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DOI

[10.1016/j.ecolecon.2020.106627](https://doi.org/10.1016/j.ecolecon.2020.106627)

Publication date

2020

Document Version

Final published version

Published in

Ecological Economics

License

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[Link to publication](#)

Citation for published version (APA):

Villamayor-Tomas, S., García-López, G., & Scholtens, J. (2020). Do commons management and movements reinforce each other? Comparative insights from Mexico and Sri Lanka. *Ecological Economics*, 173, Article 106627. <https://doi.org/10.1016/j.ecolecon.2020.106627>

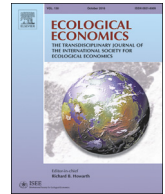
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Analysis

Do commons management and movements reinforce each other? Comparative insights from Mexico and Sri Lanka



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1. Introduction

Over the last decades, research on community-based natural resource management (CBNRM) regimes has highlighted the vulnerability of said regimes to shortsighted government regulations, intensified competition from commercial interests for resource extraction, and other threats from outside actors and institutions (Salvanes and Squires, 1995; Blaikie, 2006; Baynes et al., 2015; Notess et al., 2018). Ecological economists and political ecologists have paid increasing attention to the participation of local communities in social movements against those threats and as ‘forces for sustainability’ (Anguelovski and Martínez Alier, 2014; Temper et al., 2018). A number of works have highlighted the influence of environmental justice movements on the delimitation and formalization of collective territorial rights (Conde and Kallis, 2012; Kurien, 2013); the reinvigoration of local indigenous practices and knowledge (Armitage, 2005; Poole, 2005); and a number of other CBNRM governance functions such as deliberative decision making, monitoring capacity, and cross-community coordination (Villamayor-Tomas and García-López, 2018). This study expands on this previous research by focusing on the cross-influence between CBNRM and social mobilization¹. In particular, we ask: (a) how do communities' capacity to manage natural resources and their capacity to mobilize against environmental justice threats interact with each other? and (b) what synergies and tensions emerge in those interactions? In addressing these questions, we aim to critically investigate the appealing claim of a virtuous relationship between capacity to manage and capacity to mobilize (Peet and Watts, 1996; De Angelis, 2003; Nayak and Berkes, 2011; Villamayor-Tomas and García-López, 2018).

Empirically, the study compares three cases from different natural resource contexts in two countries, exemplifying three different possible interactions between the capacity to manage and the capacity to mobilize of local communities. The case of the Yaqui community in Northwestern Mexico illustrates a community's strong capacity to mobilize against a water transfer project and contrasts it with its inability

to self-organize to manage irrigation water. The case of community forestry in El Salto Mexico, illustrates synergies between the internal self-organization capacity of forest communities and their capacity to mobilize to engage in contentious politics and defend their rights. The case of Tamil fishers in Northern Sri Lanka illustrates how the inability of communities to mobilize to defend their fishing grounds against foreign trawlers and alien political interests erode their capacity to collectively manage their shared resources.

The paper proceeds first by introducing our theoretical framing and methods. Then it provides a description of the cases with a focus on the evidence that shows the interactions between communities' capacity to manage and to mobilize. The discussion section then reflects on the validity of the “virtuous circle” hypothesis by first synthesizing the case evidence into a series of propositions and then reflecting on the mediating role of governments and market structures and life-cycles. We conclude with a call to further study the co-evolution of CBNRM, mobilization and political-economic structures in historical perspective and test synergies and tensions among the former.

2. Theoretical background

2.1. Common pool resource theory: collective action to manage

Much of the knowledge developed around CBNRM regimes and their sustainability has developed to explain the endurance and performance of common property regimes vis-a-vis the distribution of resources among local community users. The focus on social dilemmas and cooperation theory has been key in that regard (Poteete et al., 2010). More recently, the advent of climate change and globalization have shifted attention to the capacity of said regimes to cope with external disturbances (Anderies et al., 2004; Murtinho and Hayes, 2011; Lemos et al., 2013; Villamayor-Tomas, 2014). Much of this work, however, has tended to focus on “uncontested” disturbances such as droughts, demographic changes or market integration, their impact

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¹ This article belongs to the special issue on “Social Movements and Commons”, guest edited by S. Villamayor-Tomas, G. Garcia-Lopez and G. D'Alisa.

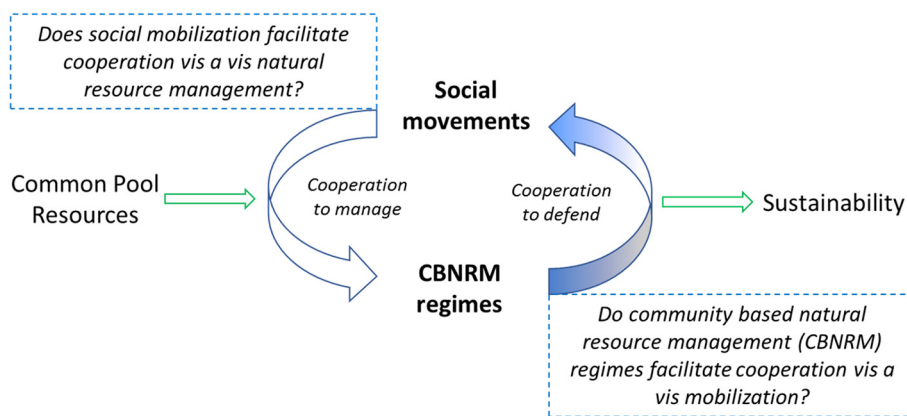


Fig. 1. Model of cooperation, CBNRM and social mobilization.

among community members, and the seemingly “apolitical” responses of communities (Eakin, 2005; Tucker et al., 2010; Villamayor-Tomas, 2018). These studies typically emphasize the importance of enhancing the resilience and adaptive capacity of communities and institutions to cope with change, rather than fundamentally questioning the socio-political sources of vulnerability (Ribot, 2014; Walsh-Dilley et al., 2016; Kaika, 2017). Many disturbances, however, are contested by communities, particularly those that involve “cost shifting” from other users or governments (Martínez-Alier and O’Connor, 1995; D’Alisa et al., 2010). Recent scholarship has well illustrated the many instances when communities have organized and mobilized to defend their rights against external intruders or undermining government policies (Temper et al., 2015; Scheidel et al., 2017). Unfortunately, and despite its strong potential, said scholarship has paid only limited attention to the links of mobilization to community organization for natural resource management (Villamayor-Tomas and García-López, 2018).

