Can Conflict Be Planned Away? A Critical Assessment of Participatory Land Use Planning in Swedish Forest Governance

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Abstract

A widespread governance response to land use conflict is to seek improved communication through the employment of dialogue-based instruments. In this paper, we interrogate the guiding presupposition that conflict can be planned away through a case study on the Reindeer Husbandry Plan (*Renbruksplan*), a tool used to address land use conflicts between industrial forestry and Indigenous Sámi reindeer herding. Drawing on critical policy analysis and environmental justice frameworks, we analyze the problematizations, silences, and effects emerging from the tool's use in forestry planning and land use decisions. Our findings reveal that, operating in its current institutional and legal context, the tool offers limited improvements in procedural justice, exacerbates unequal distribution of burdens and benefits in terms of who gets to use forest resources, privileging a forestry-centered representation of the land use conflict. We therefore conclude that, in absence of institutional reform, the tool is likely to perpetuate conflicts and continue to reproduce the injustices embedded in Swedish forest and land use governance.

Keywords: *land use conflict, forestry, reindeer herding, land use plans, forest governance, participatory land use planning, Reindeer Husbandry Plan, environmental justice, critical policy analysis, WPR*

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1. Introduction

Competition for land often provokes conflict where Indigenous communities often-times find themselves at the frontline.[1] A typical response – whether from govern-ment, industry or civil society – is to seek improved communication or negotiation through the employment of dialogue-based instruments for land use planning, such as participatory Geographic Information System (GIS) mapping tools.[2] Situated within a deliberative turn in environmental governance, the ambition is to foster more effective and legitimate land and resource governance.[3] In this paper, we inter-rogate this rationale, offering new empirical material from a case study on a dialogue-based planning tool adopted in Swedish forest governance.

Dialogue-based land use planning instruments are widespread in forest gover-nance, globally as well as in Sweden.[4] Despite their popularity, research has offered

1   Tom Blomley and Gretchen Walters, *A Landscape for Everyone: Integrating Rights-Based and Landscape Governance Approaches* (Gland, Switzerland: IUCN, International Union for Conservation of Nature, 2019).

2   Ilisapeci Lyons, Rosemary Hill, Samarla Deshong, Gary Mooney, and Gerry Turpin. "Protecting What Is Left after Colonisation: Embedding Climate Adaptation Planning in Traditional Owner Narratives." *Geographical Research* 58, no. 1 (2020): 34–48; Per Sandström, Neil Cory, Johan Svensson, Henrik Hedenås, Leif Jougda, and Nanna Borchert. "On the Decline of Ground Lichen Forests in the Swedish Boreal Landscape: Implications for Reindeer Husbandry and Sustainable Forest Management." *Ambio* 45 (2016): 415–29; Libby Porter, "Indigenous People and the Miserable Failure of Australian Planning," *Planning Practice & Research* 32, no. 5 (2017): 556–70; Greg Brown and Marketta Kyttä, "Key Issues and Priorities in Participatory Mapping: Toward Integration or Increased Specialization?," *Applied Geography* 95 (2018): 1–8; Suzanne Von der Porten and Robert C de Loë, "How Collaborative Approaches to Environmental Problem Solving View Indigenous Peoples: A Systematic Review," *Society & Natural Resources* 27, no. 10 (2014): 1040–56.

3   Andreas Duit and Annette Löf, "Dealing With a Wicked Problem? A Dark Tale of Carnivore Management in Sweden 2007–2011," *Administration & Society* 50, no. 8 (2018): 1072–96; Chris Ansell and Alison Gash, "Collaborative Governance in Theory and Practice," *Journal of Public Administration Research and Theory* 18, no. 4 (2008): 543–71; Karin Bäckstrand, Jamil Khan, Annica Kronsell, and Eva Lövbrand. "The Promise of New Modes of Environmental Governance." In *Environmental Politics and Deliberative Democracy*. Edward Elgar Publishing, 2010.

4   Mark S. Reed, "Stakeholder Participation for Environmental Management: A Literature Review," *Biological Conservation* 141, no. 10 (2008): 2417–31; Lina Holmgren, Camilla Sandström, and Anna Zachrisson, "Protected Area Governance in Sweden: New Modes of Governance or Business as Usual?," *Local Environment* 22, no. 1 (2017): 22–37; Kaisa Raitio, "New Institutional Approach to Collaborative Forest Planning on Public Land: Methods for

substantial critique and recognized shortcomings include, for example, capacity to address preexisting power asymmetries between actors, secure genuine (not token-istic) participation, and ensure equitable outcomes in terms of resource access and use.[5] This consequently cautions for critical reflection on where, when, and how, dialogical land use planning tools can be implemented and how their design might be improved.[6]

Swedish forest governance is characterized by mounting tensions between com-peting land uses and underlying values,[7] not least between the Indigenous practice of Sámi reindeer herding and industrial forestry.[8] A majority of the industrial, or large-scale forestry[9] is carried out in the northern parts of Sweden on traditional Sámi territory, also known as Sápmi, where reindeer herding is still practiced as a semi-nomadic livelihood.[10] Here, a participatory GIS tool – the so-called land use plans for reindeer husbandry (sv: *Renbruksplan*, henceforth simply RBP) – has been rolled out with the stated purpose of facilitating interactions and mitigating long-standing

Analysis and Lessons for Policy," *Land Use Policy* 29, no. 2 (2012): 309–16; Johanna Johansson, "Constructing and Contesting the Legitimacy of Private Forest Governance: The Case of Forest Certification in Sweden," (2013) Umeå University; Camilla Sandström and Camilla Widmark, "Stakeholders' Perceptions of Consultations as Tools for Co-Management—A Case Study of the Forestry and Reindeer Herding Sectors in Northern Sweden," *Forest Policy and Economics* 10, no. 1–2 (2007): 25–35

5   Raitio, "New Institutional Approach to Collaborative Forest Planning on Public Land: Methods for Analysis and Lessons for Policy"; Duit and Löf, "Dealing With a Wicked Problem? A Dark Tale of Carnivore Management in Sweden 2007–2011"; Ansell and Gash, "Collaborative Governance in Theory and Practice"; Andreas Johansson, "Managing Intractable Natural Resource Conflicts: Exploring Possibilities and Conditions for Reframing in a Mine Establishment Conflict in Northern Sweden," *Environmental Management* (2023): 1–20.

6   Bäckstrand et al., "The Promise of New Modes of Environmental Governance"; Simon Birnbaum, "Environmental Co-Governance, Legitimacy, and the Quest for Compliance: When and Why Is Stakeholder Participation Desirable?," *Journal of Environmental Policy & Planning* 18, no. 3 (2016): 306–23

7   Karin Beland Lindahl, Anna Sténs, Camilla Sandström, Johanna Johansson, Rolf Lidskog, Thomas Ranius, and Jean-Michel Roberge. "The Swedish Forestry Model: More of Everything?" *Alternative Pathways to Sustainability? Comparing Forest Governance Models* 77 (2017): 44–55

8   David Harnesk, "The Decreasing Availability of Reindeer Forage in Boreal Forests during Snow Cover Periods: A Sami Pastoral Landscape Perspective in Sweden," *Ambio* 51, no. 12 (2022): 2508–23; Sonja Kivinen, Jon Moen, Anna Berg, and Åsa Eriksson. "Effects of Modern Forest Management on Winter Grazing Resources for Reindeer in Sweden." *AMBIO* 39, no. 4 (2010): 269–78; Tim Horstkotte, "Contested Landscapes: Social-Ecological Interactions between Forestry and Reindeer Husbandry," (2013 Umeå University).

9   Forestry here refers to large-scale, industrial or commercial forms of forestry.

10   Tim Horstkotte, Øystein Holand, Jouko Kumpula, and Jon Moen. *Reindeer Husbandry and Global Environmental Change: Pastoralism in Fennoscandia*. Abingdon: Routledge, 2022.

conflicts between these land uses.[11] The land use conflict is embedded in a complex history of colonization, marginalization and assimilation which have had far-reaching consequences for the Sámi people, their customs and livelihoods.[12] The land use situation today is best described as one characterized by overlapping – but unclearly regulated – property rights,[13] a condition widely recognized as a catalyst for land use conflict.[14] Considering both land users as rights-holders, albeit operating under competing and widely different circumstances, provides the starting point for this paper. While considerable hopes and investments have been tied to the RBP project, few studies have addressed the tool in the wider context of forest governance, power and justice.[15]

The objective of this paper is to offer a critical policy analysis of the use of RBP in Sweden, and specifically evaluate its potential for addressing land use disputes between Indigenous reindeer herding communities and large-scale forestry. Whereas earlier research has focused on procedural and dialogical aspects of the tool and how it helps "solve the problem"[16] we are inspired by Carol Bacchi[17] to analyze how the use of the tool contributes to how the "problem" itself is constructed. Guided by an environmental justice perspective,[18] we pay particular attention to how the land use conflict is embedded in wider patterns of structural inequality. Our material consists

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11 Per Sandström, Tina Granqvist Pahlén, Lars Edenius, Hans Tømmervik, Olle Hagner, Leif Hemberg, Håkan Olsson, Karin Baer, Thomas Stenlund, and Lars Göran Brandt. "Conflict Resolution by Participatory Management: Remote Sensing and GIS as Tools for Communicating Land-Use Needs for Reindeer Herding in Northern Sweden." *AMBIO: A Journal of the Human Environment* 32, no. 8 (2003): 557–67.

