A Political Ecology of Sovereignty in Practice and on the Map: The Technicalities of Law, Participatory Mapping, and Environmental Governance

TYLER MCCREARY* AND VANESSA LAMB**

Abstract
This article examines the relationships between representations and operations of sovereignty in natural resource governance. We advance a 'political ecology of sovereignty', examining the participation of non-state actors in resource governance processes. We particularly argue that processes of integrating subaltern populations through mapping local ecological knowledge can modify effective governance practices while nonetheless reproducing the legibility of state sovereign authority and its territorial boundaries. Exploring the Enbridge Northern Gateway pipeline in Canada, we suggest that state jurisdictional authority is secured through incorporating indigenous interests as a delimited geography of tradition. Examining the Hat-gyi hydroelectric development along the Thai–Burmese border, we argue that the territorial boundaries of those nation-states are rearticulated through the governance of this transboundary development. Through these cases, we demonstrate how the insertion of local knowledge works not only to reconfigure effective governance processes but also to reinforce the effect of state sovereignty in new ways.

Key words
natural resource governance; participatory mapping; political ecology; sovereignty; technicalities of law

1. INTRODUCTION

A cursory examination of a world map provides a clear vision of a planet neatly divided into discrete sovereignties.[1] There is a cartographic common sense in which each nation-state 'is demarcated by a linear boundary, an edge dividing one sovereignty from the next'.[2] Within the lines, each nation-state is evenly coloured. Different colours further accentuate the separation of the world into discrete territories. Their coloration also implies that the interior of states 'is a homogeneous space, traversed evenly by state sovereignty'.[3] Such maps resonate with principles of international law regarding state sovereignty, which hold that nation-states possess exclusive autonomy over distinct territories with clear jurisdiction over their domestic affairs. This construction of sovereignty, however, has been critiqued as a misrepresentation of the dynamics of effective sovereignty – which are neither inherently politically territorialized in line with state boundaries nor exclusively organized on a state-by-state basis.[4]

In this article, we argue that examining the practices and participation of non-state actors in natural resource governance can provide a more nuanced understanding of the relationships between how sovereignty operates and how it is represented. In particular, we assert that studying the practices of mapping ecological knowledge in governance processes can inform an understanding of how sovereignty is put on the map. Along with other contributions in this collection, we share the view that particular understandings of nature and society undergird legal concepts such as sovereignty. We recognize that the literature in international law has highlighted how sovereignty is constructed through treaties and international institutions. However, there has been less discussion of the ways in which sovereignty over natural resources is enacted through governance processes involving non-state actors and technical legal devices such as maps.[5] Drawing on the authors' disciplinary training in geography, we address this gap by examining the connections between sovereignty and mapping projects in which local actors document their ecological knowledge as part of an effort to defend their interests. As Sundhya Pahuja notes, 'resources themselves can look quite different, depending on where you are speaking from'.[6] We concur, and argue by extension that examining claims about natural resources

---

1   We borrow this imagery from M. Biggs, 'Putting the State on the Map: Cartography, Territory, and European State Formation, (1999) 41 *CSSH* 374.

2   Ibid., at 374.

3   Ibid.

4   J. Agnew, 'Sovereignty Regimes: Territoriality and State Authority in Contemporary World Politics', (2005) 95 AAAG 437; K. Jayasuriya, 'Globalization, Law, and the Transformation of Sovereignty: The Emergence of Global Regulatory Governance', (1998) 6 *Ind. J. Global Legal Stud.*, at Art. 3; S. Sassen, *Losing Control?: Sovereignty in an Age of Globalization* (1996).

5   There is, however, an informative discussion of the role of maps in international law, and particularly the problems associated with the continued use territorial boundaries mapped through processes with suspect legitimacy in the present (colonial cartographies, Soviet administrative geographies, etc.). See, especially M. Mutua, 'Why Redraw the Map of Africa: A Moral and Legal Inquiry', (1995) 16 *Mich J Intl Law* 1113; S. R. Ratner, 'Drawing a Better Line: *Uti Possidetis* and the Borders of New States', (1996) 90 AJIL 590; V. Nesiah, 'Placing International Law: White Spaces on a Map', (2003) 16 LJIL 1.

6   S. Pahuja, 'Conserving the Worlds Resources?', in J. Crawford and M. Koskenniemi (eds.), *Cambridge Companion to International Law* (2012), 398 at 400.

made by local actors can offer a parallax view of sovereignty. Analysing the connections between local claims about natural resources and sovereignty enables us to understand sovereignty not simply as an independent authority to govern, but rather to understand how sovereignty is both effectively enacted through and produced as an effect of those practices of governance. This approach allows us to move beyond the perceived divide between cartographic representations of sovereignty and sovereignty in practice. By revealing the links between how maps are made in the practices of resource governance and what maps accomplish, we are able to understand sovereignty as related to both the networks of participatory governance incorporating non-state actors and the representation of an independent, absolute authority.

To make these arguments, we examine how the methods of co-ordinating and mobilizing environmental knowledge in natural resource governance processes continue to render legible the internal consistency and external boundaries of territorial sovereignty as an effect of those processes. We argue that this occurs even as governance processes work to incorporate subaltern voices and mobilize forms of political authority which cross borders. Focusing on processes of mapping 'local' ecological knowledge, we use two case studies to examine how participatory processes can modify effective governance practices while nonetheless reproducing the representation of a territorial state sovereignty. First, through analysis of the Enbridge Northern Gateway pipeline project in Canada, we explore how the integration of indigenous peoples' ecological knowledge in resource governance works to effect the legibility of state jurisdiction over its territory. Second, through analysis of the case of the Hatgyi hydropower project located on the Salween River in Southeast Asia, we examine how a transboundary development project along the Thai–Burmese border contributes to rearticulating the territorial boundaries of those states. Through these cases, we explore how natural resource governance processes include local actors, even as they seek to 'resist' processes permitting development, and nonetheless continue to produce representations of an autonomous sovereign state authority. In so doing, we begin to advance what we are terming a *political ecology of sovereignty*.

As an entry point, we start by positioning our intervention within the discussion of sovereignty in international law. We then lay out our theoretical approach to sovereignty, bringing some of the relevant recent literature in political ecology and political geography into conversation with scholarship in international law. Shifting to our particular cases, we introduce our two research sites and the distinct problems we aim to explore through each of them. In both cases, maps have been made and used to make claims to authority as part of scientific and 'local' knowledge processes. Through the explication of these two ethnographies, we connect efforts to permit a pipeline across a territory and to fix the flows of a river as a boundary to the production of territorial sovereignty. These cases enable us to discuss the ways that sovereignty has been continually represented as coherent and bounded, and our cases provide insight into how this occurs even where there exist myriad claims to authority over natural resources.

2. CONNECTIONS AND CONTRIBUTIONS TO INTERNATIONAL LAW

Representations of natural resources in environmental governance processes connect to the core of the conceptualization of sovereignty, linking ideas of land as resource and territory with sovereignty as the absolute authority over land. Initial conceptualizations of sovereignty in international law emerged with an imperial regime that rationalized the exploitation of resources by denying recognition to the colonized as peoples.[7] To claim legal personality within the international community, decolonizing polities sought recognition as states.[8] To secure control over the development and disposition of their domestic natural resources for the benefit of their people, decolonizing states further articulated a principle of permanent sovereignty over natural resources.[9]

Alongside the proliferation of sovereign regimes, there has been a remaking of regimes of sovereign governance vis-à-vis subaltern populations within the state. Internationally, there has been an increasing recognition of a right to participation within decision-making processes.[10] The international florescence of participatory models of governance reflects a dedication of subaltern populations to articulating their concerns international forums.[11] However, local peoples also made domestic assertions, demanding they be consulted and have their concerns integrated with decision-making processes.[12] These legal shifts at multiple scales have reconfigured natural resource governance processes.

Scholarship in international law has critiqued methodological nationalism and suggested that local peoples' claims have produced new forms of global authority.[13] Efforts to implement programmes to address concerns of impoverished communities in the global context continually advance and institutionalize the authority of bureaucratic international institutions designed to address those problems.[14] However, if the multiscalar effects of local legal manoeuvers and assertions are productive

---

7   A. Anghie, *Imperialism, Sovereignty and the Making of International Law* (2004).

8   See Pahuja, *supra* note 6, at 402.

9   Resolution on Permanent Sovereignty Over Natural Resources UN Doc. A/RES/1803 (XVII) (1962). There is, of course, a complex relationship between this principle and investor rights protections that is beyond the scope of this article. See Anghie, *supra* note 7; K. Hossain and S. R. Chowdhury (eds.), *Permanent Sovereignty over Natural Resources in International Law: Principle and Practice* (1984); N. Schrijver, *Sovereignty over Natural Resources: Balancing Rights and Duties* (1997).

