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Conflicts over Extractivist Policy and the Forest Frontier in Central America

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Abstract:

Central America is characterized by an asymmetric forest transition in which net deforestation is a product of both forest loss and patches of forest resurgence. Forest loss is also associated with rights violations. We explore the extent to which extractive industry and infrastructure investments create pressure on forest resources, community rights and livelihoods. Drivers of this investment are identified, in particular: constitutional, legislative and regulatory reforms; energy policies; new financial flows; and ideas of development emphasizing the centrality of infrastructure in combining geographical integration and economic growth. We discuss forms of contentious action that have emerged in response to these pressures, asking how far and in what ways this contention has elicited changes in the policies that govern investment and extractive industry, and how far such changes might reduce pressure on Central America's remaining forest cover. The paper develops a conceptual framework for analysing relationships among contention, policy change and the resilience of policy changes. *Keywords:* contentious action, extractivism, policy change, political settlements, forest rights.

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Resumen: Conflictos sobre política extractivista y la frontera forestal de América Central

América Central se caracteriza por una transición forestal asimétrica en la que la deforestación es producto tanto de la pérdida de bosques como de parches de resurgimiento forestal. La pérdida de bosques también está asociada con violaciones de derechos. Exploramos hasta qué punto las inversiones en industrias e infraestructuras extractivas crean presión sobre los recursos forestales, los derechos de la comunidad y los medios de vida. Se identifican los impulsores de esta inversión, en particular: reformas constitucionales, legislativas y reglamentarias; políticas energéticas; nuevos flujos financieros; e ideas de desarrollo que enfatizan la centralidad de la infraestructura en combinación con la integración geográfica y el crecimiento económico. Discutimos formas de acción contenciosa que han surgido en respuesta a estas presiones, cuestionándonos cuántos y cómo ha provocado este conflicto cambios en las políticas que gobiernan la inversión y la industria extractiva, y hasta qué punto dichos cambios podrían reducir la presión sobre el bosque restante de América Central. El documento desarrolla un marco conceptual para analizar las relaciones entre la contención, el cambio de política y la resistencia de los cambios de política. *Palabras clave:* acción contenciosa; extractivismo; cambio político; acuerdos políticos, derechos forestales.

Introduction

While deforestation in tropical countries receives much international attention for its impacts on climate change and biodiversity loss, the pressures that drive deforestation, and the loss of forest itself, constitute a rights and livelihoods issue. Since 2000, Central America has lost on average 0.61 per cent of its forest each year, with 9.8 per cent of the region's forests being lost between 2000 to 2016.[1] Rates of loss are highest in Nicaragua, Guatemala, Honduras and Belize. Globally, Nicaragua and Guatemala are among the 20 countries undergoing the highest rates of deforestation. Given that Central America's forest transition is "asymmetric" in nature (Redo, Grau, Aide, & Clark, 2012) – meaning that while humid forests are being lost, forest patches are resurging, especially in drier forest areas of out-migration (Hecht, Kandel, Gomes, Cuellar, & Rosa, 2006) – the implications for humid tropical forest are more serious than these aggregate data on forest loss suggest. This pressure on forest cover is in turn a rights and livelihood issue. Remaining forested areas, mostly along the Caribbean/Atlantic coast of the isthmus and in highland areas, overlap with indigenous and traditional communities, many of which practice lower impact forest-based livelihood strategies. This zone also faces a new threat, in that much of the region's new investments in mining, hydrocarbons, roads, and electricity generation projects are occurring. In particular, the Petén and Western Highlands zones in Guatemala, the Muskitia in Honduras and Nicaragua, and the Chiriquí and Darién Peninsula areas of Panama, are sites of increasing interest and contestation.

While the expansion of the large and small-scale agricultural frontier is the primary, proximate driver of forest loss in the region, in this paper we consider the extent to which investments in mining, hydrocarbons and infrastructure are also significant proximate and underlying drivers of deforestation and forest degradation. We suggest that they have already played a role in forest loss and rights violations, and that current trends suggest that investments in these sectors

will become increasingly significant in some countries. If this is so, then mobilization around extractivism is a potential catalyst for policy changes that might better regulate some of the drivers of deforestation and in this way help protect what remains of the region's forest and the rights and livelihoods of those who depend on and live in them. We explore several forms of contention that have emerged in response to extractivist investment, ask to what degree this contention has catalysed policy change, and explore the conditions that have favoured such effects, as well as fragilities that inhere in such policy changes.

We first develop a simple, three-part conceptual framework for analysing the relationships between contentious action and policy change: that framework is grounded in notions of the political economy of natural resources, political settlements and the micro- and meso-level dynamics of state-society relationships. We then return to our focus on forests, briefly describing the relationships to date between extractivist investments and forest loss, and laying out the underlying factors that drive this investment. We argue that the evidence suggests that these factors will become more significant over the coming decade. The paper then discusses a selection of contentious actions that these drivers have elicited, recognizing that contention can exist along a range from the pragmatic enactment of alternative approaches to forest management through to outright protest, and at a tactical level can include lobbying for policy change, advocacy campaigns, strategic and case-specific litigation, and direct forest management, among others. While both mining, energy and infrastructure investment, and agricultural expansion, pose threats to forest cover and forest communities in much of the region, extractivism generates more, and more diverse, forms of contention than does agricultural expansion. This contention is a resource for policy innovation, both as a driver of policy change and as a source of ideas.

Our argument is based upon research conducted between 2015 and 2018 in the context of four separate projects: a scoping study of the role of extractive industries and infrastructure in forest loss and rights violations across Central America and Mexico involving each of us; Sauls's ethnographic research on community-based forest governance in Guatemala, Honduras and Nicaragua, Fash's ethnographic research on mining movements in Honduras; and Bebbington's work on mining policy and environmental governance in El Salvador. The latter three projects have involved sustained engagements over multi-year periods. Methods included: key informant interviews (in person, electronically and by phone or videoconference) with people from NGOs, social movement organizations, academia, philanthropy and the public sector; GIS based analyses of changes in forest cover and investment in extractive industry; extended qualitative field work in Honduras, Guatemala and Nicaragua; policy engagement research in El Salvador; extensive review of grey literature and policy documents; and several workshops, in particular one with civil society and research organizations held in February 2017 in San Salvador, another with a group of donor organization in April 2017 in Europe, and workshops for forest management

groups in which Sauls participated. In practice, the paper draws on four separate projects involving authors who collaborate across a range of research initiatives.

Conceptualizing policy change and contention[2]

Any argument about the relationships between contentious action and policy change must work from a prior theory of policy formation and then build contention into this theory.[3] Here we present a simple framework that explains policy formation and change as artefacts of three sets of factors related to: the political economy of natural resources; the national political settlement; and the micro-dynamics of the relationships between bureaucrats, politicians and civil society actors.

