



Psychological and Social Impacts of Top-down Conservation Initiatives on Indigenous Communities: Lessons from the Announcement of two Royal Decrees in Thailand

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Abstract

In November 2024, the Thai government approved two Royal Decrees for ecosystem conservation that would severely threaten the livelihoods, living prospects, and continued residence of Indigenous communities in protected areas. Protests with 10,000 participants prompted a review of the decrees in May 2025. This research report investigates the psychological and social implications of the announcement of the Royal Decrees and argues that it undermined community social capital and intrinsic engagement with everyday environmental heritage. We drew on qualitative and survey data collected from 09/2024 to 05/2025 in two Pga K’Nyau and two Hmong communities in the northern Thai highlands, comprising community consultations with 73 participants, 101 semi-structured interviews, and two survey rounds, for a total of 384 observations. We used qualitative thematic analysis and descriptive statistics to explore how community members experienced, interpreted, and responded to the announcement of the decrees. We found that Indigenous villagers experienced anxiety and unease, and that the decrees undermined community efforts to conserve and engage with local ecosystems. The continued uncertainty surrounding communities’ future sparked a strong activist sentiment to resist the decrees. Disruptions to community social capital and everyday environmental heritage also had plausible, potentially significant ecological downstream effects. We therefore call for an urgent correction to the conservation initiative to embrace inclusive, bottom-up natural resource governance.

Keywords Conservation policy · Forests · Tropics · Heritage · Indigenous peoples · Thailand

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Introduction

Notwithstanding considerable variation in intervention modes across regions and over time, global ecosystem conservation practice has shown renewed and growing interest in top-down area protection since the 2000s (Brondízio et al., 2021; Tauli-Corpuz et al., 2020; Wilshusen et al., 2002). The latest global policy iteration – the 30×30 Initiative to conserve 30% of marine and terrestrial areas by 2030 – exemplifies this trend. Despite inclusive rhetoric, it remains prone to subordinating local and Indigenous communities to state-driven conservation agendas (Herse et al., 2024). This is problematic, given an abundance of evidence that top-down ecosystem conservation policies have exhausted their positive potential and are highly likely to produce detrimental social outcomes and counterintuitive ecological outcomes (Dawson et al., 2021). It is therefore encouraging that international policy texts increasingly recognize the social aspects of conservation and commit to recognizing Indigenous peoples in ecosystem conservation.

However, conservation practice has yet to fully embrace this inclusive sentiment. Thailand is a case in point. As a Southeast Asian country with abundant tropical forests, Thailand is a party to binding international conservation treaties, including the Convention on Biological Diversity (CBD). The CBD explicitly recognizes the role of Indigenous peoples: Article 8(j) requires parties to “respect, preserve and maintain knowledge, innovations and practices of indigenous and local communities” for conservation, while Article 10(c) obliges them to “protect and encourage customary use of biological resources in accordance with traditional cultural practices” (Secretariat of the Convention on Biological Diversity, 2011:8–9).

Despite policy commitments, Thailand has a long history of tensions between aggressive state-led conservation initiatives and Indigenous communities living in or near national park areas (Herse et al., 2024; Trakansuphakorn, 2008). Continuing this pattern, the Thai government announced on 12 November 2024 two draft Royal Decrees to regulate natural resource conservation in national parks and wildlife sanctuaries (henceforth referred to as “Royal Decrees” or “decrees” for simplicity). Royal Decrees are legally binding policy instruments issued by the executive branch to articulate specific rules under existing laws. In this case, they were grounded in Section 64 of the National Park Act B.E. 2562 (2019) and Section 121 of the Wildlife Conservation and Protection Act B.E. 2562 (2019), respectively. Although still in the proposal stage and applicable only to a limited number of Thailand’s protected areas, the Royal Decrees would impose significant constraints on residence, land use, and tenure security for highland Indigenous communities. The top-down formulation, which sidelined local

and Indigenous communities, provoked considerable backlash. Protestors, including over 10,000 Indigenous community members, demanded a review of the laws during a nine-day encampment in front of Chiang Mai Provincial Hall in northern Thailand, from 24 March to 1 April 2025 (Tran, 2025).

Six months after the Royal Decrees were announced, the Thai government conceded to the protesters and established a subcommittee on 21 May 2025 to review and revise the drafts. To inform this ongoing policy process, this research report examined the early impacts of the announcement of the Royal Decrees. Focusing on the psychological and social reactions of Indigenous villagers in potentially affected communities within the scope of the Royal Decrees, we drew on extensive qualitative and survey data from four Indigenous highland villages. We analysed how community members experienced, interpreted, and responded to the announcement of the decrees before their nationwide rollout.

The findings lead us to argue that even the announcement of the draft decrees had a considerable negative impact, undermining community social capital and intrinsic engagement with everyday environmental heritage. Given that these communities already engage in a wide range of environmental and conservation-related heritage practices, from firebreak clearing and tree planting to rituals involving natural deities, we recommend stronger inclusion of forest-dependent communities in co-managed conservation frameworks. In addition, we advocate independent support for their engagement with everyday environmental heritage and for intergenerational knowledge transmission to strengthen conservation-relevant social capital. Structured platforms for dialogue between policymakers and communities, facilitated by independent academic mediators, would further enable the collaborative pursuit of conservation objectives. In this way, the same ecological goals motivating the Royal Decrees could be achieved with fewer social harms and greater legitimacy.