2.2. Community mobilization, or the political ecology lenses

Contrary to common property scholars, political ecologists have paid attention to historically-shaped patterns of power, conflict, the ‘state’ and the broader political-economic context shape the access to and uses of common resources (Ribot and Peluso, 2003; Johnson, 2004; Saunders, 2014). They have shown the constraints imposed onto CBNRM regimes by states’ recentralization policies (Ribot et al., 2006; Sahide et al., 2016), ‘fortress’ conservation policies (Brockington, 2002), or elite capture and inequalities (Blaikie, 2006; Persha and Andersson, 2014). This critical scholarship emphasizes that the benefits and costs of resource management are unequally distributed and shaped by power relations and political-economic structures; and that these conditions may lead to community mobilization and conflicts (Veuthey and Gerber, 2012). Similarly, critical work in resilience has highlighted how resistance is central to communities’ ability to sustain political-economic disturbances and transform the structural constraints they face (Barthel et al., 2013; Walsh-Dilley et al., 2016). It has indeed been argued that the history of commons has always been one of struggle between enclosures and other threats to CBNRM institutions, and that of processes (sometimes in the form of mobilization) to defend and reconstitute commons (Nayak and Berkes, 2011; De Angelis, 2012).

A number of empirical works have shed light on important connections between movements and CBNRM. Examples include the rubber tappers’ movement in Brazil against logging and large-scale cattle ranching, which eventually led to the creation of collectively-owned “Extractive Reserves” (Brown and Rosendo, 2000); the social movements of the Mau Mau tribes in Kenya and Nigeria, which used land occupations and built on customary land use institutions to reclaim historically common lands from agri-business and oil companies (Turner and Brownhill, 2004); and the grassroots movements in

Campania, Italy, which opposed toxic waste and develop projects of “territorialization from below” based on commons (De Rosa, 2018). In their meta-analysis Villamayor-Tomas and García-López (2018) find that movements can help strengthen CBNRM institutions beyond the reaction to specific threats. Those effects include the democratization of communities’ collective choice processes, the reinvigoration of identity ties and local ecological knowledge, the promotion of economic development and autonomy, and the creation of nested user organizations. Beyond empirical analyses, new concepts like Martínez-Alier’s (2003) “environmentalism of the poor” and Peet and Watts’s (2004) “liberation ecologies” have put forth an inherent relationship between environmental conflicts, mobilization, poverty alleviation and community-led resource conservation.

2.3. A model of collective action and mobilization

The methodological and political differences between common property scholars and political ecologists “suggests that we have a tension, between an interpretation of commons as endogenous social systems, and commons as systems influenced by external social forces, capitalist social forces. In the first case, whether a community-based management regime fails or succeeds to reproduce itself depends on its management principles. In the second case, it depends on the power relations vis-à-vis the enclosing (which simply destroys commons) or co-opting (which sucks surplus value by using commons as a way to keep social wages down) force of capital” (De Angelis, 2017, pp. 170).

This tension between the internal vs. external and the managerial vs. political dimensions of CBNRM is analytical rather than real, and requires further articulation and theorization rather differentiation. Our analysis aims to start addressing this challenge. We formalize this dialogue by distinguishing between capacity to manage and capacity to mobilize, i.e., the ability of communities to collectively manage their shared resources and their ability to mobilize against external threats (see Fig. 1). Both involve collective organization, yet the purpose of the cooperation and the repertoire of the action differ. The model in Fig. 1 is inspired by De Angelis (2003), and his proposal of a potential “virtuous circle” between movements and CBNRM institutions (see also Caggiano and De Rosa, 2015).

The hypothesis underlying the model is the existence of a positive relationship between collective management and mobilization. According to De Angelis (2003), the watchdog and transformative power of commons movements in times of crisis would be complemented by the ability of community institutions to provide for behavioral certainty and cooperation in times of stability. Also, as posited by common property scholars, past cooperative experiences (e.g., in the form of management or mobilization) pave the way for future cooperative experiences, because community members learn about the benefits of cooperation as well as how to minimize the costs and risks of

it (Ostrom, 1998; Lubell, 2003).

3. Methods

We designed the study as an exploratory comparison of three cases (Yin, 2014). We selected the cases based on our long-term firsthand knowledge (see below), the presence of an environmental conflict, the presence/absence of CBNRM regime, and the diversity of resource contexts (water, forests, fisheries). Each author first profiled their cases with four questions in mind: 1) what was the capacity and effectiveness of the community to manage their common resources (CBNRM)?; 2) what external issues were threatening the viability of communities and their natural resources?; 3) what was the capacity and effectiveness of the community to mobilize vis-à-vis that/those external threats?; and 4) did the mobilization have any visible effect on CBNRM, and vice versa? Then, we drew exploratory comparisons to make inferences about the interaction between CBNRM and mobilization.

Data was obtained from secondary sources and interviews, as part of the PhD or postdoctoral studies of the co-authors. The Yaqui case is based on previous studies of the Yaqui political economy history, and on 16 interviews carried in between 2014 and 2017 by the first author with members of the Yaqui community (traditional authorities of two of the 8 Yaqui villages), public officials, and researchers. The El Salto case is based on a one-year ethnographic research project in the state of Durango involving data collection in El Salto and three other locations by the second author. In El Salto alone, this involved 54 interviews with leaders of communities and regional organizations, foresters, and government officials, and participated in 7 assemblies (4 community and 3 regional). The fisheries case is based on 14 months of mixed method fieldwork in Northern Sri Lanka from 2011 to 2015 undertaken by the third author, including ethnographic work in three fishing villages, as well as 117 interviews with fisher leaders, village authorities, academics, government officials, politicians, NGO staff, activists and clergy at local and national level. These studies have also been documented separately (García-López, 2013, 2019; Scholtens, 2016; Scholtens and Bavinck, 2018; García-López and Antinori, 2018).