10 See G. H. Fox, 'The Right to Political Participation in International Law', *Yale J. Int'l L.* 17 (1992) 539; R. Chambers, 'The Origins and Practice of Participatory Rural Appraisal', (1994) 22 *World Dev* 953; S. Marks, *The Riddle of All Constitutions: International Law, Democracy, and the Critique of Ideology* (2003).

11 See R. Torres, 'The Rights of Indigenous Populations: The Emerging International Norm', (1991) 16 *Yale J Int'l L* 127; Y. Henderson, *Indigenous Diplomacy and the Rights of Peoples: Achieving UN Recognition* (2008).

12 See J. C. O'Faircheallaigh, 'International Recognition of Indigenous Rights, Indigenous Control of Development and Domestic Political Mobilisation', (2012) 47 *Aust J Polit Sci* 531. In Canada this push has been extensively litigated domestically in relation to a fiduciary obligation of the government to consult indigenous peoples – see D. Newman, *The Duty to Consult: New Relationships with Aboriginal Peoples* (2009); L. Sossin, 'The Duty to Consult and Accommodate: Procedural Justice as Aboriginal Rights', (2010) 23 CJALP 93.

13 L. Parrish, 'Changing Territoriality, Fading Sovereignty, and the Development of Indigenous Rights', (2007) 31 *Am. Indian L. Rev.* 291. The concept of methodological nationalism is from A. Wimmer and N. Glick Schiller, 'Methodological Nationalism and Beyond: Nation-State Building, Migration and the Social Sciences', (2002) 2 *Global Netw* 301.

14 B. Rajagopal, 'From Resistance to Renewal: The Third World, Social Movements, and the Expansion of International Institutions', (2000) 41 *Harv Intl L J* 529; B. Rajagopal, *International Law from Below: Development, Social Movements and Third World Resistance* (2003).

of new forms of international law, then they too can be seen to be reordering dynamics domestically. Our article seeks to document how local claims-making works not only to reconfigure effective governance processes but also work to reinforce the effect of sovereign state authority in new ways.

Methodologically, we argue that data generated through long-term participant observation can reveal considerable complexity in how sovereignty is understood. An analysis of local peoples' participation in state-led natural resource governance processes can highlight how local knowledge claims can also be productive of state sovereignty. Examining sovereignty in relation to security, John Lea and Kevin Stenson argue that non-state actors can become enrolled in public governance processes that, at times, work to strengthen the legal authority of the state.[15] We advance an analogous argument, suggesting in part that local peoples' enrolment in state-led natural governance processes can reproduce the representation of the sovereign authority to make decisions over development, even as their participation remaps the routes through which sovereign decision-making occurs. Through analysing the selective enrolment of local people within natural resource governance, we highlight how claims to 'local' ecological knowledge and for sustainable development can operate not only to challenge the authority of the sovereign state but also to produce it as an effect.

Making this argument, we make a modest contribution to the still nascent discussion of what Annelise Riles refers to as the technicalities of law.[16] While conventional accounts of the relation of state sovereignty to subaltern peoples focus on processes of exclusion, attending to maps as technicalities of law enables us to recognize a more complex and interesting dynamic between sovereign authorities and local actors, including those who ostensibly are resisting state processes of permitting development. Rather than assuming maps are simply tools that people use to catalogue and advance their claims, we demonstrate the ways in which maps and the processes of their production are in fact key to how legal categories are framed and mobilized. Thinking through such technicalities, as Riles suggests, opens fruitful new areas for legal inquiry.

3. TOWARDS A POLITICAL ECOLOGY OF SOVEREIGNTY

In this article, we approach sovereignty from below, drawing on a political ecology framework that theorizes the politics of nature through an analysis that begins with (but is not limited to) local resource users. Thus, rather than starting with international agreements, law, and policies, we focus attention on how local resource users and ecologies connect to broader political formations.[17] The field of political

---

15   J. Lea and K. Stenson, 'Security, Sovereignty, and Non-State Governance "From Below"', (2007) 22 *Cdn J L & Soc* 9.

16   A. Riles, 'A New Agenda for the Cultural Study of Law: Taking on the Technicalities', (2005) 53 *Buff L Rev* 973.

17   See B. Braun and N. Castree (eds.), *Remaking Reality: Nature at the Millennium* (1998); A. Tsing, 'Becoming a Tribal Elder, and Other Green Development Fantasies', in T. Li (ed.), *Transforming the Indonesian Uplands: Marginality, Power and Production* (1999), 159; T. Forsyth, *Critical Political Ecology: The Politics of Environmental Science* (2002); T. Li, *The Will to Improve: Governmentality, Development, and the Practice of Politics* (2007).

ecology's foundations emerge from work in disciplines of geography, anthropology, and critical development studies.[18] As a field, political ecology is well positioned to address and understand relationships between nature, society, and institutions, like the law. As an approach, it considers the ecological and political in addition to the social, cultural, and historical context of environmental issues in order to better understand the ways that environmental problems are framed.

Scholars in political ecology are increasingly engaging science studies – studies of how knowledge is made – in order to study how environmental problems are framed.[19] Thus, the documentation and representation of knowledges both 'local' and 'scientific'[20] are capturing the attentions of key scholars in the field.[21] Such work has added to our understanding of how the everyday practices of individuals matter to how environmental governance and state institutions are themselves made through practice. We draw on this work to aid our understanding of how sovereignty is practiced, represented and remade.

We particularly draw upon political ecologists' insights into how many 'unexpected' actors – including indigenous peoples, development practitioners, corporations, and even elements of non-human nature and technologies such as maps – actually work together to co-produce taken-for-granted institutions and representations (such as 'the state').[22] In this article, we take an approach which understands that legal contests over nature not only play a key role in reconstituting the environment through shaping its legibility and remapping patterns of land use, but argue that they also crucially rearticulate particular conceptions of territorial sovereignty.

To approach the study of sovereignty 'from below' we also build on work in political geography, a sub-field of geography which has focused on the study of political borders, sovereignty, territory, and 'the state'. Political geographers have made several key critical contributions to understanding how states, territories, and

---

18   T. Forsyth, *Critical Political Ecology* (2003); P. Robbins, *Political Ecology: A Critical Introduction* (2012); P. Vandergeest and R. Roth, 'A Southeast Asian Political Ecology', in P. Hirsch (ed.), *Routledge Handbook of the Environment in Southeast Asia* (forthcoming).

19   This includes work in science studies such as T. Mitchell, *Rule of Experts: Egypt, Techno-Politics, Modernity* (2002); S. Jasanoff, *States of Knowledge: The Co-Production of Science and Social Order* (2005), S. Jasanoff and M. Long Martello, *Earthly Politics: Local and Global in Environmental Governance* (2005), B. Latour, *Reassembling the Social* (2005).

20   While the conversations and debates around the divide between 'local' and 'scientific' knowledge are long-standing, emerging work is less concerned with the 'divide' and engages scholarship in science studies in order to better understand practices of making ecological knowledge and the implications for how we understand the relationships between ecologies, individuals, and institutions. See A. Agrawal, 'Dismantling the Divide between Indigenous and Scientific Knowledge', (1995) 26 *Dev Change* 413; A. Agrawal, 'Indigenous Knowledge and the Politics of Classification', (2002) 54 *Int Soc Sci J* 287; F. Berkes, 'Indigenous Ways of Knowing and the Study of Environmental Change', (2009) 39 *J R Soc NZ* 151.

21   See M. J. Goldman, P. Nadasdy, and M. D. Turner (eds.), *Knowing Nature: Conversations at the Intersection of Political Ecology and Science Studies* (2011); A. Mathews, *Instituting Nature: Authority, Expertise, and Power in Mexican Forests* (2011); Vandergeest and Roth, *supra* note 18; S. Gururani and P. Vandergeest, 'Introduction to Special Issue: Ecologies on the Edge', (forthcoming) *Conservat. Soc.*; Forsyth, *supra* note 18.

22   N. Peluso, 'Whose Woods are these? Politics of Mapping Forests in Kalimantan' (1995) 27 *Antipode* 383; P. Vandergeest and N. Peluso, 'Territorialization and State Power in Thailand', (1995) 24 *Theor Soc* 385; J. P. Brosius, 'Green Dots, Pink Hearts: Displacing Politics from the Malaysian Rainforest', (1999) 101 *Am Anthropol* 36; J. P. Brosius, 'Analyses and Interventions: Anthropological Engagements with Environmentalism', (1999) 40 *Curr Anthropol* 277; M. Dove, 'Indigenous People and Environmental Politics', (2006) 35 *Annu Rev Anthropol* 191; Vandergeest and Roth, *supra* note 18.

sovereign authorities are 'produced'. This includes a critique of the notion that 'the state' has emerged as the de facto site of governance and sovereign authority, which then reinforces its authority.[23] This has particular resonance with a move beyond methodological nationalism in international law scholarship.