12 Christina Allard, "Sami Land Rights: Recent Developments in Swedish Case Law." *European Yearbook of Minority Issues* 19, no. 1 (2022): 221–38.

13 Malin Brännström, "The Implementation of Sámi Land Rights in the Swedish Forestry Act." *The Significance of Sámi Rights*, 101–15. Routledge, 2023.

14 Lotte de Jong, Sophie De Bruin, Joost Knoop, and Jasper van Vliet. "Understanding Land-Use Change Conflict: A Systematic Review of Case Studies." *Land Use Science* 16, no. 3 (2021): 223–39

15 But see Elias Andersson and E Carina H Keskitalo, "Technology Use in Swedish Reindeer Husbandry through a Social Lens," *Polar Geography* 40, no. 1 (2017): 19–34.

16 Sandström et al., "Conflict Resolution by Participatory Management: Remote Sensing and GIS as Tools for Communicating Land-Use Needs for Reindeer Herding in Northern Sweden"; Per Sandström et al., "Participatory GIS to Mitigate Conflicts between Reindeer Husbandry and Forestry in Vilhelmina Model Forest, Sweden," The Forestry Chronicle 88, no. 03 (2012): 254–60; Hanna Vestman, "Renbruksplan – Från Tanke till Verklighet" (Swedish Forest Agency, 2014) Forest Agency, "Upprättade Renbruksplaner 2005–2010," (2011).

17 Carol Bacchi, "Why Study Problematizations? Making Politics Visible," *Open Journal of Political Science* 2, no. 01 (2012)

18 David Schlosberg, "Reconceiving Environmental Justice: Global Movements And Political Theories," *Environmental Politics* 13, no. 3 (2004): 517–40; Nancy Fraser, "Recognition or Redistribution? A Critical Reading of Iris Young's Justice and the Politics of Difference," *Journal of Political Philosophy* 3, no. 2 (1995): 166–80.

of both interviews and policy documents, complemented with field notes from participant observations of two meetings held in the development phase of the RBP. As alluded to in the title, we question the assumption that land use conflict can be "planned away", and with this paper we hope to contribute new perspectives on the contestations currently hampering Swedish forest governance.

2. Environmental justice and critiques of collaborative planning

It is well-established that dialogue-based or collaborative planning, including its preference for participatory GIS tools, faces multiple challenges, owing to institutional and regulatory constraints, engrained power imbalances, economic inequalities, and other socio-political factors.[19] Developing and using GIS maps is resource intensive and time consuming. As Indigenous communities often lack access to the technical expertise available to industry actors, they risk losing control over traditional knowledge and data.[20] In the literature on participatory GIS, a recurrent observation is therefore that cartographic tools are often used in ways that, contrary to stated aims, undermine the rights and interests of Indigenous groups,[21] in turn exacerbating rather than mitigating preexisting inequalities.[22]

Literature on justice in environmental governance helps bring these issues to the fore. Environmental justice is commonly understood as constituting three different but interrelated dimensions – distributive, procedural, and recognitional justice.[23]

19 Ansell and Gash, "Collaborative Governance in Theory and Practice"; K. Emerson, T. Nabatchi, and S. Balogh, "An Integrative Framework for Collaborative Governance," *Journal of Public Administration Research and Theory* 22, no. 1 (2012): 1–29; Bill Cooke and Uma Kothari, *Participation: The New Tyranny?* (Zed books, 2001); Steven M Radil and Matthew B Anderson, "Rethinking PGIS: Participatory or (Post) Political GIS?," *Progress in Human Geography* 43, no. 2 (2019): 195–213; Holmgren et al. "Protected Area Governance in Sweden: New Modes of Governance or Business as Usual?"; Raitio, "New Institutional Approach to Collaborative Forest Planning on Public Land: Methods for Analysis and Lessons for Policy"; Eva Maria Fjellheim, "'You Can Kill Us with Dialogue:' Critical Perspectives on Wind Energy Development in a Nordic-Saami Green Colonial Context," *Human Rights Review* (2023); Johansson, "Managing Intractable Natural Resource Conflicts: Exploring Possibilities and Conditions for Reframing in a Mine Establishment Conflict in Northern Sweden"; Porter et al., "Indigenous People and the Miserable Failure of Australian Planning"; Lyons et al., "Protecting What Is Left after Colonisation: Embedding Climate Adaptation Planning in Traditional Owner Narratives."
20 Melinda Laituri, "Indigenous Peoples' Issues and Indigenous Uses of GIS," *The SAGE Handbook of GIS and Society* 1996 (2011): 202–21.
21 Ramsey, "A Call for Agonism: GIS and the Politics of Collaboration"; Radil and Anderson, "Rethinking PGIS: Participatory or (Post) Political GIS?"
22 Lyons et al., "Protecting What Is Left after Colonisation: Embedding Climate Adaptation Planning in Traditional Owner Narratives."
23 Schlosberg, "Reconceiving Environmental Justice: Global Movements and Political Theories"; Fraser, "Recognition or Redistribution? A Critical Reading of Iris Young's Justice and the Politics of Difference."

Distributive justice concerns how benefits and burdens are distributed among actors, including material and ecological consequences (relating for example to governance arrangements' so-called ecological regulatory capacity),[24] and how well different actors' various needs are met.[25] Procedural justice concerns the design of decision-making processes, including meaningful participation of all affected groups and actors. Finally, recognitional justice focuses on how actors and their rights, values, knowledge, and views are respected (or ignored).[26]

Benjaminsen et al.[27] further distinguish between formal and discursive (mis-)recognition. Formal recognition concerns who are recognized as stakeholders and, importantly, as rights-holders,[28] while discursive recognition operates more subtly, delineating which claims are considered legitimate or not. While often given less attention than other dimensions in research on environmental justice,[29] recognition provides a foundation for unpacking the underlying causes of distributive and procedural injustices. Earlier research establishes that Sámi reindeer herding struggles with both formal and discursive misrecognition in land use governance,[30] leaving them "fighting an uneven battle against development projects and decisions by state agencies regarding further encroachments on reindeer grazing lands".[31]

As we outline further below, in this paper, we use Bacchi's "What's the problem represented to be" (WPR) as our main analytical framework. WPR, and its focus on problematizations, is well suited to address issues of recognition. In the discussion (section 7), we weave these analytical perspectives together, discussing the findings from the WPR analysis through an environmental justice lens.

24 Franke van der Molen, "How Knowledge Enables Governance: The Coproduction of Environmental Governance Capacity," *Environmental Science & Policy* 87 (2018): 18–25.

25 Hanne Svarstad et al., "Three Types of Environmental Justice," *Torgarden: Policymix*, (2010).

26 Fraser, "Recognition or Redistribution? A Critical Reading of Iris Young's Justice and the Politics of Difference."

27 Tor A Benjaminsen, Hanne Svarstad, and (I.) Shaw of Tordarroch, "Recognising Recognition in Climate Justice," *IDS Bulletin* (2021)

28 See also Simo Sarkki, Hannu I. Heikkinen, and Annette Löf. "Reindeer Herders as Stakeholders or Rights-Holders? Introducing a Social Equity-Based Conceptualization Relevant for Indigenous and Local Communities." *Nordic Perspectives on the Responsible Development of the Arctic: Pathways to Action*, D.C. Nord (ed), 271–92. Cham: Springer International Publishing (2021)

29 Tor Benjaminsen, et al. "Recognising Recognition in Climate Justice."

30 Annette Löf, Kaisa Raitio, Bruce C Forbes, Kristina Labba, Mia Landauer, Camilla Risvoll, and Simo Sarkki. "Unpacking Reindeer Husbandry Governance in Sweden, Norway and Finland: A Political Discursive Perspective." *Reindeer Husbandry and Global Environmental Change* (Routledge, 2022), 150–72.

