capital investment of approximately USD 94 million (Paudel & Adhikary, 2017). This averages out to an investment of USD 6,403 per forest-based enterprise (Paudel & Adhikary, 2017). Furniture enterprises were the most common (69%), followed by NTFPs and medicinal and aromatic plant enterprises (17%), saw mills (13%), and plywood and veneer companies (less than 1%). Investors generate significant socio-economic benefits, through employment of approximately 85,000 rural people (Paudel & Adhikary, 2017).

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\(^8\) Industries register either at the Department of Industry (DOI) or the Department of Cottage and Small Industries (DCSI) in Nepal, however many enterprises and industries operate without registering.

\(^9\) SME industries in Nepal are defined under Industrial Policy 2010 as: i) **Micro industries**: Enterprises with fixed capital not exceeding NPR 200,000 working at local level, utilizing local raw materials and labor with total employees not exceeding nine persons and electrical power consumption utilizing less than 10 KW. ii) **Cottage industries**: Industries/enterprises that utilize local human resource and raw materials based on traditional industries reflecting country’s indigenous art and culture. iii) **Small industries**: Small-scale industries with fixed assets not exceeding NPR 50 million (excluding cottage industries).
Namibia

Eighty-two conservancies now cover over 19% of Namibia’s land area (NACSO, 2015), with the community-based natural resource management (CBNRM) program in Namibia considered internationally to be one of the most successful examples of communities protecting biodiversity, while generating social and economic benefits through tourism (Jones, 2010; Jones & Mosimane, 2000; Lendelvo et al., 2012; Mehta & Kellert, 1998; Munthali, 2007).

Donor support has played a significant role in the success of CBNRM. NACSO (2015) lists 29 donor funding partners, including USAID, the World Bank, WWF International, DFID, GIZ, NORAD, SIDA and the EU, and estimates that between 1990 and 2015, approximately USD 160 million was invested in the CBNRM program, most of which was supplied by donors. Most significantly, in 1993, the government partnered with the United States Agency for International Development (USAID) and World Wildlife Fund (WWF) to fund and develop a project called Living in a Finite Environment (LIFE) (Hoole, 2010) which employed international advisors and local staff to support implementation activities and provide technical support. Namibia’s government has made investments in policy development, socialization of new regulations, mapping and licensing, and the MET (Ministry of Environment and Tourism) has provided ‘in-kind’ contributions, such as staffing and vehicles. Training in management, financial literacy, international standards and long-term planning has benefited individuals across all sectors, and additional national income has been generated by air travel, hotels and car rental, interest, taxes and further spending generated by additional income (NACSO, 2015). In 2015, CBNRM contributed approximately USD 55 million to the net national income of Namibia (NACSO, 2015).

In 2015, returns generated from conservancies totaled almost USD 9 million. Sixty-nine conservancies are now generating a cash income, and may eventually prove a viable long-term business model for the country, without donor support. When successful, conservancies are targeting re-investment at households, infrastructure and social services such as education and health care (NACSO, 2015); however, not all conservancies are seeing the same level of success, with financial sustainability remaining a concern for thirteen conservancies, which failed to generate cash income or in-kind benefits (NACSO, 2015). This can be attributed to lack of capacity, or little potential to generate income from hunting and tourism, the primary revenue sources for conservancies; as conservancies experience great
variation in size, climate, topography, population density, diversity and abundance of game, land-use activities, access to market and infrastructure, some are more suitable for CBNRM activities than others.

Joint venture tourism provides almost 49% of total cash income and in-kind benefits to conservancies and their members, while conservation hunting accounts for approximately 31% (NACSO, 2015). Tourism provides higher cash income to households through wages, while consumptive wildlife operations generate income for conservancies and provide benefits to communities in the form of meat. Most conservancy income is spent on staff wages, vehicles, infrastructure and public services, which whilst can be seen as an economic gain for households and the rural economy, is not profit. As such, conservancies are actively seeking alternative revenue streams, such as the Wildlife Credits and Incentives Scheme, designed to link the conservation performance of conservancies with external investors willing to pay for conservation efforts.

