

A burning issue: Spirits of land and capital in Thailand's agricultural haze crisis

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Air pollution created by agricultural burning has become a critical environmental problem across Southeast Asia, but the solution to it remains unclear. In this essay I discuss the haze crisis in a small community in Northern Thailand, and show how an increase in contract farming is accompanied by a decrease in agricultural spirit rituals. I argue that this change represents a broader shift in the cosmopolitical ecology of the region, as large agricultural businesses hide behind continuing narratives about 'slash-and-burn' 'hill tribes' to advance an environmentally unsustainable agenda.

Before, we would thank the spirits of the land. We asked them to protect our rice fields. We asked for a good harvest, for our fires to not spread far from the field. Now, when we grow corn? Now we don't do anything for the spirits, we use chemicals on the field. We don't move to a new field, we burn the same field, and sell the corn to the business.

Lawa farmer in Mae Chaem district, Chiang Mai province, December 2019

Haze pollution represents a growing environmental crisis across Mainland Southeast Asia. In Northern Thailand, even before the onset of COVID-19, people wore N95 face masks outside during the months of March and April each year, and hospitals reported progressively alarming health effects from the smoke. Complex causes of the haze pollution have been identified, and multiple, ongoing solutions have been implemented.¹ As with the causes, the solutions to the crisis

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1 The burning of fields as demanded by the agricultural businesses in contract farming, which I highlight in this essay, is just one of many factors that go into the creation of the haze. Some additional factors include interest in foraging for a highly-valued, prized local mushroom that appears after the fires (see

are not simple.² In this essay I focus on the increasingly common practice of burning fields and forests for agriculture, and their role as one of the primary contributors to the haze. Based on long-term ethnographic research in a district of Northern Thailand that is a known ‘hot spot’ of the crisis,³ I emphasise one of the changes that has taken

Mary Mostafanezhad, ‘The materiality of air pollution: Urban political ecologies of tourism in Thailand’, *Tourism Geographies* 23, 4 [2020]: 1–18; Pukjira Chaemchuea, ‘Investigation into fire prevention techniques for use in Northern Thailand’s Mae Ping National Park’ [PhD diss., Worcester Polytechnic Institute]; and Thanyaporn Chankrajang, ‘State–community property-rights sharing in forests and its contributions to environmental outcomes: Evidence from Thailand’s community forestry’, *Journal of Development Economics* 138 [2019]: 261–73; hunters who set fires to flush out animals (see Adelowo Adeleke et al., ‘Contributing factors and impacts of open burning in Thailand: Perspectives from farmers in Chiang Rai province, Thailand’, *Journal of Health Research* 31, 2 (2017): 159–67; and Yongyut Tiyapairat and Edsel E. Sajor, ‘State simplification, heterogeneous causes of vegetation fires and implications on local haze management: Case study in Thailand’, *Environment, development and sustainability* 14 [2012]: 1047–64); transboundary pollution (see Nuntavarn Vichit-Vadakan and Nitaya Vajanapoom, ‘Health impact from air pollution in Thailand: Current and future challenges’, *Environmental Health Perspectives* 119, 5 [2011]: 197–8; and Praphatsorn Punsompong and Somporn Chantara, ‘Identification of potential sources of PM10 pollution from biomass burning in northern Thailand using statistical analysis of trajectories’, *Atmospheric Pollution Research* 9, 6 [2018]: 1038–51); and government agencies competing for authority and redistributing land use rights (see Paul K. Gellert, ‘The political economy of environmental degradation and climate disaster in Southeast Asia’, in *The political economy of Southeast Asia: Politics and uneven development under hyperglobalisation* [Cham: Springer, 2020], pp. 367–87; and Suparb Pas-Ong and Louis Lebel, ‘Political transformation and the environment in Southeast Asia’, *Environment: Science and Policy for Sustainable Development* 42, 8 [2000]: 8–19).

Rumours of people and jurisdictions setting fires and spreading misinformation to sabotage each other, and a slew of other practical and perceptual problems, also contribute to the problem, along with population growth and increasing vehicle exhaust. These are all important issues to consider alongside this essay’s emphasis on the cultural ideologies surrounding pressure from agricultural businesses to burn fields.

2 For discussions of the difficulties, see Luecha Ladachart, Manus Poothawee and Ladapa Ladachart, ‘Toward a place-based learning progression for haze pollution in the northern region of Thailand’, *Cultural Studies of Science Education* 15 (2020): 991–1017; P. Pochanart, ‘The present state of urban air pollution problems in Thailand’s large cities: Cases of Bangkok, Chiang Mai, and Rayong’, *Journal of Environmental Management* 12, 1 (2016): 114–33; Daniel Murdiyarto et al., ‘Policy responses to complex environmental problems: Insights from a science–policy activity on transboundary haze from vegetation fires in Southeast Asia’, *Agriculture, Ecosystems & Environment* 104, 1 (2004): 47–56; Mary Mostafanezhad and Olivier Evrard, ‘Environmental geopolitics of rumor: The sociality of uncertainty during Northern Thailand’s smoky season’, in *A research agenda for environmental geopolitics*, ed. Shannon O’Lear (Cheltenham: Edward Elgar, 2020), pp. 121–35.