31 Allard "Sami Land Rights: Recent Developments in Swedish Case Law." p. 224

3. Empirical context

3.1. Swedish forest governance, overlapping rights and persistent land use conflicts

A large part of Sweden is covered in forests, with more than 50% classified as so-called production forests.[32] Large-scale forestry is thus a major industry and engine for the national economy, with Sweden maintaining a position as world-leading producer of forest products.[33] Historically, securing timber and profit from the forests was accompanied by explicit rationales to assert control over the land and boreal forests in the sparsely settled north,[34] that is, traditional Sámi territory.

Since the 1800s, Swedish forest management has included attempts to balance different objectives, including sustainable (early on understood as regenerative) land use, economic yield, and enabling public use of forests.[35] The Forestry Act of 1903 aimed explicitly at securing forest regeneration but applied only to privately owned forests. Later in the 1900s, specific goals of conservation were included.[36] The current Forestry Act (SFS 1979:429), applying to all forests regardless of ownership, included regulation on nature conservation while also providing strong incentives to increase wood production.[37]

Today, Swedish forestry operates under the espoused principle of "freedom under responsibility" with forest governance characterized by a high degree of de-regulation and maintaining production-oriented management.[38] This has meant a rolling-back of the state in favor of market mechanisms, such as private certification schemes, and reliance on companies' own policies and practices to ensure and interpret sustainable forestry. Sweden has been recognized as a frontrunner, both for its high degree

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32 Cornelia Roberge, Per Nilsson, Per-Erik Wikberg, and Jonas Fridman. Skogsdata: aktuella uppgifter om de svenska skogarna från SLU Riksskogstaxeringen. Tema: Gammal skog enligt miljömålsdefinitionen: vad kännetecknar den och var finns den? Inst. för skoglig resurshushållning, SLU, 2023.

33 Klara Fischer, Tove Stenius, and Sara Holmgren. "Swedish Forests in the Bioeconomy: Stories from the National Forest Program." *Society & Natural Resources* 33, no. 7 (2020): 896–913.

34 Per Eliasson and Erik Törnlund, "Swedish State Forestry, 1790–2000," in *Managing Northern Europe's Forests: Histories from the Age of Improvement to the Age of Ecology. Environment in History: International Perspectives, Eds. Oosthoek, J & Hölzl, R.* (New York, 2018), 248–87.

35 Eliasson and Törnlund "Swedish State Forestry, 1790–2000,"

36 Beland Lindahl et al., "The Swedish Forestry Model: More of Everything?"

37 Forestry Act, SFS 1979:429

38 Beland Lindahl et al., "The Swedish Forestry Model: More of Everything"; Johansson, "Constructing and Contesting the Legitimacy of Private Forest Governance: The Case of Forest Certification in Sweden"; Forest Agency, "Frihet under Ansvar [Freedom under Responsibility]," (2023) https://www.skogsstyrelsen.se/aga-skog/du-och-din-skog/frihet-under-ansvar.

of certified forests and for its sustainable forestry model.[39] Recently, however, criticism has been voiced regarding Sweden's failure to meet environmental and climate goals and protecting the rights and needs of other land users.[40]

Like for other Indigenous peoples, maintaining traditional practices (such as reindeer herding) and connection to ancestral lands (including access to grazing areas) is not only of fundamental importance for the Sámi people and culture, but a pre-requisite for ensuring human rights.[41] Through customary use, such as herding, hunting and fishing, the Sámi have established land rights to their traditional lands. These rights are today primarily regulated through the Reindeer Husbandry Act (SFS 1971:437),[42] and the so-called "reindeer herding right" (*renskötselrätten*). This collective right can be exercised by the reindeer herding communities (comprising a minority of the Sámi people) and includes for example the right to herd reindeer on different seasonal grazing areas, subsistence hunting and fishing, using timber and building structures needed for herding activities. The reindeer herding right is based on immemorial prescription and customary law and is considered a private property right. As such, it entails the same form of constitutional protection as other property rights, including the right to compensation if infringed or violated.[43] The complicating factor is that *other* private property rights – such as land ownership – also apply on most of the reindeer herding area, and the relationship between different rights-holders has not been clarified or addressed, either politically or in other relevant sectoral legislations, such as the Forestry Act.[44] The state has, on the contrary, held "a persistent approach of not respecting Sámi land rights to the same extent as other civil rights",[45] which have contributed to widespread misrecognition of Sámi land rights.

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39 Johansson, "Constructing and Contesting the Legitimacy of Private Forest Governance: The Case of Forest Certification in Sweden."

40 Beland Lindahl et al., "The Swedish Forestry Model: More of Everything?"; Fischer et al. "Swedish Forests in the Bioeconomy: Stories from the National Forest Program." Blattert et al. 2023, "Climate Targets in European Timber-Producing Countries Conflict with Goals on Forest Ecosystem Services and Biodiversity."

41 Brännström "The Implementation of Sámi Land Rights in the Swedish Forestry Act.". Since 2011 a specific section in the Swedish Constitution states that the Sámi people's opportunities to maintain and develop their own cultural and community life shall be promoted, specifically mentioning reindeer herding.

42 Reindeer Husbandry Act, SFS 1971:437

43 Allard "Sami Land Rights: Recent Developments in Swedish Case Law."; Brännström "The Implementation of Sámi Land Rights in the Swedish Forestry Act."

44 Ibid.; Kaisa Raitio, Christina Allard, and Rebecca Lawrence. "Mineral Extraction in Swedish Sápmi: The Regulatory Gap between Sami Rights and Sweden's Mining Permitting Practices." *Land Use Policy* 99 (2020): 105001

45 Allard "Sami Land Rights: Recent Developments in Swedish Case Law.", p. 237

3.2. Failed attempts to address conflict through consultation and collaboration

While conflicts between forestry and reindeer herding have been known for over 100 years, it was only in 1991 that provisions regarding consideration to reindeer herding were implemented in the Forestry Act.[46] Since the 1970s, the state has opted to address land use conflicts between industrial forestry and reindeer herding through dialogue-based means. The so-called Central Consultation Group for reindeer husbandry and forestry (*centrala samrådsgruppen*, CSG) was established at the national level in 1971, to enable dialogue aimed at fostering co-existence between the two land users. In the Forestry Act of 1979, corporate consultations (*samråd*) were introduced to strengthen the position of herding communities and to mitigate conflicts between the actors.[47] However, consultations are only required for the so-called year-round grazing areas (*året-runt-marker*).[48] For many herding communities, this excludes the lion's share of the productive forest land (and most of the winter grazing areas). While forest companies reportedly find consultations useful,[49] the same evaluations show that herding communities experience a recurrent lack of influence and recognition. Key unresolved issues include the loss of and degradation of grazing resources, for example due to invasive species such as *pinus contorta*.[50] Research further shows that costs for consultations are unevenly distributed, with a higher burden placed on the communities compared to forest companies.[51]

Since 1994, the (arguably weak) legislated requirements for consultation were complemented by private governance mechanisms through voluntary forest certification schemes, primarily offered via the Forest Stewardship Council (FSC).[52] Certified companies are expected to respect Indigenous rights, but to what degree this is implemented has been debated.[53] The current (2020) FSC standard contains

46 Brännström "The Implementation of Sámi Land Rights in the Swedish Forestry Act."

47 Widmark, "Forestry and Reindeer Husbandry in Northern Sweden–the Development of a Land Use Conflict," 2006; Widmark et al., "Measuring Transaction Costs Incurred by Landowners in Multiple Land-Use Situations"; Forestry Act 1979:429.

48 Ibid.

49 Forest Agency, "Utvärdering Av Samråden 1998 Skogsbruk – Rennäring." Meddelande 2001:6, (2001).

50 Roos, U, G Lidestav, S Sandström, and P Sandström. "Samråd: An Institutional Arrangement in the Context of Forestry and Reindeer Husbandry in Northern Sweden." *International Forestry Review* 24, no. 3 (2022): 441–57; Anna-Maria Fjellström. "Att Lösa Konflikter via Konsensus? En Fallstudie Av Centrala Samrådsgruppen För Skogsbruk Och Rennäring." BSc, Umeå University, 2012.

51 Widmark et al., "Measuring Transaction Costs Incurred by Landowners in Multiple Land-Use Situations"; Bostedt et al., "Measuring Transaction Costs for Pastoralists in Multiple Land Use Situations: Reindeer Husbandry in Northern Sweden."

52 Johanna Johansson, "Challenges to the Legitimacy of Private Forest Governance–the Development of Forest Certification in Sweden," *Environmental Policy and Governance* 22, no. 6 (2012): 424–36.