Joint Ventures (JVs) are one of the most common models of investment. NASCO lists 46 JV tourism agreements between conservancies and private sector operators, as well as 51 consumptive wildlife or hunting operator partners and 32 tourism operators (NACSO, 2015). JV lodges (conservancy-owned with a private sector operating partner, or investor-owned with conservancy contracts) provide new forms of employment, with other opportunities for work in SMEs and conservancies, for example as hunting guides. Such employment has resulted in conservancy residents earning a total cash income of roughly USD 4 million from wages, of which roughly USD 2 million was from joint venture tourism, roughly USD 1 million from conservancies, over USD 300,000 from conservation hunting and over USD 150,000 from SMEs (NACSO, 2015). Better management of natural resources has also improved the harvesting practices of indigenous natural products, while the influx of tourists has improved sales, leading to more diversified income sources.

Much of the CBNRM success has been due to the capacity building efforts, coordination and advocacy of the Namibian Association of CBNRM Support Organizations at the local and national level; organizing trainings, planning meetings and advocating for CBNRM favorable policies.
Discussion

Hypothesis 1 - Barriers to commons-based investment are not insurmountable, and investment in community-owned resources is taking place.

Donors appear to be the most significant investors in community tenure systems. However, their relative significance may be exaggerated due to the lack of available data on private sector investments. Donor investments have focused on building institutional structures, technical capacity and social capital over long timeframes. Recently this funding has been significantly reduced, leaving many CUGs and NGOs struggling to retain staff and cover running costs. In Mexico, capacity-building activities were supported by government, as opposed to donors. Domestic public-sector support varies between cases. Where forestry and the timber industry play a limited role in the national economy (in Mexico and Guatemala forest activities make up less than 5% of GDP), government investment has been lower. While in countries where forestry makes a significant contribution to the national economy and employment, government financial investment has been significant, often supplemented by donor support (e.g. Nepal). Forestry is perceived as a long-term, higher risk economic activity, and the ability of community enterprises to compete domestically and internationally is affected by opportunity costs, as well as by public incentives such as grants, subsidies, interest rate concessions or credit guarantees.

CUGs themselves have a strong social mandate to re-invest back into the community, particularly in terms of infrastructure (e.g. roads, buildings) and education (e.g. tourism or forest management). In some instances, communities invested in the establishment of enterprises that are owned and run (to varying degrees) by community members. A community’s ability to derive healthy financial returns impacts the volume and distribution of future benefits to the community, but Hodgon and Lowenthal (2015, p. 9) argue that re-investment in CFEs may be constrained by a multi-objective management focus and a pressure to maximize dividends.

Donor investments and CUGs have often focused initially on one key industry, such as tourism (Namibia) or timber extraction (Guatemala). However, cottage industries and SMEs are also taking advantage of resource management and use rights, particularly in Namibia and Nepal, where local businessmen are catering to local or domestic markets. Joint ventures are particularly common in Namibia and Mexico, with private sector partners assuming varying degrees of control in day-to-day operations. Private sector
investors may also engage in simple lease or off-take agreements with communities (as seen in Nepal and Namibia), such as access to lands for hunting or tourism purposes, or extraction of timber. Blended financing, where a development bank or donor may assume some of the first loss risk on a loan, is also being used.

Despite these examples, lack of capital is still cited as a limiting factor for the growth and success of CUGs. In their evaluation of CFEs in Mexico, Antinori and Bray (2004) observed that “assets were purchased with community funds with little reliance on outside debt, suggesting barriers to credit, a bias against debt, or lack of need for debt financing”. In their analysis of obstacles to credit in the MBR, Hodgon and Lowenthal (2015) identify financial guarantees, interest rates and competition as key barriers. Pandit et al. (2009) observed that in Nepal, a common constraint was found to be lack of adequate capital to sustain the enterprises without external support.