Some proposed solutions include place-based learning on the topic in schools (Ladachart et al.) and state involvement, including the military, fire, and other new units with master plans and regulations criminalizing burning, especially at particular times of year (Pollution Control Department, 2005; <http://infofile.pcd.go.th/air/air%5fOpenburning.pdf?CFID=1629110&CFTOKEN=16341544> (last accessed 2 Dec. 2021) (in Thai)); Pearmsak Makarabhirom, David Ganz and Surin Onprom, ‘Community involvement in fire management: Cases and recommendations for community-based fire management in Thailand’, in *Proceedings of the International Conference on Community Involvement in Fire Management, Bangkok, Thailand*, ed. Peter Moore et al. (Bangkok: RAP Publications FAO; FireFight South East Asia, 2002), pp. 10–15; NGO advocates working through social media, and joint university research programmes. See, for example, ‘Silent Gen Y’, ‘Raks Mae Ping’, and ‘Kaew Suay Hom’: Liwa Pardthaisong, Phaothai Sin-ampol, Chanida Suwanprasit and Arisara Charoenpanyanet, ‘Haze pollution in Chiang Mai, Thailand: A road to resilience’, *Procedia Engineering* 212 (2018): 85–9. Chiang Mai University leads the ‘Research University Network for Climate Change and Disaster Management (RUN-CCDM)’, <http://runccdm.weebly.com/> (last accessed 16 Feb. 2024).

3 ‘When smog became so severe [in 2015] that the Singapore Armed Forces sent two Chinook helicopters to help fight the fires, CP—which also sources for corn in Laos, Myanmar and Vietnam—was singled out for criticism. It denied responsibility for the haze, but ended farming contracts in Mae Chaem, a

place in human relationships to the land: the decrease in engagement with agricultural spirits and their replacement with chemical fertilisers. I argue that the disappearance of these spirit rituals reflects an important and underappreciated shift in cosmopolitical relations in the region, and that a recognition of this shift may help to alleviate the pressures placed on the land by agricultural businesses and the farmers they employ.

Burning fields between harvests is a long-standing agricultural technique in Northern Thailand.⁴ While many forms of burning can be considered environmentally sustainable, it has become a larger and larger problem in recent years, as particles formed by the fires linger in the air and spread across the region. Because fire was traditionally used in agriculture, at first glance the current crisis may seem to be literally a case of ‘more of the same’: an increase in the scale of burning rather than any recent change in land-clearing practices. In approaching the problem anthropologically, however, we can attend to an aspect of the crisis that goes unnoticed. By offering ethnographic evidence of a replacement of spirits of the land to a chemical-heavy spirit of capital—a spirit that merges with discourses of civilisational potency emanating from the centre of the Thai nation—I will suggest cosmological changes to be an unrecognised factor that plays into, and may help to mitigate, the crisis.

For over twenty years I have been conducting ethnographic research on religion and health as a cultural anthropologist in the district of Mae Chaem, an area of Chiang Mai province with a national reputation for producing large quantities of agricultural haze.⁵ When I first lived in Mae Chaem in 2002 the valley floor and

particularly notorious “hot spot” in Chiang Mai province ... One of the farmers cut loose, Mr Chitnarong Chompootan, now sells his corn for 12 baht per kg instead of 16 baht. “We were the scapegoats”, he laments. “We were only responsible for 20 to 30 per cent of the smoke. The rest comes from elsewhere”. Tan Hui Yee, ‘Spore sends 2 helicopters to help fight haze in Thai north’, *Straits Times*, 25 Jan. 2016, <https://www.straitstimes.com/singapore/spore-sends-2-helicopters-to-help-fight-haze-in-thai-north>.

Mae Chaem’s farmers are dealing with the increase in maize production in various ways. See, for example, Sayamol Charoenratana Sayamol, Cholnapa Anukul and Peter M. Rosset, ‘Food sovereignty and food security: Livelihood strategies pursued by farmers during the maize monoculture boom in Northern Thailand’, *Sustainability* 13, 17 (2021): 9821.

4 Peter Kunstadter, ‘Subsistence agricultural economies of Lua’ and Karen hill farmers, Mae Sariang district, northwestern Thailand’, in *Farmers in the forest: Economic development and marginal agriculture in Northern Thailand*, ed. Peter Kunstadter, E.C. Chapman and Sanga Sabhasri (Honolulu, HI: University of Hawai’i Press; East West Centre, 1978), pp. 74–133; F.G.B. Keen, ‘Land use’, in *Highlanders of Thailand*, ed. J. McKinnon and W. Bhruksasri (Kuala Lumpur: Oxford University Press, 1983), pp. 293–306; James D. Fahn, *A land on fire: The environmental consequences of the Southeast Asian boom* (Boulder, CO: Westview, 2003).

5 See Julia Cassaniti, *Living Buddhism: Mind, self, and emotion in a Thai community* (Ithaca, NY: Cornell University Press, 2015); Julia Cassaniti, ‘Encountering impermanence, crafting change: A case study of alcoholism and attachment’, in *Impermanence: Exploring continuous change across cultures*, ed. Haidy Geismar, Ton Otto and Cameron David Warner (London: UCL Press, 2022), pp. 65–82; Julia Cassaniti, ‘Toward a cultural psychology of impermanence in Thailand’, *Ethos: Journal of Psychological Anthropology* 34 (2006): 58–88; Julia Cassaniti and Tanya M. Luhrmann, ‘The cultural kindling of spiritual experiences’, *Current Anthropology* 55, 10 (2014): 333–43; Julia Cassaniti and Michael Chladek, ‘Aimless agency: Precarity and uncertainty among Buddhist novice monks in Thailand’, *Ethos* 50, 3 (2022): 315–31. To continue the use of pseudonyms for interlocutors from these past publications, and because a few farmers warned me that there could be retaliation for speaking out against the agribusinesses for this article, I have tried to keep informants anonymous. Vasuthep and Duang are real names as per the preference of these two interlocutors. All quotes from interviews with

surrounding hills were filled with fields of rice, and, while it sometimes occurred, agricultural haze was not a widespread concern. Some of the rice grown was sold at the local market in town, or in the nearby city of Chiang Mai, but most of it was consumed by the people who grew it: the Northern Thai (*kon muang*) population in the valleys, and those in the Karen, Hmong, Lawa, and other ethnic minority upland communities in the surrounding hills. In the years I have spent living and working in Mae Chaem since 2002 I witnessed a gradual but steady decline in rice farming, and a parallel increase in the production of maize.⁶ Maize is now the most common crop grown in Mae Chaem.⁷ Where there had once been wet paddies of rice now stood tall stalks of corn and other vegetable crops.