The political economy of natural resources

Among the different factors influencing natural resources policy, the place of the environment in national economic development is critical. While nature plays roles both in the accumulation of capital as well as the reproduction of the conditions of production (O'Connor, 1988), the actual ways in which natural resources sustain national development strategies vary enormously – both as regards the extent to which natural resource control and extraction underpin growth, exports and foreign direct investment, and the particular natural resources that play these roles. Thus, the weight of forests, or the land on which forests stand, within *measured* Gross National Product (GNP) goes a long way in defining policies towards forest governance and use. The place of lands with standing primary forests in sustaining economic development is typically undercounted in measures of GNP, weakening the political economy imperative for policies of forest protection and requiring that other, non-monetary mechanisms (such as protest) become the vehicle through which demands are made for such policies.

Seen through this very simple political economy lens, environmental and forest policies would be understood as reflections of the combined need to sustain capital accumulation and to reproduce the environmental conditions that sustain the possibility of such accumulation. The more that these imperatives pull in different directions, the presumption (particularly in discussions of extractivism) has been that policy and corporate practice will privilege capital accumulation over resource conservation (O'Connor, 1988; Ospina Peralta, Bebbington, Hollenstein, Nussbaum, & Ramírez, 2015). The implication is that in economies where resource extraction dominates, policy that limits extractive industry access to the natural resources necessary for accumulation will be absent, weak, or constantly prone to reversal. Similarly, in contexts of economic stagnation where expanded natural resource extraction is viewed as a possible means of rebooting growth, then policy change will tend to favour increased (agro)industrial access to forests and other resources, in essence weakening protection of these

resources. On the other hand, policies that introduce instruments for environmental management (such as monitoring systems or impact assessment statements) without limiting industrial access to resources will face less resistance – precisely because they do not threaten the relations of resource control that underlie the dominant means of accumulation (Ospina Peralta et al., 2015).

While such broad readings of the political economy of the environment often get lost in micro-sociological or managerial interpretations of policy formation,[4] their structuring effect on policy choices are real. Any analysis of the relationships between contentious politics and policy change must therefore attend to these questions. That said, other, mutually compatible, concepts are needed to address *how* particular policy options become dominant, who lobbies for them, and why they take the specific forms that they take.

Political settlements and natural resource governance

Political settlement "refers to the balance or distribution of power between contending social groups and social classes, on which any state is based" (Di John & Putzel, 2009). While the concept has a notion of contentious politics at its core – both contention among dominant elites and between elites[5] and other groups – settlements are generally understood as more or less stable arrangements in which elites arrive at explicit or implicit agreements regarding the distribution of opportunities and costs in society (Khan, 2010). This emphasis on stability reflects the idea that power structures and dominant elites change only slowly, and that even when groups excluded from the political settlement are able to exert increasing demands through protest or other means, the general tendency is that elites find ways of accommodating those demands (for instance, through relationships of clientelism or targeted concessions) rather than changing the overall structure and nature of the settlement. In other instances, elites respond to such demands with violence with a view to demobilizing protest and other forms of contention.

The concept of political settlement is itself a theory of policy formation insofar as this literature argues that public policy and institutions of economic governance will distribute resources and opportunities in ways that reflect the overall nature of the settlement (Hickey, 2013; Hickey, Sen, & Bukenya, 2015). That said, and as in efforts to relate natural resource policy to political economy, there are many nuances regarding the ways in which different forms of settlement will affect policy (Levy & Walton, 2013). However, the more general and important point is that settlements structure policy domains and the scope for policy change, meaning that abrupt policy innovation is unlikely and that the possibility of sustained policy change will depend on change in the settlement (Bebbington, Abdulai, Humphreys Bebbington, Hinfelaar, & Sanborn, 2018a).

Settlements *do*, however, change over time (Bebbington et al., 2018a), and contention can be one important pathway towards such change through: challenging and reframing the dominant narratives in society that legitimate

particular distributions of power and forms of development; contesting specific legal arrangements that are key in sustaining given (unequal) distributions of opportunity; attacking existing elites head on; or presenting such a threat to the settlement that elites feel obliged to make significant concessions. When this contention cannot be merely repressed, or incorporated through clientelism, then the nature of the settlement, and thus also the policies that flow from this settlement, may begin to change more substantially. How powerful forms of contention emerge in the first place thus becomes a key empirical question that requires conceptualizing in a way that recognizes that forms of contention are endogenous to the nature of the political economy and political settlement, even if in many instances exogenous factors may also play an important role (e.g. the support of transnational allies, exogenous shocks that weaken elites for one or other reason, or externally developed narratives on environment and society that begin to circulate in a given national context).

To the extent that dominant elites are closely tied to particular strategies of accumulation, then those elites whose interests are related to natural resource extraction will lobby for policies that ease their access to and control over resources. However, to the extent that not all elites necessarily share these same economic interests, then some of the contention within a settlement may also relate to the definition of policies for natural resource governance (Di John & Putzel, 2009). Similarly, the environmental interests of particularly strong excluded elements will influence the extent to which elites use change in natural resources policy as a strategy to respond to the demands of these groups and accommodate their contention.

Understanding the internal dynamics of a settlement – how contending elites come to pacts regarding particular policies, and how they come to agree to adapt policies in response to contention – is therefore part of any adequate theory and analysis of policy formation and change. However, other dimensions of the relationships between polities, bureaucracies and civil society actors are also important in defining the forms that policy and policy changes take. These relate in particular to the micro- and meso-scale sociologies and politics of these relationships.

Micro-sociologies and politics of policy change

The agency of bureaucrats and technocrats, operating within the state and interacting with corporate and social actors, has been shown to influence the definition of environmental policy (Hochstetler & Keck, 2007), industrial policy (Evans, 1995) and economic policy (Dargent, 2015), as well as the ways in which natural resource policies are implemented in practice (Ostrom, 1996). These and other analyses make clear that public-sector actors have their own beliefs, commitments and viewpoints (many of which motivate them to take positions in particular public agencies in the first place), and that in the process of negotiating constraints defined by the political economy and political settlement,

they are also motivated by these commitments in ways that can influence policy design and roll-out.

In these micro- and meso-level processes of policy formation, the nature of relationships between bureaucrats and other actors is key. Evans (1995) shows that the extent to which public officials are "embedded" in the groups that they are regulating, but also have a degree of "autonomy" from these groups (and so can escape "capture") is important in determining the types of policies that they fashion and propose. In a somewhat similar vein, Jasanoff and others (Jasanoff, 2006; Clark et al., 2016) have noted that such bureaucrats, as well scientists and other types of expert organizations, can help mediate between different knowledge systems and interests, particularly in the realm of environmental policy. Absent such mediators and translators, the chance that social movement, community and other actors in contention will influence the details of policy formation is reduced.

Contention can play various roles in this micro-politics of policy formation and change. It can place general themes onto bureaucrats' agendas by making these themes visible and indeed unavoidable; it can make demands on bureaucrats such that they are "pulled" towards social actors and forced to listen to and deal with them and their concerns; and it can create space for reform-minded bureaucrats who would otherwise be too constrained by political and economic pressures. In other cases, contention can also create distance between social actors and the policy process. In this sense, the skills and tactics of social movements matter as much as the contention itself in creating productive links with policy framers and makers (see Spalding, in this issue). The implication of these observations is that the details of who works, and what happens, within key ministries, agencies, parliamentary commissions, working groups and similar boundary organizations, matter in the determination of natural resource policy and the nature of the relationship between contentious action and policy change.