**Hypothesis 2 - Investment readiness develops over time, in stages, and is conditional on the level of assurance stakeholders have that the obligations of each party will be met.**

Results indicate that investments materialize in phases, with levels of assurance and needs changing over time. We broadly identify three phases, beginning from the devolution of rights:

- Phase one is characterized by capacity building and significant investment in community representative organizations, provided by donors, government and NGOs. Communities gain in confidence and agency, creating new space for decision making around forest use. Aligning stakeholders under one shared vision and framework is critical to developing and implementing policies and regulation that will produce environmental, social and economic benefits. The joint Namibian Ministry of Environment and Tourism is a perfect example of this, with the two sectors inherently linked and mutually supportive. At this stage, we also see local investment (from remittances and savings) into housing, education and health.

- In phase two, a review of the institutional/legal framework promoted by the initial devolution, coupled with investment in infrastructure, education and building social capital and institutions, delivers “forest reform”. Technical capacity building stabilizes or improves the condition of natural resources. Additional investments are critical to support the emergence of CFEs and cottage industries focused on established markets. The formation of regional or national federations representing CUG interests is key to developing a supportive framework, as is the
gradual development of more formal governance and enforcement institutions. In parallel, CFEs cement their “social character”, ensuring that poor sections of the community are protected and supported (e.g. Nepali law requires that 30-35% of CFE income be set aside for Dalits).

- Stage three sees stronger representation, credibility and assurance at a national level, which attracts new forms of financial investment. CUG federations focus initially on negotiating a supportive regulatory environment and ensuring governments follow through on their commitments to rights, but may begin to give greater attention to promoting commercial investment. Improved community capacity enables diversification and investment into new sectors, as well as the development of value chains and adherence to global market standards. Certified forest use and extraction plans meet the stringent conditions of international buyers and ESG investors.

Progress through these phases is the result of constant negotiation, making the process dynamic rather than linear. Further investments and rights often depend on evidencing initial returns, yet progress can also be negatively impacted by a lack of institutional and financial support, and rights are often highly contested. Likewise, internal negotiation and trade-offs determine how returns are re-invested in the CUG and its enterprises, with pressure to ensure both individual dividends and community investments. Consequently in Mexico, different levels of re-investment led to the emergence of five categories of CFEs. How long each stage takes often depends on existing and emerging social capital and organizational capacity, offering an explanation as to why some CUG initiatives remain at phase one.

Long-term investment and commitment to change was important in all cases studied. Donor and governmental investment was critical for building capacity and service provision; many organizations and associations lack financial literacy, investment management knowledge, and an understanding of complex concepts such as climate financing. Investments from community members, such as time and labor, are often undervalued and poorly documented, as they are not assigned an economic value. In Nepal, management and financial mechanisms are now in use by some CFUGs, but there are large differences between donor-supported and non-supported districts.

NGOs and consultancies perform three key functions: 1) building capacity; 2) brokering deals between investors and communities; and 3) providing assurance to investors that they will see desired returns. Reflecting on Baynes et al. (2015), the broker can be seen to play a bridging role. The skills these key
functions rely on are seen rarely in rural areas; as such, NACSO (2015) argue that the increasing number of CUGs is presenting a challenge to the limited number of NGOs and personnel available to provide support (it is estimated that the CBNRM program will grow to encompass 90-100 conservancies and 40-50 community forests, covering over 21% of Namibia). NACSO is in the process of creating a framework to sustainably deliver conservancy services, including the establishment of a Community Conservation Fund of Namibia (CCFN) which will channel funds from a variety of sources to support community conservation activities. FORESCOM in Guatemala, is an example of a secondary-level community forest enterprise, acting as a broker for profit. Between 2010 and 2016, it generated a net income of over USD 7 million. Successful CFUGs in Nepal have begun to introduce stratified membership fees (based on financial means) in order to cover costs, generate capital for re-investment and help to guarantee buy-in from community members.