I did not think much at first of this shift from largely subsistence rice farming to maize and other commercial crops, nor connect it with the haze problem. After all, everyone knows that farmers sometimes burn their fields before planting new crops, and they continued to do so throughout these changes in what was grown, just at an increased rate. Even when the haze problem started to become more and more prominent in the news, and I heard people in Mae Chaem, Chiang Mai, and elsewhere around Thailand talking of the need to combat farmers' practice of burning fields, the change in crops did not seem particularly relevant to the crisis.

Yet it became clear to me and many others over time—as early as 2007 but exponentially in the years since—that the increase in maize cultivation comes with an increase in burning. The Mae Chaem Development Model project, for example, a network of local farmers, the Thai government, and agricultural business, reports that 'the dependence on corn production, mixed with the local custom of burning corn stalks after harvests are complete, has created massive amounts of smog and haze'.⁸ Maize farming creates more crop residue than rice farming, meaning that more burning is done to clear the fields of it. Maize farming is also connected to an overall reduction in fallow land, because many fields are worked at once in order to plant more and earn more money, which results in more surfaces being burned each year. This increase in residue has clearly created more haze. 'Agricultural products in the past were only used for eating, and there were not many agricultural residues from farming', a health worker named Ton explained to me in Mae Chaem, referring in contrast to the current high proportion of corn stalks that require burning. 'The

ethnic Thai informants are my translations from Thai and Northern Thai. Interviews conducted with Hmong, Karen, and Lawa informants were first translated into Thai by an interpreter and then from Thai to English by me, unless otherwise noted.

6 This increase parallels that of other regions in Thailand. As Pasuk Phongpaichit and Chris Baker point out, maize production has been on the rise since the 1950s, when it began to be used for animal feed in Taiwan, Japan, and elsewhere across Asia. Pasuk Phongpaichit and Chris Baker, *Thailand: Economy and politics* (Oxford: Oxford University Press, 1996). Its production has increased forty-fold since the 1950s.

7 *Mae Chaem Development Model*, 2019; <https://thailand.opendevdevelopmentmekong.net/stories/the-mae-chaem-development-model/#return-note-5064-12> (last accessed 16 Feb. 2024).

8 'Between 2009 and 2011 and again in 2014, especially large amounts of land were converted from forest to agricultural land, largely to grow corn. The area used for corn production increased from 34,122 acres in 2009 to 41,698 acres in 2011 and further to 57,281 acres in 2013. Significantly, even this project, a self-declared local and government-led network with links to 'Ethnic minorities and indigenous peoples development NGOs', is heavily run by the agribusiness Charoen Pokphand (CP), discussed below.

management of agricultural waste in the past was part of the traditional way of life', he went on, suggesting that the practice of burning itself was not ecologically harmful; '[t]hey included the popular practice of burning to increase the amount of potassium and also reduce production costs, or to create a layer at the surface level ... In addition to increasing the amount of organic matter in the soil, it also helps to reduce production costs for the farmers.'

Along with the increased demand for burning, the increase in maize farming also indexes a different economic relationship with the land. Unlike rice, which is mostly eaten locally, maize and the other relatively recently introduced crops for the most part are not eaten by members of the community that grow them, although occasionally an ear of corn or other vegetable serves as a snack or a complement to a rice meal. Instead of being eaten locally, the maize is sold to large agricultural businesses, who then export much of the yield to neighbouring countries to serve as feed for livestock. These new economic relationships have significant effects on the environmental and spiritual landscape of the region.

Contract farming in Mae Chaem

To learn more about agricultural practices I leveraged my extensive network of long-term ethnographic contacts in the town and surrounding hills in the Mae Chaem district.⁹ Over a six-month period in 2018–19 I conducted 25 semi-structured interviews that investigated farmers' engagements with the land, past and present. I asked what farmers did to help ensure a successful harvest before and after planting their fields, and I paid special attention to talk about agricultural fires, spirits, environmental concerns, and economic contracts. I also conducted informal interviews with non-farming friends and informants in Mae Chaem and Chiang Mai to gather general impressions of the haze pollution. Although I made sure to include a mix of farmers from each of the main ethnic communities in the region, informants were not systematically representative of all farmers from all communities, nor were they controlled for gender and economic status. Instead, they were made up predominantly of friends and friends of friends, interlocutors whom I identified through the common anthropological method of 'snowball sampling'. Although the narratives I heard were not necessarily those of everyone in the area, my close acquaintance with the people I spoke with, and with those who know people I know, rather than strangers or specialised groups of farmer advocates, allowed me to garner a level of familiarity and candour that would have been unavailable had I approached people with whom I did not have sustained personal connections. What I lost in statistical representativeness I gained in the emotional force of personal reflections, adding to a growing body of knowledge about the attitudes of farmers in Southeast Asia.

Contract farming has seen a dramatic rise in recent decades in Northern Thailand, and although not all farmers I know engage in it, there are significant

9 Daniel Hayward refers to the situation in Mae Cham as '[a] cautionary tale', 'From maize to haze', paper presented at the conference Haze and Social (in)Justice in Southeast Asia: Past Experience and What Next?, Chiang Mai University, 29 July 2020; https://static1.squarespace.com/static/575fb39762cd94c2d69dc556/t/5f23cd96b1ec7d2b3875dfae/1596181931423/200729_DanielHayward.pdf (last accessed 16 Feb. 2024).

socioeconomic and political pressures that force many of them to do so.¹⁰ Farming contracts work by stipulating that farmers agree to sell a set quantity of crops to the businesses each year, in return for an income that provides a semblance of security to a notoriously unpredictable livelihood. Burning the fields allows for a quicker turn-around time for different harvests, to ‘prepare’ the fields for a new round of cultivation. Although the businesses do not ostensibly demand that farmers burn their fields between harvesting and planting their crops, there is usually an expectation of doing so, in order to meet the yields stipulated in the farming contracts. This expectation, paired with the depletion of the land’s ability to produce these yields through the overuse of the same fields rather than following older patterns of rotational farming, results in a de facto requirement for more and more burning.