53 Ibid.

demands on forest companies to consult affected social groups, with consultation requirements extending also to winter pastures. Companies must, in dialogue with affected Sámi communities, develop multi-year forestry plans defining forest management practices and demonstrate consideration (in Swe. *hänsyn*) to reindeer herding when logging is carried out. The current standard also emphasizes the need to share cartographic material, preferably in GIS format, in so-called co-planning[54] processes.[55] The FSC standard recognizes that consultations should take place in "good faith" and acknowledges the right of communities to give or withhold Free Prior and Informed Consent (FPIC), based on customary land rights. However, the conception of FPIC seems weak: even if communities withhold consent, the company can still proceed with the proposed activity if it would otherwise negatively impact forestry practices, or if the community has not sufficiently demonstrated what harm they might suffer.[56] This had led others to dub the standard a "timid advance"[57] toward Sámi participation in decision-making processes.

Meanwhile, the ecological conditions for reindeer grazing are rapidly deteriorating.[58] While this negative trend admittedly owes to a confluence of compounding effects from multiple competing land uses[59] the negative impacts of modern forestry practices play a key role.[60] Since the 1950s, rising steeply in the 1990s,[61] up to 70% of the lichen-rich forest pastures, essential for ensuring the viability of traditional reindeer

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54   At the time of our study, the standard was so newly introduced that the standard and new routines such as co-planning were primarily discussed in the future tense, and we are not able to draw any conclusions from our own empirical material.

55   FSC, "FSC-Standard För Skogsbruk i Sverige" (2019), p. 22.

56   FSC, "FSC-Standard För Skogsbruk i Sverige" p. 26.

57   Governance in the Boreal Forest: What Role for Local and Indigenous Communities?," in *Boreal Forests in the Face of Climate Change*, ed. Miguel Montoro Girona et al., vol. 74, Advances in Global Change Research (Cham: Springer 2023), 513–32, p. 525.

58   Harnesk, "The Decreasing Availability of Reindeer Forage in Boreal Forests during Snow Cover Periods: A Sami Pastoral Landscape Perspective in Sweden"; Horstkotte et al., *Reindeer Husbandry and Global Environmental Change: Pastoralism in Fennoscandia*.

59   Marianne Stoessel, Jon Moen, and Regina Lindborg. "Mapping Cumulative Pressures on the Grazing Lands of Northern Fennoscandia" *Scientific Reports* 12, no. 1 (2022): 16044. (2022); Rasmus Kløcker Larsen, Kaisa Raitio, Marita Stinnerbom, and Jenny Wik-Karlsson. "Sami-State Collaboration in the Governance of Cumulative Effects Assessment: A Critical Action Research Approach." *Environmental Impact Assessment Review* 64 (2017): 67–76.; Annette Löf, Per Sandström, Karin Baer, Marita Stinnerbom, and Camilla Sandström. Renskötsel Och Klimatförändring: Risker, Sårbarhet Och Anpassningsmöjligheter i Vilhelmina Norra Sameby. Umeå universitet, 2012.

60   Kivinen et al., "Effects of Modern Forest Management on Winter Grazing Resources for Reindeer in Sweden."

61   Roberge et al., Skogsdata: aktuella uppgifter om de svenska skogarna från SLU Riksskogstaxeringen

herding, have been degraded.[62] It is against this complex backdrop that the RBP has emerged as the preferred tool to facilitate consultations and address the persistent land use conflicts between Sámi herders and the forestry industry.

4. Method and material

Our starting point is that in diverse and pluralistic societies, there will always be competing problem representations, shaped by underlying differences in perspectives and power.[63] Hence, no 'objective' environmental problems exist. Therefore, examining *how* problem representations are produced or challenged, becomes of the essence. This is precisely what signifies Carol Bacchi's approach to critical policy analysis, which essentially dissects proposed "solutions", such as those offered via specific policies or decision-making tools in order to trace the underlying problem representation they respond to. This, in turn, can be used to shed light on critical socio-political processes, such as how problems are produced, whose knowledge is privileged, and whose perspectives and what claims are silenced.[64]

4.1. Material and design

In our study, we draw on both primary and secondary data. Primary data generation mainly took place via semi-structured interviews (Spring 2021)[65] with actors from within all major forestry companies, the Forest Agency, the Sámi Parliament, and others with leading roles in the development of the RBP project,[66] including researchers and reindeer herders. Interviews were guided by open-ended questions and bundled into three themes, with the main purpose of examining how forestry companies view the use of RBP in forestry practices: i) How have you engaged with RBP, either during tool development or its application? ii) What do you consider the purpose of RBP to be, and has this purpose been met? iii) How has the use of RBP affected the interactions with reindeer herding and ensuing planning and land use decisions?

Due to the Covid-19 pandemic, interviews were conducted online. They were held in Swedish, recorded, and subsequently transcribed. Participants gave their consent to participate by replying to an e-mail invitation with information about the research. We initially guaranteed that attributions be made only to respective

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62 Sandström et al., "On the Decline of Ground Lichen Forests in the Swedish Boreal Landscape: Implications for Reindeer Husbandry and Sustainable Forest Management."

63 North, *Institutions, Institutional Change and Economic Performance*.

64 Bacchi, "Why Study Problematizations? Making Politics Visible."

65 Conducted by the third author as part of master's thesis (Fahlin 2021) complemented with additional empirical material and a novel analytical framework for this study. F. Fahlin, "Mapping indigenous land through PGIS in Swedish Sapmi: A tool of power or empowerment?". MSc thesis. Lund University, unpublished.

66 For a detailed overview of the RBP instrument see section 5.1 and 5.2

organizations and not to individuals. Nevertheless, we later opted to pseudonymize the data further, to enhance protection of individuals' integrity, and therefore only indicated the type of organization, clustered into three categories: forestry representatives, Sámi communities, and developers.[67] Unless otherwise specified, direct quotes, whether sourced from the interviews (*italics*) or written documents, have been translated by the authors from Swedish into English.

Secondary data includes key policy documents sourced from the Swedish government's document database (we included 17 unique sources such as bills, reports, and remittance responses) and additional material on the RBP issued by the Forest Agency (including evaluations, reports, manuals, and information material). Considering the active role of researchers (and research funding) in developing the RBP,[68] we have also included early academic papers for mapping how the project has evolved.

We also included field notes from two early RBP project meetings, attended by the first author in 2009 and 2010. Such RBP meetings have been hosted annually by the Forest Agency, offering an arena for stakeholders to discuss the tool and its implementation, and for the agency to provide guidance to the users. Using these multiple and complementary data sources, we describe how the RBP project has evolved (section 5.1–5.3) and how the tool is perceived and used by forest companies (section 5.4).

4.2 Data analysis

When studying the perspectives of government or industry representatives operating on Indigenous lands, Western approaches to research carry inherent risks of exacerbating prejudices and biases. While we are acutely aware that such risks never can be fully mitigated, one important measure is to include herders' perspectives and invite input on the design and implementation of the study. Guided by research ethics for a Sámi context,[69] we have had an ongoing dialogue with Sámi and reindeer herding representatives. Prior to conducting the main interviews, we consulted experts from herding communities for input, for example on knowledge gaps and needs. During the phase of data analysis, we convened a workshop together with Sámiid Riikkasearvi[70] (fall 2021) where representatives from herding communities, the Sámi Parliament, and Sámiid Riikkasearvi were invited to discuss and comment – for example possible silences and contradictions that we had missed or misinterpreted – in our preliminary (and anonymized) findings. In total, 30 people contributed to

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67 Developers include researchers and Forest Agency staff with a leading role in developing, institutionalizing and enabling adoption of the RBP tool.

68 See section 5.2

69 Anna-Lill Drugge. Ethics in Indigenous Research: Past Experiences-Future Challenges. Umeå: Vaartoe-Centre for Sami Research, 2016; SSR, "Riktlinjer Vid Forsknings- Och Projektsamarbeten Med Sámiid Riikkasearvi (SSR)."

70 Sámiid Riikkasearvi (SSR) is the national association and interest organization for reindeer herding.

this study, 19 through interviews (including pilots) and 11 as part of the analysis workshop (for an overview see Table 1). The final analysis and text in this paper has been carried out independently and is the responsibility of the authors alone.

Table 1. Overview of study participants.