The government plays an important role as a support or barrier to investment. Uncertain regulation may make investments too risky, while excessive regulation may make investment prohibitively expensive. Reflecting on Dasgupta’s framework, the terms of an agreement may not always be credible if enforcement structures are unreliable. The Nepalese policy environment under which CUGs and CFEs have to operate is convoluted. Regulations overlap, and there are separate, lengthy legal processes for registration, environmental and quality standards, distance-related provisions and taxation. One of the key challenges of decentralization efforts identified by Larson & Soto (2008) is that of encouraging public sector officials to give up their power. Bureaucrats have strong incentives to lobby politicians against the devolution of rights to local communities. In Nepal, problems are vested in the open interpretation of forest laws by government officials, as tenure rights for CFUGs in Nepal are established following the approval of an operational plan by the District Forest Office (HMG/N, 1995). Political instability and weak accountability leads to corruption, which affects the investment climate. In Namibia, however, decentralization of resource management benefited from strong political leadership, good institutional design, favorable timing, and support inside and outside of government (Bartley et. al., 2008). For example, growth in the number of JV lodges, the engine of Namibian conservancies, has been enhanced by the awarding of tourism concessions to conservancies by the MET.

The formalization of pre-existing use rights can also present a challenge, in terms of communities buying into the government’s reform agenda. In many instances, devolution of rights occurred as an attempt to remediate past wrongs; in Mexico, providing indigenous communities with greater rights following
periods of repression and marginalization, and in Namibia, equalizing rights between people of different racial backgrounds. Local ownership of the process, and pride in the outcome, are key to the success of CUGs (Jones & Mosimane, 2000; Nuggehalli & Prokopy, 2009; Reed, 2008). Although the state often maintains ownership and some control over resource management, democratically agreed upon constitutions, land use plans, governance structures and management systems are critical. Literature argues that giving people a voice as a collective, and empowering them by increasing their ability to advocate for their needs and wants, means governance structures are strengthened, people are better able to collectively manage resources, and there is less chance of appropriation (Boudreaux, 2010; Flintan, 2008; Reed, 2008). When an enterprise has buy-in from the whole community, it has legitimacy and investors have greater assurance that their financial investment is secure.

Almost all community forest enterprises have, at one time or another, participated in secondary-level organizations (Ciriacy-Wantrup & Bishop, 1975; Paudel et al., 2012) but the focus or objective of these secondary-level organizations varies. In Namibia, NACSO focuses on technical assistance and engagement with the private sector, while in Nepal and Mexico, secondary-level organizations place greater focus on political mobilization and democratization. Policies and practices in Nepal are shaped by regular national community forestry workshops. The formation of national-level federations and associations has become a key feature of the community rights devolution process; As reflected in Ciriacy-Wantrup & Bishop (1975), Paudel et al., (2012), and Schlager & Ostrom (1992), the ability of these associations or secondary-level institutions to shape policy and regulation makes the difference between CUGs exercising a pre-determined right and participating in its definition. Therefore, an ability to build and sustain social capital is crucial to successfully engaging in political contests for natural assets.

Optimum returns can only be generated if enterprises are run in accordance with industry standards, however meeting international standards is costly. In the MBR, regulations require that in order to keep contracts active, organizations must obtain certification from the Forest Stewardship Council (FSC) during the first three years of the contract - a considerable financial investment at an early stage. Between 1998 and 2005, all community concessions became certified (about 350,000 ha remain certified currently). Additionally, since 2008, eight community concessions have acquired certification for the extraction of xate palm and chewing gum. Accessing recognized industry standards in Namibia is
facilitated by joint ventures, with experienced private sector partners training community members and increasing community management responsibilities over time (World Bank Group, 2014).

Data, transparency and communication within and outside the community plays an important role in building social capital and assurance. Investors often lack high-quality information on CUGs and their resources. Private investment can be seen across the four case studies in a variety of forms, with assurance provided in different ways. In Nepal, where small businesses emerge in a context where enforcement of government regulation is inconsistent, assurance may be provided within communities by mutual affection, reputation and pro-social disposition. Private investments, such as those taking place in Namibia and Guatemala, make use of blended finance, or joint venture models and short-term leasing, to manage risk levels. These cases support Runge’s (1985) argument that “assurance is possible under a wide variety of institutional arrangements”.