Many people I spoke with found contract farming to be useful for ensuring an income, but they also told me about feeling pressure to produce ever higher yields because of these contracts, and about worries about the environmental effects exacerbated by the contract scheme. Fertilisers, insecticides, and herbicides are often offered to a farmer by the business with which they have a contractual agreement, meaning that contract farming comes with it higher levels of chemical and pesticide use.¹¹ Farmers come to rely on these chemical pesticides to help ensure a successful harvest. One will regularly see farmers walk out into fields in Mae Chaem with large packs of a variety of pesticides on their backs, such as the cancer-linked chemicals glyphosate and chlorpyrifos,¹² and hear stories about people getting ill from sustained contact with the chemicals over the years. The rise in chemical pesticides is correlated with an increase in contract farming. In a thorough review of pesticide use in Thailand, Wisanti Laohaudomchok and colleagues report that ‘The use of agricultural pesticides has rapidly increased in Southeast Asia, particularly in the neighboring countries of Thailand such as Cambodia, Laos, and Vietnam.... Such trends are driven by land use intensification related to the expansion of higher value crop production and integration of farmers into wider markets.’¹³

Evaluations of these fertilisers and pesticides by farmers I spoke with are partly positive and partly negative, but the negatives I heard were not a nostalgic wish for a return to a supposedly unproblematic time of traditional practices. They were, rather, a very real recognition of the harmful effects of the new farming techniques, from chemical poisoning to fertilisers running off the fields into the water system, to the depletion of nutrients in the soil from overuse. Except for a retired Monsanto employee I met with in Chiang Mai, everyone I spoke with in both the formal interviews and informal conversations felt ambivalent about contract farming.

10 See Sukhpal Singh, ‘Role of the state in contract farming in Thailand: Experience and lessons’, *ASEAN Economic Bulletin* 22, 2 (2005): 217–28; see also Songsak Sriboonchitta and Aree Wiboonpoongse, ‘Overview of contract farming in Thailand: Lessons learned’, ADBI Discussion Paper 112 (Tokyo: Asian Development Bank Institute, 2008).

11 Sukhpal Singh, ‘Contract farming system in Thailand’, *Economic and Political Weekly* (2005): 5578–86.

12 Wisanti Laohaudomchok et al., ‘Pesticide use in Thailand: Current situation, health risks, and gaps in research and policy’, *Human and Ecological Risk Assessment: An International Journal* 27, 5 (2021): 1147–69.

13 Ibid.

Far from being ignorant or greedily complicit in the negative effects of contract farming, many of those with whom I spoke are aware of the negative effects of the newer practices, not just to their own health but also to the land. ‘Now when we grow corn,’ one farmer told me; ‘it’s easy money, but it’s against nature (*pit thamma-chat*). The chemicals go into the water, dry up the land, we have to burn more, there’s more residue to burn from the corn stalks ... it’s a problem, in the hills, all over!’¹⁴ I heard about ongoing government attempts to ban some of the chemicals used for farming, but, as one Hmong man said, now people feel they can’t go back to ‘the old ways’.

Even as many farmers I spoke with recognise the negative effects of cash crop farming, and some have participated in programmes that promote changes to them, many also feel there is not much they can do about it. ‘Since capitalism (*rabop tum niyom*) came in, the lives of people changed’, a public health worker in Mae Chaem explained to me: ‘Contract farming is a popular consumer system, and the farmers here have no choice but to follow it.’ ‘If we don’t make contracts,’ another farmer said, ‘we don’t know if we’ll be able to sell our crops. Maybe no one will buy them. This way we’re sure. The company gives money to the people,’ he continued, suggesting that while the support of the farmers by the companies might be seen as good, the damage to the land isn’t: ‘but there’s not much one can do’. He hesitated for a moment and then added, ‘They’re really powerful, with a lot of connections to the government.’ Another farmer put it even more plainly: ‘the people here, they get told by the company what to grow, the company controls this, and the people burn the fields, and the air is bad.’ While many farmers do advocate for changes to these contractual relationships, many find it difficult to alter the dynamic brought on by them.

‘A pair of chickens and a glass of whiskey’

In discussing burning practices, some farmers spoke of differences between past and present approaches. ‘In the past, in the summer, we would prepare the field’, a Hmong villager told me in one typical example (and he meant ‘burn’ here when he used the word *triam*, ‘to prepare’) ‘but we would only do that for just 20 or 30 minutes, in the middle [of the field], to help the ground grow easier. Around April we would cut the crops and move to a new field, burning a little, like a natural fertiliser. But now people burn between planting, more than once a year.’ Although burning the fields was an important part of shifting cultivation in the past, the traditional rotating style of Hmong swidden agriculture, as with rotational farming in general across the region, has now been outlawed for decades. In part because of the need to replant in the same field year after year now, burning necessarily takes on different forms than it had in the past.

14 Even when the fact of burning looks similar in many ways, its social meanings, practices, and even environmental effects have changed. ‘In the burning process,’ writes Yos Santasombat, ‘neighbors who have land adjacent to or near by also set fire to their plots simultaneously so as to help one another make the flames spread and burn extensively ... [which helps to] accumulate calcium, phosphorous and potassium in the soil from residue of the burnt substances.’ Yos Santasombat, *Biodiversity: Local knowledge and sustainable development* (Chiang Mai: Regional Center for Social Science and Sustainable Development, Chiang Mai University, 2003), p. 31. The burnt residue that used to be helpful to the soil is now seen as dangerous.