With these conceptual observations in mind, we now return to the roles of extractive industry and infrastructure investment in forest loss and rights violations, and the various contentious responses that these drivers have elicited. As will be clear, the nature of these drivers has much to do with the overall political economy of development and the nature of national political settlements. Different forms of contention seek to negotiate these structuring factors in differing ways and with distinct degrees of success.

Extractive industry, infrastructure and forests: patterns and trends

As of 2011, more than 14 per cent of all land in El Salvador Guatemala, Honduras, and Nicaragua was under mineral concessions (Nolasco, 2011, 17). These concessions overlap with forested protected areas and indigenous and communal lands across the region, though particularly in Guatemala, Honduras, and Panama. Nicaragua's second largest minerals mining complex, in Bonanza, is located adjacent to the Bosawas Biosphere Reserve and Mayangna and Miskitu

indigenous territories. Some hydrocarbons extraction and infrastructure also overlap with areas of humid forests and indigenous and traditional lands. This is the case in the Guatemalan Petén where the existing Xan oil field (operated by the UK-French company Perenco) is the major producer of petroleum in the region. In 2013, the Government of Guatemala granted new exploration and exploitation permissions in six areas across five departments in the country's north. While none of the new fields has yet achieved commercial-scale production, several fields that overlap with protected areas came on-stream, including the Ocultun field within the Maya Biosphere Reserve (MBR) (Escalón, 2016; Ministerio de Energía y Minas, 2016).

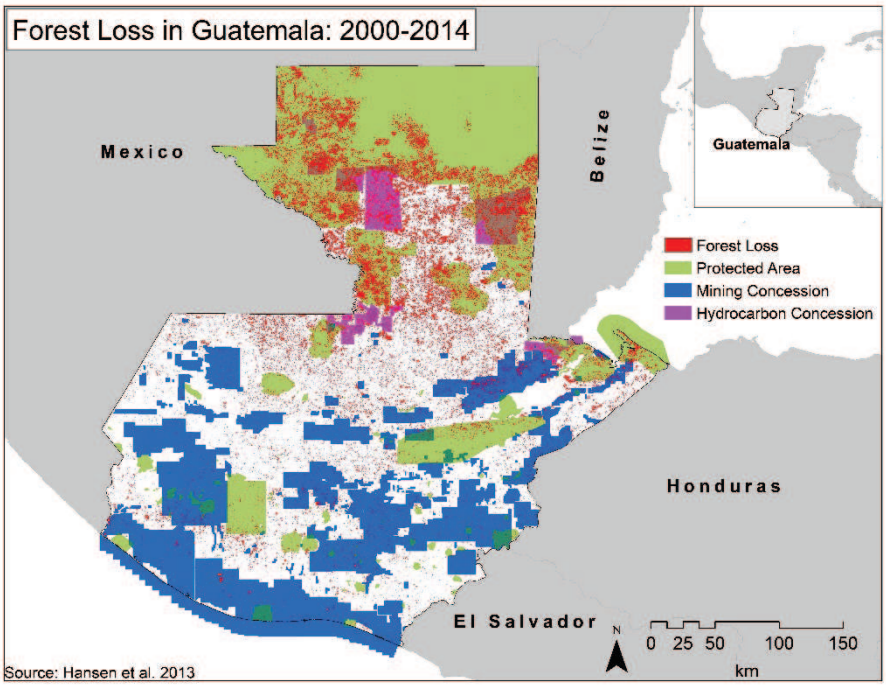
Notwithstanding these overlaps, and with some exceptions, extractive industry has not yet had much direct impact on deforestation. As Maps 1, 2, and 3 show, the geography of forest loss between 2000 and 2014 in Honduras and Guatemala bears little relationship to the geography of mining concessions, though considerably more to hydrocarbon concessions in Guatemala. Table 1 documents levels of forest loss within mining concessions in El Salvador, Guatemala and Honduras, showing that over that period only 0.96 per cent of national forest loss occurred in concessions with fully operating mines.[6] That said, localized impacts can be significant. In Panama, the Cobre Panamá project will clear 5,500 ha of tropical forest and increase deforestation due to induced development catalysed by road-building; it will also increase Panama's greenhouse gas emissions by 8 per cent (de Chassy, Chehab, & Cipollitti, 2016).[7]

There is evidence to suggest that infrastructure development for such projects, especially roads and pipelines, may have an additional and important influence on forest quality and communally claimed lands. For example, the development of hydrocarbon reserves in the western Petén required the construction of roads, pipelines, processing facilities, worker camps, etc., in areas technically classified as protected (Sader, Hayes, Hepinstall, Coan, & Soza, 2001). Local leaders directly attribute the historic and ongoing loss in forest cover in

Table 1. Summary of loss of forest (ha) within different types of active mining concessions in select countries in Central America over the years 2001-14, based on data from Hansen et al. (2013)

Forest Loss	El Salvador[8]	Guatemala	Honduras	Sub-region
Metallic: Exploitation	3643	4148	1290	9081
Non-metallic: Exploitation	N/A	4692	2139	6832
Total Forest Loss	62738	1014611	588299	1665648
% Loss from Metallic	5.81	0.41	0.22	0.55
% Loss from Non-Metallic	0.00	0.46	0.36	0.41
% Loss from All Mining	5.81	0.87	0.58	0.96

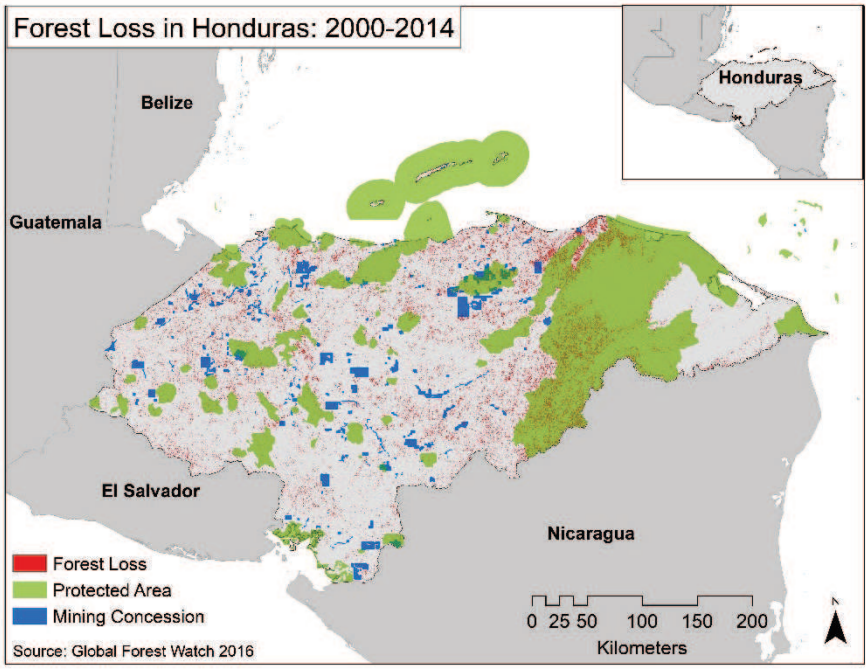
Map 1. Mining and hydrocarbon concessions, protected areas, and forest loss in Guatemala (Bebbington et al., 2018b)



this zone to the government granting permission for an oil access road in the national park, leading to rapid and uncontrolled settlement.[9] Remotely sensed data from April 1986 and 1990 indicate that this pattern is long-standing, with over 90 per cent of new forest clearings occurring within 3 km of a road or river in Petén (Sader, Sever, Smoot, & Richards, 1994). Laguna del Tigre National Park in Petén illustrates this extractive industry/road building/forest clearing nexus: in the period 1986-1993, forest clearing rates were quite low but increased significantly from 1995-1997, extending out from the road entering the park from the south to access the Xan Perenco oil field inside the park (Sader et al., 2001).