Background

Study Area

According to official statistics, forest cover in Thailand declined steadily from an estimated 53.3% of the land area in 1961 to 25.3% in 1998, then slowly rebounded and stabilised at 31.5% by 2023 (FAO, 2009:13; RFD, 2025). In response to rapid deforestation, Thailand set forest conservation targets of 15% of the total Thai land area under the *1985 National Forest Policy*, which were expanded shortly thereafter to 25%. The rapid expansion of conservation areas reached the 25% goal as early as 1991. The National

Council for Peace and Order, under the military government following the 2014 coup d'état, enforced goals to attain 40% forest coverage. Internationally recognised terrestrial protected areas according to the *World Database on Protected Areas*, amounted to 18.43% (94,712km²) of Thailand's land area in August 2025 (Fig. 1) (UNEP-WCMC, 2025). The specific study area of Chiang Mai Province had, with 68.3%, the fourth-largest share of forest area among the 76 Thai provinces, well above the northern regional average of 63.2% and the national average of 31.5% (RFD, 2025). The province also had an extensive Indigenous population, with Karen and Hmong among the most numerous of the diverse Indigenous groups residing in northern Thailand.

For over 60 years, Thailand has followed a conservation model of a “people-free forest” (the Forest Act B.E. 2484 [1941] and the National Reserved Forest Act B.E. 2507 [1964]). The effectiveness of its largely top-down protected area management approach has been repeatedly questioned. On the one hand, research has documented that forest loss rates were somewhat lower within protected areas than outside them (Liu et al., 2022). On the other hand, abundant evidence shows that forest conservation areas have experienced deteriorating soil health, and that conservation policies have exposed forest-dependent Indigenous and local communities to health risks, livelihood challenges, and threats of arrest and eviction (Bruun et al., 2017; Ingalls et al., 2018).

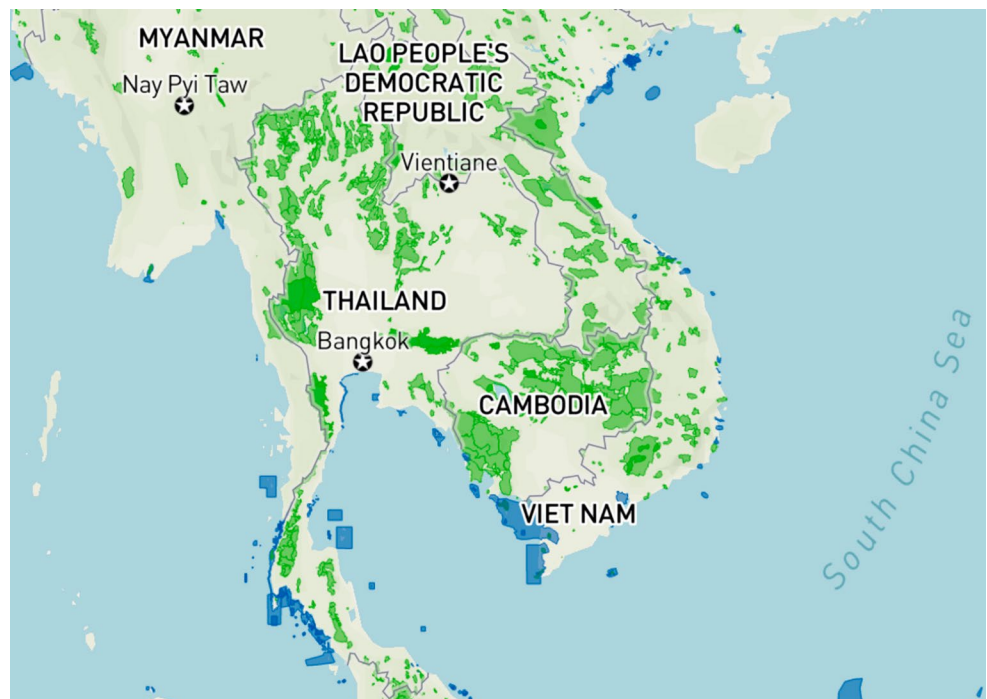
Although the military government was succeeded by two general elections after the 2014 coup d'état, the Thai conservation policy agenda has retained a repressive character.

For instance, 46,000 court cases related to alleged forest encroachment – often by forest residents themselves – were filed nationwide between 2014 and 2022 (Green News, 2022). Protests have abounded in response to the conservation policy, both in Bangkok and in other provinces, including in Chiang Mai at the APEC Summit on 24 August 2022, where activists protesting current conservation laws (i.e., the National Park Act B.E. 2562 [2019]) were met with police violence. The subsequent proposal of the two Royal Decrees continues the hardline conservation policy agenda established by the 2014 military government.

Progression of the Royal Decrees

The draft Royal Decrees were originally proposed on 11 July 2023 and approved by the Cabinet on 12 November 2024, marking one of the most significant recent developments in Thailand's conservation policy landscape. The approved decrees were still in the proposal stage, as they sought to implement conservation projects in six initial areas, including four national parks, one wildlife sanctuary, and one prohibited hunting zone (Thai PBS Policy Watch, 2024). The decrees' legislative language was intended to support communities living in these forest areas, especially by permitting residence or work on land they had used before the decrees were enforced. However, households residing in the classified areas would be restricted to maintaining 20 rai (3.2 ha) of land under a 20-year residency tenure, and they would be denied land ownership or the right to hold other land outside the designated area.

Fig. 1 Study area of Thailand, with terrestrial (green) and marine (blue) protected areas per the world database on protected areas, August 2025. Source: UNEP-WCMC (2025)



As a set of specific, legally binding rules for the already problematic conservation policy under the National Park Act B.E. 2562 (2019) and the Wildlife Conservation and Protection Act B.E. 2562 (2019), the proposed implementation drew strong opposition from civil society, particularly Indigenous groups in northern Thailand. Local communities expressed concerns that the decrees would continue transforming lawful residents into de facto trespassers, centralize conservation authority in state agencies, and undermine the legitimacy of local environmental management practices. These concerns were compounded by the lack of clear provisions for rights renewal after the initial 20-year term, which could affect over 4,000 communities and 4.2 million rai (672,000 ha) of land if scaled up nationwide (Thai PBS The Active, 2024). Mass mobilizations followed, including a protest encampment of over 10,000 Indigenous people in Chiang Mai in March and April 2025. Protesters demanded a review of the laws and formal recognition of Indigenous land rights, which eventually led the Cabinet to accept key demands on 1 April 2025 (Asia Indigenous Peoples Pact, 2025).