4. Case descriptions

4.1. Yaqui irrigation case

The Yaqui or Yoeme are an Uto-Aztecan speaking indigenous people of Mexico who inhabit eight villages along the Valley of the Río Yaqui in the Mexican state of Sonora. They are known for fiercely fighting over more than 500 years the attempts from colonizers and governments to occupy and exploit their territories and natural resources. They are also currently known for the difficulties they face to collectively manage their land and water resources.

The Yaqui have full rights over land and water resources within their territory. The irrigation infrastructure and irrigated land within their territory conforms the “Colonias Yaquis” irrigation district (also named district 018). The Yaqui do not manage or enjoy land and water use rights directly; instead, they rent them to outsiders, mostly big farmers and corporations from a neighboring irrigation district (district 041). These farmers, in turn, hire Yaqui members to work as laborers. The Yaqui that cultivate land have a voice in the organization of their district, but management is ultimately controlled by the National Water Agency (heretofore CONAGUA). For some time during the 1940s and 50s, the Yaqui did cultivate their own land; however, this never translated into a community-based water management system. In the late 1930s, after a decades-long warfare between the Yaqui and the Mexican government over land and water rights, the President Lázaro Cárdenas signed a decree to devolve around 485,000 ha to the Yaqui and also granted them 50% of the water stored in the main reservoir of the valley. This came along with an ambitious, green revolution-inspired governmental program to develop canal irrigation in the valley.

Mexico is known for its dual agricultural sector, with high-input commercial systems characteristic of Sonora on one end of the spectrum, and low-input subsistence systems, more pronounced in the southern states, at the other end. Nevertheless, Sonora also reproduces this duality, with some irrigation areas within the Yaqui Valley (see District 041 below) being home to the *green revolution* and some of the more productive wheat systems in the world on the one hand, and indigenous communities like the Yaqui, forced to and therefore struggling to accommodate their traditional livelihoods to market dynamics (Naylor and Falcon, 2012).

The newly created CONAGUA promoted two irrigation districts (the 018 and 041 districts); and two water management organizations under its control. The Yaqui were never satisfied with these developments. As claimed by the Yaqui traditional authorities, the 485,000 ha fell short of recognizing the historical extent of the Yaqui territories. Also, the water rights were not unconditional but rather restricted to irrigation development and ultimately also vulnerable to the construction of dams and new irrigation developments upstream the river, i.e., around District 041. This was not unlikely if one compares the hydraulic infrastructure investments carried by CONAGUA in the former (to irrigate 24,000 has) with those in the later (more than 100,000 has). More importantly, the Yaqui had to engage in a particular mode of intensive and commercial agriculture for which they lacked the know-how and economic resources. As it happened, many of the Yaqui ended up subcontracting with government-sponsored local savings cooperatives the management of their cultivations (Almanza Sánchez, 2008). Corruption, a series of bad-yield years and a crisis of credit led the system to collapse and the Yaqui to start renting their land to outsider farmers. This, in turn, has been repeatedly used by CONAGUA to resist the transfer of water management in the district to the community. The “Colonias Yaquis” is the only irrigation district in Mexico that still remains under the direct control of CONAGUA. Since the 1990s, the fluctuating prices for agricultural outputs and inputs caused in part by the North American Free Trade Agreement (NAFTA), a set of national liberalization policies for agriculture; and macro-economic, credit and global commodity shocks since the early 1990s, have pushed commercial agriculture in the Yaqui Valley towards intensification and bulk production, sophisticated irrigation infrastructure investments, privatization of communal land, and the expansion of operational holdings (Naylor and Falcon, 2012). All this in turn has increased the breach between the *green revolution* side of the Valley and the Yaqui community side, likely making more difficult for the community to collectively reengage in commercial agricultural production at their own path.

The dispossession of land and water by governments and private interests has been a constant threat to the self-determination capacity of the Yaqui community vis a vis its territory and natural resources (Luna Escalante, 2007; Velázquez, 2014). One of the most recent instances of this dispossession was the construction of the Independencia water transfer project, steered by the Governor of Sonora and supported by mostly economic interests (agricultural and tourism industry) from the state's capital, Hermosillo. The transfer project would derive water from the Yaqui valley to the city of Hermosillo, potentially affecting the water rights of the Yaqui tribe and other upstream water users. The project was announced in 2010 as a solution to the long drought period that had intermittently threatened the state since the mid-1990s. The Yaqui opposed the project on the basis that it jeopardized their water rights and violated their Constitutional right of prior consultation (Lerma Rodríguez, 2014; Moreno, 2015). Mobilizations within the Yaqui community were to a great extent spurred by leaders from the District 041 organization and interest groups from the city of Obregon (both upstream the valley), which created a “Citizen Movement in Defense of Water” and initiated a series of actions against the transfer. These included court appeals, meetings with government officials, demonstrations and a blockade of the Federal highway that crosses the tribe's territory. The blockade, which became the flagship of the movement, lasted two years (2013–2015) and epitomized, once again,

the capacity of the Yaqui tribe to mobilize against threats to its rights.

The mobilization was only partially successful. One of the milestones in the Yaqui struggles was the filing of two lawsuits against the President of Mexico, the Governor of Sonora and the CONAGUA for failing to fulfill the community's right to prior consultation (Mejía, 2014). In both cases the court ruled in favor of the community; however, openly contradicting the courts, the governor ordered construction to continue. More importantly, the community did not mobilize at once but in a divided fashion. The “traditional authorities” (main political decision-making body) of one of the villages sided with the “District 041” leaders and the interest groups of the city of Obregon and focused on showcasing the pitfalls of the transfer project. The authorities of other Yaqui villages remained more isolated and linked their opposition to the transfer with their longer-standing discourse about the unfair restitution of land and water rights since Cardenas' decree. Additionally, the state government created new divisions within the community, first by offering side compensations to some of the village authorities, and then questioning the political legitimacy of the authorities that opposed the project. All these divisions, added to an already long history of disagreements within the community about whether and how to participate in government-sponsored rural development programs from the 1970s, to the 1990s (Restor, 2007).

4.2. Durango forest case

The region of El Salto in the north-central state of Durango, is considered one of the most important for forestry in all of Mexico. It is the main forest region of Durango, which is usually labeled the ‘top forest reserve’ in the country, having the largest forest extension and highest production (together with Chihuahua) of timber. As with the rest of Mexico, most of the forests in El Salto are community-owned, and arguably represent a global model of how community forestry can contribute to “sustainable landscapes” (Bray, 2013). Communities collectively own forestlands and harvest timber for sale in the market (as logs or as sawn wood) and some also have ecotourism ventures.