#	Type of actor	Description
1–12	Forest industry representatives (referred to as 'forestry representatives' in the text)	Including interviews with representatives from all the major forest companies, both private and public, and one representative from a Forest ownership association. We have sought both geographical spread (including all regions in the reindeer grazing area) and organizational diversity (including professionals holding consultations, regional planners, managers, and in-house specialists on reindeer herding).
13–17	Public officials, researchers, and consultants involved in the development and management of the RBP (referred to as 'developers' in the text)	Including interviews with representatives from the Forest Agency, the Sámi Parliament, and individuals (researchers and/ or consultants) with leading roles in developing and maintaining the project.
18–20	Reindeer herding representatives	Including pilot interviews with two reindeer herders, and a workshop co-organized together with SSR, convening 11 herding representatives from 7 different herding communities and representatives from the SSR and the Sámi Parliament.

We have analyzed the material following Bacchi's WPR approach and guiding questions:[71] What is the 'problem' represented to be? What assumptions and conceptual logic underpin this representation? How has the representation come about? What is left unproblematic and what is silenced? What effects are produced? How and where has this representation been produced and legitimized and how could it be disrupted?[72] While we address all questions, we focus specifically on three inquiries, consistent with the three interview themes: eliciting dominant and silenced problem representations, identifying the assumptions and norms that underlie these problematizations, and tracing the effects (material and discursive) generated thereby.

5. Participatory land use plans – an emerging forest governance tool

In policy documents, the RBP is typically described as a land use planning tool intended for two primary purposes. First, as an *internal* tool for herding communities to improve their own planning, and second, as an *outwards-facing* tool to facilitate communities' participation in consultations invited by forestry companies.[73]

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71 Bacchi, "Why Study Problematizations? Making Politics Visible."

72 Ibid.

73 Forest Agency, "Staten Som Föregångare i Hållbart Skogsbruk Inom Renskötselområdet"; Forest Agency, "Upprättade Renbruksplaner 2005–2010"; Sandström et al., "Participatory GIS to Mitigate Conflicts between Reindeer Husbandry and Forestry in Vilhelmina Model Forest, Sweden."

As previously noted, in this paper, our interest is only in the latter application. Others, such as Kuoljok[74] provide more insights into the internal use.

5.1. What kind of tool is the RBP?

The RBP tool consists of several components, including a classification of pastures (*beteslandsindelning*); field inventories of, for example, pasture status; and mapping of external pressures *(omvärldsfaktorer)*. These external pressures are meant to illustrate the combined and cumulative effects on reindeer herding resulting from multiple drivers and competing land use and have been a core component from the start of the project.[75] These different parts are combined in a tailor-made GIS system that while intended to provide a "more complete" picture is acknowledged as never "fully complete"; due to the constant need to capture environmental change, changing land use as well as evolving community assessments of the land.[76]

Pasture classification essentially entails dividing the land into different pre-defined categories. *Key areas* are important grazing areas "regularly visited",[77] *core areas* comprise the heartland of the communities and are "of significant importance for continuing the practice of reindeer herding",[78] while *infrequently used areas* are areas "which could have good grazing conditions, but which currently are not, or irregularly, used".[79] Restoration areas describe areas "where previous land use have impacted herding conditions negatively".[80] The pasture classification thus ascribes the land with different values and purposes, and hence implies different needs for consideration and protection.[81]

Data from Global Positioning System (GPS) tracking collars on the reindeer was, after a few years, added as a fourth (optional) component. The Forest Agency noted that this added "important value and validity to the plans".[82] It is seen to complement the herders' practice-based knowledge and satellite imagery, which otherwise lay the foundation for the grazing classification conducted by the communities. Herders have also been positive, describing the inclusion of the GPS data as "drawing the

74   Kajsa Kuoljok. "Without Land We Are Lost: Traditional Knowledge, Digital Technology and Power Relations." *AlterNative: An International Journal of Indigenous People*s 15, no. 4 (2019): 349–58.

75   Forest Agency 2023a, "Staten Som Föregångare i Hållbart Skogsbruk Inom Renskötselområdet"; Prop. 2023/24:1., Budget Proposition

76   Forest Agency, "Statusrapport 2009: Renbruksplaner – Ett Planeringsverktyg För Samebyar", p. 1.

77   Forest Agency 2003.

78   Ibid.

79   Ibid.

80   Ibid.

81   Forest Agency 2023a, p. 47–48.

82   Forest Agency, p. 7.

reindeer's own land use plan".[83] GPS collars are expensive, however, and communities have struggled with technological shortcomings such as limited battery capacity and restricted cell coverage, particularly in the early years.[84]

5.2. Tracing the development of the RBP project

The RBP project is often described as bottom-up and user-driven.[85] As one of the developers noted: *"The communities were not happy with the consultations, so it was their initiative [to ask for RBP]"*.[86] The active role of herders in developing the tool has been described as key to the RBP project's success.[87] It was launched as a pilot project in Västerbotten County in the late 1990s, in a collaboration between the County Administrative Board, the Regional Forest Management Board (*Skogsvårdsstyrelsen*, later incorporated as part of the Forest Agency), university researchers, and two herding communities.[88] However, it is possible to trace the idea back to the 1980s, to discussions held in the CCG concerning forestry companies' lacking understanding of reindeer herding land use.[89]

While the communities own their data (GIS, inventories, written descriptions etc.) and decide when and with whom to share it,[90] the ownership of the RBP project itself has been external – first with the Regional Forest Management Board/Forest Agency and since 2016 with the administrative branch of the Sámi Parliament (a government agency regulated by the Swedish government). The long-term political interest from the state has been underscored by views such as that of the Forest Agency, seeing RBP as "the single most important project to improve the dialogue between reindeer herding and other land users".[91] In 2005, after six communities had engaged in the

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83   Field notes 2009, Notes from RBP meeting ("stormöte") in Vilhelmina, Västerbotten county. Organized by the Forest Agency inviting 14 herding communities, and relevant authorities and researchers.

84   Forest Agency, "Statusrapport 2009: Renbruksplaner – Ett Planeringsverktyg För Samebyar"; see also Kuoljok, "Without Land We Are Lost: Traditional Knowledge, Digital Technology and Power Relations."

85   Sandström et al., "Participatory GIS to Mitigate Conflicts between Reindeer Husbandry and Forestry in Vilhelmina Model Forest, Sweden"; Forest Agency, 2003, "Projekt Renbruksplan 2000–2002, Slutrapport – Ett Planeringsverktyg För Samebyarna."

86   Interview #14, developer.

87   Sandström et al., "Participatory GIS to Mitigate Conflicts between Reindeer Husbandry and Forestry in Vilhelmina Model Forest, Sweden."

88   Forest Agency, "Projekt Renbruksplan 2000–2002, Slutrapport – Ett Planeringsverktyg För Samebyarna."

89   Roos et al., "Samråd: An Institutional Arrangement in the Context of Forestry and Reindeer Husbandry in Northern Sweden"; Fjellström, "Att Lösa Konflikter via Konsensus? En Fallstudie Av Centrala Samrådsgruppen För Skogsbruk Och Rennäring."

90   Sámi Parliament, "Renbruksplan."

91   Forest Agency, "Dialog Och Samverkan Mellan Skogsbruk Och Rennäring", p. 18; see also Prop. 2009/10:201 Gränser i skog.

project, the government tasked the Forest Agency with expanding the development of the RBP and widening its scope.[92] One of the developers recalls how the Minister of Agriculture endorsed governmental funding for RBPs "*if it could minimize conflict*," however, the work needed to "*speed up and include all communities*".[93] By 2009, the number of involved communities was 14,[94] and in 2016, when project ownership (including responsibility for maintaining, updating, and assuring the quality of the plans) was handed over to the Sámi Parliament, 50 out of 51 herding communities had initiated work with RBP.[95]

The RBP project was initially financed by a combination of public funds and research grants.[96] The larger forestry companies contributed financially to the early development stages[97] and after a few years, funds for the RBP were channeled via the authorities and specified in the government's budget proposition.[98] Participating communities can apply for reimbursement for certain costs related to RBP work, which constitutes an important funding source for many communities.[99]

5.3. How are land use conflicts represented through the RBP?

The key governing issue that the RBP project responds to is, in broad terms, that "*modern forestry is in conflict with reindeer herding practices*".[100] Problem representations activated through the tool focus, in turn, on the conflict's procedural or communicative dimensions, which are assumed governable through improved maps and information sharing. For example, the Forest Agency argues that "good consultation material is instrumental to minimize the conflicts of interest".[101] As we paraphrase in the title, the tool and its pronounced role in Swedish forest governance presumes that conflict can be planned away. This is a central assumption with far-reaching implications, including depoliticizing the land use conflict.