A foundational critique for political geography is Timothy Mitchell's 'state effect'.[24] He argues that standard approaches to the study of the state *both* treat 'the state' as a bounded institution (distinct from society) *and* fail to recognize how such distinctions between state-society and state-economy have emerged as part of the present-day imaginings of the state. The 'state effect' then is the representation of the state as a bounded entity that is created and recreated through practice. This is a representation that obfuscates its own origins. In order to reveal how the state is accomplished, Mitchell advocates an approach that 'address[es] the state as an effect of mundane processes of spatial organization, temporal arrangement, functional specification, supervision and surveillance, and representation that create the appearance of a world fundamentally divided into state and society or state and economy'.[25] Thus, understanding of the state as discrete and autonomous is, in part, produced as an effect of the broader governance processes through which authority is exercised. This framework forms the foundation for our approach to sovereignty as working through a set of relationships that nonetheless continually reproduce an ossified understanding of territorial sovereignty as independent of these relationships. We seek to understand the modalities through which sovereign power actually operates, on one hand, and how these processes continually work to reproduce an understanding of the sovereign as an autonomous authority, on the other hand.[26] In other words, we seek to better understand how both 'effective sovereignty' and the 'sovereignty effect' are produced alongside one another.

Thus, building on these insights from political geography, political ecology, and international law, we tackle sovereignty as a process that is practised and product that requires articulation. We are particularly interested in how the technology of mapping mediates the role of many so-called 'non-state' actors in the governance process. Noteworthy critiques of maps and mapping from political ecology and geography have included the 'fixing' of dynamic natures,[27] the inability to effectively redraw boundaries or 'untie' resources from territorial boundaries,[28] and how the

---

23 P. Abrams, 'Notes on the Difficulty of Studying the State', (1988) 1 *J Historical Sociology* 58; J. Agnew, 'The Territorial Trap: The Geographical Assumptions of International Relations Theory', (1994) 1 RIPE 53; T. Mitchell, 'Society, Economy and the State effect', in A. Sharma and A. Gupta (eds.), *The Anthropology of the State: A Reader* (1999).

24 See Mitchell, ibid.

25 Ibid., at 185.

26 This framework has been informative to subsequent efforts to retheorize sovereignty and territory, See also J. Painter, 'Rethinking Territory', (2010) 42 *Antipode* 1090; C. Lund, 'Fragmented Sovereignty: Land Reform and Dispossession in Laos', (2010) 38 *J Peasant Studies* 885.

27 See M. Dove, 'Theories of Swidden Agriculture and the Political Economy of Ignorance', (1983) 1 *Agrofor. Syst* 85; R. Roth, 'Two-Dimensional Maps in Multi-Dimensional Worlds: A Case of Community-Based Mapping in Northern Thailand', (2007) 38 *Geoforum* 49.

28 P. Walker and P. Peters, 'Maps, Metaphors, and Meanings: Boundary Struggles and Village Forest Use on Private and State Land in Malawi', (2001) 14 *Soc'y & Nat Resources* 411.

limits of such maps constrain broader legal and political strategies.[29] Scholarship also recognizes that maps are more than simple, self-evident representations of territory or property.[30] These critiques and insights are significant in light of our examination of maps within the legal and institutional authority of state-led natural resource governance processes, and are positioned to contribute to discussion in international law on the technicalities of law and our understanding of how sovereignty authority is produced.[31]

For instance, while environmental governance processes are in many cases – including both cases presented here – mandated by state law and led by state actors, they require the participation and authorization of multiple stakeholders and their maps. These environmental governance processes do not simply decide on the project outcomes, but also reinforce the state's authority to make these decisions. Local actors have increasingly engaged in mapping activities to translate local concerns into the technical–legal valences of natural resource governance discourse. We argue that the making and use of maps as part of the governance process is important to examine as they play an important role in both representing and mobilizing claims to territories and natural resources. Specifically, we examine both the ways that maps are part of making certain claims but also de-emphasizing others, particularly regarding what they can show us about how constructions of authority and nature are normalized.

4. 'MAPPING OUT' THE CONNECTIONS BETWEEN LOCAL KNOWLEDGE AND SOVEREIGNTY

Through our two cases, we highlight the co-production of sovereignty and ecological knowledge. In particular, we highlight the role that maps and mapping play within two natural resource governance processes and their political–legal contexts. The first case we present is the proposed Enbridge Northern Gateway pipeline.[32] If constructed, this pipeline would transect the traditional territories of more than 50 indigenous communities in Canada. The federal government has a fiduciary duty with respect to these communities and is obligated to consider and accommodate

---

29   D. Hodgson and R. Schroeder, 'Dilemmas of Counter-Mapping Community Resources in Tanzania', (2002) 33 *Dev & Change* 79.

30   On the fraught practices of counter-cartography, see J. Wainwright and J. Bryan, 'Cartography, Territory, Property: Postcolonial Reflections on Indigenous Counter-Mapping in Nicaragua and Belize', (2009) 16 *Cult. Geogr.* 153. On the mapping as performance, see C. Perkins, 'Cartography: Mapping Theory', (2003) 27 *Prog in Human Geog* 341.

31   For example, Joel Wainwright and Joe Bryan draw upon 'counter-mapping' experiences in the courts to complicate 'the celebratory descriptions of the 'power of maps' for indigenous peoples made by geographers and activists'. Wainwright and Bryan assert that efforts to use counter-cartographies of indigenous land holdings to push for state recognition have the unintended effect of normalizing relations to land as property, thereby deepening the capitalist social relations entrenched within the architecture of state law. They express concern that struggles of indigenous self-determination articulated through counter-cartographic assertions before the courts may in fact have the perverse effect of increasing state authority vis-à-vis indigenous peoples, see J. Wainwright and J. Bryan, ibid., at 154.

32   The 1,177 km Northern Gateway project would deliver an average of 525,000 barrels of diluted bitumen per day to a port. The pipeline would open markets in the Pacific Rim to Canadian oil exports, supplying roughly 200 tankers yearly.

their interests in the regulation of development. In late 2009, Canada established an independent review panel tasked with evaluating the balance of social, economic, and environmental impacts of the proposed pipeline. The first author of this article, Tyler McCreary, conducted ethnographic research into this governance process over two years (June 2010–December 2012) while living in northwest British Columbia, Canada. This included attending community meetings and the hearings of an independent panel appointed to review the project. He also reviewed the Enbridge Northern Gateway project application, particularly focusing critical analysis on the submissions addressed to aboriginal traditional knowledge (ATK).

The second governance process we present centres on the Hatgyi Dam, proposed on the Salween River in Southeast Asia. The Salween, which flows through Burma, Thailand, and China, remains one of the longest rivers in Asia without significant damming, and the Hatgyi Dam would potentially be the first dam on this transboundary river. It has been proposed a short distance downstream from where the Salween River comprises 120 kilometers of the Thai–Burma border.[33] Government officials, NGO activists, and local residents, many of whom identify as members of the Karen ethnic minority group, have raised concerns about the dam's social and environmental impacts. As such, authority over the river and the political border has emerged as a highly contested issue. In this article, we focus on maps mobilized through a series of public information hearings on the Hatgyi Dam. Organized by a government subcommittee chaired by the Thai Prime Minister's Office, these hearings took place in Thailand in 2011 and were aimed to address questions raised about the potential impacts of the proposed dam, both to Thai territory and to the political border.[34] The second author of this article, Vanessa Lamb, employed ethnographic methods, including participant observation of public information hearings, over a one-year period (2010–11) at multiple sites in Thailand to generate the data presented. In addition, more than 100 interviews were conducted with individuals related to the Hatgyi project, including government officials, NGO staff, and local residents.

Evidently, relationships between people, law, and the state have developed differently in Thailand and Canada and even within these states relationships vary temporally and geographically. For residents at the Salween in Thailand, the Hatgyi governance process represents a unique opportunity to make claims to and through the Thai state that were less formally articulated or less apparent prior to this process. In contrast, relationships between aboriginal peoples and the Canadian state were comparatively more legally formalized prior to the pipeline proposals and

---

33   The Salween River forms the political border between Karen State, Burma, and Mae Hong Son Province, Thailand. The dam will be located around 40 km from the point where the Salween river border 'ends' and the border continues along a tributary of the Salween called the Moei River. The precise details of dam planning and engineering are regularly revised in the planning phases.