While hydroelectric dam expansion has also impacted forest resources, its impacts on community rights have been more severe. The Patuca dam complex in Honduras has posed particular challenges (BankTrack, 2016).[10] The United Nations' Special Rapporteur on the Rights of Indigenous Peoples reported from her November 2015 trip to Honduras that the construction of the Patuca III dam and its reservoir had affected non-indigenous populations leading to the illegal settlement of indigenous Tawahka lands (United Nations, 2016). She also expressed concern regarding the expected impacts of the network of dams on the water levels of the rivers used by indigenous Tawahka and Miskitu communities,

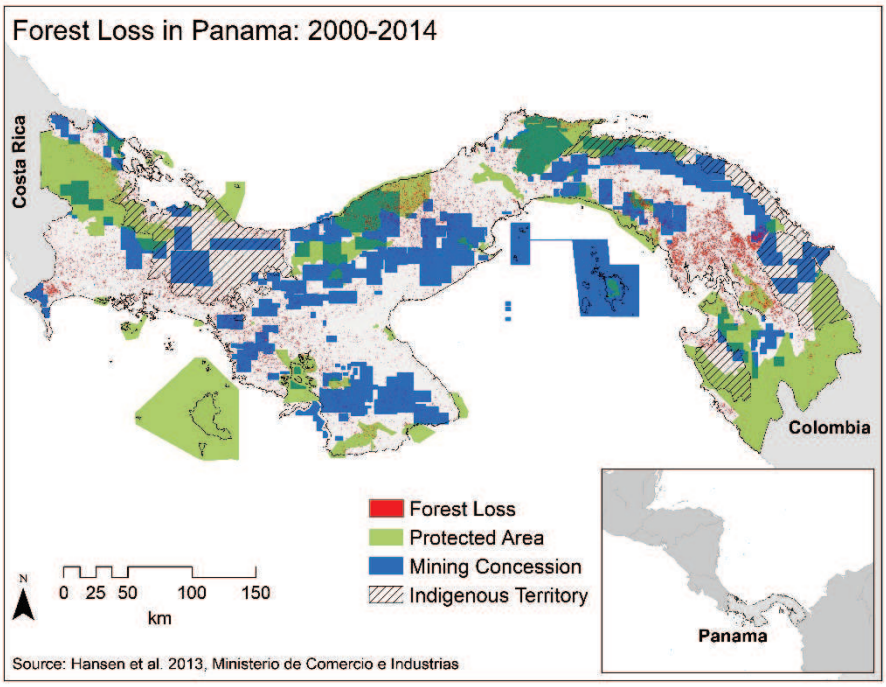
Map 2. Mining concessions, protected areas, and forest loss in Honduras (Bebbington et al., 2018b)



and the implications that flooding of ancestral lands would have for their rights to livelihood and cultural rights. She reported a failure to respect rights to adequate prior consultation.

These trends in the lack of consultation and the knock-on effects of large-scale hydropower development – including deforestation and rights violations – are also apparent in Panama and Guatemala (Finley-Brook & Thomas, 2010; NISGUA, 2015). In July 2013, then-UN Special Rapporteur James Anaya singled out the Barro Blanco dam in Panama as a case in which indigenous people's rights were not being honoured (Bivin Ford, 2015). The impacts of extractive industry investment on community rights reveal similar patterns. Cases of concession overlap with indigenous and communal lands, which often have community forests, are common, and it is often not until exploration begins in earnest that communities discover that their lands are subject to external claims. The lack of implementing regulation for free, prior, and informed consent (FPIC) in several countries, and Panama's resistance to sign on to the Tribal and Indigenous Peoples' Convention (ILO 169), continues to undermine community rights in the face of large-scale projects. Even where governments are advancing laws on consultation, they fall far short of the requirements to do so in a way consistent with cultural norms and processes or to receive consent – and as has

Map 3. Mining and hydrocarbon concessions, protected areas, indigenous territory and forest loss in Panama (Bebbington et al., 2018b)



been the case in Honduras, the proposed consultation law could seriously undermine Indigenous rights to stop extractivist projects from going forward (Sellwood, 2018).

In more extreme cases, large-scale infrastructure investment has been associated with the violation of the right to life, as in conflicts over the Agua Zarca dam in Honduras, a project led by a Honduran corporation and with financing from Finland and the Netherlands. For 2016, Global Witness (2017) reported that Honduras and Nicaragua were the most dangerous countries in the world in which to be an environmental defender, with many killings associated with extractive industries and dam building projects. While Honduras saw fewer environmental activists murdered in 2017, Nicaragua witnessed the highest per capita rate in the world. Worldwide, 207 environmental activists were killed in 2017 (Global Witness, 2018).

Drivers and trends

Beyond the specificities of individual projects, a more general set of drivers underlies investment in large-scale infrastructure and extractive industry in the region. These drivers are related to the role of natural resources in economic development, underlying political settlements and a core set of structuring ideas that recur across national policies and plans. Such ideas include: the centrality of large-scale, natural resource-based accumulation in development; the

importance of infrastructure for growth, and the belief not only in national integration but also cross border and regional integration; the need for substantial increases in energy provision; the leading role of elites in these processes; and the need to contain civil rights and curtail civic involvement in decision making because such involvement is viewed as a brake on investment. The relative consistency and stability of these policy commitments (notwithstanding outlier exceptions such as El Salvador's recent mining law: see below) also suggest underlying political settlements that promote this policy and ideational orientation.