While, in principle, the herding communities own their data, they are also held responsible for sharing parts of this data, at least the pasture classification.[102] Project

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92 Forest Agency, "Upprättade Renbruksplaner 2005–2010."
93 Interview #16, developer.
94 Forest Agency, "Statusrapport 2009: Renbruksplaner – Ett Planeringsverktyg För Samebyar."
95 Prop. 2917/18:1 Budget Proposition 2018
96 Forest Agency, "Projekt Renbruksplan 2000–2002, Slutrapport – Ett Planeringsverktyg För Samebyarna."
97 Forest Agency, "Informationsblad: RBP Ett Planeringsverktyg För Samebyar."
98 Prop. 2017/18:1 Budget Proposition 2018; Prop. 2023/24:1 Budget Proposition 2024; Prop. 2015/16:1 Budget Proposition 2016.
99 Workshop with herders, #20.
100 SOU, En ny rennäringspolitik – öppna samebyar och samverkan med andra markanvändare, p. 153.
101 Forest Agency, "Staten Som Föregångare i Hållbart Skogsbruk Inom Renskötselområdet", p. 33.
102 Forest Agency, p. 34; Field notes 2009.

developers express frustration when communities do not share data as anticipated: "*It's a shame, it [the data sharing] hasn't worked*".[103] During one of the early RBP meetings, the convening Forest Agency representatives stressed that the work has been publicly funded, and the classifications should therefore be shared.[104] Furthermore, through the RBP, communities are expected to communicate in ways so that industry actors can make sense of the reindeer herding land use. This has implied major efforts to educate and instruct herders in *how* to document and analyze grazing resources, to make traditional knowledge accessible to industry actors,[105] but also to make the communities' land use planning more efficient.[106] A passage from a previous study tellingly demonstrates the objective of molding Sámi knowledge and practices palatable to the industry as the greatest value of the RBP is deemed educational in terms of "preparing the communities to act within the Swedish society and how it is set up".[107] The fact that the RBP is designed on the back of – or at least with much inspiration from – the GIS plans that forestry companies themselves first developed[108] reflects a particular knowledge and planning hierarchy. One forestry representative explains that "*essentially, it's a forestry plan, but adapted to reindeer husbandry*".[109]

Through framing the land use conflict as a problem of communication and translation, Sámi communities are simultaneously held responsible and tasked to adapt, not only to the forestry industry's planning needs, but also to forestry industry-centered perceptions of the landscape.[110] For example, the basic prerequisite to grade the importance of pasture lands, assumes that the land *can* be divided into distinct parts and ultimately reflects a compartmentalized rather than relational understanding of the landscape (despite the outspoken ambition of the plan to illustrate

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103 Interview #16, developer.

104 Field notes 2009

105 Interview #15, developer. Sandström et al., "Participatory GIS to Mitigate Conflicts between Reindeer Husbandry and Forestry in Vilhelmina Model Forest, Sweden"; Forest Agency, "Projekt Renbruksplan 2000–2002, Slutrapport – Ett Planeringsverktyg För Samebyarna"; Forest Agency, "Statusrapport 2009: Renbruksplaner – Ett Planeringsverktyg För Samebyar."

106 Forest Agency, "Upprättade Renbruksplaner 2005–2010", p. 30.

107 Vestman, "Renbruksplan – Från Tanke till Verklighet", p. 46.

108 Sandström et al., "Participatory GIS to Mitigate Conflicts between Reindeer Husbandry and Forestry in Vilhelmina Model Forest, Sweden"; Forest Agency, "Projekt Renbruksplan 2000–2002, Slutrapport – Ett Planeringsverktyg För Samebyarna."

109 Interview #9, forestry representative.

110 For this wider issue, see, e.g., Andersson and Keskitalo, "Technology Use in Swedish Reindeer Husbandry through a Social Lens"; Lyons et al., "Protecting What Is Left after Colonisation: Embedding Climate Adaptation Planning in Traditional Owner Narratives"; Brown and Kyttä, "Key Issues and Priorities in Participatory Mapping: Toward Integration or Increased Specialization?"; Joks, Østmo, and Law, "Verbing Meahcci: Living Sámi Lands."

reindeer herding land in a holistic manner).[111] At the outset, herders were instructed not to include too much land in the most important category (the so-called key areas), and some herders recall restrictions being articulated of around 2–5% for key areas[112] or a maximum of 30% of key and core areas combined.[113] Exceeding these thresholds would "*not be seen as credible*".[114] Fiercely discussed, such limitations were later removed, but our interviews show how the sentiment lives on. One forestry representative explains that it was better the way it was before, when there were some limitations, because "*now communities can classify the whole area as important, and then it loses its value, it becomes useless….*".[115] Similarly, the category known as "infrequently used areas" has been ardently opposed by herders, suggesting that such areas are better described as "areas difficult to use" to illustrate their continued importance, despite pasture degradation and loss of functionality due to ongoing and historical impacts from competing land use.[116]

5.4. How do forest companies engage with RBP?

A somewhat surprising observation from the interviews was that many forestry representatives expressed limited usefulness of the RBP. Despite its espoused purpose as a tool to be used *during* consultations, the primary use cited among the forestry side was *prior to* consultations, i.e., for development of long-term (5–15 year) forestry plans.[117] As one interviewee stated: "*With more information, it's easier for us to make long-term plans. Then we can get it right from the start and avoid unnecessary consultations*".[118] While others highlighted the value of physical consultations and face-to-face interaction with the herders, the statement above demonstrates how the RBP is primarily used to make forestry planning practices more effective, and preferably interpreted without herders' practical expertise.

A common message from forestry representatives was that the RBP helps them adopt a "landscape perspective",[119] something which has been an outspoken need from herding communities[120] whose land use stretches over much larger distances,

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111 Forest Agency, "Projekt Renbruksplan 2000–2002, Slutrapport – Ett Planeringsverktyg För Samebyarna."

112 See interview data reported in Löf, "Challenging Adaptability: Analysing the Governance of Reindeer Husbandry in Sweden.", paper IV, p. 13.

113 Vestman, "Renbruksplan – Från Tanke till Verklighet."

114 Field notes 2009.

115 Interview #1, forestry representative.

116 Field notes 2009; see also Löf, "Challenging Adaptability: Analysing the Governance of Reindeer Husbandry in Sweden."

117 Interview #1, 2, 3, 4, 5, 6, 7, 8, 9 and 10, forestry representatives.

118 Interview #8, forestry representative.

119 Interview #1, 2, 3, 4, 5, 7, 8, 9, 10, forestry representatives.

120 Forest Agency, 2003."Projekt Renbruksplan 2000–2002, Slutrapport – Ett Planeringsverktyg För Samebyarna."

often from the coast to the mountains,[121] compared to individual forest companies operating on more confined areas. However, when forestry representatives were asked to describe what they meant by a landscape perspective, their understanding was typically still restricted to their own corporate land holdings (*markinnehav*), thus comprising only a small part of the relevant herding landscape. As one forestry representative acknowledged, adopting an *actual* landscape perspective in forestry planning would require coordination between companies and changing the norm, deemed highly unlikely and "*extremely time-consuming and difficult*".[122]

The part of the RBP forestry representatives regard most valuable is the pasture classification. Most agreed that the maps helped them consider appropriate mitigation measures (*hänsynsåtgärder*),[123] helping the companies prepare for difficult situations: "*if, when and where conflict could arise*",[124] and enabling more strategic long-term forestry planning.[125] One forestry representative explained how they used the RBP to strategically plan objects located also in the core and key areas, but "*with greater precaution*" since the company cannot afford to set even these most sensitive areas aside.[126] While some took a narrow stance that their company should *only* consider mitigation measures on the most important grazing lands (key and core areas), others argued that the cartographic delineations could not be read statically. As one of them stated: "*For many [communities] the entire land is important, they need both belts and suspenders*".[127]

During the interviews, forestry representatives reiterated the concern that communities were reluctant to share this information, speculating it might be attributed to fear of losing control over how data would be (mis)used by the companies. Yet, somewhat surprisingly, several also questioned the usefulness of the pasture classification, emphasizing that maps were often outdated or incomplete, hence not reliable.[128] This view reveals an expectation from the corporate side that communities must continuously update the plan.[129] It is noteworthy that some forestry representatives even demanded updates after forestry activities: "*We've clear-cut the area, but they still haven't updated their plan*",[130] or as another forestry representative put it "*if, for example, a wind farm is established and new migration routes between seasonal pastures need to be decided, the communities should be obliged to consult with us [the forest companies]*