This older practice of burning fields comes with religious beliefs, rituals and ‘the supernatural’¹⁵ that are part of complex systems of land management. Up until recently, and still in part today, farming has included practices that involved non-material, spiritual beings. ‘*Gai kuu, lao hai*’: a pair of chickens and a glass of whiskey are and were, I was told, often offered to the spirits of the land, as part of the many ritual practices asking for and thanking the spirits for a good harvest. This practice and many others like it are part of what is referred to in Mae Chaem by the general term of ‘*liang phi*’: to take care of, or attend to, the spirits of nature. Farmers described how one honours the spirits in order to avoid incurring their wrath, and to ensure the fertility of the land.

Within this general term of ‘taking care’ of the spirits there are a range of differences in practice among the different ethnic communities around Mae Chaem, from the lowland Muang (Northern Thai) people who live predominantly in the valleys to the upland Lawa, Hmong, and Karen in the surrounding hills. I learned about some of these practices in different communities. Their particulars as well as their shared qualities matter, because they point to the complexity and diversity of meaningfully ‘enchanted’ relationships to the land, as well as to changes over time.

Northern Thai farmers

As with many other lowland rice growers across Thailand, Northern Thai farmers in the valleys of Mae Chaem told me that they often make a small offering to the *Jao Din* (‘Lord of the Land’), or *Jao Thi* (‘Lord of the Place’) before and after planting rice. These spirits of place are part of Thai society generally, not just in the north but across the country. They are recognised in daily offerings at spirit houses in front of virtually every home in Mae Chaem, and in the common practice of asking for permission to trespass before entering into wild areas, as well as in relation to farming.¹⁶ Northern Thai and Karen communities will propitiate Phii Khun Nam spirits who safeguard watershed forests,¹⁷ as well as Mae Kong Kah, ‘mother of the river’, because of the significance of water for wet rice cultivation. Mae Poh Sop, ‘the spirit mother of the rice’, is especially prominent. Rituals to these and other spirits occur at particular times of the agricultural cycle. A few farmers in the valleys of Mae Chaem told me about not just practices conducted for particular spirits but also for particular cosmological moments. ‘If the mouse doesn’t eat rice one day,’ a farmer told me, as we sat near a field he had just burned that morning, ‘then we would know it’s not a good day to begin planting.’

Only a few people in the valleys told me about elaborate contemporary spirit rituals, beyond a basic attention to the ‘lords of the land’, even as the cosmological landscape is thought to be full of spirits. ‘To talk to more people who take care of the spirits (*liang phi*)’, I was told by a few lowland farmers, ‘you need to go up into the hills’. In the upland communities around Mae Chaem there are, or were, more elaborate spirit rituals, as well as a more elaborate, (in)famous reputation of farmers as burners of fields in swidden farming.

15 Santasombat, *Biodiversity*, p. 36.

16 See Cassaniti, *Living Buddhism*; and Julia Cassaniti and Tanya Luhrmann, ‘Encountering the supernatural: A phenomenological account of mind’, *Religion and Society* 2 (2011): 37–53.

17 Santasombat, ‘Biodiversity’, p. 172.

I accompanied my Northern Thai friend P'Duang in his old pickup truck to rural areas that he visits for his buffalo-selling business, and we stopped at houses tucked into the hillside to talk with farmers about their fields. P'Duang is married to a Karen woman and speaks both Northern Thai and Karen, along with some of the other local languages of the area, and he introduced me to some of his clients. As we drove into the remote hills outside of Mae Chaem town the overgrown paths were dotted with large official 'Don't Burn!' signs, while fires from the fields were visible from the street.

Lawa farmers

An older, kind Lawa man named Vasuthep in a remote village a few miles from the Myanmar border showed me around his farm, as he talked about his spirit practices, along with burning rituals and the now-outlawed practices of secondary-forest swidden farming.¹⁸ 'In the past, every seven years we would burn a new field', he said, squinting his wrinkly eyes thoughtfully as he showed me the overgrown plots around his house:

and after seven years using that field we would move to a new one. When we came to a new field we would first make a spirit house in the area. We would hold a ceremony, kill two chickens, or a pig, or what we could afford, for the spirits of the land. Seven to ten chickens would be good, twelve would guarantee success. And one big bottle of whiskey. A long time ago, it was customary to kill a dog—not to eat, we would do this to help the spirit, for the spirit of the land, the spirit of the water, because for the rice to grow strong it needs water. We would look for the right land, conduct the ceremony, burn the field, and plant the rice.

Included with these rituals is, or was, the propitiation of another spirit: the spirit of fire. 'We would do the ceremony for the spirit of the fire (*phi fai*), too', he told P'Duang and I, as we sat in his home drinking tea over an open fire. 'In the afternoon, each house would participate, to help the fire to not escape the field, to not have the wind come up, and move the fire another place. We would ask the fire spirit to control the fire.' I asked him where this fire spirit lives, and he laughed, gesturing around us: 'in the jungle, of course!' As Nils Bubandt writes about mud in 'Haunted geologies', fire in Northern Thailand is 'cosmopolitical': it is at once a political symbol and a cosmological agent.¹⁹

18 There is significant diversity in land management practices among different ethnic communities in upland Southeast Asia. The Lawa (Lua) and Karen are typically referred to as secondary-forest swiddeners, rotating fields rather than moving villages, while the Hmong, Lahu, Yao, Akha and Lasu are referred to as primary-forest swiddeners, farming an area of land over and over for a series of years, and then when nutrients are depleted, moving to a new area. See Peter Kunstader, 'Ecological modification and adaptation: An ethnobotanical view of Lua' swiddeners in northwestern Thailand', *The nature and status of ethnobotany*, ed. Richard I. Ford, 2nd edn (Ann Arbor: Museum of Anthropology, University of Michigan, 1978), pp. 169–200; and Keen, 'Land use'.