Among the government responses was the formation of a joint law amendment committee, formally known as the “Subcommittee to Study and Revise the National Park Act B.E. 2562 (2019) and the Wildlife Conservation and Protection Act B.E. 2562 (2019),” on 21 May 2025 (National Land Policy Committee, Order No. 2/2568 [2025]). Its objectives included “Study, analyse, and evaluate the impacts of existing laws relevant to conservation projects in national parks and wildlife protection areas” and “Conduct fieldwork to collect public input and factual data within areas defined by national land policies and Cabinet resolutions, reporting within 90 days.” These objectives prompted the current study to inform the ongoing policy process at a critical juncture.

Indigeneity and Heritage in Conservation Policy

Conservation policy research has repeatedly shown that top-down interventions, particularly those that exclude Indigenous communities, often produce problematic social outcomes and counterintuitive ecological results (Dawson et al., 2021; Fa et al., 2020; Garnett et al., 2018; Tauli-Corpuz et al., 2020). Beyond the extensively documented negative social outcomes, including human rights violations, evictions, economic hardship, and cultural erasure (Linh et al., 2021; Tauli-Corpuz et al., 2020), externally imposed, top-down conservation arrangements can also shift environmentally harmful practices to less effectively protected areas, accelerate biodiversity loss through ecosystem disruption and selective overpopulation of species, displace local populations, and create perverse incentives for

economic extraction or even the destruction of forest lands to avoid expropriation (Balmford et al., 2025; Dawson et al., 2021; Haenssger et al., 2023; Miller et al., 2023). While the underlying impact pathways have primarily focused on power imbalances, rights and resistance, and livelihood strategies, psychological mechanisms and social dynamics have received less attention (Balmford et al., 2021; Valatin et al., 2016).

Conversely, studies of locally or co-managed conservation areas worldwide have shown that empowering Indigenous communities can enhance conservation capacity, reduce habitat loss, and contribute to the restoration of native plants while culturally and economically safeguarding Indigenous livelihoods (Brondízio et al., 2021; Fa et al., 2020; Garnett et al., 2018; Tran et al., 2020). However, although locally and Indigenous-led conservation approaches tend to be more effective on average, we must also recognize that Indigenous and local forest-dependent communities are neither homogeneous nor cohesive social units, nor are their practices universally pro-environmental. For instance, the now-abandoned practice of pioneering swidden cultivation in northern Thailand contributed to the persistent stereotype that some ethnic groups are forest destroyers, and reports of varied forms of ecological engagement and tensions within and across highland communities have been widely documented (Forsyth & Walker, 2008; Ingalls et al., 2018; Laungaramsri, 2003; Roth, 2007; Youdelis, 2013). Nevertheless, conservation policy has recognized the potential benefits and begun incorporating social and cultural aspects experienced by local and Indigenous communities into policy frameworks, for instance, by articulating the nonmaterial benefits humans derive from local ecosystems (IPBES, 2022; Treviño, 2022). The IPBES methodological assessment report on the diverse values and valuation of nature (2022:10) stressed that social and cultural diversity shape people’s worldviews and their relationships to ecosystems. The report argues that “a forest may simultaneously be seen as a useful resource for harvesting timber (living from), a harbour of biodiversity and carbon sink (living with), a cultural landscape (living in) or as an inseparable part of one’s body or of the ecological identity of a community (living as),” which can inform conservation policy decisions. A focus on “heritage” and its active role in shaping this bidirectional relationship could further enrich culturally sensitive and socially inclusive conservation policy research and practice (Bele et al., 2024).

Contemporary conceptualizations of everyday heritage highlight its forward-oriented character by “mak[ing] us who we are, colour[ing] how we interact, and shap[ing] the futures that we can envisage and might create” (Auclair & Fairclough, 2015, p. 4). This conceptualisation acknowledges “the ‘work’ that ‘heritage’ ‘does’ as a social and

cultural practice” (Holtorf & Bolin, 2024; Smith, 2006:11); that is, a process of meaning-making and negotiation about which in-/tangible aspects of a community’s cultural practices create a sense of attachment to people, identity, and place (Auclair & Fairclough, 2015; Auclair & Garcia, 2021). Expressions of in-/tangible heritage evolve throughout this process and materialise as “ordinary” objects, imaginaries, and practices (Bonnin & Moore-Cherry, 2023; Coles et al., 2013) – and are therefore not limited to traditional or primordial stereotypes of Indigeneity. This analytical framing draws attention to the transmission and reinterpretation of social memory; its role in forming attachments is deeply affective and can bring to the fore the psychological consequences of conservation policy; and the negotiation and intergenerational transmission of heritage can help explain collective responses to conservation policy in the context of cultural reproduction.

The concept of everyday environmental heritage, therefore, helps to understand the potential impacts of conservation policy on communities’ transmission of social memory, their sense of belonging, and the continuity of their cultural practices. It also complements existing scholarship that has focused on heritage as a cultural marker threatened by top-down conservation (Aziz et al., 2024), as a tool for environmental management (Rodrigues et al., 2022), or as an element for valuing cultural ecosystem services (IPBES, 2019; Treviño, 2022).