Hypothesis 3 - Community rights have fostered investment that recognizes the social character of commons ownership, and delivers environmental and social returns, as well as profits.

The primary goal of the devolution of rights, whether it is to promote rural development (Mexico) or conservation (Guatemala), has a significant impact on the benefits that emerge. There is a strong legal obligation to environmental sustainability across all case study sites, with significant positive environmental outcomes. However, in some instances this environmental regulation is seen as prohibitively expensive, as enterprises struggle to compete internationally (e.g. Mexico, Guatemala). In the case of Namibia, when setting up the community concession model, the creation of jobs and financial returns to communities was given equal weight alongside environmental protection, while in Guatemala, part-time employment is provided to all members of the community who would like to work, rather than full-time employment for a select few.

Inclusivity remains a challenge. This may be attributed to how state regulations define the subject or beneficiaries of the reforms, and/or engrained customary and social practices, such as patriarchy. The Namibian CBNRM program aspires to include a portion (15%) of all communal area residents, and 50% of rural communal areas residents in suitable areas, and as such, many communal area residents don’t experience the benefits of the CBNRM model. In Guatemala, rather than broadening the "membership" of concessions, the CUGs have attempted to expand benefits such as social services and developing value chains to provide greater employment and income. In Nepal, despite clear guidance within the CF
Guidelines aimed at ensuring inclusivity (MoFSC, 2014), the caste divide and the dominance of the males in decision making limits the inclusion of, and benefits to, women and other marginalized community members. Similarly, in Mexico, the reforms have benefitted "collectivities" and the distribution of benefits and decision making is subject not to State regulations but rather customary practices that define who can be member of the collective. Improvements are still needed to ensure that vulnerable people and groups are not left behind and that reforms do not deepen social differentiation.

In all four cases, CUGs have assumed many of the roles of local government, particularly the provision of public services. In Nepal, the largest use of community forestry funds has been for schools (30%), followed by poverty reduction activities (17%), roads (16%) and other infrastructure. When profits from a community enterprise are re-invested in new equipment or a diversification of productive activities, this increases the assets of the community as a shareholder. When profits from the community enterprise are used for investing in public goods, such as potable water systems and clinics, then the assets of each individual household increase.

CUG institutions also have an important role to play in legal advocacy, harnessing social equity, and the institutionalization of democratic governance. Between 1964 and 1999, forest cover shrunk continuously in Nepal (Acharya et al., 2012). However, during the civil war of 1996-2006, community forest institutions remained among the few functioning local institutions, and by 2015, forest cover had dramatically increased (DoF, 2015; DFRS, 2015; LFP, 2010). As such, Nepal's community forestry is widely regarded as a successful model for reducing deforestation and delivering strong community buy-in (Acharya, 2002; Arnold & Campbell, 1986; Pandit & Bevilacqua, 2011). During the 2017 parliamentary and provincial elections, many community forestry leaders emerged as top contenders in their respective provinces and municipalities, with a handful being elected to office. Three main forms of social capital have developed and grown stronger in Mexico since rights devolution (Bray & Merino, 2002): 1) Indigenous customary arrangements, that have served as the basis for grassroots mobilization and the construction of community forest enterprises; 2) Institutional social capital promoted by the Mexican government, particularly after establishing the ejido systems of organization, as well as secondary and tertiary-level associations that developed subsequently; and 3) Institutional social capital promoted by non-governmental organizations and foundations, who have also served as important sources of support for grassroots mobilizations.
One of the challenges for communities looking to encourage investment that delivers a diverse range of returns, is that governments and other stakeholders often work in sectoral silos, and delivering the triple-bottom-line requires more systemic thinking. Donor organizations may place significant value on more democratic and equitable governance structures, while the government may see increased employment and per capita GDP as a decisive benefit. Investors will often start with financial viability and the competitive nature of returns, but may then add criteria depending on their commitment to sustainable and ethical practices. Where benefits go beyond financial returns to environmental and social benefits, investment may be more appealing for local-level investors, or those that will benefit from an improved social and environmental context, e.g. the Namibian tourism industry. How stakeholders evaluate the benefits they receive from investment is critical. The value that communities, government and investors place on the different kinds of returns generated (social, environmental, economic and financial) will determine the kind of investments and activities that materialize in these areas.