34   There was a Thai government subcommittee established in 2009 to examine the Hatgyi dam project, of which the Thai state electricity authority (EGAT) was a part. It was formally referred to as the 'Sub-committee to Study Information and Present Comments on the Various Impacts Including Human Rights Abuses in the case of Electricity Generating Authority of Thailand's proposed Hatgyi Dam Project on the Salween River in the Republic of the Union of Myanmar [Burma]'. Informally, it was referred to as 'the Hatgyi subcommittee'. There were 18 members, including government officials, civil society, EIA consultants, and EGAT staff.

permitting – but these too have experienced incredible dynamism over the last few decades and exhibit regional variation. Even within the same region, different marginalized communities may adopt different strategies to approach natural resource governance processes. The position the subaltern groups take within the assemblage of actors that participate in environmental governance is shaped by the particular legal histories and relations of each case.

While there are substantial differences between the political history of Thailand and Canada, we use maps as points of analogy to illustrate the connections between the Northern Gateway and Hatgyi governance processes. These two cases both emerge from long histories of struggle by local peoples to achieve state recognition of their interests. In this context, maps and mapping have played an important part of representing local residents' knowledge and advancing their claims vis-à-vis state authorities. However, the inclusion and consideration of local knowledge within governance processes has also reinforced a state authority to arbitrate claims. Analysing this doubled relationship, we examine the making and use of the map to leverage both local interests and national claims. As such, we consider these maps as traces of broader processes which reveal how global imaginaries such as territorial sovereignty are enacted in particular contexts.[35] In each case, we focus on the production of a distinct characteristic of sovereign territoriality: the evenness of its internal jurisdiction in the Northern Gateway Project and the reinforcement of a boundary and boundedness in relation to the Hatgyi Dam. Such an approach allows us to explore the particular contexts relevant to our ethnographic work while attending to how the model of the territorial sovereign is produced as an effect through the integration of a variety of actors into natural resource governance processes. We particularly examine how maps link to the networks involved in the ongoing enactment of sovereignty, working to effect the appearance of a stable and already accomplished sovereignty.

5. PERMITTING PIPELINES: THE NORTHERN GATEWAY PROJECT (CASE 1)

In this section we examine how the development proponent worked with local communities to incorporate consideration of local ecological knowledge, codified as Aboriginal Traditional Knowledge (ATK), as part of the project proposal. While the Northern Gateway project has been a topic of debate across Canada and remains highly contested, we want to move beyond the mythic binaries that frame the issue of the relation between political economies that dispossess and indigenous peoples who resist. For us, understanding power is not simply a matter of exposing exclusions. We argue indigeneity is controlled not through the simple rejection of the claims of indigenous peoples, but rather through their selective enrolment within the processes of natural resource governance. Interrogating how

---

35   The concept of analysing texts and ethnographic moments as fragments of global processes from Anna Tsing, who argues that the global is an aspiration that must constantly mobilized through the friction of the encounter with local politics. A. Tsing, *Friction: An Ethnography of Global Connection* (2005), 271.

corporate research facilitators and indigenous community members collaborate in mapping ATK, we examine how indigenous traditions were fitted and mapped into delimited areas which development could accommodate. We argue the selective enrolment of indigenous interests through this research contributed to inserting indigeneity within the governance process in a way that worked to effect the sovereign decision-making authority of the state. But this was not simply a form of capture, as corporate–community research partnerships both reconfigured as well as confirmed the representation of state sovereignty.

Consideration of ATK reflects institutional recognition of demands that Canadian natural resource governance consider the impacts of development on indigenous people. There is now a 'duty to consult' enshrined in case law.[36] Canadian court rulings have repeatedly recognized and expanded consideration of indigenous peoples in decision-making on their traditional territories, and contributed to the establishment of processes around, and indeed the creation of the very category of, ATK. The rulings in *Calder* (1973), *Delgamuukw* (1997), and *Haida* (2004) have all been recognized as major turning points for aboriginal law and policy in Canada.[37] These cases have been responsible for articulating a doctrine of aboriginal title, compelling recognition of indigenous traditions as evidence of an indigenous people's relationships to their territories, and delineating the duty of the Canadian sovereign to consult with indigenous peoples and accommodate their interests in regulating development. As Brian Slattery describes it, recognition of indigenous peoples' historic claims has been generative of contemporary requirements to reconcile development with indigenous geographies.[38]

In response to the jurisprudence, the Canadian government has institutionalized consideration of indigenous concerns in natural resource governance. The proposed Enbridge Northern Gateway pipeline was evaluated with respect to both the National Energy Board Act and the Canadian Environmental Assessment Act by an independent review panel.[39] The review panel for the Northern Gateway Project included ATK in their considerations and accounted for aboriginal interests in their deliberations.

To address these considerations and secure development from potential regulatory and legal liabilities, companies now work with indigenous communities to integrate their concerns into development proposals. ATK studies now regularly form part of development proponents' submissions in environmental assessments, including detailed information on aboriginal traditional land use, potential effects of the proposed development on these specified uses, and the plans for mitigation. After defining the project corridor in 2005, Enbridge focused its engagement activities on indigenous groups with either reserves or traditional lands located within

---

36 See Newman, *supra* note 12; Sossin, *supra* note 12.
37 *Calder v. British Columbia (Attorney General)*, (1973) SCR 313; *Delgamuukw v. British Columbia*, (1997) 3 SCR 1010; *Haida Nation v. British Columbia (Minister of Forests)*, (2004) 3 SCR 511.
38 B. Slattery, 'The Metamorphosis of Aboriginal Title', (2006) 85 *Can Bar Rev.* 255; B. Slattery, 'The Generative Structure of Aboriginal Rights', (2007) 38 SCLR 595.
39 This panel consisted of two members of the National Energy Board (the Canadian energy regulator) and the former president of the Canadian Aboriginal Minerals Association.

80 kilometers of the corridor. They also contacted communities in proximity to the shipping routes for tankers using the marine terminal. Communities were provided with opportunities to participate in direct consultations with the company and to complete ATK studies. In December 2013, following review of company and public submissions, the review panel released its recommendation to accept the Northern Gateway project, finding that the company had substantially consulted with indigenous communities and adequately modified its plans in relation to indigenous interests.[40] In this section, we interrogate how the process of corporate–community engagement shaped the legibility of indigeneity within the governance processes and worked to produce the effect of state authority to decide on the development proposal.

In their regulatory application, Enbridge provided a description of the methodology used to collect traditional knowledge from communities willing to work with the company. Enbridge funded two types of studies with indigenous communities. In collaborative studies, Enbridge facilitated the studies; in research referred to as independent, indigenous communities either conducted the research themselves or contracted a party to conduct the research for them. To establish a foundation for research partnerships for both collaborative and independent studies, Enbridge ATK facilitators met with indigenous communities to discuss the regulatory requirements and objectives and the community's own objectives for the work. ATK research contrasted with more conventional social impact assessments focused on socioeconomic data such as employment rates, instead focusing on the collection of information on traditional use and traditional ecological knowledge. Mapping traditional use involved collecting information on activities and sites of cultural significance such as trap lines, fish camps, berry-picking areas, camps, and burial sites. Traditional ecological knowledge research consisted of assaying 'the wisdom and understanding of a particular natural environment that has accumulated over countless generations'.[41]

Enbridge treated ATK information as supplemental to other research conducted as part of the natural resource permitting process, providing 'additional context to baseline descriptions and the analysis of potential project effects'.[42] In their application, Enbridge suggested ATK contributed specifically to project design and planning, assessment of the biophysical components and environmental management planning, assessment of the socio-cultural aspects, and assessment of the cumulative effects of past and existing activities on both culture and the environment. In particular, Enbridge emphasized how sharing the locations of identified traditional use sites and areas aided the company in its 'constraints mapping, rerouting assessments, and watercourse crossing analysis'.[43]

---

40 *Report of the Joint Review Panel for the Enbridge Northern Gateway Project* (2013). The adequacy of consultation, however, remains a matter of notable contestation, and numerous indigenous groups have applied for judicial review of the JRP decision.

41 Enbridge Northern Gateway Pipelines. *Enbridge Northern Gateway Project Sec. 52 Application: Volume 5B: Aboriginal Traditional Knowledge* (May 2010), at 4–3.