Materials and Methods

Research Design

The research informing this report drew on participatory action research with heritage-sensitive pilot activities in four highland Indigenous communities in northern Thailand. The pilot activities supported existing everyday environmental heritage practices identified in prior ethnographic research and participatory work with communities, practices that were likely to contribute to forest conservation. Pilot 1 involved community-led forest protection activities, such as firebreak clearing; Pilot 2 supported the marketing of origin-labelled products; and Pilot 3 focused on youth media training to capture and communicate communities’ environmental heritage. The evaluation of these pilots was not the focus of this research report, but their links to conservation-related heritage practices made villagers’ participation in the pilots relevant to the analysis. The pilot implementation did not follow a randomized design with control communities serving as “counterfactuals,” but our study included, in each community, both villagers who participated in the pilot

activities and those who were not involved in any of the pilots.

The study sites were part of a long-term research agenda and were originally invited to participate because of their heterogeneous socioeconomic conditions. The sites comprised two Pgaz K’Nyau (Karen) and two Hmong villages with varying degrees of rural economic integration and diverse forest conservation practices: Pgaz K’Nyau Village A is a small, remote community within a national park; Pgaz K’Nyau Village B is a market-integrated village that had largely converted to Christianity; Hmong Village A is a relatively large, agriculture-based community adjacent to a national park; and Hmong Village B is an affluent, tourism-dominated village located in a forest conservation area (“ป่าสงวน” or *p.a. sa-nguang*).¹ These case study communities were not included in the initial trial areas of the Royal Decrees. However, their location in or adjacent to national park areas meant they fell directly under the remit of the Royal Decrees once they were scaled nationwide. The communities’ experience with top-down conservation and development schemes over the previous five decades also enabled them to plausibly envision the impact of the full-scale upscaling and enforcement of the Royal Decrees on their communities (Haenssger et al., 2023, 2026).

Data Collection

The research project collected qualitative and quantitative data, including observations from community consultations, semi-structured interviews, and individual panel surveys across the four case study communities. These multi-method data sources provided complementary evidence of psychological and social reactions to the Royal Decrees at the individual and community levels. The project began in June 2024. Community and stakeholder consultations began in September 2024, and formal data collection began in November 2024, coinciding with the announcement of the Royal Decrees. The data in this study included (see the Supplemental Material for the qualitative and quantitative data collection tools):

1. documentation of community and stakeholder engagement (stakeholders include an Indigenous project Advisory Board comprising community leaders, an Indigenous activist-scholar, and a representative of a regional advocacy organization for Indigenous rights) during the study implementation, in the form of

¹ Forest conservation area in this context refers to the land classification of “National Forest Reserves” under the National Forest Reserve Act B.E. 2507 (1964), which is a less restricted classification than e.g. the “National Park” classification but still contains regulation to manage resources and prevent private land claims.

- bilingual Thai and English implementation notes and summary reports, along with photography and video footage of the community consultations,
2. bilingual Thai and English transcripts of 45-minute semi-structured interviews with villagers from all four communities, transcribed from audio recordings and stored in MAXQDA 2020,
 3. two rounds of survey data from 30-minute individual, interviewer-administered questionnaires with villagers from all four communities, recorded on tablets using KoboToolbox software and stored in Stata 17.

While the full research project would involve three waves of mixed-methods data collection (Items 2 and 3 in the list above), spanning Baseline (prior to pilot implementation), Midline (six months into pilot implementation), and Endline (one month after pilot completion and nine months after pilot start), the present study draws on data from the first two waves (i.e., Baseline and Midline). The data were gathered by graduate-level research assistants who resided in the communities during data collection and were supported by Hmong and Pgaz K’Nyau research facilitators who lived in the study communities. Consultations, interviews, and surveys were conducted in Thai, as all participants were fluent in Thai. The community-based research facilitators also provided occasional ad hoc translation during interviews with community elders in their first languages. Interview recordings were transcribed with meaning-based English translations and analysed in Thai and English by the multilingual study team. Prior informed consent and media consent were obtained from all research participants, and all participants received compensation equivalent to GBP 2.50 for their time.

We recruited community-based participants aged 16 years and older. Pilot participant recruitment was self-selecting, followed by snowball sampling of volunteers to support cooperation in the activities. The broader qualitative and survey data collection used purposive sampling to achieve high diversity across genders, ages, and pilot participation within each of the four study communities (Haenssgen, 2020). Village authorities supported village access, consultations, data collection, and pilot implementation. The resulting data are summarized in Table 1 and, as of 31 May 2025, include four community consultations with a total of 73 participants, 101 semi-structured interviews, and 384 survey observations, including a panel of 143 respondents who could be revisited in the second survey round.

Data Analysis

Although the project was not originally intended to assess the impact of the Royal Decrees, the rich contextualization of the research activities provided extensive insights into community livelihoods and conservation experiences, helping establish a comprehensive picture of the direct and indirect impacts of the decrees. To enable this assessment, we identified references to the decrees and the broader conservation policy environment in qualitative materials from community engagement and interviews, and we analysed them thematically with a view toward the impact on individuals, community life, and heritage practice (Haenssgen, 2020). Following the identification of community sentiment toward the Royal Decrees in the consultations and their broader community impact in the semi-structured interviews, we analysed the survey data using inferential

Table 1 Data sources

Data source	Analytical value	Participants					
		By village				Total	% female
		Pgaz K’Nyau village A	Pgaz K’Nyau village B	Hmong village A	Hmong village B		
Consultations ^a	Observations and operational information about community priorities and reactions to the Royal Decree	21	18	14	20	73	46.6%
Interviews	Targeted discussions on participants’ experiences and thoughts about the Royal Decrees	25	25	26	25	101	47.5%
Survey	Baseline	43	50	49	58	200	51.0% ^c
	Midline	50	47	48	39	184	47.5% ^c
	<i>Of which: Revisited at Midline</i>	43	28	45	27	143	46.9% ^c

Data as of 31 May 2025; data collection was ongoing at the time of this study, including planned endline data collection in August 2025

^a. In addition to four meetings with advisory board members, ad hoc meetings with project stakeholders, and study implementation notes from the research team

^b. Note that Chiang Mai was also afflicted during this period by an extraordinary earthquake and the annual “burning season” of high to extreme air pollution between February and April. A historical flood in October 2024 preceded the formal data collection

^c. One respondent in Hmong Village A disclosed a diverse gender identity

univariate and bivariate descriptive statistical analysis (Agresti, 2018).