Conclusions

In each of the country cases, prior to natural resource rights devolution, communities were characterized by extremes of poverty, lack of agency, poor governance, weak technical capacity and limited opportunity for improving livelihoods in rural areas. The resources they used and managed informally often exhibited high levels of degradation and low productivity. Since rights devolution, there have been considerable improvements in natural resource quality and livelihoods across the case study sites. This paper sought to understand what investments have taken place in collectively owned and managed resources, what factors shaped those investments, and what returns are they delivering.

We find that there is a lack of publicly available and accurate data on investments in CUGs and CEs, and a need for additional research on the origins, mechanism, volume and direction of investment in community-managed resources. Available literature provided insights to investment, but cannot be considered conclusive. All case studies have received significant investment from donors and the public sector, in technical and institutional capacity building. Brokers (often NGOs or consultancies) play a key role in building capacity, improving transparency and aligning objectives between investment partners.

There is variation in the volume and mode of private investment between cases, but also within the cases themselves. Large-scale private investments, such as those taking place in Namibia and Guatemala, often
use a tried-and-tested model for an established market, and make use of blended finance, joint-ventures and short-term lease agreements to manage risk. Small-scale investment in established industries that target local markets is also common, where government enforcement of regulations is inconsistent and corruption remains a problem, but where assurance may be provided by mutual affection and reputation.

Building social capital (bonding and bridging) has a significant impact on the ability of CUGs to attract investment and generate returns, which can in turn be fed back into strengthening social and natural capital. Social capital establishes legitimacy that is vital in the political contest for natural assets, and the development of secondary-level collective institutions plays an important role in advocating for sound, consistent and enforceable public policy, and regulations that augment the existing bundle of rights and support investment.

In contexts where investment is in high demand, such as rural areas, communities must compete for financing. Lack of transparency and information remains an influencing factor where investors and communities fail to connect. Although companies and investors may have an interest in meeting sustainability objectives and supporting global initiatives such as the SDGs, environmental and social benefits must be coupled with healthy financial returns and manageable risk. Investors and financial service providers also need to do a better job of identifying where the sustainable opportunities are, and what financial products are needed to support them.

Steering investment in land toward projects that deliver environmental, social and economic benefits is something that can be addressed by governments leveling the playing field, both at the national level and beyond national borders. There is also potential for donors to expand their focus beyond capacity building and institutional development, to supporting local entrepreneurs through innovative and blended finance models. Considering the changing capital needs of CUGs and CEs as they grow, we argue that significant research is needed to better understand the financing and investment potential for CUGs at different stages of their development, and this paper provides a forward-looking framework to do so.
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Tables

Table 1: The four elements of the Realist Synthesis Framework. The reasoning and decisions of individuals, or “mechanisms”, are shaped by the social and intervention context, to deliver investment outcomes.

<table>
<thead>
<tr>
<th>Social context</th>
<th>Intervention context</th>
<th>Mechanism</th>
<th>Outcome</th>
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<tbody>
<tr>
<td>Social and environmental context including: 1) socioeconomic, 2) political, 3) biophysical, 4) time elapsed since the property intervention occurred</td>
<td><strong>Bundle of rights:</strong> Regulatory reforms change the communities’ ability to manage, use and benefit from resources.</td>
<td>Decision making based on the assurance that each party will meet their obligations and commitments</td>
<td><strong>Volume of financial investment including:</strong> 1) Origin of investment 2) Investment mechanism 3) Volume of investment 4) Target sector 5) Expected returns or benefits</td>
</tr>
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