42 Ibid.

43 Ibid., at 1–4. Constraints mapping is the process of mapping any physical, technical, legal, environmental, or topographical considerations that may limit or restrict the location of the project. In addition to culturally-

Collaborative corporate–community ATK research typically advanced through three stages. First, in interviews, traditional knowledge holders were 'provided with a general project description, including project-specific and regional maps'.[44] Semi-directed discussions focused on baseline conditions (i.e., air and water quality, health and abundance of fish and wildlife), the potential project effects on traditional use areas, and proposed mitigation measures. In the interviews, traditional use sites were marked on maps. The interview process also served to determine sites for field visits. By visiting field sites, research participants were able to view the proximity of traditional use areas to the project development area. Site visits also enabled researchers to record traditional and culturally important ecological sites. Finally, reports based on interviews and field surveys were compiled, 'including maps of sites and areas discussed during interviews and recorded during field visits',[45] and reviewed by research participants and designated community representatives for accuracy and suitability for release to the public regulatory process.[46] These studies were subsequently summarized in Volume 5B of the Enbridge Northern Gateway Project application to the JRP.[47]

The Canadian legal requirements to consult aboriginal groups and accommodate their interests in development orientated the ATK volume of the Northern Gateway application. The bulk of the volume consisted of an appendix entitled, 'ATK Summary of Potential Project Effects and Mitigation'.[48] This appendix was further supplemented by an ATK update to address gaps in the original application.[49] The initial appendix and supplement served to compile the information from the various ATK studies (both collaborative and independent) in the form of tables listing the baseline conditions, project impacts, and mitigation recommendations. Recognizing sites of significance to indigenous peoples as a limit to development, a particular set of indigenous concerns were rendered legible as part of natural resource governance and development processes.

In our assessment, the ATK data collected and summarized in the Northern Gateway application served to demarcate indigeneity – to fix it on the map – and provide opportunities to route development around it. Thus, when collaborative research with Alexander First Nation identified burials and historic settlements in the Deadman Lake area that would potentially be disturbed by pipeline development, it was suggested that the proponent 'Route the Project around Deadman Lake. If a reroute is not possible, a comprehensive GIS traditional land use study will be

---

sensitive sites, examples of constraints would include particularly ecologically-sensitive areas or unstable topography.
44   Ibid., at 4–8.
45   Ibid.
46   This is the typical review process for a collaborative research process conducted with company Aboriginal traditional knowledge facilitators. Communities were also able to negotiate shared research goals and accept Enbridge funding to do the research independently, these communities could choose alternative review processes.
47   The Enbridge submissions included data from both the collaborative and independent work it commissioned in partnership with indigenous communities.
48   See Enbridge *supra*, note 41, at C-1.
49   Enbridge Northern Gateway Pipelines, *Update to Sec. 52 Application: Volume 5B: Aboriginal Traditional Knowledge* (June 2011).

required to identify and record all burials, use areas and Elders' stories'.[50] Similarly, the independent Kitselas First Nation study identified the project could potentially impact salmon spawning grounds at Christ and Hunter Creeks, and recommended the construction of aerial crossings at the those watercourses.[51]

This process of documenting sites and mapping constraints around which development should be rerouted was often central to the enterprise of conducting an ATK study. For instance, McLeod Lake Indian Band emphasized through their collaborative research the importance of maintaining the access to and integrity of their traplines, trails, hunting, fishing, and cabin sites.[52] They also prioritized protecting and preserving their medicinal plant-harvesting and berry-picking areas, as well as their burial and archaeological sites, including culturally modified trees. Working collaboratively with Enbridge personnel and contracted consultants, the McLeod Lake Indian Band documented nearby campsites and cabins, travel routes, important freshwater sources, hunting and trapping areas, plant-harvesting sites, culturally modified trees, and archaeological, and burial sites. These sites all represented delimited geographic constraints on pipeline routing, which ideally the company could address by modifying the pipeline's course. In their ATK study, McLeod Lake Indian Band also voiced frustration over the unfulfilled promises of employment attached to past developments, a concern that could be addressed by the provision of training and jobs.[53] The assertion of these concerns served to modify elements of the company's plan for the construction and operation of the pipeline.

Thus, in Enbridge's ATK submissions, indigenous concerns were recognized as a limitation that development needed to accommodate. The geography of indigeneity produced through corporate-funded ATK research presented a dual character: opening possibilities for indigenous peoples to achieve new forms of recognition and simultaneously delimiting indigenous claims. ATK research made indigenous claims legible but the way the company integrated this information into its application also worked to limit the claims that could be made. Thus, although Carrier Sekani Tribal Council used funding to conduct an independent study emphasizing an indigenous jurisdictional claim, this was de-emphasized in the Enbridge summary documents. Constraints mapping provided protections for sites of indigenous cultural importance, but corporate submissions quieted indigenous claims to authority that competed with the state. This echoes a long history in Canada, and particularly within the province of British Columbia, of constricting indigenous claims to land to a delimited geography. As Cole Harris documents, colonial and subsequent settler state land policy worked to map a geography of reserve lands around which development could unfold.[54] Responding to this history, indigenous peoples have long

---

50   See Enbridge *supra*, note 41, at C-11.
51   Ibid., at C-218. The company's subsequent modification of its watercourse crossing plans was cited in the report of the review panel as evidence that the company had effectively consulted indigenous communities and integrated their concerns into its planning. *Report of the Joint Review Panel*, supra note 40, Vol. 2 at 31.
52   Ibid., at C-229–C-262.
53   Ibid., at C-243.
54   C. Harris, *Making Native Space: Colonialism, Resistance, and Reserves in British Columbia* (2002); See also, P. Tennant, *Aboriginal Peoples and Politics: The Indian Land Question in British Columbia, 1849–1989* (1990).

sought to contest the terms on which they are recognized and negotiate new terms for their inclusion within the Canadian state.[55]

While outcomes of the JRP process may still project the image of the state as a coherent authority to land and resources, indigenous claims articulated in the natural resource governance process simultaneously reconfigure their relationship with the state, obligating consideration of their interests in decision-making and moreover ensuring indigenous peoples are beneficiaries rather than (or as well as) victims of development. This dynamic of mutual recognition of subject and authority does not imply equality among actors. Nor does it necessitate that rights-bearing subjects possess normative approval of sovereign authority. Instead, it is a sign that rights-bearing subjects recognize a need to reckon themselves with state agencies. In the processes through which local actors reckon with state agencies (and corporations conducting research related to government reviews), they articulate subaltern claims with reference to the frames of the sovereign, they reconfigure elements of how governance occurs. For instance, decisions about the project are subject to appeal on the basis of a failure to adequately consult and accommodate indigenous peoples, and state regulators (and companies) must to make an effort to incorporate indigenous communities, and their knowledges and maps, within the governance processes. Thus, while natural resource governance processes produce the effect or representation of a homogenous Canadian sovereignty making decisions over natural resource development throughout its domain, in practice 'effective sovereignty' is articulated in complex ways that are transformed through indigenous peoples' participation.

6. New maps, agreements, and authorities in the governance of the Hatgyi hydroelectric project, Salween river border, Southeast Asia (Case 2)

While the Canadian case focuses on the complexities of participation of indigenous peoples alongside company-facilitated ATK research, our study in Thailand illustrates how a governance process which crosses an international border also produces the effect of clearly bounded sovereign domain and jurisdiction. Significantly, this cross-border case, concerning the proposed construction of a large dam called Hatgyi,[56] emphasized the political border and sovereign authority of the nation-state – not, as could be anticipated in water governance, an ecological border such as the watershed or local borders such as a village. [57]

55   D. Culhane, *The Pleasure of the Crown: Anthropology, Law and First Nations* (1998); J. Borrows, *Recovering Canada: The Resurgence of Indigenous Law* (2002); A. Woolford, *Between Justice and Certainty: Treaty Making in British Columbia* (2005); T. Penikett, *Reconciliation: First Nations Treaty Making in British Columbia* (2006); H. Foster, H. Raven, and J. Webber (eds.). *Let Right be Done: Aboriginal Title, the Calder Case, and the Future of Indigenous Rights* (2011).

56   According to the World Commission on Dam standards, this would be a large dam. See World Commission on Dams, *Dams and Development: A New Framework for Decision-Making* (2000).

57   See also E. Norman and K. Bakker, 'Transgressing Scales: Transboundary Water Governance across the Canada – US Borderland', (2009) 99 *Annals Assoc Am Geog* 99.

At present, the Hatgyi Dam is just one of 16 large hydroelectric development projects proposed for the mainstream of the Salween by Thai, Burmese, and Chinese investors.[58] It is the first project to proceed with an EIA and public consultation processes. The specific agreements among Thailand, Burma, and China state that the proposed 1300 megawatt Hatgyi project would see 90 per cent of electricity sold to Thailand, with ten per cent to remain in Burma.[59] While the proposed dam's construction would take place in Karen State, Burma, it is the Electricity Generating Authority of Thailand (EGAT) that has been facilitating the decision-making processes on both sides of the political border.