121 For an overview see Horstkotte et al. 2022, *Reindeer Husbandry and Global Environmental Change: Pastoralism in Fennoscandia*.
122 Interview #3, forestry representative.
123 Interview #1, 2, 4, 5, 6, 9, 10, 11, forestry representatives.
124 Interview #6, forestry representative.
125 Interview #3, 6, 11, forestry representatives.
126 Interview #1, forestry representative.
127 Interview #3, forestry representative.
128 Interviews #1, 2, 3, 4, forestry representatives.
129 Interview #1,2, 3, 4, 7, 9, 10, forestry representatives.
130 Interview #1, forestry representative.

first, to reduce interference with forestry practices.[131] These statements reveal an assumed hierarchy in land use decision, where the herding area classification is regarded as fluid and malleable to forestry activities. In policy documents, we similarly discern a gradual shift from the early emphasis on community involvement towards increasing "quality control" of the RBPs.[132]

In our search for silences, we also examined how the plans are *not* being used. Here, two primary observations stand out. First, despite the expressed intent of the RBP to map and assess cumulative effects (this being an important motivation for herding communities to take part in the RBP project at the outset),[133] only two company representatives (of 12 interviewed) recognized this potential use of the tool. Developers similarly noted that after more than 20 years, progress in this application has been slow and much work remains to be done.[134] Secondly, most forestry representatives seemed unaware and unreflective of the fact that RBP does include the category 'restoration areas', where it is up to the communities to identify and suggest areas in need of restoration or mitigation measures. We interpret this as an indication of how "solutions" are narrowly constructed and focused on *reducing* (additional) harm on grazing lands while alternative measures to protect what is left and improve already degraded lands become silenced.

6. A power-sensitive analysis of the RBP in use

Above, we have identified problem representations, silences and how the tool came into being. We now proceed to unpack important assumptions and claims on which these problem representations rest.

6.1. Underlying assumptions

The assumption that grazing lands should be classified after relative importance essentially suggests a compartmentalized view of the land. Meanwhile, forestry representatives also assume that *all* forests must eventually be cut, and hence contrarily, all land is important for forest production.[135] Some interviewees even described a sense of a moral duty: "*We have a responsibility to use the forest, to make sure new forests can grow up*".[136] Refraining from logging, in their view, equals "*putting a dead hand*

131　Interview #6, forestry representative.

132　Swedish Government, Strategidokument: Sveriges nationella skogsprogram; Forest Agency, "Upprättade Renbruksplaner 2005–2010"; Forest Agency, "Staten Som Föregångare i Hållbart Skogsbruk Inom Renskötselområdet."

133　E.g., Forest Agency, "Projekt Renbruksplan 2000–2002, Slutrapport – Ett Planeringsverktyg För Samebyarna."

134　Interview #14, 16, developers.

135　Interview #1, 2, 3, 5, 6, 9, 10, forestry representatives.

136　Interview #5, forestry representative.

over the forest".[137] This demonstrates how forest industry norms remain intact despite the use of the RBP, legitimated by claims that "*forestry is the disturbance that herding must simply tolerate*".[138]

Another important assumption is expressed in relation to the notion of co-existence.[139] Impacts of forestry are seen as temporary and co-existence between the two land uses is presumed based on a semi-dynamic planning rationale, a form of rotational, planned co-existence. One representative explains "*if we cut the forest sequentially, adapting the forestry production chain, then there is always forest available [for herding] in one area*".[140] Such views assume that every piece of land is exchangeable for another, that the reindeer herding land use (including the movement of the reindeer) can both be planned and steered, and implicitly that all forest land will eventually be cut. This view on co-existence is at odds with herding practices based on high degrees of flexibility and adaptation from year to year, following the reindeer and responding to changing grazing conditions in the landscape.[141]

Forest representatives also tend to regard themselves as the only legitimate rights-holder.[142] As one of them put it, "*it should be in their [the communities'] interest to provide us with the information. If we were to track down all stakeholders who have views on how we manage our land, then it's just not feasible!*".[143] The subjectification of herding communities as stakeholders (conveniently ignoring their status as rights-holding subjects), is also made with reference to the legislation, specifically the unclear legal status of the reindeer herding right in the Forestry Act, for example that when facing a choice between setting aside land for nature conservation or reindeer grazing – forestry representatives prioritize nature conservation since it is more clearly demanded in the legislation.[144]

6.2. How does the RBP influence land use decisions in forestry planning?

While we cannot trace the direct material effects of the RBP in governing the interactions between forestry and herding, our material allows us to say something about how forestry representatives perceive influence of the tool on land use

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137 Interview #11, forestry representative.

138 Interview #6, forestry representative.

139 For earlier discussions of the problems associated with this term and its discursive effects, see, e.g., Kløcker Larsen et al., "Sami-State Collaboration in the Governance of Cumulative Effects Assessment: A Critical Action Research Approach"; Löf et al., "Unpacking Reindeer Husbandry Governance in Sweden, Norway and Finland: A Political Discursive Perspective."

140 Interview #11, forestry representative.

141 Horstkotte, Löf, and Moen, "Understanding Adaptation Landscapes: Mapping the Complexity of Decision Making in Reindeer Herding", this volume; Solveig Joks, Liv Østmo, and John Law. "Verbing Meahcci: Living Sámi Lands." *The Sociological Review* 68, no. 2 (2020): 305–21.; Fjellheim, "Wind Energy on Trial in Saepmie."

142 Interview #1, 2, 5, 6, 8, 9, 10, 11, forestry representatives.

143 Interview #8, forestry representative.

144 Interview #8, also discussed in #4, 5, 6, 7, 10, forestry representatives.

decisions and planning practices. On a general level we find that the RBP is primarily used to enable, not constrain, the forest companies' logging activities, which is achieved through identifying consideration and mitigation measures.[145] As one forest representative put it: "*It's not a question of preventing forestry, but about finding solutions that minimize the impact on reindeer herding*".[146] In fact, only one forest representative explicitly talked about using the RBP with the purpose of protecting grazing land.[147]

While identifying mitigation measures may seem promising, our data indicates a narrow understanding of what mitigation entails, quickly dismissing measures deemed too costly or compromising productivity.[148] One forestry representative explained that "*naturally, it costs us more money [adopting mitigation measures], but this pays back through the logging [by gaining access to more areas]. So, those land use plans contain much helpful information, in my view*".[149] One of the most frequent examples of mitigation was to postpone planned forestry activities for a few years (*överhållning*). Several also refer to an overall shrinking maneuverability for the forest companies, where extensive logging has left them with few available options, meaning that mitigation measures are becoming increasingly difficult to adopt.[150]

Consequently, there is no evidence to suggest that the use of RPB leads to any decisions about *if* logging shall take place, but rather *when*, and possibly *how* (for example, related to choices concerning soil preparation, fertilization, thinning, and clearing, which were also frequently mentioned). Moreover, issues which have long plagued herding communities, such as the use of the invasive pine species *Pinus contorta* or attempts to change forestry methods from harmful clearcutting to selective cutting,[151] seem to be left outside the scope of identified, possible mitigation measures.

7. The RBP and role of dialogue-based tools for just and legitimate forest governance

We have shown how corporate engagement with RBP functions primarily to facilitate continued logging, rather than protecting grazing resources. Moreover, the RBP places a heavy load on the communities, as has earlier been observed for the use of

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145 Interview #1,2, 4, 5, 6, 9, 10, 11, forestry representatives.
146 Interview #2, forestry representative.
147 Interview #9, forestry representative.
148 Interview #6, 7, 8, 9, forestry representatives.
149 Interview #6, forestry representative.
150 E.g. Interview #3, 6, forestry representatives
151 See Kivinen et al., "Effects of Modern Forest Management on Winter Grazing Resources for Reindeer in Sweden."

GPS collars on reindeer[152]. The use of the tool adds both administrative and emotional burdens on herders,[153] while continued encroachment is legitimated through a weak regulatory environment. Communities thus find themselves between a rock and a hard place: They could opt not to share their land use plans (notably the pasture classifications), or even decline consultations altogether – but then the meager opportunity to influence actions of forest companies will be lost. In the remainder of this section, we discuss our findings from an environmental justice perspective and what contributions our study makes to the understanding of the potential of participatory land use planning tools to "plan conflict away".

7.1. Recognitional justice

As we witnessed in the interviews, formal recognition[154] is lacking, with reindeer herding communities discursively positioned as one interest group among others, rather than rights-holders with legitimate claims to the land. Previous studies have highlighted this asymmetrical relationship[155] and how weak and unclear sectoral legislation contributes to upholding this imbalance.[156] Our study does not indicate that the RBP has any potential to help rectify such formal recognitional injustices.