The statistical analysis first documented the community context and the extent of problematic interactions with conservation actors at baseline. We then focused on the balanced survey panel to analyse short-term changes in the communities over the six-month survey period. We compared changes among villagers with and without problematic conservation experiences, as well as among those who participated in the pilot activities and those who did not. Relevant outcomes included:

1. villagers' perceptions of year-over-year changes in personal and community aspects of community life, the economic situation, local conservation activities, and local ecosystem health,
2. villagers' personal involvement in community life, cultural practices, local conservation activities, and environmental issues during the past month,
3. year-over-year changes in villagers' feelings of engagement in community activities and organizations, village cultural heritage (e.g., tree ordination ceremonies), local forest protection, and environmental issues more broadly, and.
4. current assessments of community social capital using an index based on nine indicators, including villagers' attachment to the village, trust, pride, and connections to other community members and the local environment.

Confidence interval calculations and statistical tests comparing panel responses across survey rounds included (a) logit 95% confidence intervals (CIs) and Pearson χ^2 tests for binary and categorical variables, and (b) linear 95% CIs and two-sample Student's *t*-tests for the social capital index, treated as continuous. Robustness checks using non-parametric Wilcoxon rank-sum tests produced substantively similar results and were omitted here for brevity.

Results

Observations from Community and Stakeholder Engagement

Qualitative observations from community consultations, stakeholder engagement, and study implementation revealed a clear and growing concern among Indigenous communities about the Royal Decrees. Before the announcement of the Royal Decrees, all communities were generally upbeat about the research collaboration and the opportunities to support their everyday heritage-related conservation efforts. For example, village elders noted that each community

continued to preserve its cultural heritage, and villagers discussed ways to support community-based conservation, such as clearing firebreaks and monitoring forest fires.

However, enthusiasm was not universal and weakened considerably over time. The Royal Decrees played a discernible role in this process: upon their announcement in November 2024, our study team observed immediate community reactions – both toward the government initiative and toward our research activities. Villagers and village leaders were explicit that, if the new law were enforced nationwide, the research project's efforts could become nearly meaningless. However, not all villages experienced these concerns equally. In Pgaz K'Nyau Village B, distress from the Royal Decree was initially minimal, as land-use areas were comparatively clearly defined by government authorities. By March 2025, community leaders observed that “Regarding the Conservation Forest Royal Decree, community members are increasingly aware and concerned. Local leaders actively share information about arrests made by state officials and coordinate community responses” (Advisory Board minutes). In contrast, villagers in Hmong Village A expressed immediate apprehension and disappointment, noting, “because research projects often visit but fail to support them in their struggles against injustice. They feel anger and frustration, with bias from government officials still evident” (implementation notes). In Hmong Village B, where tensions between community and conservation officials had been the most intense among the four case study communities in recent years, the Royal Decrees were described as “deeply troubling,” and consultations revealed that “Some community members are beginning to feel that, if they no longer have any rights to access or benefit from the land they have cared for, then they may as well abandon forest fire prevention [that many regard as environmental heritage]” (consultation notes). We thus observed an intensification of negative sentiment across all sites, with worrying tendencies toward disengagement from external partners and local conservation practices.

Qualitative Research Findings

The qualitative analysis showed how the Royal Decree announcement profoundly affected communities and their environmental heritage. A key theme was the looming loss of land. The threat of effectively expropriating villagers after 20 years – now explicitly and credibly articulated in the Royal Decrees – bred despair and fear of displacement. A villager in Hmong Village A commented:

The new laws make it feel like we are losing everything that is important to us – our fields, our homes, and our future,

and added that the situation made him feel “hopeless”:

I also have children, and if I pass away, they will have to carry on. But in 20 years, they might lose all their rights. It’s disheartening (male, 55 years, Hmong Village A).

As the quote illustrates, the land insecurity created by the Royal Decrees deprived villagers of their visions for the future. Pgaz K’Nyau Village B was an outlier among the four communities, as villagers’ residential land was deemed more secure because it had been allocated by the government about 20 years ago. Nevertheless, even here, the Royal Decrees created uncertainty and unease, as reflected in the statement of a woman who worried about the future of her children:

If this law forces us off our land, where will our children go? These forests are part of who we are (female, 38 years, Pgaz K’Nyau Village B).

Implicit in such expressions was a second key theme: growing uncertainty about the future and a loss of attachment to place. In general, the transmission of social memory consistently fostered a sense of attachment to place and community. In Hmong Village A, social memory, for instance, centered on local legends (Doi Pha Klong) and visits by the late King Rama IX. The community also repeatedly emphasized the importance of the Tong Seng tree as central to their attachment to the local environment:

During the New Year, the elders gather the kids [around Tong Seng in the community forest] and tell them stories about how we must take care of the forest, celebrate it, and give back to it as a way of honouring its spirit. They say the forest gives us a good life in return. It’s a tradition that’s been passed down for generations, and even now, when people see the forest, it reminds them of the importance of preserving and respecting it. It’s such a big part of who we are. (male, 35 years, Hmong Village A)

The previous quotes already indicated that the Royal Decrees weakened engagement in community life, thereby hindering the transmission of the social memory described here and threatening villagers’ sense of attachment and their visions of the future.