El Salto's community forestry initiatives emerged after a tumultuous period of multiple social mobilizations starting in the early 20th century. During the Porfirio Diaz dictatorship, many forests across Mexico were declared ‘vacant’ and given to private corporations for timber and mining activities. In El Salto, the Durango Lumber Company acquired hundreds of thousands of prime forestlands and developed a company town with large sawmills. Many of the region's peasants lived without land titles and worked for the Company. The Mexican Revolution (1910–1920) ended the dictatorship and began a process of land reform which distributed collective forest land titles and use rights to groups of landless peasants and indigenous communities and recognized common property regimes in the Constitution and in a series of federal laws. This national institutional framework was important for today's success of community forestry, but it was not enough: Governments after Cardenas stalled land redistribution and shifted to a combination of no-use conservation areas and industrial-scale extractivist concessions.

In El Salto, the Company continued operations. In the 1960s, things started to change. The increased support for land distribution and community forestry by the federal government in this period—a result of strong peasant mobilizations across the country—was taken by local peasant leaders from the local National Peasant Confederation (CNC) chapter as an opportunity to further expand community ownership of forests and in turn weaken the Company's power. Almost half of the region's forest communities were created between 1960 and 1970. By the mid-1960s, the Company had lost more than half of its forest land. Three of the region's largest communities formed the first community forestry enterprises in the country in this period. The Company, however, entered into individual contracts with communities, and taking advantage of the little knowledge most communities had of the permitting process, it kept most of the profits, as well as the permits. This

led several communities to try to sell timber to other buyers, which the Company opposed vigorously (sometimes through violence).

In response, communities began protests against the Company and organized in the El Salto Forest Association in 1968 to obtain the permits for forest extraction and continue expanding land reform. This was the first association in the country in the struggle for rights over forests, and was crucial both to organize peasants and communities internally, as well as to strengthen their autonomy and political power externally. First, it grouped communities, creating more unity and solidarity (i.e., cooperation) in a shared struggle. It helped communities to solicit and obtain formal collective land titles. Then, it helped them obtain permits for extracting and processing timber, overcoming opposition from some local politicians and business leaders. This was the first government recognition of communities' right to self-organize to manage forests. Afterwards, the association improved the communities' bargaining power in the timber market (e.g., by developing a timber price list for all member communities, which pushed prices up). It also contributed to channel economic resources from the government and from members to develop community forestry enterprises (e.g. sawmills). The Association also maintained its activity in the movement for community forest rights, which has played a strategic role to gain access to state-party decision-makers and eventually promote and elect its own candidates to municipal government. We could thus say that the Association became a ‘political arm’ of the forest communities, a form of social movement organization—led and financed by the forest communities through their forestry activities—advocating on their behalf. As a result of these and other actions, in 1986 a new national law was passed recognizing forest communities' rights and creating an institutional structure of co-management between the government's environmental and agrarian agencies and communities. Eventually communities also achieved representation in government advisory boards related to forestry regulations and the use of forestry funds.

El Salto's strong alliance with the state proved an asset in the beginning, but it also diminished the association's internal autonomy and generated internal conflicts over electoral politics, leading to some communities exiting and in turn the overall decline of collective strength of the association. The changes in the national political regime from a corporatist to neoliberal begun in the 1990s has also meant less influence over government policies, and a stronger influence from private foresters who control the new highly-technical processes of applying for government funds. Moreover, *El Salto* has been unable to address the significant challenges that communities began to face after the implementation of neoliberal reforms, which reduced government support for peasant agriculture, allowed for the privatization of common property lands, and eliminated barriers for the import of foreign timber. Increased competition from large-scale corporate plantation timber from Canada, the US and Chile—facilitated by North American and Chilean Free Trade Agreements with Mexico—has meant decreasing timber prices and ‘pricing out’ for forest communities. This has been coupled with increased costs of production from the rising price of petrol and machinery and over-regulation of community forestry—total costs for obtaining harvesting permits can easily reach \$10,000 USD—and a reduction of funding for the social/organizational and economic activities of forest communities and their inter-community associations. Persistent lack of adequate access to credit in peasant communities and particularly in the community forestry sector is another significant market challenge.

In response, many communities in the region of *El Salto* (a trend observed in other parts of Durango and Mexico) have sold their community forestry enterprises, divided into smaller forestry ‘work groups’ and shifted to selling ‘standing wood’ (i.e. renting the forest for private companies to come harvest it), reducing control over forest management quality, employment and collective financial capital in the communities, while increasing internal divisions. The El Salto region's Strategic Plan (*Asociación Regional de Silvicultores “El Salto”, 2010*) points out this ‘vertical disintegration’ process as a main challenge and

concludes that social organization in their region is “unstable” and “underdeveloped”. All of this has translated into an overall weakening of inter-community associations' social organization, stability, and above all their activities (e.g. lobbying), and thus their political power.

4.3. North Sri Lankan fisheries case

Fisheries Cooperatives are a core institution in Northern Sri Lanka, representing one of the main economic sectors in the region, providing tens of thousands of livelihoods. During the past few decades, however, fishers have found themselves in a particularly unenviable situation. Thirty years of civil warfare (1983–2009) had caused repeated forced displacement, severe restrictions to fishing activity, as well as a socio-psychological derailing of the regional social fabric. The 2004 Indian Ocean tsunami and a cyclone in 2008 further added to the devastation. In this context of destruction, fisheries cooperatives demonstrated a remarkable resilience in terms of maintaining some of their functions, benefiting from a strong cooperative tradition as well as, somewhat ironically, from a war-induced isolation from the rest of the country. While formally fisheries management is the domain of the government, in practice the fisheries cooperatives used to have considerable authority over setting and implementing locally specific rules dictating who can fish where and when, and what gears can be used by whom in what season. In addition to such regulatory tasks, cooperatives also carry out important community tasks, solve disputes over fisheries matters, represent fishers' interests to authorities, channeled post-tsunami and post-war recovery funds, provide loans for boats, gears and emergency aid, and manage minor insurance schemes.