I focus on Lawa, Hmong, and Karen practices here because they are the main upland communities in Mae Chaem district; for an excellent summary of rituals related to spirits of the land in agricultural rituals among the Lahu, see Anthony R. Walker, 'From spirits of the wilderness to lords of the place and guardians of the village and farmlands: Mountains and their spirits in traditional Lahu cosmography, belief, and ritual practice', *Anthropos* 110, 1 (2015): 27–42.

19 Nils Bubandt, 'Haunted geologies: Spirits, stones, and the necropolitics of the Anthropocene', in *Arts of living on a damaged planet: Ghosts and monsters of the Anthropocene*, ed. Anna L. Tsing, Heather Anne Swanson, Elaine Gan and Nils Bubandt (Minneapolis: University of Minnesota Press, 2017), p. 135.

Vasuthep and other Lawa farmers I spoke with referred mainly to practices in their own villages, but the spirit practices they described are not culturally isolated. Although there are only approximately 17,000 remaining Lawa-identified people in Thailand today, they are believed to be the first indigenous group to settle in upper northern Thailand, with cultural practices that remain influential across the region.²⁰ ‘This land around here,’ I was told by one Lawa farmer, ‘used to all be owned by the Lawa.’ Kraisri Nimmanhaeminda, a royal family member of the old Lanna Kingdom that used to encompass Chiang Mai province and is today part of the Thai state, described the annual Northern Thai rituals to the spirits Pu Sae and Ya Sae, and called them Lawa aboriginal spirits: ‘The invocations ask the spirit to partake of and enjoy the offering and to assure health and rainfall for the villagers in return,’ Nimmanhaeminda writes, explaining that they included invocations to ‘let not the rice of the Lawa [Lua hill-tribe] die in their swiddens, let not the rice ... wither and die in their fields.’²¹ These rituals included the ceremonial burning of fields and forests. While the burning continues, however, many of the cultural practices around it have changed.

Karen farmers

People in other upland ethnic communities around Mae Chaem conduct, or conducted, similar spirit rituals around the harvesting cycle. Propitiations to guardian spirits, especially to the *K'Sah* ‘lord of land and water’ (*ther myng khae*), have and in some locations continue to be conducted before each planting season.²² Yos Santasombat reports on the agricultural initiation ritual of Hnee Saw Kho (New Year commencement ceremony), for example, held in the northern Mae Wang river basin to ask permission of the rice goddess (Tho Bee Kha) and the fire spirit to farm the land and secure a good harvest: ‘The ritual propitiation of the fire spirit is meant to ask the spirit to cool down to normal so that the heat will not affect the rice plants and other produce in the fields.’²³ In part because many Karen around Mae Chaem today are Christians, and in part because of new patterns of agriculture brought on by contract farming, rituals to the spirits of the land associated with burning fields have diminished over time. ‘This generation doesn’t know those old things’, my Karen friend Duangsri explained, but when I asked her about spirit propitiation

20 See Georges Condominas, *From Lawa to Mon, from Saa' to Thai: Historical and anthropological aspects of Southeast Asian social spaces*, trans. Stephanie Anderson, Maria Magannon and Gehan Wijeyewardene, Occasional Paper, Dept of Anthropology, Research School of Asian and Pacific Studies (Canberra: Australian National University, 1990). The exact number of Lawa and Lawa-identified people living in Thailand is uncertain. Some sources suggest the number to be closer to 60,000 (see, for example, <https://pathsunwritten.com/lawa-culture-thailand/> (last accessed 16 Feb. 2024)).

21 In Lawa: *Lua'nyia'hai bō hue tai, ka, Tai nyia'na bq hue tai hiao haeng*. Kraisri Nimmanhaeminda, ‘The Lawa guardian spirits of Chiangmai’, *Journal of the Siam Society* 55 (1967): 78, as cited in Michael R. Rhum, ‘The cosmology of power in Lanna’, *Journal of the Siam Society* 5 (1987): 94.

22 See Yoko Hayami, ‘Pagodas and prophets: Contesting sacred space and power among Buddhist Karen in Karen State’, *Journal of Asian Studies* 70, 4 (2011): 1083–105; see also Nicola Beth Tannenbaum, Nina A. Kammerer and Cornelia Ann Kammerer, *Founders' cults in Southeast Asia: Ancestors, polity, and identity* (New Haven, CT: Yale University Press, 2003).

23 Santasombat, *Biodiversity*, p. 205.

rituals, she emphasised that there continues to be a strong feeling of symbiotic dependency on the land. In other, non-Christian Karen villages around Mae Chaem, she implied, these rituals to the spirits may be continuing. It is not, her sister added, listening in on our conversation, that the spirits don't exist in Christian Karen communities; it is that one no longer needs to be scared of them. 'God assigns the spirits to carry out His orders', another Karen friend pointed out, suggesting a continuity with Karen practices from the past even under a new cosmological religious order. 'In church we would ask God to watch over the land,' I was told, 'instead of asking the spirits ... but it was a similar kind of thing.'