The RBP project follows the rationale that "conflict can be planned away" via improved understanding and communication. Our study, however, demonstrates limited improvement in discursive recognition[157] including respect for Sámi herders' needs and priorities. In some interviews, we heard that a benefit of RBP is the development of a common language but, as we demonstrate, this is a language structured on the back of forestry norms. While several forestry representatives expressed solidarity with the herders' situation and a willingness, in principle, to do more, such ambitions were outweighed by a lack of (formal and discursive) recognition,

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152 Andersson and Keskitalo, "Technology Use in Swedish Reindeer Husbandry through a Social Lens"; Kuoljok, "Without Land We Are Lost: Traditional Knowledge, Digital Technology and Power Relations"; Bostedt et al., "Measuring Transaction Costs for Pastoralists in Multiple Land Use Situations: Reindeer Husbandry in Northern Sweden."

153 Workshop with herders, #20.

154 In accordance with Benjaminsen et al. "Recognising Recognition in Climate Justice."

155 Widmark, "Forestry and Reindeer Husbandry in Northern Sweden–the Development of a Land Use Conflict"; Johansson, "Towards Democratic and Effective Forest Governance? The Discursive Legitimation of Forest Certification in Northern Sweden"; Widmark et al., "Measuring Transaction Costs Incurred by Landowners in Multiple Land-Use Situations."

156 Brännström, "Skogsbruk Och Renskötsel På Samma Mark: En Rättsvetenskaplig Studie Av Äganderätten Och Renskötselrätten"; Sarkki et al. "Reindeer Herders as Stakeholders or Rights-Holders? Introducing a Social Equity-Based Conceptualization Relevant for Indigenous and Local Communities"; Löf et al., "Unpacking Reindeer Husbandry Governance in Sweden, Norway and Finland: A Political Discursive Perspective."

157 Benjaminsen et al. "Recognising Recognition in Climate Justice."

economic demands, and a dominant forestry normativity where the economic interest of the forest companies is consistently given priority.

7.2. Procedural justice

The RBP has provided companies with some opportunities for considering the needs of herding communities. However, the stated desire of companies to use this information prior to, rather than during, consultations could prevent communities from asserting meaningful influence. While forestry representatives express that the RBP improves and prepares them better for consultations, they are not oblivious to the challenges facing communities, including the burden of participating in numerous and overlapping consultations.

The RBP might thus contribute towards more efficient corporate land use planning – for example by enabling forestry staff to conduct early detection of potential conflict hot spots and plan for gradually closing in on the areas of most importance for reindeer herding). But there is limited influence on land use decisions and how relations between the actors are structured, with expectations placed on communities to constantly update the plans in response to industry activity.

7.3. Distributive justice

The unequal distribution of burdens and benefits between forestry and reindeer herding communities is rife throughout our findings. It is primarily the herding communities who must undergo education, are asked to adapt their planning practices, and use a tool designed primarily based for the needs of the forest industry. They are also expected to adopt a terminology palatable to outsiders, including making practical herding knowledge comprehensible to foresters.[158]

Communities might succeed in demanding certain mitigation measures, such as more thinning and less fertilization. Yet, the heartlands of their grazing areas – those tracts they have, adhering to the RBP pasture classification, defined as of absolute necessity to be able to continue traditional herding practices[159] – will most likely be subject to logging. If not even the lands categorized as most valuable can be protected, the analysis of this tool maybe tells us more about a broken system than the meagre options to address the land use conflict provided through the RBP.

Several comments from herders similarly testify to a sense of hopelessness, of being left to beg for the goodwill of the forest companies. As one herder explained

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158 On uneven transaction costs, see also Bostedt et al., "Measuring Transaction Costs for Pastoralists in Multiple Land Use Situations: Reindeer Husbandry in Northern Sweden"; Widmark et al., "Measuring Transaction Costs Incurred by Landowners in Multiple Land-Use Situations."

159 Forest Agency, "Projekt Renbruksplan 2000–2002, Slutrapport – Ett Planeringsverktyg För Samebyarna."

to us: "*We find ourselves standing with our hat in one hand and a bag of supplementary fodder in the other*."[160] In other words, failing to obtain the forest industry's charity, they risk being forced into unwanted and maladaptive decision trajectories.[161] The distribution of burdens is thus largely determined on the basis of what measures the forestry companies are willing to tolerate. In sum, the burden of "solving" the land use conflict is, by and large, placed on the shoulders of the herding communities.[162]

8. Conclusion

This study was prompted by an awareness of the risks associated with the deliberative turn in environmental governance and, specifically, expectations placed on participatory mapping projects as a means of addressing land use conflicts. We have investigated the RBP as such a tool, developed with the outspoken ambition to mitigate land use conflicts between reindeer herding and forestry. By adopting Bacchi's WPR approach, our analysis has shown how RBP, embedded in a governing context for Swedish forestry shaped by ideas of de-regulation and corporate consultation, contributes to reproducing specific representations of (and responses to) the conflict that perpetuates existing power imbalances and inequalities.

The study raises doubts about the RBP project as a political and state-led undertaking. We do not suggest, though, that efforts made by herding communities, and others involved, have been in vain. As Wainright and Bryan[163] have noted, cartographic-legal strategies must always be assessed vis-à-vis the broader context of Indigenous political struggle. When it comes to RBP, several Sámi reindeer herding communities have applied the participatory GIS tool to a host of other decision-making processes, beyond the corporate consultations in forestry. Considering their own land use visions and traditional knowledge, they strategically craft cartographic material and insert their 'counter-maps'[164] into environmental impact assessments and court appeals on mining, wind power, and hydropower.[165] What we critique, however, is the expectation that RPB can help mitigate conflicts in the specific context of herding and forestry interactions. Contrarily, we see how the tool in use

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160 Workshop with reindeer herder #20.
161 Horstkotte et al., "Supplementary Feeding in Reindeer Husbandry: Results from a Workshop with Reindeer Herders and Researchers from Norway, Sweden and Finland." See also Horstkotte et al. this volume
162 Fjellheim, "'You Can Kill Us with Dialogue': Critical Perspectives on Wind Energy Development in a Nordic-Saami Green Colonial Context."
163 Joel Wainwright, and Joe Bryan. "Cartography, Territory, Property: Postcolonial Reflections on Indigenous Counter-Mapping in Nicaragua and Belize." *Cultural Geographies* 16, no. 2 (2009): 153–78.
164 ibid.
165 E.g., Kløcker Larsen et al., "Sami-State Collaboration in the Governance of Cumulative Effects Assessment: A Critical Action Research Approach."

reproduces conflicts and injustices embedded in the wider governing context. Our study thus provides important lessons for the future designs of dialogical tools, including critical reflection of what representations are taken for granted or reinforced through their adoption, as well as how known inequalities and knowledge hierarchies could be deliberately challenged, for example through the language and routines adopted.

We are aware that a theoretical tension runs through this study, one concerned with the relative hope that can be invested in the agency of forest companies in meeting Sámi herding communities on equal terms. Bacchi's critical approach to policy analysis belongs to Foucault-influenced poststructuralism, primarily seeking to explain behavior and outcomes by looking at how we are governed through problematizations.[166] Yet, our inquiry has nonetheless probed the interpretive agency of forestry representatives as frontline actors in environmental governance.[167] This latter line of theorizing is concerned with the possibilities of what industry actors *could* potentially do with the RBP tool. In our view, there is nothing to suggest that the use of RBP could not, in principle, have more influence and relevance from a Sámi herding perspective had only the forestry industry embraced opportunities more proactively. As we saw, several industry representatives exhibited personal commitments. The issue here is, most probably, that such individuals are tied up in corporate governance structures, with expected profit targets, internal policies, and directives given by boards and directors – in turn embedded in a highly unequal regulatory regime that provides little support to legitimate actions that respectfully engage with Sámi rights claims.

Whereas forestry companies' engagement with RBP suggests some positive (but limited) outcomes, these are outweighed by a highly skewed distribution of benefits and harms and privileging of forestry industry centered problem representations. Our overall conclusion is, hence, that like experiences elsewhere[168] the RBP by and large functions to cement preexisting inequities. This means that it is unlikely to contribute to any marked improvements, whether in terms of the antagonistic relations between forestry and reindeer herding, or the perceived justice and legitimacy of Swedish forest governance.

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166 Bacchi, "Why Study Problematizations? Making Politics Visible."
167 Holstead, Funder, and Upton, "Environmental Governance on the Street: Towards an Expanded Research Agenda on Street-Level Bureaucrats."
168 Radil and Anderson, "Rethinking PGIS: Participatory or (Post) Political GIS?"; Lyons et al., "Protecting What Is Left after Colonisation: Embedding Climate Adaptation Planning in Traditional Owner Narratives"; Ramsey, "A Call for Agonism: GIS and the Politics of Collaboration."

Acknowledgements