In post-war years, however, the viability of the fisheries sector, as well as the functioning of these cooperatives have come under increasing pressure. The first, most proximate reason for this has been the frequent illegal intrusion of approximately 1500 Indian trawlers into North Sri Lankan waters. This transboundary poaching originates in India's subsidized push for an export-oriented trawler industry, which was bound to capitalize on the liberalization of India's markets in the 80s. Shrimp became the primary target species for these trawlers given the high prices fetched in the expanding markets in Europe, United States and the Far East (Menon et al., 2016) and the abundant availability of shrimp in Sri Lanka made operations into those fishing grounds increasingly attractive. This cross-border Indian trawler fleet not only left Sri Lankan fishers with less resources to harvest, but also made sea-going operations prohibitively risky due to the costs of trawlers destroying the fishers' nets. The fishers and cooperatives stood powerless against this fleet that is not only technologically superior, but also received political backing from Tamil Nadu authorities. A second reason for increasing pressure on the north Sri Lankan fisheries sector and its cooperatives has been the military-backed political repression of the Tamil ethnic minority, lack of political representation from either Sinhalese or Tamil elites, and political interference in the leadership causing frictions in the cooperative movement, all of which slowly but steadily eroded the cooperatives' functioning.

In the face of an illegal fleet of foreign trawlers that severely undermined the fishers' possibility to make a living, one may have expected a furious collective mobilization by fishers to defend their common fishing grounds. Fishers across the Northern Province did take some action. Two villages proudly succeeded in hijacking a dozen Indian trawlers in 2011, and in the period between 2010 and 2016 a dozen demonstrations and petitions against both the Sri Lankan and Indian authorities materialized, apart from an occasional hunger strike (Scholtens, 2016). Later, legal support to push Indian trawlers out of Sri Lankan waters was also sought and found. Yet the cooperative's response was always measured, mild and never as forceful as one would expect given the severe injustices incurred on them. The eroding power of the cooperatives due to reasons described above was one reason for this. In addition, the intense surveillance apparatus employed by military and intelligence units also effectively suppressed any fierce

collective action to defend their fishing grounds. Post-war repression of collective mobilization should also be seen in the context of the strong role of some of the fishing communities in the 30-year guerilla movement fighting for Tamil autonomy against the Sinhala dominated armed forces. In addition, fisher leaders found themselves in a political stalemate in terms of selected the right target for their mobilization. Mobilization against Indian trawlers would require collaboration with antagonistic Sri Lankan authorities, which was unthinkable during the aftermath of the war characterized by ethnic tensions. At the other end, mobilizing against the Sri Lankan State for its lack of support for Tamil fishing rights, would surely be suppressed by Sri Lankan authorities, unless receiving political backing from India.

The inability of fisheries cooperatives to sufficiently mobilize against external threats that were obviously beyond their domain of control, not only undermined their resources and livelihoods, but also their ability for self- and co-management. The use of trawl gear by some north Sri Lankan fishers is illustrative of this. While the large majority of fishers opposes such gear, trawl owners have been able to continue their operations, using the argument that as long as Indian trawlers operate in Sri Lankan waters, it would be entirely irrational to curb their relatively minor trawling practices. Other locally illegal practices were also justified quoting their insignificance vis-à-vis the scale of destruction caused by ‘outsiders’. This sheer lack of control over and inability to collectively defend ‘their’ waters, had thus led to disillusionment and lethargy with regard to maintaining the regulatory and other local functions of the cooperatives.

The fact that the dynamics of Indian trawler poaching were largely determined in a geopolitical game beyond the control of the cooperatives also spiked internal conflict among fisher leaders about whether and how to undertake defensive action. Ironically, in the rare cases where fishers did mobilize against the foreign fleet and the apathy of the Sri Lankan state, this tended to undermine rather than strengthen the cooperatives' functioning. While some leaders, supported by activist NGOs, maintained the energy to find common ground to mobilize, others furiously opposed such action quoting the fact that mobilization entailed considerable risk and cost, with chances of success being overly small. Government authorities and politicians further pushed these divisions and tensions by setting up a parallel fisheries organization, appointing leaders that were loyal to the ruling political parties, and threatening dissident voices, thus further undermining an already fragile cooperative structure and leadership.

5. Discussion

The cases provide insights to qualify our initial hypothesis about the positive relationship between capacity to manage (e.g., CBNRM) and capacity to mobilize and contest. Generally speaking, our cases suggests that the relationship between CBNRM and mobilization is not a “virtuous circle” in the sense of a more or less automatic reinforcement dynamic between a community's capacity to collectively manage at the one hand, and collectively mobilize, contest and defend on the other. Instead, the two forms of collective action show non-linear relations which are mediated by a range of factors –some synergistic and others constraining– that vary across space and time.

5.1. Does CBNRM contribute to mobilization?

One way to explore the validity of the “virtuous circle” hypothesis is inspecting the potential influence of CBNRM on mobilization capacity. Here, our evidence first suggests that even a well-functioning CBNRM is not sufficient for mobilization to emerge (see Table 1 for a synthesis and propositions). The Northern Sri Lanka case is illustrative in this regard. As shown, the potential for mobilization stemming from the Tamil's political identity, longstanding community fishing practices and cooperative movement was largely annulled by the fear of repression by the government and the difficulty of building strategic alliances against

Table 1
Synergies and tensions in the relation between mobilization and CBNRM.

	Synergies	Tensions
Mobilization affecting CBNRM	<ul style="list-style-type: none"> • Movements can ensure the implementation of collective land rights and facilitate the organization of local communities into management organization (ES). • Successful mobilization is likely to create more space for autonomy of CBNRM regimes (ES). • Movements can trigger the creation of second order CBNRM organizations (e.g., federation of local CBNRM organizations) (ES). 	<ul style="list-style-type: none"> • Mobilization can reinforce divisions within CBNRM regimes when these pre-exist mobilization (Y, NSL). • The scaling up required for mobilization contributes to the simplification of CBNRM knowledge/discourses and may expose vulnerable CBNRM regimes to high level politics (Y).
CBNRM affecting mobilization?	<ul style="list-style-type: none"> • CBNRM is more likely to contribute to mobilization in contexts of relatively open political opportunity structures (ES, NSL). • In the absence of a CBNRM regime, the expectation of creating such a regime can promote mobilization. (ES). • CBNRM can be instrumental in providing necessary human, organizational and financial resources to movements (ES). • Second order CBNRM organizations (e.g., federation of local CBNRM organizations) can scale out local mobilization (ES, Y). 	<ul style="list-style-type: none"> • Failure to mobilize or to achieve the goals of mobilization can trigger dynamics of defection cooperation defection in CBNRM regimes (NSL). • The integration of CBNRM into co-management structures can depolitize resource user's struggles and/or jeopardize mobilization capacity (ES, NSL).