Hmong farmers

Similar farming practices of clearing, burning, cultivating, and moving on continue to be followed in Hmong communities, to an extent. But as with farmers in other communities in the area, these long-established methods of 'long cultivation—very long fallow'²⁴ are increasingly less practised, as new styles of agriculture have taken over. 'People would ask the spirits of the neighbourhood to help', anthropologist of Hmong culture Jacob Hickman explained: 'Hmong farming practices are completely cosmological, but it's not always a giant ceremony. It's more, like, "hey, we planted the rice, help us keep the bugs away", and later the first part of the harvest might be offered to the ancestors.'²⁵ Hmong planting rituals included what are referred to as the *ten hao de* ceremony, to ask the spirits to protect the water and forests,²⁶ suggesting a community of actors that extends beyond the human and into the environment.²⁷ It points, or pointed to, a moral ontology that looks quite different than that typically portrayed in discussions of ethics in anthropology or moral philosophy.²⁸

At his house overlooking sloped fields of cash-crop vegetables, the leader of one community told me in a long interview that in the past 'we would have practices for the *jao thii*, the lord of the place. We would use pigs, chickens, whatever we could afford, and chant'. I asked him to tell me some of the chants that were used, but he responded, 'The old people will know about this better'. An older man who was listening in to our conversation from a chair near our table nodded, and quietly intoned some chants in Hmong to illustrate, but he did not elaborate on them. Another Hmong farmer I spoke with summed up what he saw as the current state of affairs: 'Now we make the fields, and ask the spirits for their support, that if we have a successful harvest we'll thank them ... though not as much as in the past.'

24 Ibid.

25 Personal communication.

26 Paiboon Hengsuwan, 'Contradictions on the struggles over resources and contesting terrain of ethnic groups on the hill in protected area, Chom Thong, Chiang Mai', paper for the International Conference on Politics of the Commons: Articulating Development and Strengthening Local Practices, Faculty of Social Sciences, Chiang Mai University, 2003, cited in Tim Forsyth and Andrew Walker, *Forest guardians, forest destroyers: The politics of environmental knowledge in northern Thailand* (Seattle: University of Washington Press, 2008).

27 Jacob R. Hickman, 'Ancestral personhood and moral justification', *Anthropological Theory* 14, 3 (2014): 317–35.

28 Julia L. Cassaniti and Jacob R. Hickman, 'New directions in the anthropology of morality', *Anthropological Theory* 14, 3 (2014): 251–62.

From these and other conversations with farmers in the valleys and upland communities around Mae Chaem a few shared outlooks emerge: different spirits and rituals are associated with farming techniques in different ethnic communities; within these differences there was, and sometimes continues to be, a shared feeling that spirits need attention when a farmer engages in practices like burning; and a recognition that this attention to the spirits is decreasing as farmers adapt and modify their practices. Ritual relations to spirits of the kind I have described here suggest a cosmologically rich, ontologically multiple perspective at play in the region, pointing to a kind of psychological pluralism²⁹ that is not easily appreciated when the issue of burning is analysed solely from a political ecology perspective. As is common in anthropological analyses of the more-than-human,³⁰ the attitude and approach to the land in these spirit-laden farming techniques suggest cosmological perspectives that see nature as part of, and often an extension of, the social world.

From spirits to chemicals in contract farming

Engagements with local spirits of the land have markedly declined in Mae Chaem, and this decline is connected, both directly and indirectly, to the prevalence of contract farming. ‘We thank the *mae poh sop*, the *jao thi du lae na khao*, sure, with rice—but no, not with the corn’, one farmer in Mae Chaem explained to me, and others echoed the sentiment. ‘People make offerings for spirits for food they eat’, one said, speaking in a way that suggested his statement was obvious, ‘... so people do this for rice. They don’t eat the corn. So there’s no reason to make offerings to the spirits.’ Although rituals are at times done for rice that is grown to be sold, and in many of these cases pesticides are also used, in general spirit practices are less common when crops are cultivated for the market and pesticides are more customary. What looks like ‘more of the same’—in the sense that people used to burn their fields and still do—is not the same in the sense of the practical, spiritual relationship to the land.

Instead of performing rituals to the spirits of the land, yield-improving chemicals (fertilisers and pesticides) are often now employed in their place.³¹ After the Hmong

29 Julia Cassaniti and Usha Menon, *Universalism without uniformity: Explorations in mind and culture* (Chicago: University of Chicago Press: 2017).

30 See, for example, Marisol de la Cadena, *Earth beings: Ecologies of practice across Andean worlds* (Durham, NC: Duke University Press, 2015); Tsing et al, *Arts of living on a damaged planet*.

31 The use of pesticides has increased rapidly in the past ten years in Thailand. Laohaudomchok et al. (‘Pesticide use in Thailand’), in partnership with the Thai Ministry of Health and eight universities in Thailand, Laos and Indonesia, write that the overuse of pesticides is a major health problem in the country, and tie it to cash crop farming: ‘In Thailand, for example, there are indigenous ethnic minority groups living along the mountainous areas in the North and the West. These hill people comprise several local tribes including the Hmong (Meo), Mien (Yao), Lahu (Mu Ser), Akha (Egor), etc. Highland Hmong farmers have abandoned cultivation of subsistence crops and turned to chemical-intensive cultivation of non-narcotic permanent field cash crops. Like other Thai farmers, they apply pesticides by backpack and machine sprayers and by hand.’ I first noticed this connection in the early 2000s in Mae Chaem, when my Karen friend Thew mentioned his concern for his mother’s health because of pesticides she uses to grow strawberries for sale in Bangkok and abroad. Although a thorough ethnohistory of the link between pesticide use and maize production is beyond the scope of this article, others have voiced similar concerns.

village leader told me about the older, lesser-practised techniques of burning fields and propitiating spirits, he went on to say:

now it has changed. Now we put chemicals on, but in the past we'd pay more attention to the spirit. In the past, we weren't as sure, the outcome [of farming] wasn't as certain, so we had to ask the spirits. Now, when we put the chemicals on we're more sure they'll work, so we don't have to ask the spirits as much.

The connection is correlational for some, but for others the relationship is an explicitly causal substitution in a very practical and meaningful sense.