While policies to promote foreign and domestic investment and market deepening are nothing new to Mesoamerica (reflecting a longstanding political settlement around such policies), there has been a notable deepening of efforts to attract large-scale international investment in extractive industries and infrastructure over the last two decades (Dougherty, 2011; Spalding, 2014). As one example, Honduras's 1998 mining law was clearly oriented towards favouring investors in resource extraction, and despite nods to improvements in royalties and consultation, the 2013 mining law is quite similar. This 2013 law itself was subject to consultation with token environmental organizations, but many of them pulled out of the process because their demands were not met (ICEFI & IBIS, 2014). The law, and its progress in spite of civil society resistance, is part of a larger legislative push bearing the "Honduras is Open for Business" motto, which signals an approach to economic growth that is explicitly oriented towards increasing foreign investment and exports (COHA, 2011). The post-coup Lobo and Hernández administrations in Honduras have also had a major infrastructure focus through the public-private "Coalianza" initiative that seeks to turn the country into the logistical hub of the region.[11]

The commitments to regional integration in Central America emphasize market, energy system and transport integration, as opposed to social policy integration oriented towards shared social development goals. Such plans for regional infrastructural and energy integration drive the growing investment in megaprojects and related pressure on forests. A review of pending investments shows how far these plans guide current financial flows.[12] In the case of roads, the Plan Puebla-Panama (PPP) – now the Mesoamerican Project for Integration and Development (Proyecto Mesoamérica) – has oriented much of the official expansion of the transportation network in the region. Often attributed to the political agenda of then-Mexican President Vicente Fox, the PPP emerged out of the post-Hurricane Mitch efforts of national and international policymakers, especially the Inter-American Development Bank (IDB) (Almaguer-Kalixto, 2016). Plans for regional integration proposed in the Alliance for Prosperity between Guatemala, Honduras, and El Salvador track closely with the infrastructure proposals in the PPP and MIDP (Goodfriend, 2017).[13] In theory, greater integration in the region could support recovery and development and expand the reach of local markets; however, this integration process continues to be implemented through fairly top-down mechanisms (McElhinny & Nickinson, 2005; Paley, 2016).

The Mexico-Guatemala border in Petén is one area where these regional integration plans have pushed for this type of infrastructure- and energy-based connectivity (Grandia, 2013). Currently, the area between Calakmul National Park in Quintana Roo, Mexico, Belize, and Guatemala has a dense network of paved roads and shows extensive tree cover loss, emanating both from larger, planned infrastructure development and as a result of more localized demands. While deforestation seems to stop at the Guatemalan border, the pressure to build the roads into Guatemala is mounting and if – or when – they are built, extensive deforestation in that area of Petén is to be expected, both in the protected areas and in community-held forest concessions (see next section). Of other road building projects putting pressure on forests and forest communities, the construction of a road through the Santa Fe National Forest and an area claimed by the Comarca Ngäbe-Buglé in Panama stands out as another threat to remaining forest and forest dependent communities in the Isthmus (Bilbao, 2017).

New sources of finance outside of traditional donors and development banks, whose relative importance is waning, are also beginning to drive the expansion of investments in extractive industry and large-scale infrastructure, and indicators suggest that this investment will increase. Canadian investment has been prominent in the mining sector, with Canadian foreign policy also supporting pro-investment reforms to the mining codes in some countries (Nolin & Stephens, 2010; Shipley, 2013; Pedersen, 2014). In some instances, Central American investment itself has played a growing role in infrastructure investment. The most significant shift in investment flows, however, has been those coming from East Asia insofar as these are affecting a range of sectors and are also bound up in the crafting of wider trade and geopolitical relationships. Costa Rica and Panama have re-oriented their geopolitical allegiances away from the Republic of Taiwan in recent years, and China has pledged new grant and loan packages in the same timeframe (Wintgens, 2017). In Costa Rica, Chinese finance is enabling the construction of an enhanced highway to support expanded port capacity along the country's Caribbean coast. The Chinese government has provided US $395 million of the nearly US $500 million budget, and a Chinese infrastructure and engineering firm is in charge of the project (Arias, 2016). In Panama, Chinese companies are playing a key role in the development of lands along the Panama Canal, and the government has expressed interest in leveraging Chinese investment to fund a Central American railway connector (Xinhua, 2018). In 2018, the Community of Latin American and Caribbean States (CELAC) signed an agreement with China to expand engagement between them, with infrastructure as the signature issue (Cambero & Sherwood, 2018).

To summarize, while the direct impacts of extractive industry and infrastructure investments on forest loss have by and large been modest (i.e. those impacts in the immediate footprints of the investments), the indirect impacts triggered by these investments (such as forest loss due to follow-on investments, in-migration and agricultural colonization etc.) have been more substantial, and the implications for community rights have been more serious still. Trends in the drivers of

these investments suggest that future impacts on remaining forest cover and community rights may be yet more significant. In the following section, we consider a subset of responses to these actual and anticipated impacts, and suggest that, because of the impacts of extractivist investments on community rights, contention around such projects might be more likely to influence policies affecting forest cover and forest peoples' rights than will contention related to agricultural expansion.

Diverse "contentions" and pathways to policy change

The contentions surrounding the intersections between extractive industry, infrastructure, forest loss and forest community rights across Central America have been quite varied. In many instances, rights violations and environmental transformation proceed without any contentious response, while in other instances, contention is met by violence and repression, and subsequently unravels. Our purpose in this section is to discuss a subset of cases where contention has been associated with some form of policy change, but where the form of the contention varies and the policy impacts differ in their durability and depth. In the first example, that of the Asociación de Comunidades Forestales in Petén (ACOFOP), Guatemala and the regional Alianza Mesoamericana de Pueblos y Bosques (AMPB), contention emerges directly around the relationships between forest cover and community rights and subsequently spreads from one territory to others. While the horizontal spread of alternative approaches to forest management that emerge in this process may not constitute public policy change, it has influenced the thinking (and in some sense, "policy") of a series of international foundations and agencies. The second example is that of the diverse types of relationship between more open contention and mining policy reform in El Salvador, Guatemala, Honduras and Panama. In these cases, the links between contention and public policy are far clearer, as are the conditions under which such policy may change.

Contention and innovation in the management of forests in Petén

Toward the end of its long civil war, and in the context of increasing pressure on forests from the aforementioned road building and in-migration, the Government of Guatemala established the MBR, the largest protected area in Mesoamerica (Monterroso & Barry, 2012). The national government shifted its efforts in Petén from promoting colonization along the agricultural frontier to imposing strict limits on land uses, excluding resident and MBR-adjacent communities, including both resettled families and communities with a much longer history in Petén, from the region's vast forests (Sundberg, 2006). In response, communities within the heart of the MBR and several in its 'buffer zone' protested and took direct action, pushing the government toward recognizing some degree of community right to the forest. Ultimately, these communities were successful in

securing more than 450 thousand ha, primarily in the form of community forest concessions (Gómez & Méndez, 2007).

This market-friendly model based on collective management involves communities managing trees, timber, timber processing facilities, and increasingly non-timber forest products (Radachowsky, Ramos, McNab, Baur, & Kazakov, 2012). In this sense, having grown out of conflictive actions aimed at securing access to land, the communities that went on to constitute ACOFOP shifted to a more pragmatic mode of contention that challenges privatization and corporatization of resource control by effectively managing forests through community management. Many MBR resident communities have also pushed to decentre timber in their management strategies, rebuking the government's principal interest in the concessions (Bocci, Fortmann, Sohngen, & Milian, 2018). This "pragmatic contention" offers a different mode of linking forests, communities and the market in a way that would sustain community economies while implicitly criticizing more extractive and destructive forms of forest use pursued by larger-scale enterprises, typically owned by national and regional elites. The investment of international conservation and development NGOs in the model has provided space for this moderated form of contention to survive (Devine, 2018).