Note: In parenthesis, the cases from which each proposition is based on: ES (El Salto), NSL (North Sri-Lanka), Y (Yaqui).

Indian trawlers. The barriers to mobilization faced by the Tamil fishers in the North Sri Lanka case highlight the importance of political opportunity structures (Tarrow, 1996) as a contextual factor shaping the relation between CBNRM and movements. Ostrom (1990) also pointed to the importance that public authorities recognize the right of local communities to manage their resources for CBNRM regimes to last. As the Tamil case shows, such recognition may first require the recognition of the communities' right to mobilize. This relationship between rights to mobilize and to manage is also illustrated in the El Salto case. Here, the widespread social mobilization across the country and the consequent development of a pro-peasant national government was a crucial political opportunity factor spurring local mobilization and the development of policies favoring land reform and CBNRM. The existence of a national Peasant Confederation (CNC) which provided resources to the local peasant movement was another key political opportunity. Further research shall explore more in depth how political opportunity structures co-evolve with local communities' abilities to mobilize and manage (see Section 5.4 below).

Second, the Yaqui and El Salto cases suggest that CBNRM is not necessary for mobilization to emerge. In both cases, the communities did not have their own CBNRM regime (i.e., with regard to water and forest resources, respectively) and nevertheless mobilization emerged. The El Salto case suggests that the *desire* to have CBNRM and to enjoy benefits of taking ownership over the commercialization of timber (until then in the hands of the private company) –especially in a context where this begins to be widely recognized as a right– can ignite a movement, which in turn helps to gather support for community forestry, and eventually institutionalize it. As pointed by commons scholars, expectations and beliefs about the benefits of cooperation can be a powerful factor for CBNRM (Lubell, 2003; Ostrom, 2005). In the Yaqui case, on the other hand, mobilization was to a great extent fostered by actors external to the community. To be sure, the District 041 organization is a CBNRM entity (i.e., a federation of the local irrigation organizations from the District 041); however, this organization but was alien to the Yaqui.

Also, both cases illustrate the importance of looking at leaders and institutions beyond CBNRM (Agrawal and Gibson, 1999; Morris and Staggborg, 2004). In El Salto, the leaders of titled forest communities, also members of the local peasant organization (CNC-El Salto), were the ones which initiated the attempt to break the monopoly of the private company. In the Yaqui case, the “traditional authority” of one of the 8 Yaqui villages and a young political leader from said authority served as focal point of the Yaqui struggle. The arrest of this leader by the state police made him an icon of the Yaqui identity and mobilizations and contributed to maintaining the momentum of the protests.

Finally, a close look at the mobilization of the Yaqui against the

water transfer questions the understanding of their protests as an exemplar instance of community collective action. As mentioned, the process was to a great extent promoted by outsiders, who provided from lawyers and litigation expertise to logistical support (food, banners, monetary compensations to patrollers) during the road blockade. Second, the road blockade was mostly featured by neighbors of just one of the 8 Yaqui villages. Third, it is questionable that the Yaqui members who mobilized did so in the expectation of transitioning to a community-led water management system. As pointed by interviewees, an important motivation for those participating in the blockade was indeed to guarantee that they could continue renting their land (and water use rights) to outside farmers, which has been the main barrier for the Yaqui to feature CBNRM system.

5.2. Does mobilization contribute to CBNRM?

Another entry point to our inquiry is inspecting the influence of mobilization on CBNRM. Here, the case evidence is somewhat more conclusive about the existence of a relationship that operates in both positive and negative directions, as well as directly and indirectly (see Table 1 for a synthesis and propositions). The El Salto case clearly shows the important role played by mobilization in the promotion of CBNRM. The movement there ensured the implementation of collective land rights and facilitated organization of local communities into management organizations. Cooperative management requires organizational resources and a minimum level of coordination (Villamayor-Tomas et al., 2019), and the movement provided for that. Additionally, the movement, as embodied in the second order “El Salto” association, contributed indirectly to the sustainability of CBNRM by creating value, providing or facilitating access to organizational resources (e.g. government investment in community sawmills and capacity-building), facilitating collective bargaining (e.g. regional timber prices) and opening spaces of political representation (pro-peasant government being elected and eventually to policies supporting land reform and community forestry). Such role of opening economic and political opportunities for communities has been also highlighted in previous studies (e.g., Cronkleton and Taylor, 2011). However, the El Salto case also suggests that when CBNRM becomes integrated into administrative and partisan structures of the state, mobilization capacity may be lost, and thus political organizing may cease to be useful for CBNRM and may even be counterproductive.

The Yaqui case shows that mobilization can also have a negative impact on CBNRM. First, the expansion of “the Yaqui conflict” into the public arena and the alliance with the District 041 organization and urban users within the “Citizen Movement in Defense of Water” came at the cost of simplifying the discourse of the Yaqui. The discourse held by

the movement revolved around the impacts of the water transfer on water uses upstream the transfer. The historical claims of the Yaqui over the land and water rights that had been allocated to District 041, or the barriers that the Yaqui face to have access to credit (which are at the core of the Yaqui land dispossession) were barely mobilized in the discourse. The strategic alignment of discourses among movement participants and the potential simplification of narratives are well-known by social movement scholars (Snow, 2004). Less known is the impact of such “frame alignments” on the interests of said participants. This is not trivial in the case of CBNRM communities and given the enthusiasm recently built around the emergence of a global environmental justice movement (Sikor and Newell, 2014; Martínez-Alier et al., 2016). Anecdotal evidence indeed shows that resource management solutions promoted by large scale movements on behalf of local communities can do more bad than good to the interests of those communities (Kearney, 1989; Kurien, 1991). Second, although divisions in the Yaqui community existed before the water transfer struggle, these aggravated during the conflict due to differences about how to mobilize and the object of contempt (the project or the longer standing land and water rights dispossession). These differences reflected more profound priorities and expectations about what is good for the Yaqui (Restor, 2007; Lerma Rodríguez, 2014). Such heterogeneity of interests and values has been shown to play an important barrier to sustain cooperation and CBNRM over time (Poteete and Ostrom, 2004). Indeed, this is also a challenge observed in the case of El Salto, where over time, the mobilizing organization began to divide based on disputes over electoral politics and the distribution of costs and benefits of participation between smaller (poorer) and larger (wealthier) communities (see García-López and Antinori, 2018; García-López, 2019). Last, but not least, the ‘divide and conquer’ strategy played by the government in reaction to the Yaqui mobilizations reinforced old divisions and created new ones in the community. Mobilizations can indeed be counter-productive for communities in the short term depending on the repressive nature of governments (Tarrow and Tilly, 2009).