In this section, we consider the Hatgyi governance process in Thailand and how it incorporated participation from Karen residents in the border region. We also consider the role of the EIA which was relied upon by the Thai subcommittee organizing the public information hearings. Considering that they simultaneously produce, represent, and mobilize claims to territories and natural resources, maps are valuable for thinking about the governance process. In this case, we consider both the ways that maps are relied upon in natural resource governance processes as part of making claims but also the ways that maps de-emphasize 'other' claims and sovereignties. Through 'not mapping' or keeping certain spaces off the map, national cartographies screen particular polities from view – both internally through effacing differentiated domestic polities and externally by silencing the concerns of other sovereign nation-states or the polities and ecologies contained therein. Yet, these insights also remind us of the fraught endeavour of making claims for subaltern groups, as not every map is legible within governance processes, nor does every map-maker possess equivalent status. Of particular consideration here are what these maps have to tell us about authority, claims to nature, and the different scales evoked through map-making that tend to privilege some actors while discounting others.

To elucidate this, we focus on two different maps produced and used in the Thai planning processes related to the Hatgyi Dam. The first map, actually a set of maps, was made through the 'Salween Villager Research' (*ngan wijay thai baan*) project.[60] Villager Research aims to document the cultural and livelihood activities of residents. In Villager Research, residents – or 'villagers' – collect data on fish

---

58 The investors for the Hatgyi dam include the international arm of the Electricity Generating Authority of Thailand (EGAT), China's Sinohydro Company, the Burmese Ministry of Hydropower, and IGE, a Burmese company.

59 The Memorandum of Agreement for the Hatgyi project was first signed in 2005, and in 2010 it was altered to include a Burmese company, IGE, in addition to the original signatory developers. The 10 per cent electricity to be sold to Burma was added in 2010; originally all electricity would go to Thailand. The domestic rationale given in Thailand for the Hatgyi project is that it comprises an important part of the nation's push to meet their energy forecasts.

60 Villager Research is a methodology developed in Thailand at the Pak Mun dam by 'villagers' advocating against the dam project being developed by EGAT and also initially the World Bank (until it withdrew funding). Pak Mun drew international attention to exclusionary water governance processes in Thailand and was used as a primary case study in the 2000 World Commission on Dams report. The methodology has since circulated throughout Southeast Asia and has been used by Salween residents since 2004. Local residents and NGOs in Burma, Laos, Cambodia, southern China, and Vietnam have also initiated Villager Research projects. See World Commission on Dams, *Dams and Development: A New Framework for Decision-Making (The Report of the World Commission on Dams)* (2000).
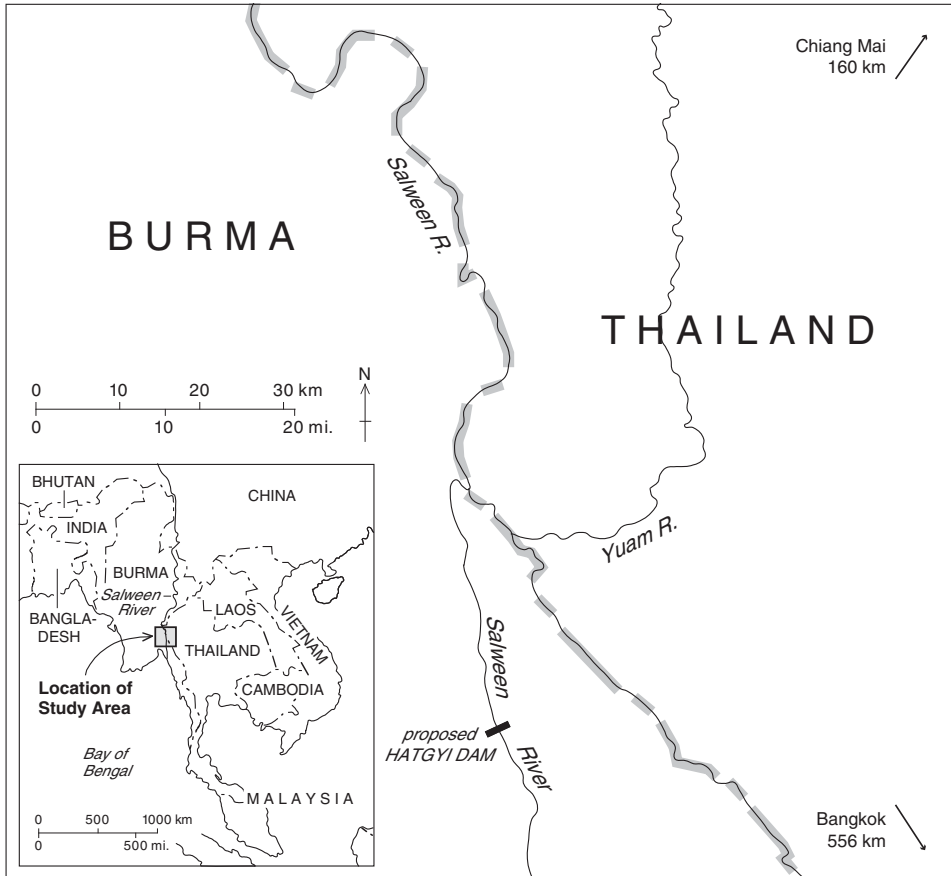
Fig. 1 Location of proposed Hatgyi Dam and study area

species, fishing gear use, riverbank gardens, and other topics while undertaking their everyday livelihood activities. The Villager Research approach includes villagers as the researchers, with research assistance from NGO staff and academics. It relies on a systematic methodology to collect data that was first developed in the aftermath of the last large dam to be built within Thailand, the Pak Mun Dam. Since the project that spurred the formation of the Villager Research methodology, no large dams have been built within Thai borders; this is not a causal relationship but it is related to a history in Thailand of resistance to top-down development that did not include the participation of affected residents. Villager Research can be positioned as an attempt to draw on the complementary strengths of both 'scientific' and 'local' knowledge in that the methodology is replicable and the approach situates itself as emerging from a particular local context.[61] The project is one example of many

---

61   See Agrawal, 'Dismantling the Divide', *supra* note 20; Agrawal, 'Indigenous knowledge', *supra* note 20; M. Leach and J. Fairhead, 'Manners of Contestation: "Citizen Science" and "Indigenous Knowledge" in West Africa and the Caribbean', (2002) 54 *Int Soc Sci J* 299; Berkes, *supra* note 20

efforts to collaboratively produce maps for and about residents at the Salween, and fits within a larger effort to produce and circulate local ecological knowledge in the context of Salween dam development.

In some ways, Villager Research is similar to ATK; both produce textualized knowledges and maps with explicit reference to development projects. However, Villager Research is not facilitated or funded by a company or project developer. Instead, it is collaboratively produced through the efforts of local volunteers, NGO staff, and academics. Also, in contrast to the Canadian case, in Thailand local groups have eschewed labelling themselves exclusively as traditional or indigenous, organizing instead based on their relationships to development as villagers located in an important area within the boundaries of the Thai nation-state. Local mapping by villagers provides one example of the documentation or representation of this relationship.

At the Salween, mapping has been highlighted in part because the villages along the border that would be affected by Hatgyi Dam have been referred to – even by activists – as '*nok pan tii*' or 'off the map' because they are not included on most government maps. As such, the Salween Villager Research project can be seen as part of a response to requests by residents to be more formally recognized in Thailand. One series of maps titled 'Ecological Systems of the Salween River, Thai–Burma Border' has been published in books and was made with research collected by local residents.[62] These maps present information regarding important ecosystems such as the rapids, waterfalls, and riverbank gardens documented through Villager Research, highlighting the impacts of the proposed dams on livelihoods in Thailand.

Of note for our discussion, this map series highlights the national political border in both the title and the image. Yet, while attention is drawn to the river-border at the centre of the image, there are no symbols marking important ecological systems in Karen State, Burma. Karen State, where the dam barrage would be constructed and where the dam would also have impacts, is not mapped in detail.

In contrast to the Villager Research map of the river border and its relation to villagers' lives and livelihoods, there is a second map from the Hatgyi governance process we consider for analysis. This map, part of the EIA document, was made by the consultants hired by the Thai state electricity authority EGAT to conduct the EIA for the dam. Oddly, it erases Thailand from consideration. Entitled 'Locations of Villages Surveyed', it is one of the first maps introduced in the EIA report, which was heavily relied upon in the public information hearings.[63] While this map and the Villager Research map are meant to draw attention to geographies that would be impacted by the proposed dam, they do so in very different ways.