While ACOFOP's contention secured a response from the dominant settlement in the sense that they were given concessions over forest resources, it did not lead to wholesale policy change, as these concessions remain contingent on a market-oriented model of socio-economic development and are temporally limited. This contention did lead to an alternative model for community natural resource access that offered a way of managing forest without clearing land, though its reach remains limited within Guatemala (Radachowsky et al., 2012). This model has resonated in the region, and on the basis of ACOFOP's innovations, a broader network of community and territorially based organizations emerged, the AMPB (Dupuits, 2015). This regional network has promoted the conservation and economic successes of ACOFOP concession communities in advocacy at the global level, in part to support a broader goal for recognizing community land rights, but also to provide some cover for ACOFOP within the precarious context of Guatemala.

This advocacy has also allowed ACOFOP to become a point of reference for community forestry groups within and beyond Latin America (though it continues to face challenges of capacity and legitimacy).[14] Links with Southeast Asian organizations have led to community learning exchanges in both directions, a process in which international allies and sponsors played an important role. Further, the ACOFOP process has been incorporated into elements of the ongoing peace process in Colombia, as the forested areas that once housed rebel groups are now possible sites for state economic development plans.[15]

However, the failure to transform national policy remains the potential Achilles heel of the ACOFOP model. A key indicator of this weakness is that the initial forest concessions that ACOFOP secured from the Guatemalan government terminate in 2022, with other concessions ending in the following years

(Davis & Sauls, 2017). The government has still not confirmed that it will renew these concessions, and timber interests in the Petén are manoeuvring to secure access to ACOFOP's forests. Large-scale tourism interests have also gained increasing traction at the national political level, with proposals to develop the infrastructure that would make the Maya ruins along the far north-eastern border with Mexico accessible without community input, again putting these forest concessions at risk.[16] These interests are linked to elites who are party to the national political settlement in Guatemala, and are sustained by a model of capital accumulation that depends on natural resource extraction and community exclusion (Devine, 2018). At the same time, as noted earlier, the Petén has become subject to a new series of hydrocarbon exploration contracts as well as to road building on all sides, apart from the border with the Calakmul Biosphere Reserve in Mexico. The broader pressures of a model of development and accumulation based on resource extraction and infrastructure place in question the continued viability of the innovations generated by this three-decade history of mostly low intensity contention.

Contention and degrees of change in mining policy in Mesoamerica

While we have argued that extractive industry investment has not yet been a significant driver of forest loss, we have also suggested that in some territories such investment has had significant effects on forests and forest dependent peoples, and has compromised community rights more broadly. We have also suggested that there are indications that the scale of mining and hydrocarbon investment may well increase in forested areas in Panama, Nicaragua, Honduras, and Guatemala. The extent to which mining policy has been modified as a result of contentious action is therefore of interest looking forward. Such policy changes could have direct implications for future pressures on forests, and might bear lessons regarding the conditions under which change in policies that undergird the drivers of resource extraction in the region might occur.

Across the region, the last two decades offer several instances in which diverse forms of contention have affected mining policy, although not all these changes have been sustained over time. One significant policy change is the 2017 legislation in El Salvador that bans metallic mining throughout the country. Several factors made the ultimate passage of this law possible. First, national economic elites were scarcely, if at all, involved in mining investment and showed no or limited interest in the activity (the primary investments in mining came from Canada and the US, among others).[17] This meant that there was political space for significant restrictions on mining and that elites would be unlikely to be assertive resisting such policy. Second, the call for a ban on mining grew out of sustained contention around mining projects, a campaign coordinated by The National Platform Against Metallic Mining and certain NGOs, and with the involvement at different moments of parts of the Catholic Church (Broad & Cavanagh, 2011; Nadelman, 2015; Spalding, 2013, in this issue).

Third, the election of an FMLN government in 2009 marked a shift in the balance of power and the insertion of new political elites into the national settlement such that political space opened for policy innovations that under prior ARENA governments would not have been possible. Fourth, this political change allowed for new relationships between government bureaucrats and parliamentary commissions that, though characterized by tension (Bebbington, Bury, Cuba, & Rogan, 2015; Spalding, this issue), led the government to produce national policy appraisals that provided technical support to the 2017 law. Fifth, these interactions together with research commissioned by movement organizations themselves helped produce a scientific narrative regarding the risks that the combined effects of mining and climate change would imply for water security (Bebbington et al., 2015). This narrative began to circulate widely in the country, helping legitimate potential change in policy. Sixth, the campaign had important transnational dimensions, with significant lesson sharing between movement organizations in El Salvador and elsewhere in Central America (Spalding, 2013, in this issue).

In addition to these enabling factors, final passage of the law owed a great deal to increasingly assertive and visible involvement of the Catholic Church in the latter stages of the dispute, as well as to shifting calculations by members of the Legislative Assembly regarding the political incentives for supporting the law and the science surrounding the relationships between climate risk and mining risk. Even so, the legislation as passed does have certain weaknesses. The initial policy proposal included an immediate ban on artisanal and small-scale mining (ASM). The implementation of this ban on ASM was, however, delayed for two years at the request of certain lawmakers, and the regulations of the law do not stipulate exactly how the transfer of miners to other livelihood activities will be financed. This creates the possibility that ASM will continue, with the government turning a blind-eye. Whether these miners might become an important political actor or not is, however, uncertain given that the current number of small-scale miners is not high. In addition, the likelihood that a non-FMLN government will be elected, and the fact that leading candidates have expressed doubts about the new mining law, calls into question the medium-term durability of the law, suggesting that the change in power relationships and elite settlements marked by the election of the FMLN may be reversed.

Other examples of policy change also speak to the limited political space for sustained change in the policies that govern the drivers of extractive industry investment in the region. One of these examples of policy change comes from Guatemala. As in the case of El Salvador, this has been the result of an extended period of contestation at local and national levels coupled with technically-based efforts to challenge national laws. One basis of grassroots contestation has been the use of self-organized community consultations on whether populations accept mining or not. The first such consultation was in the municipality of Sipakapa in 2005, and by 2014 seventy such consultations had been carried out (Inter-American Commission on Human Rights, 2015). Alongside this

mobilization, the NGO CALAS (Centro de Acción Legal-Ambiental y Social de Guatemala) presented a legal challenge to the country's 1997 mining law and on June 19, 2008 the Constitutional Court agreed that several provisions of the law violated the State´s obligation to protect the environment (van de Sandt, 2009). In response, the Guatemalan government imposed a *de facto* moratorium between 2009 and 2011, and in 2012 proposed to the national congress a two-year formal moratorium on metal mining. This has not yet been approved, and so in practice the *de facto* moratorium was re-established and continues today (Instituto Centroamericano de Estudios Fiscales, 2016). This moratorium is, however, limited to the granting of new mining concessions, and allows current concessions to proceed. In some sense, the moratorium therefore benefits existing investors and elites as it protects them from further competition within the sector.