The Sri Lankan case also throws important insights about negative effects. Like in the Yaqui case, dissensus about whether, how and against whom to undertake defensive action negatively affected social capital within the community. Additionally, inability to mobilize against outsiders also undermined compliance with CBNRM rules (e.g., about fishing gears). In the context of imperfect information, rule compliance involves a social dilemma and thus it is important that monitoring and sanctioning mechanisms are in place (Coleman and Steed, 2009); however, these mechanisms are ineffective if their legitimacy is questioned due to the presence of uncontrolled outsiders (Berkes et al., 2006). From this point of view, collective mobilization against outsiders becomes a quite crucial condition for CBNRM to function. Finally, the Tamil case also points to negative effects of mobilization on CBNRM via the role of government. Like in the Yaqui case, the government relied on ‘divide and conquer’ strategy by promoting a new, competing system of local fishers organization under its patronage.

5.3. A co-evolutionary perspective of CBNRM, mobilization and opportunity structures

The findings of this study highlight the importance of the management and political opportunities (e.g., rights, decision making venues, policies, resources) granted by governments and/or earned by movements in favor of local communities.

Fig. 2 reflects a first attempt to model the relationship between government, markets social movements and CBNRM as they affect said opportunities and cooperation dynamics. Also, putting the three cases of this study in historical perspective brings some insights about their co-evolution of and the existence of lock-in path dependencies (Wilson, 2013). While the case of El Salto is a clear example of how movements can help significantly expand and institutionalize community forestry,

it is also emblematic of the many challenges faced by social mobilizations when they transition from movements to formal organizations and when the structure of political opportunities change. As explained in Section 4, a series of political-economic factors and the advent of state corporatism at the national level opened the space for mobilization (political opportunities), which in turn fostered the development of community forestry initiatives, and programmatic support for them (management opportunities). The El Salto communities became immersed in state politics, including participating in the National Peasant Confederation (CNC) and in elected government positions; however, their integration in government politics also made communities less mobilized as an oppositional force to the state. Interestingly, the new neoliberal political-economic context has weakened communities' political power within the state, but they remain locked-in to political affiliations which are no longer ideologically or pragmatically in their benefit.

The Tamil case illustrates the interdependent paths through which political and management opportunities (i.e., political and management rights) may evolve and the difficulties of local communities to defend the latter in the absence of the former. The fisheries cooperatives enjoyed a great deal of political and management autonomy for decades; however, the situation fundamentally changed during the war and in the aftermath of it. With the globalization of markets, incursion of new business interests into the marine and coastal space and the increasing interference by governments in what used to be the affairs of fishing cooperatives, mobilization became increasingly relevant and almost the only option left for fishers to protect their management rights. This option, however, was severely curtailed due to the continuous political repression of Tamil institutions.

The Yaqui case shows the perverse effects of mobilization in a context of evolving political opportunities but limited management opportunities. Cardena's government and reforms constituted an inflexion point in the political rights of indigenous communities in Mexico. The right to be consulted by the government in decisions that affect their territories was indeed key in the Yaqui mobilizations against the water transfer. Unfortunately, the opportunities for the Yaqui to manage their resources have barely evolved and rather decreased since the Cardena's years. They “Colonias Yaqui” irrigation district remains the only district in Mexico under the control of the federal water agency (CONAGUA) and the chances for Yaqui members to obtain credit and regain ownership over farming activities have barely improved since the collapse of the local savings cooperatives model. All this throws not very optimistic expectations about the impact of future mobilizations on CBNRM for the Yaqui.

The role of markets shapes the co-evolution of opportunity structures, mobilization and CBNRM, as illustrated in all three cases. Markets are indeed part of the opportunity structures of collective action. In the Yaqui case, the difficulties to adapt to the intensification and managerial requirements of the Green Revolution and the difficulties to access credit later on undermined the capacity of the community to take ownership over management. In the El Salto case, the globalization of ‘free’ timber markets has contributed to the weakening of community organization and their scaled-up networks. In the North Sri Lanka case the opening of the lucrative international market for shrimp export made both the government and exporters to support and push trawler owners to continue operations in Sri Lankan waters, undermining existing customary management regimes on either side of the boundary. Extensions of the above model should also build on and revise works on hybrid governance that question the old trichotomy of governance between the state, communities and markets, and propose a more detailed analysis of the extent to which these three modes of governance coexist in many contexts (Lemos and Agrawal, 2006; Driessen et al., 2012). While political ecologists have already established the structural political economic limitations and power-laden contentions in hybrid arrangements (Takeda and Røpke, 2010; Gallemore et al., 2015; Tormos-Aponte and García-López, 2018; Brisbois et al.,

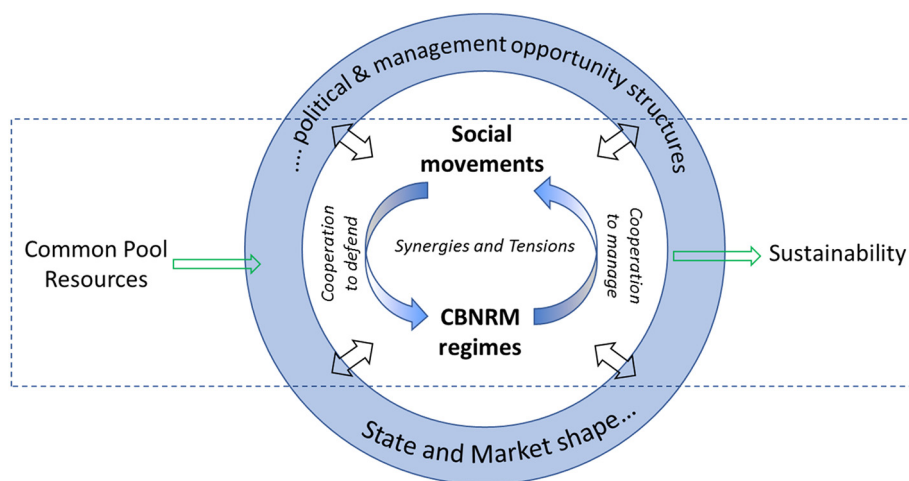


Fig. 2. Revised model: a co-evolutionary model of CBNRM, social movements and opportunity structures.