The EIA map is included in the chapter that proposes mitigation measures for the dam's impacts, particularly the impacts to fishing and other livelihood activities. This map is scaled to show the Salween River in Burma, downstream of where part of the Salween River comprises the Thai–Burma border. No Thai provinces or villages

62   See maps 1–3 in Figure 2 from SEARIN (Living Rivers Siam) *Salween Villager Research* (2005), <www.livingriversiam.org/4river-tran/4sw/sw_tb_book3map.pdf>.
63   Environmental Research Institute, Chulalongkorn University. *The Environmental Impact Assessment of the Hutgyi Hydropower Project, Final Report*, (July 2008), at Chap. 5 at 6.

are shown. This map and the accompanying text in the EIA document only address the impacts and consultations previously held in Burma; it delimits dam impacts within Burma and defines the boundaries of dam impacts to exclude Thailand. In and through this map, produced by Thai consultants, we do not see any negative impacts to Thai territory or the border.[64]

Although not apparent from the introduction of the map in the EIA, this move to spatially exclude Thailand from the dam's impacts is quite useful to the future success of the project and, in turn, for meeting Thailand's expected energy demands. Delimiting the impacts of the dam to one side of the border allows the developer to exclude Thailand from the proposed dam's impacts. It is important to highlight that this move to develop large hydropower just beyond Thailand's borders and jurisdiction is part of a broader trend within the region to develop large hydropower just outside national boundaries.[65]

Both representations – the Villager Research map and the EIA map – highlight the implications of mapping and not mapping within the broader processes of governance and decision-making around this cross-border project. In the villager's map, while ecological systems in Thailand and along the river-border are shown, the act of 'not mapping' Burma also has implications. It tends to de-emphasize the dam impacts in Burma, as well as to de-emphasize the role of Karen State authorities or Burmese actors in making claims to the Salween River. As a result, the Villager Research map clearly positions potentially impacted villages and 'their' resources within Thailand, on the 'other' side of the Salween River-border.

In the public information hearings for Hatgyi Dam, the process called for legible knowledge, such as maps, and knowable subjects, like mapped and counted residents. This stems in part from broad trajectory towards more participatory approaches to development. But it also relates specifically to the 2007 Thai constitution, which encoded recognition of 'Community Rights', including rights to traditional use of resources and rights 'to participate with State and communities in the preservation and exploitation of natural resources and biological diversity'.[66] The 2011 public information hearings were presented by the Thai Prime Minister's Office as part of addressing these constitutional requirements.[67]

---

64   To be clear, such claims are contested. For instance, research from the National Human Rights Commission of Thailand (done at the request of Thai citizens) points to cross-border impacts. Moreover, experience with and research on cross-border hydropower development in the region has demonstrated that cross-border impacts should be anticipated. This includes A. B. Wyatt and I. G. Baird, 'Transboundary Impact Assessment in the Sesan River Basin: The case of the Yali Falls Dam', (2007) 23 *Int'l J Water Res Dev* 427. It is also unclear why EGAT paid to have the EIA conducted in Burma by Thai consultants. Some of the implications of this move have been to bolster Thai claims to authority and expertise over the river and the project as was demonstrated in the public information hearing process.

65   By developing large dams beyond Thai borders, the Thai electric authority need not follow Thai law but can still purchase the electricity. That there have been no dams constructed in Thailand since the infamous Pak Mun project underscores this move; the construction of that large dam saw national-scale mobilization and galvanized resistance to large, state-led development projects within Thai national borders. See also C. Middleton. 'Transborder Environmental Justice in Regional Energy Trade in Mainland South-East Asia', (2012) 5 *Austrian Journal of South-East Asian Studies* 292.

66   *Constitution of the Kingdom of Thailand, Buddhist Era 2550* (2007), s. 66–7.

67   There was confusion among the Thai subcommittee regarding what the hearings were intended for. At times, the hearings were referred to as related to constitutional rights to participate in decision-making processes.

Following Article 190 of this same constitution, any project disrupting the political border also necessitates a specific set of decision-making processes including public participation; in this case, if the dam were found to impact the political border, it would require parliamentary approval.[68] Further underscoring why mapping the political border matters, if the constitution requires that any project that would impact the political border must seek such approval, then it must also be debated in Thai parliament. Thus, we position the EIA map as emblematic of a larger process that compels and enables EGAT to make claims that the project is exempt from scrutiny under Thai law. In fact, not mapping the river boundary in this context serves a particular purpose. It represents a reiteration and reinforcement of the boundary, delineating Burmese space from the Thai territory and thus suspending, at least in part, the responsibility of the Thai sovereign to impacted local residents in Thailand under the constitution.

In addition to the presentation and discussion of maps, the Hatgyi public information hearing process saw local residents, including people who identify as Karen ethnic minority group, participate. These residents took the opportunity to articulate claims to and about the political border, the Thai nation, and natural resources. The majority of the residents at the border who stand to be most impacted by the proposed dam identify as Karen or Thai-Karen. In Thailand, popular discourse presents people who identify as a member of the Karen ethnic group as a people 'close to nature'.[69] Imagined as a people living harmoniously with nature but out-of-sync with modern Thailand, Thai discourse regularly associates the Karen people within Thai territorial borders with a Burmese state broadly considered more primitive and undeveloped. This process of splitting the Karen people from Thai modernity along an imagined ethnic-temporal-geographic cleavage, however, has not divorced the Karen in Thailand from the processes involved in the articulation of contemporary Thai sovereignty. Here the effect of a bounded territory becomes particularly significant in the processes of this cross-border case where, even as the governance processes recognize the project's relationship to both 'sides' of the political border, the border is represented more as a static line than a dynamic boundary produced through historical and political processes.

Returning to the two cartographies, and our juxtaposition of them, despite their different spatial representations of dam impacts, we argue that both emphasize national borders and make claims about the river within a national frame. Together, these representations invoke the border as a taken for granted line, not a contested or ambiguous historical-political-ecological construct.[70] These bordering effects shape not only the representation of territorial sovereignty (as seen in the maps) but also

---

At other times, the subcommittee referred to their goals as finding out the 'truth' of the project, particularly about the impacts to Thailand.

68   *Constitution of the Kingdom of Thailand, Buddhist Era 2550* (2007), s. 190.

69   T. Forsyth and A. Walker, *Forest Guardians, Forest Destroyers: The Politics of Environmental Knowledge in Northern Thailand* (2008).

70   See also discussion in L. Harris and S. Alatout, 'Negotiating Hydro-Scales, Forging States: Comparison of the upper Tigris/Euphrates and Jordan River basins', (2010) 29 *Polit Geogr* 148, at 149.

work to distinguish transboundary Karen populations as respectively belonging to the Thai and Burmese nation-states.

In Thailand, like Canada, there is a long history of developing participatory approaches to development and 'community rights' which include the right to participate in decisions about natural resources enshrined in the Thai constitution.[71] In bringing subaltern peoples and their knowledge before the state, this governance process has been an important part of producing the effect of a delimited and bounded state, particularly in areas that are considered 'off the map'. As with the Canadian case, understanding sovereignty as the product rather than precursor to governance provides insight into the enduring representation of a coherent, bounded territorial sovereignty produced through the work of state and non-state actors.

While the river as a border has become an increasingly significant part of this case, and increasingly important for the legalities of the Hatgyi project's approval, the particular articulations of sovereign authority and the arrangements regarding borders and boundaries are also linked to a longer, contested history of authority and development within the region in ways that differ from the Canadian case. Prior to the colonization of Southeast Asian kingdoms, sovereign power is argued to have been understood not as discretely bounded but with overlapping jurisdiction.[72] In the establishment of political borders, historian Thongchai Winichakul argues that negotiations with European colonizers changed representations of the border in Thailand, superimposing a Cartesian understanding of the border onto indigenous understandings of the border.[73] Mapping technologies played a crucial role in mediating these encounters and constructing particular ideas about territorial boundaries. Yet, simply mapping a stretch of the Salween River as a border in the mid-1800s did not produce a static line of demarcation. Both rivers and borders move, and in the context of the Hatgyi Dam, the river threatens to flood and destabilize the political border.

At the same time, we show how the border is not just being remade through altered water levels. Prior to the actual construction of the dam, the political border is being mapped and represented during the participation and planning phases by a variety of actors or 'stakeholders' described here. The list of actors includes the consultants hired to conduct the environmental impact assessment (EIA) and residents who would be impacted by the dam, either directly affected by relocation or indirectly affected through the dam's impacts on fishing and agricultural livelihoods. The network of those involved in remaking the border also includes government officials and dam developers. In fact, all of these actors made and presented maps during the initial stages of natural resource decision-making of the Hatgyi hydroelectric project. We argue that the process of creating these maps and the cartographic representations they advance link with and reconfigure the network of actors enacting

---

71   On participatory development in Thailand, see Chambers, *supra* note 10.
72   In 1849, the British administration in Burma negotiated the Salween river border with the northern kingdom of Chiangmai, part of present-day northern Thailand. See T. Winichakul, *Siam Mapped* (1994), at 82–91.
73   Ibid.

sovereign authority. In turn, this also complicates understanding of the border as distant from 'state power' geographically, or of Karen residents as 'off the map'.