In Honduras, following a 1998 law facilitating investment in the mining sector, conflicts around the San Martín and San Andrés gold mines (each owned by Canadian listed companies) became a basis for a nascent movement contending the adverse impacts of mining (Bebbington, Fash and Rogan, forthcoming). The Roman Catholic church also supported this agenda, and in 2004 the Episcopal Conference of Honduras asked the government "to oppose the exploiters of natural resources" and Cardinal Rodríguez joined the networked movement to present the President of Congress with a proposal for mining law reform (CISDE, 2009). That same year the Congress placed a moratorium on new mining concessions, though existing concessions were not affected. In 2006, responding to litigation, the Honduran Supreme Court ruled that 13 articles of the 1998 mining law were in violation of the constitution and of international agreements that the country had signed. In marked contrast with the case in El Salvador, however, government functionaries continued to support expanded investment in mining with, among other things, the national Office for Mining Promotion (DEFOMIN) coordinating campaigns with mayors to promote mining. Ultimately, following the removal of the Zelaya government, and a de-linking of the Church leadership with the anti-mining movement, the mining law was again changed in 2013 through a new General Mining Law, providing a very favourable and highly militarized environment for mining investment. Thus, while mining has not yet had a significant impact on forest cover, the commitment to the expansion of this activity and associated infrastructure may alter the historical trend (Herrera et al., 2017). Indeed, mining activity *is* now increasing as reflected in the significant number of new exploration concessions and mining reserves granted through the 2013 Mining Law (Herrera et al., 2017; La Prensa, 2018).

A final example comes from Panama. Here the scale of contention has been primarily local, and the policy shift, though itself national, has had only local implications. This case involves the significant copper reserves that lie within the Comarca Ngäbé-Buglé. While efforts to develop these reserves had been resisted over several years, on February 11, 2011, the Martinelli government passed a law (Law 8) that reformed the mining code in a way that would facilitate

investment by a Korean company interested in mining the copper reserves. The reform induced three days of protests organized by a Ngäbe-Buglé coalition (the Coordinadora por la Defensa de los Recursos Naturales y el Derecho del Pueblo Ngäbe Buglé). Following clashes with the police and many injuries, the government agreed to the installation of a high-level commission, made up of representatives of the government and the *Coordinadora*, with the Catholic Church as mediator and guarantor of dialogue. As a result, on March 18, 2011, Law 8 was repealed by a subsequent law, Law 12. This law did not, however, meet the *Coordinadora*'s demands that mining be prohibited within the Comarca. Another round of protests began until, on March 26, 2012, the government passed another law establishing a special regime for the protection of the mineral, water and environmental resources in the Comarca Ngäbé-Buglé. In particular, Article 3 of the law prohibits exploration and exploitation concessions for metal and non-metal mining in the Comarca and in its annexed areas as well as in Ngäbé-Buglé communities adjacent to those areas, while Article 4 cancels all the concessions that had been granted previously (León, 2016).

These different pathways between contention and mining policy reform suggest certain patterns: the importance of grassroots contention; the legitimating role of the Catholic Church and its capacity to engage and partially persuade national elites; the importance of having support from bureaucrats and technocrats within government (as per the contrast between El Salvador and Guatemala); and the importance of legal actors and institutions in shaping legislative change through taking up strategic litigation and drafting legislative alternatives. The cases also reflect cross-border coordination among initiatives, but also show that national factors and institutions ultimately exercise more influence than this transnational dimension. The cases each point to ways in which the national political settlement and its relationships to a particular mode of accumulation based in resource extraction constrains the extent of policy change (as in the case of moratoria that do not affect existing mining concessions) and also challenges the durability of this change, making the possibility of policy reversal very real. We take up some of these points in the concluding section.

Discussion, contention and change in socio-environmental policy

With the exceptions of Nicaragua, Panama and the Petén, mining and hydrocarbon investments have not yet had significant impacts on forest cover. Looking forward, however, the potential social and ecological impacts of extractivist investment in forested areas are likely to be much more significant than impacts to date, not least in the few remaining areas of substantial primary forest and indigenous territory in the region. Road building in northern Guatemala and across the borders in Mexico threatens forests in the Petén; road building and the passage (whatever the route) of electricity connections from Panama to Colombia threaten forests in the Darien and the Santa Fe National Park (Bilbao, 2017);

and mining expansion in the Honduras and Nicaragua threatens both forest cover and indigenous lands.

At this intersection of forests, extractive industry and infrastructure, mining, hydroelectricity investments and some hydrocarbon projects have triggered the most visible protest and mobilization. At one level this presumably reflects simple cost-benefit calculations at a community level as these investments generate limited local benefits. The energy from dams and turbines typically skips over nearby communities, while mining and hydrocarbons generate few jobs; meanwhile the costs of lost land, lost local control, increased uncertainty and displacement are felt locally. Conflicts related to extractive industry and dams have also been more effective at mobilizing national and transnational actors and organizations – sometimes as direct allies and sources of support for local actors, and at other times simply as part of a looser set of relationships. In some instances, these allies have been found within the national state itself, in Human Rights Defenders' and Procurators offices and Ministries of Environment, though more frequently they have been from civil society and church organizations. Legal defence organizations have been important allies.

This contentious action around investment in extractive models of development in Central America has been generative both in a general sense, and as a vehicle for innovations that increase some degree of protection for forests and forest dependent communities. Contention has: led to alternative models for organizing forest governance; driven wholesale or partial changes in national mining policies; influenced policies governing mining investment in indigenous lands in Panama; and forced national and international debate about the sometimes-egregious implications of this investment for human security and rights. These changes have reduced pressure on forest cover and the rights and livelihoods of people who depend on those forests. The spatial and temporal scales at which contention has had these effects vary greatly, ranging from the short-term and localized and territory specific through to medium-term and national. It is not yet possible to say that any of these effects have been long-term, given the ever-present possibility of rollback (Humphreys Bebbington et al., in this issue).

Across the cases discussed here, we can identify conditions that have increased the likelihood that contention will translate into change in policies away from those promoting a broadly extractivist model of development. These conditions reflect different elements of our conceptual framework. First, and perhaps most important, is the weight of natural resources in patterns of accumulation and economic development. The fact that mining is insignificant in El Salvador's economy, meant that neither the public-sector budget nor national elites depended on income from mining. This clearly helped create space for an argument for a national ban on mining. Conversely, the relative importance of mining for parts of the national elite and for public sector finances in Honduras and Guatemala meant that there was always resistance to moratoria on mining investment, leading to the reversal of Honduras's moratorium after the coup in 2009, and the restriction of Guatemala's moratorium to new (but not existing)

mineral concessions. In Nicaragua, the increasing macroeconomic dependence on gold (now the country's main export) limits any prospect for policy change.

Related to the prior point is that policy innovation is more likely to occur – especially when it occurs at a national level – when the political settlement shifts such that groups who are not aligned with income from extractivism, and/or are committed to greater defence of forests and the rights of forest dependent communities, gain greater presence and leverage within that settlement. Once again, the Salvadoran case illustrates this tendency. Guatemala at the end of its 36-year civil war also experienced a shifting settlement that gave forests a higher priority and was more open to demands expressed in processes of contention. A converse illustration would be that of Honduras, where elites associated with extractivism were central to the national settlement, helping create the space for the very public murder of a leader such as Berta Cáceres.