Note: The relationship between CBNRM regimes and movements includes synergies and tensions partially due to influence of governments and markets on political and management opportunity structures.

2019).

5.4. On the 'life-cycle' of CBNRM-mobilization dynamics

A key concern in both the social movement and CBNRM literatures has been the over-time endurance or sustainability of collective action. However, while CBNRM studies have tended to focus on the persistence/stability of institutions and related moments/periods of disturbance and adaptation, in movements the focus has been on their "life cycles," which tend to be comparatively shorter and some characterize very schematically as going through phases (from initial expansion to final demobilization or institutionalization). Taking a long-term view of the relation between movements and CBNRM is therefore crucial for understanding this relation.

A first observation is that 'life-cycles' of coupled movement-CBNRM processes are part of longer histories of social struggle, and we need to recognize the legacies or 'sediments' (as historical institutionalists have emphasized) of collective actions and institutions in these relations. For instance, the Yaqui have been mobilizing since colonial times against external occupations and interventions from the Spanish and Mexican states, and at least since 1920s to manage their own land. In El Salto, the struggles for forest lands cannot be understood without reference to the legacy of the Mexican Revolution and its aftershock: forest struggles were influenced by a history of peasant struggles for agrarian and democratic reforms. And in Sri Lanka the fisherfolks struggles have been significantly shaped by the Tamil Tigers' struggle for autonomy/sovereignty.

A second point is that movements-CBNRM life-cycles are influenced by changing political-economic structures. In El Salto, for example, it was clear that movements created openings for CBNRM, but over time, the process of movements becoming institutionalized into co-management agreements and second-order organization lead to de-mobilization, weakening movements and making CBNRM more vulnerable to political-economic changes. This example also suggests a third point: there may indeed be a phasing that tends towards institutionalization and demobilization in the movement-CBNRM dynamic –altered in moments of strong, pointed external threats. This, however, requires further research that explores these processes in historical and comparative time frames.

6. Conclusion

The capacity of local communities to manage natural resources via CBNRM regimes and to mobilize to defend said regimes from threats

from outside actors and institutions are two sides of the same collective action phenomenon. However, with some notable exceptions they have so far been studied rather separately. In this paper we question the hypothesis of a virtuous circle between capacity to manage and to mobilize through an exploratory comparison of three cases.

Two preliminary conclusions can be drawn from the analysis. First, the expected positive relationship between CBNRM and mobilization is non-linear. A community's capacity to manage its natural resources is not necessary or sufficient for mobilization. However, when CBNRM regimes are absent, expectations about the creation of one such regime can constitute an important motivation for mobilization, especially when there is a widespread belief that this is a right. Also, mobilizations can rely on community institutions and leaders other than those strictly associated to a CBNRM regime.

Second, mobilization can have both positive and negative effects on CBNRM regimes. It can enable the formal recognition of the regimes, guarantee a sense of unity and commitment towards management rules, and also improve the political and economic conditions under which the regime operate; however, it can also result in and/or reinforce divisions within the community, simplify the emancipatory imaginaries of community members, shift resources away from commons management efforts, and expose the communities to repression.

These insights pave the way to further the study of the co-evolution of political and management opportunities, environmental justice movements and CBNRM regimes. In this study we purposefully bounded our cases around a threat against which communities reacted. We recognize that this approach is limited because CBNRM regimes and mobilization are not static phenomena. As hinted in the analysis, the fact that communities mobilize or fail to mobilize at a point in time does not mean that they will do it again or have always failed to do it. Another interesting insight for further research has to do with the evolution of movements into enduring CBNRM initiatives and the trade-offs that emerge between mobilizing and managing in the long term. A historical perspective may be useful to better understand these co-evolution puzzles. Another vantage point that we have barely addressed and shall be tackled for further theoretical development is that of scale. Or cases illustrate that interactions between CBNRM and mobilizations can operate at different scales as featured, for example, by local communities or second order organizations. The cases also show how interactions at larger scales (e.g., the scaling-up of mobilization discourses or the integration of movements into government structures) can affect interactions those at lower scales (i.e., aggravating internal divisions or depoliticizing communities' struggles). Further research shall tackle these insights more systematically.

Also, despite our analytical interest in separating CBNRM and mobilizations it is important to recognize that there are many instances where both are difficult to separate. In our view, the tension between the two types of collective action, and their associated intellectual traditions can benefit from a productive articulation rather than a categorical differentiation or undifferentiation. In this regard, promising issues to address in the future include the conditions for success of hybrid collective ventures and the pathways through which contentious social movements transition towards enduring management organizations; and the conditions under which management organizations are able to integrate social movement characteristics to defend their commons in the face of external coopting or destructive forces.

Declaration of competing interest

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

Acknowledgements

The work of Sergio Villamayor-Tomas was supported by the European Union's Horizon 2020 research and innovation programme under the Marie Skłodowska-Curie grant agreement No 660089. Part of the work of García-López in this paper was supported by was the Portuguese Foundation for Science and Technology (FCT), Individual Stimulus Program for Scientific Endeavors (CEECIND), under contract CEECIND/04850/2017/CP1402/CT0010. The other part was supported by the author's research time offered by the Graduate School of Planning, University of Puerto Rico. We also want to thank the thoughtful comments and suggestions of the three anonymous reviewers, Giacomo D'Alisa, and attendants to the "IASC Workshop on Social Movements and Commons (June 2018, ICTA-UAB, Barcelona)".

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