Villagers also expressed anger, emphasizing that the decrees reactivated historically entrenched discrimination against Indigenous forest dwellers, labelling them as “forest destroyers or encroachers” (male, 26 years, Hmong Village A) and scapegoating them in an “unfair” way compared to urban communities (female, 30 years, Pgaz K’Nyau Village

B; see the discussion section for further detail on the historical discrimination). But the discrimination was not only rhetorical. The new policies would also actively restrict Indigenous practices. Villagers in Pgaz K’Nyau Village A, some of whom continued to practise rotational farming, felt that:

Top-down policies might overlook the nuanced relationship villagers have with the forest, where conservation and subsistence farming coexist. (male, 51 years, Pgaz K’Nyau Village A)

Yet again, it appeared that the Royal Decrees threatened environmental heritage.

The continued discriminatory framing was ironic, given that members of all communities readily cited examples of bottom-up, community-based conservation efforts. These efforts included tree planting:

The area around your accommodation used to be barren farmland, but now we’ve planted trees and increased green spaces significantly (male, 58 years, Hmong Village B),

and labour-intensive firebreak clearing that:

requires cooperation and a lot of endurance (male, 51 years, Pgaz K’Nyau Village A).

Villagers also reiterated their alignment with conservation goals and expressed a willingness to collaborate with forest authorities:

While villagers like us support conservation efforts, we stressed the importance of collaboration between the government and local communities. (male, 51 years, Pgaz K’Nyau Village A)

However, the potential uprooting of communities, together with the policy’s discriminatory tone, gave rise to a third key theme, namely a tendency for the Royal Decrees to galvanize stronger community activism against the proposed legislation. While at least some members of all four study communities were involved in protest movements against the Royal Decrees, respondents from Hmong Village A and Pgaz K’Nyau Village B explicitly expressed their readiness to stand up collectively. For example, a respondent from Pgaz K’Nyau Village B articulated a strong resolve, stating:

This land is more than just property. It’s our history, our way of life. If they take it, our children will lose everything. If the government doesn’t listen to us, we’ll make

them hear us. We're ready to fight for our land. (male, 32 years, Pgaz K'Nyau Village B)

This and similar statements underscored a broader sentiment of community mobilization and resistance in the assertion of their rights.

The qualitative data, therefore, indicated that villagers recognized the severe threats posed by the Royal Decrees to their communities' lives and heritage. The decrees amplified existing land insecurity and ethnic discrimination, weakened their attachment to local spaces and communities, and risked disrupting everyday environmental heritage and conservation practices. These tensions fuelled increased community activism, with villagers explicitly expressing readiness to collectively resist the legislation.

Survey Findings

Detailed results of the descriptive statistical analysis, including hypothesis tests comparing panel participants' responses across survey rounds, are presented in Supplemental Material Table A1. Among the 200 Baseline survey participants, 22.0% reported that they or their families had ever experienced problems with forest authorities (95% CI [16.8%;28.3%]), with rates ranging from 4.0% in Pgaz K'Nyau Village B to over 40.0% in Pgaz K'Nyau Village A.

Overall, the survey data showed mixed trends across the four indicator domains over the six-month study period. For example, while year-over-year assessments of community life stabilized (i.e., trending toward "no change"), the nine-item social capital index declined by 1.22 indicator points ($-19.5%$, $p < 0.001$). In contrast, we observed month-over-month increases in personal involvement in community activities ($+5.6%$ points, $p = 0.029$) and in community organizations ($+11.9$ p.p., $p = 0.003$), reaching nearly 50.0% at Midline in both cases. More striking was a significant month-over-month increase in respondents' involvement in forest protection ($+28.0$ p.p., $p < 0.001$) and general environmental issues ($+16.1$ p.p., $p = 0.002$), together with an improved perception of year-over-year environmental changes ($+16.8$ p.p. responding "improved," $p = 0.016$). Contrary to expectations, personal involvement and general engagement with the communities' cultural heritage also increased significantly, with $+11.9$ p.p. ($p = 0.023$) of respondents feeling "more engaged" and $+11.9$ p.p. ($p = 0.003$) reporting recent personal involvement in cultural practices in their village.

A more detailed examination of the subgroups showed that respondents with problematic conservation experiences were less likely to report improved engagement with heritage practices and started from considerably lower levels than those without problematic histories with forest authorities. When improvements were observed, they were

typically smaller or less significant than those among pilot participants (67.1% of the panel sub-sample), a finding that was highly relevant given that participation in the pilot activities was positively correlated with problematic conservation experiences (correlation coefficient = 0.19, $p = 0.030$). For example, whereas involvement in village cultural practices increased from 43.2% to 58.9% among people without problematic experiences, those reporting problematic experiences remained constant at a lower level of 34.3%. Conversely, people participating in the pilot activities had a considerably higher baseline and a greater increase in their involvement in community cultural practices compared to non-participants (39.6%, $+17.7$ p.p., $p = 0.006$ vs. 19.1%, $+10.6$ p.p., $p = 0.262$; also see Fig. 2). Similar patterns emerged with respect to recent involvement in and broader engagement with forest protection and general environmental issues.

Therefore, the descriptive statistical analysis indicated that problematic experiences with conservation authorities were associated with either suppressed improvements or an accentuated decline in community-level social capital, heritage, and conservation indicators. Although people with problematic conservation histories were more likely to participate in our project's pilot activities, the indicator trends suggested that pilot participation may at least partially offset the problematic impacts of oppressive conservation practices.