In line with the Canadian situation, this case highlights how the process of natural resource governance serves multiple functions. In addition to producing a decision about the dam project, the process brings multiple actors together to articulate and make coherent their claims to natural resources and political geographies. In relation to the Hatgyi Dam, residents, government officials, and dam developers have been compelled to make claims through these environmental governance processes. This occurs not as a result of legal compulsion; rather it reflects different actors' strategic orientation, aiming to achieve greater resonance with and effect in natural resource governance proceedings through performing claims (and laws) that reproduce territorial boundaries of the state. Similar to the Canadian case, we argue that the inclusion of local peoples in resource governance is not simply a process of state capture. Rather, through their inclusion, local peoples are effectively remaking their relationships with governance, and in practice, the governance processes and outcomes are altered in ways that (potentially) better acknowledge or incorporate multiple claims to resources. This is part of a much longer struggle for participation in making decisions over natural resources in Thailand and across Southeast Asia.

7. DISCUSSION

What do these cases teach us about how sovereignty is produced and how can this inform a broader scholarship on sovereignty and nature, particularly as they are understood in scholarship on international law? In both cases, the networks of people, institutions, and ecologies that produce sovereign authority were extended to include aboriginal knowledge holders and village researchers. Rethinking sovereignty from the 'bottom up' – as something that is practised and requires enactment – demonstrates how these so-called 'non-state' actors, alongside government officials, participate in rearticulating territorial sovereignty as an effect of governance. In processes mediated by the technology of mapping, people made claims that reproduced the internal coherency and external boundaries of the sovereign territory. One of the most significant similarities between the two cases presented here is that the governance processes were not simply about decisions on the specific projects (whether the project would go ahead), but also questions of territory and jurisdiction.

This inversion of conventional approaches to sovereignty, positioning its authority as the product of rather than precursor to governance, begins to explain the enduring imagination of a coherent, bounded territorial sovereignty despite its seeming disjuncture with how governance processes occur in contemporary contexts. We argue that sovereignty emerges as an effect of particular methods of organizing and arranging knowledge through governance processes. While governance processes enlist numerous state and non-state actors in complex negotiations, these processes continually produce an image of an enduring structure of territorial sovereignty as neatly bounded and internally consistent. Thus, we argue the effective exercise of sovereignty within the technical practices of governance works to reproduce the effect of a political structure of sovereignty external to those practices.

Further, in examining the linkages between local actors' efforts to document their relationships to resources and the rearticulation of territorial sovereignty, we are able to offer insights into the relation between subaltern populations and the state. Our long-term ethnographic research on local knowledge practices produces nuanced understanding of a complex set of relations that cannot be adequately conceptualized in binaries of state oppression and subaltern resistance. Examining the participation of local actors in map-making and the subsequent mobilization of these maps in natural resource governance processes highlights the co-production of forms of state authority through subaltern claims-making. This matters to our understanding of sovereignty because it situates subaltern claims-making as part of how sovereign power works in practice as well as how representations of sovereignty are produced through governance practices. Theoretically we offer a means of rapprochement between participatory governance processes and conventional representations of sovereignty, recognizing how the former can act as an unexpected means of producing the later.

Attending to maps as 'technicalities of law' recognizes the complex and nuanced relations between sovereign authorities and local actors. Our ethnographic work allows us to reveal how claims-making also often works as a form of sovereignty-making activity. In one sense, we can understand how even ostensibly resistant non-state actors making claims can be seen to subject themselves to the authority of the state. But local peoples are not simply subjugating themselves to an already coherent state sovereignty; rather local actors' processes of reckoning with sovereign authority also contribute to the constitution of that authority. While sovereignty is presented as autonomous and external, we want to insist that sovereign authority itself is immanent to the domain in which claims are made. Thus, rather than appealing to an already coherent, united, and absolute entity, local actors' claims work through a set of governance relationships that produce the authority to make decisions alongside a series of representations that reify that authority as independent of the relationships that produce it. In this way, local actors' counter assertions within natural resource governance processes co-produce sovereignty alongside local claims to land and resources.

Yet, if there appears a remarkably stable script for sovereignty with newly enrolled actors seemingly just adapting an old repertoire, we insist the innovations in the performance of sovereignty are significant. While indigeneity is secured in a localized geography of traditional use, this geography has nonetheless modified the interior of the state's claimed territory. Similarly, the incorporation of Karen people has modified how the body politic is conceived in Thailand, mapping the 'Other within' onto the nation. In both cases, these inclusions and modifications in governance processes are the result of long struggles among marginalized communities for political recognition.[74] While these changes appear limited in many ways, it is important to register that decades of activism were involved in reconfiguring the networks of natural resource governance to ensure local actors had a role in the

---

74   T. Winichakul, 'The Quest for "Siwilai": A Geographical Discourse of Civilizational Thinking in the Late Nineteenth and Early Twentieth-Century Siam', (2000) 59 *J Asian Stud* 528; Tennant supra note 54.

process. These shifts indicate the malleability of effective governance processes, even while the dominant imagination of the territorial sovereign endures. This highlights the flexibility of how sovereignty is enacted through governance while nonetheless maintaining the comprehensibility of sovereignty within traditional valences.

However, in both cases, as in participatory approaches to development worldwide, mapping technologies both mediate and are productive of relations between local people, the environment, and development, which stabilize the authority and the territorial integrity of the sovereign. For us, understanding the role of mediating technologies within the ways that sovereignty is produced is vital to understanding the relationships between knowledge making and sovereignty as the absolute authority over land. As geographers, we are guarded about the implications of making claims with maps. There is a broad literature about both the possibilities and pitfalls of mapping, particularly in participatory development exercises.[75] Yet, maps as representations that are common within local, national, and global natural resource governance processes illustrate some basic elements of sovereignty effects: how different institutional actors and individuals come together to make and represent claims to natural resources and co-produce authority to whom these actors are accountable. We would argue that this is done in the maps themselves (as texts), but perhaps more importantly, that this process enrolls and engages multiple actors in authorizing the sovereign to speak on behalf of nature and people, as made legible through these maps.

Recognizing how local actors mapping their claims to natural resources in governance processes is part of the rearticulation of sovereignty, our initial contribution to this discussion has also led us to questions for future investigation. Insights from science and technology studies have been useful in apprehending how natures or environments themselves are co-constituted alongside natural resource governance networks.[76] The understanding that ecologies and natural resources are part of the network that produce agency is one way our arguments can be extended to raise further questions about sovereignty. For instance, what role do 'natures' or 'ecologies' play in shaping how governance processes unfold? How do understandings of nature or our relationships with the materiality of the environment influence or challenge conventional understandings of authority and jurisdiction? To acknowledge these questions compels a broader recognition of the contingencies underlying sovereign authority. Acknowledging the ways in which sovereignty is constantly brought into relations with the world of subjects – state and non-state, human and non-human – under its jurisdiction allows us to comprehend moments exhibiting the contingency that the world presses on the sovereign.

---

75   See Roth, *supra* note 27; Walker and Peters, *supra* note 28; Hodgson and Schroeder, *supra* note 29; Wainwright and Bryan, *supra* note 30.
76   B. Latour, *We have never been Modern* (1993).

8. CONCLUSION

Overall, the pairing of these two cases demonstrates how two core aspects of sovereignty – territorial boundaries and jurisdiction over domestic polities – can be seen as progressive enactments produced through the work of multiple actors in natural resource governance networks. Sovereignty is not simply a form of power imposed, but enacted and produced through complex relationships between governing authorities and the governed. Thus, indigenous peoples and rural residents, as well as corporations, investors, and company knowledge facilitators, are variously enlisted in practices that reproduce and remake the authority of the sovereign. The contingencies pressed upon and embedded within the sovereign on the basis of its ongoing co-production, renders it a necessarily provisional arrangement, under constant revision. This contingency opens opportunities to modify the roles and responsibilities of the sovereign, to redefine it in association with new concepts of citizenship and ecology. But if the sovereign is a precarious achievement, it has been an enduring one. This endurance in part is a result of the way that mediating technologies, such as maps, help stabilize the networks producing sovereignty and aid their perpetuation.