Even where such political and economic space exists, the mechanisms through which contention translates into policy change must also be present. The cases discussed above show a variety of such mechanisms: they do not all need to be in place for policy changes to occur, though it appears important that more than one of these mechanisms be present. Of particular significance are legal professionals, technocrats and bureaucrats of different sorts. The case of mining legislation in El Salvador shows the importance of actors who are able to work across the boundaries between social movements and movement organizations on the one hand, and public bureaucracy and legislative institutions on the other. Such people and organizations translate ideas, claims and denunciations within movements into the language of legislation. They are also able to manage the relationships with different actors in the policy making process to help keep policy initiatives moving forward. Legal professionals have played roles as attorneys defending cases and challenging existing laws, and as judges who serve to interpret the interface between movement claims and constitutional provisions. The roles of such actors are apparent in the case of policies protecting indigenous lands from mining investments.

Finally, the broader ideational context matters (Hall, 2009). Relations of causality are even harder to trace in this instance, but it seems reasonable to conclude that contention is more likely to catalyse policy change when broader arguments that legitimate a change in policy become consolidated in the public sphere. In the case of El Salvador, arguments regarding climate change, climate risk, water resources and mining had been crafted over a decade or so prior to the legislation banning mining (Bebbington et al., 2015; Spalding, in this issue). These arguments circulated with progressively greater reach in public media, among bureaucrats and politicians, and in the Catholic Church (Nadelman, 2015).

Policy changes that tighten regulation of the drivers of investment in extractive industry and infrastructure are, however, fragile. If economic growth slows, and demands to deepen natural resource-based accumulation intensify, there will be pressure to roll back rules that protect forests or that regulate investment in

mining, hydrocarbons or infrastructure. While this phenomenon has been clearer in South America (Humphreys Bebbington et al., in this issue), it is also visible in Central America, perhaps particularly in Honduras. Accumulation pressures in Guatemala likewise threaten the continuation of ACOFOP's forest concessions and could lead to shifts toward industrial-scale logging operations and/or commercial tourism expansion, both of which would severely limit community rights and could affect deforestation pressures.

To the extent that policy changes have been facilitated by a shift in the political settlement, the resilience of those changes depends on the stability of the new political settlement. In this sense, there must remain some question regarding the durability of the new mining law in El Salvador. The fact that concerns about water security are so strong in the country,[18] and that national economic groups still show little interest in the sector, presumably provide political economic and ideational shields to the law. However, the continuing stagnation of the Salvadoran economy, further aggravated by the decision of the Trump administration to end Temporary Protected Status for Salvadoran migrants in the USA, may encourage elites in the future to look again at mining as a revenue source.

The fragility of progressive policy changes – their relatively low levels of institutionalization – in the face of potential reversals in the conditions that helped bring them into being, means that their resilience also depends on the continuing commitment of the judiciary to such changes, on the continuing purchase of the ideas and narratives that legitimated policy change, and on the ongoing strength of social movements demanding these policies. Here too there are fragilities, and cases such as Honduras and El Salvador show that the movements that helped bring such changes into being can easily weaken and fracture internally once they have achieved "success". These fissures can emerge because of contestation among leaders over who claims responsibility for such success, or over differences of opinion regarding the strategy used to secure success, or more mundanely, because having been successful, the movements lose some of their reason for being. To the extent that such movements are also vectors of the discursive changes that helped legitimate policy innovation, then this weakening reduces pressure on elites allied with extractivist approaches to development, shifting the political equilibrium and easing policy rollback.

Discussions of the relations between contentious action and "progressive" policy change are really just another version of more general discussions of pathways towards institutional change (Mahoney & Thelen, 2009; Acemoglu & Robinson, 2013). The results of contention around extractive industry, infrastructure and forest loss in Central America are consistent with themes in these literatures: namely that endogenous (progressive) institutional change is not common and that the resiliency of any such change depends on more substantial changes in the balance of power within the underlying political settlement or "political equilibrium" (Acemoglu & Robinson, 2013).

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Notes

1. Calculated using the Global Forest Watch tool and data set.
2. This section draws on a theoretical argument developed in Bebbington, Fash and Rogan (forthcoming).
3. Here there is much from which to choose, as reflected across the papers in this issue and the broad field of Policy Sciences.
4. We also view these managerial and micro-sociological explanations as important – the point here is that they are, though, incomplete when disconnected from political and political economy analytical frameworks.
5. "Elites" are understood here as powerful groups able to exercise that power in pursuit of a particular vision for national development. Their power may have socio-political, economic, military or ideational underpinnings, and often a combination of these.
6. *Tree* growth may also return once mining ceases, depending on soil and other conditions – an example would be the monoculture pine reforestation at the San Andrés mine in Honduras. This is not, however, the same as *forest* resurgence.
7. The "Cobre Panama" concession consists of four zones totalling 13,600 ha in an area covered by dense rainforest. In February 2018, First Quantum, the Canadian company developing the project, reported that capital development costs would reach US$6.3 billion by 2018 and that US$4.74 billion had already been spent during 2016-2017.
8. The 3643 ha figure for El Salvador may also reflect forest loss within non-metallic mining areas (e.g. quarries) because concession data combines concessions for both metallic and non-metallic mining.
9. Here we draw on interviews with local organization leaders in the Petén.
10. The Patuca Complex includes the controversial Patuca III dam, under construction since 2013, and the planned Patuca IIa and IIb dams. The Industrial and Commercial Bank of China (ICBC) is the primary project investor in the and Chinese company Sinohydro the main contracted builder.
11. For more information on the programme, see: http://coalianza.gob.hn/es/cartera-de-proyectos/cartera-app-nacional/infraestructura (Last Accessed 4 Sept. 2018). This is partly a response to the bad press that Honduras received in 2015 for having among "the worst infrastructures in the world", and the worst in Central America (*La Prensa,* 2015).
12. Data prepared on financial flows to Central America prepared by Diego Zarate in 2016 as part of the Climate and Land Use Alliance (Contract # 1607-55271).
13. An additional driver in this case is Central America's geopolitical relationship with the United States and Mexico, as the Alliance for Prosperity was announced after a spike in the northward migration of unaccompanied minors in 2014.
14. Ybarra argues that the ACOFOP model might be difficult to replicate "because it is land extensive, benefits few people, and required significant long-term foreign funding" (2017, p. 171). She is critical of the organization for its lack of effective representation of the indigenous communities with whom she works in the Maya Biosphere Reserve's national

parks, some of which have been in ACOFOP's orbit. That said, ACOFOP estimates that its concessions provide benefits (indirectly and directly) to some 80,000 people, many in areas that the state fails to reach (without including more distant beneficiaries from any climate change and conservation "services" effects of ACOFOP).

15. Here we draw on our own interviews.
16. Our discussion here draws substantially on field interviews.
17. Here we draw on our own interviews.
18. See, for instance Magaña (2018a, 2018b).

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