Discussion

We examined the effects of two recently announced Royal Decrees for ecosystem conservation in four Indigenous highland communities in northern Thailand. Our multi-method approach consistently highlighted predominantly negative psychological and community effects: Indigenous villagers experienced anxiety and unease, the decrees undermined community efforts to conserve and engage with local ecosystems, and ongoing uncertainty about communities' futures fuelled strong activist resistance to the policies. A positive outlier was a market-integrated Pgaz K'Nyau community where villagers felt relatively at ease with the existing government land allocation, but even there, uncertainty about the scope and impact of the Royal Decrees gradually created anxiety and resistance. If implemented and enforced at scale in their current form, our analysis suggests the Royal Decrees would likely:

- provoke a livelihood crisis in highland communities,
- create further tension in the already strained relationship between communities and conservation authorities,

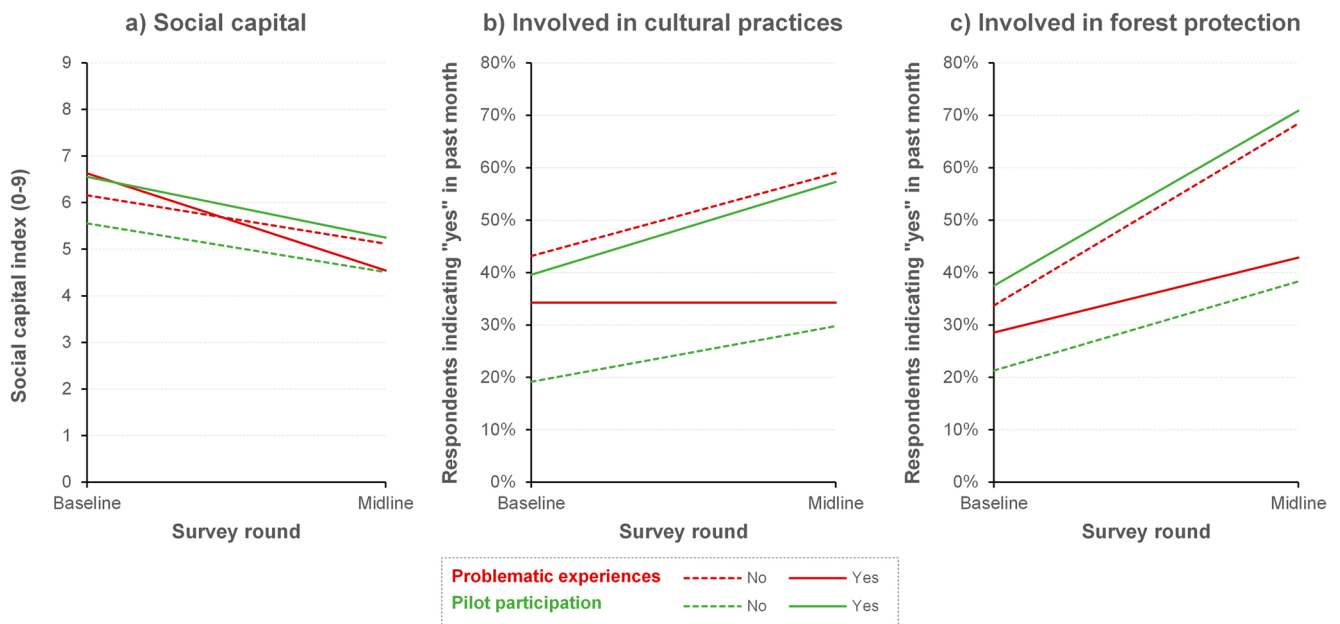


Fig. 2 Trends in social capital, cultural involvement, and forest protection involvement among respondents with problematic conservation experiences (red) and among pilot participants (green). *Note.* n = 143

- inflict widespread damage on communities’ everyday environmental heritage,
- depress intrinsically motivated community-led forest management activities, and,
- perversely contribute to increased forest fire risk and ecosystem degradation.

The announcement of the decrees provoked significant distrust and disengagement among external conservation stakeholders. Particularly worrying were the attenuated short-term improvements or exacerbated declines among villagers with problematic histories with conservation authorities. However, our quantitative analysis also documented that active efforts to support community heritage could at least mitigate some of the likely negative impacts of the top-down policy.

Our multi-method study identified key psychological and social mechanisms that may have contributed to the surprisingly tangible impacts of the Royal Decrees’ announcement. From a psychological perspective, stress and anxiety, as reported by study participants, would undermine strategic thinking and drive people into a more short-term, survival-oriented mode (Haushofer & Fehr, 2014; Starcke & Brand, 2012). Building on participants’ reactions to the policy initiative, which included the reactivation of historical ethnic stereotypes and reflected threats to “deeply held beliefs and trust,” the psychological reaction may even reach the traumatic level of “moral injury” (Leepreecha, 2019; Williamson et al., 2021, p. 453). Adverse psychological reactions of this kind would undermine prosocial engagement with other

panel respondents. See Supplemental Material Table A1 and survey questionnaire for underlying indicator construction

community members, everyday heritage, the transmission of social memory, and voluntary action to protect the forest environment for long-term sustainability. The growing disengagement of study participants lent strong support to this interpretation, and this would plausibly intensify if the Royal Decrees were rolled out at scale. The increased threat of eviction and disengagement from everyday environmental heritage would amplify these tendencies, as community members appeared to lose their established stake in their future and the mechanisms that retain their attachment to place through engaging with their heritage.

These developments are situated within and interact with the broader historical, political, and social context of forest conservation in Thailand. Thai policy and public discourse have, for decades, mobilized stereotypical narratives about Indigenous highland communities, such as the claim that Hmong land management practices were responsible for widespread forest loss, while the Karen have been romantically framed as forest guardians (Forsyth & Walker, 2008; Haenssger et al., 2023). The discriminatory discourse continues to this day, and community members in our study clearly noticed this sentiment in the formulation of the Royal Decrees. This neglects not only Indigenous communities’ diversity but also their evolving livelihoods and gradual adaptation to conservation challenges. For example, economic livelihoods have commonly diversified away from subsistence farming to include cash cropping and organic and agroecological cultivation techniques. In addition, many communities have adopted a wide range of conservation-oriented land management activities (e.g.,

tree ordination, cessation of pioneering swidden agriculture) – partly in response to natural resource management challenges and partly as an explicit reaction to the pressures and threats from conservation officials (Baird, 2020; Delang, 2002; Isager & Ivarsson, 2002). At the same time, the combined pressure from the Thai conservation policy and rural development agenda has also fuelled individualization trends and out-migration, especially among youth, into urban areas, further severing attachment to local spaces (Haenssger et al., 2023, 2026).

Although international frameworks promote a more positive approach to recognizing Indigenous peoples' rights, the Thai government has criminalized forest-dependent livelihoods that were common in many communities. Observers have noted that powerful landholders and politically connected actors have rarely been subject to the same scrutiny (Trakansuphakorn, 2008). However, ongoing policy changes have provided frameworks and opportunities for more constructive interactions. Among others, the Thai government passed on 6 August 2025, a *Law on the Protection and Promotion of the Way of Life of Ethnic Groups*, which represents a formal mechanism for negotiating with the Thai government to protect the rights and cultural practices of Indigenous peoples (despite controversies, e.g., over replacing the term “Indigenous peoples” with “ethnic groups”). Indigenous groups in Thailand had previously successfully challenged conservation policy interventions by appealing to the Thai Cabinet Resolutions dated 2 June 2010 and 3 August 2010 to restore the traditional practices and livelihoods of Karen and Chao-le. Despite the scale and extent of the protest required, the government's invitation to submit evidence for review of the Royal Decrees is testimony that bottom-up responses can contribute to the conservation policy process.

Overall, our empirical findings confirmed the adverse expectations in the literature that top-down policies can entail not only social injustice but also ecological inefficiency. At the same time, our conceptual focus on everyday environmental heritage has offered a useful analytical tool for rendering such impacts visible within the broader community context and for exploring possible remedial actions. However, it is important to recall that the project behind this research was not originally designed to assess the impact of the Royal Decrees specifically. As a result, parts of the analysis remain circumstantial. For example, while overall negative trends in community social capital may be linked to the psychological impact of the Royal Decrees, they may also have been influenced by the social and ecological impact of the “burning season” of high to extreme air pollution between February and April, which intersected the Baseline and Midline surveys. The region was also afflicted during this period by an extraordinary earthquake on 28

March 2025 originating from Myanmar, while a historical flood in October 2024 preceded the formal data collection. It is therefore important to continue monitoring their impact while implementing dedicated policy evaluation research. Expanding the range of case studies to directly affected communities and including a broader, nationwide survey of Indigenous communities' experiences with Thai conservation policy can further complement the limited regional scope of our analysis. In addition, this research report focused on the impact of the Royal Decrees' announcement. However, as they have been opened for negotiation and review, the impact of implementing and enforcing these and future Royal Decrees will depend on the ongoing negotiations with the Thai government in an evolving policy landscape that included the recent passing of the *Law on the Protection and Promotion of the Way of Life of Ethnic Groups* as a first key for recalibrating power in a more balanced way.

Conclusion

Our study is another stark reminder of the pitfalls of top-down policymaking in the name of conservation. Despite strong intrinsic motivations among community members to care for their environment, which closely align with the conservation objectives of the newly proposed Royal Decrees, the decrees have been found to reactivate historical trauma, suppress community-led conservation, and threaten Indigenous livelihoods and heritage. Put simply, the Royal Decrees in their current form appear unlikely to effectively support communities or forest health. Rather, based on the available evidence, we conclude that the Royal Decrees are heritage-destroying and likely to undermine conservation progress made by local initiatives, thereby rendering them inconsistent with Thailand's international obligations under the CBD.

As the Thai government considers scaling up the Royal Decrees, urgent revisions are necessary to prevent further damage. While the Royal Decrees would benefit from embracing inclusive, bottom-up natural resource governance, broader national-level plans, such as Thailand's Nationally Determined Contribution to reduce greenhouse gas emissions, tend to prioritize the energy and corporate sectors (Office of Natural Resources and Environmental Policy and Planning, 2022), largely overlooking the untapped potential of local community contributions to ecosystem health and biodiversity conservation. Community-led environmental mitigation plans, developed collaboratively with local administrative organizations, may better address context-specific needs and build on existing conservation-effective heritage practices. Such an approach

requires a mindset shift in Thai public administration away from top-down conservation governance. Past attempts to write laws granting rights to communities and recognizing frontline officials' understanding have been repeatedly suppressed during the legislative process in parliament, but joint management solutions that promote bottom-up participation are needed, supported by new platforms for dialogue between government policymakers and local communities, facilitated by academic mediators, and informed by locally grounded research. Framing conservation reforms through the lens of CBD obligations could provide a further pathway for communities and civil society to hold the state accountable and push for co-designed solutions that align with both ecological and cultural sustainability.

However, not every response needs to rely on state action. Community-driven solutions proposed by our study participants included sustainable livelihood initiatives such as ecotourism, marketing environmental heritage products such as handicrafts, and an endogenous shift toward new agroecological production techniques. To sustain the local transmission of social memory in the ongoing evolution of everyday environmental heritage, youth-focused initiatives may also engage younger generations in cultural preservation through media and public communication training and by creating physical spaces for generational knowledge transmission and ecological engagement. Media platforms at the local and national levels can also help challenge and shift prevailing negative narratives about highland communities, supported by youth media and locally informed science communication. In short, our study demonstrates that re-engaging communities through bottom-up, heritage-sensitive initiatives can safeguard conservation-relevant social capital and environmental engagement and counteract at least some of the Royal Decrees' already tangible damage.

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Data Availability The data are available from the corresponding author upon reasonable request, provided that it does not compromise the confidentiality of participants' responses.

Declarations

Human Ethics and Consent to Participate The study received ethical approval from the University of Warwick Humanities and Social Sciences Research Ethics Committee (Ref. HSSREC 18/24-25). Prior informed consent was obtained from all participants. The study was conducted in accordance with the principles of the Declaration of Helsinki.

Competing interests The authors declare no competing interests.

Clinical Trial Number Not applicable.

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