Farmers used to burn fields and forests, and continue to do so, but the relationship to the land being burned has changed. The spirits, I was told, were fickle and in need of attention, while the fertilisers act as ready replacements in a superficially similar but ecologically different sense. The substitution points, importantly, to the role of the agribusinesses in contributing to the environmental devastation occurring across the region. As I will argue below, it also sheds light on agribusinesses' ability to leverage the reputation of farmers as continuing past practices in order to obscure, or hide from, their own role in the crisis.

The role of agribusinesses and the changes to spirit relations in the new forms of contract farming point to a cosmologically and politically loaded aspect of the haze crisis. Some people I spoke with mentioned the role of agribusinesses in explaining air pollution, but not many did, and usually even then those who spoke only did so after I had prodded them. Almost none mentioned the businesses by name. Newspapers largely do not mention these businesses by name, either, even as their involvement in the haze is known by many.

There are a variety of businesses responsible for the rapid increase in contract farming in Thailand, but Charoen Pokphand Foods Public Company Limited (CP) tops the list as the largest and most dominant player in the field. Starting out as a small seed shop in Bangkok's Chinatown in the 1950s, CP imported seed from China, and exported pigs and chickens from Thailand, and from there the maize-growing took off, to serve as animal feed in a growing regional demand for meat.³² In the mid-1980s it began contract farming in collaboration with Thailand's state-run Bank for Agriculture and Agricultural Cooperatives (BAAC). Its billionaire family is now the richest in Thailand, and the fourth richest in Asia.³³ Far from being local or even only national, CP participates in global trade agreements that are themselves part of larger networked models of international business. Even if very few people I interviewed blamed them for the haze, it is not that the agribusinesses are not known; their role in the cash-crop economy, and related air pollution, is considered by many to be an open secret.

When I asked about CP in and around Mae Chaem I was often met with laughter, or silence, or a nervous kind of both. I shared with my friend Sen that I would be writing an article about the haze problem, to the point that people blame the farmers but really it's the big businesses like CP that are to blame, and in response he laughed

32 Tan Hui Yee, 'Chiang Mai's headache: Corn-fed smoke haze', *Straits Times*, 21 May, 2016.

33 See Kevin Hewison, 'Crazy rich Thais: Thailand's capitalist class, 1980–2019', *Journal of Contemporary Asia* 51, 2 (2021): 262–77.

outright and said ‘you can’t write that!’ When I asked why, he said it was because ‘well, they’re corporations. CP is a big company, a powerful company. They have connections, not just to business, but to the government. You just can’t write about them like that.’ ‘We’re just the little people here’, one farmer told me, when I asked her about the farmers’ relation to the large businesses. She showed me a small cupped hand to represent the people, and with the other hand covered over it as the agribusinesses. I asked her about CP: ‘Um, well I’m not sure if CP is here, or left,’ she told me, ‘Mae Chaem has been a case study of this problem.’ She paused and continued: ‘but one can’t say much about CP, Julia.’ ‘Is it because it’s tied to the government?’ I asked. She nodded, but didn’t say more.

Only three Thai informants out of the almost fifty I spoke with informally and formally in Mae Chaem and Chiang Mai about the haze cited agribusiness as a culprit in the haze catastrophe, and only one cited CP by name. All three are highly educated and live in Chiang Mai city, rather than Mae Chaem. All three speak English; one is a graduate student from Chiang Rai who visits Europe yearly for holidays, and the other two are professors at Chiang Mai University. Although these urban elite Thai informants are in many ways representative of a different social group than the farmers in Mae Chaem, their difference matters mainly because in many ways they share with the farmers a concern about the haze, and the privilege that their status brings allows them to share thoughts that others feel unwilling or unable to do. One of them, a professor of religion and philosophy at Chiang Mai University, wrote in an email to me how ‘capitalistic monopolies and the cruelty of CP have power over the state’. He talked of hidden agendas, and what he called the ‘lords of war’, using the English phrase in an otherwise Thai-language message. Referring to the agribusiness as ‘lords of war’ is a telling replacement of the ‘lords of the land’ that had been honoured in the agricultural practices of the past. Although he probably didn’t think of ‘lords of war’ in the same direct spiritual sense as farmers did in referring to ‘lords of the land’ in describing past rituals, the sense invoked in his statement indexes a kind of cosmologically loaded, political reference of its own.

A silent imaginaire: Blaming the ‘hill tribes’

A relative absence of talk about CP and other agribusinesses in assigning blame for the haze has meant that almost by necessity there is a need to look elsewhere. Luckily for the agribusinesses, rather than people pointing to a global network of neo-liberal economic practices as an obvious cause of the haze crisis, a scapegoat—the rural farmer—is ready at hand. It is partly *because* of the existence of the cosmologically rich traditional agricultural practices that I have discussed above, tied as they are to what is thought of as ‘slash-and-burn’ farming, rather than in spite of it, that the much more problematic role of agribusiness is so underappreciated. In place of blame assigned to the agribusinesses, people blame the farmers.

Perceptions of the fires often carry negative connotations about those doing the burning, which in the eyes of many people I spoke with in Chiang Mai and Mae Chaem are undertaken in rural and upland communities by farmers who ‘do not know better’. When I asked in casual conversation with farmer and non-farming friends and neighbours why the air was so bad I would hear a lot of different explanations, echoing the kinds of stories people were hearing regularly on their televisions,

radios, and other media. The conversations were tense—the air was so poor that many people weren't able to leave their house for significant periods of time, squinting when they did go outside and watching from closed windows the haze and the news about the fires raging around them.³⁴ At night the mountains were lit up red with the fires, and the air was thick with smoke.

A non-farming Northern Thai man in Chiang Mai said, in a typical explanation, 'The haze occurs because people with misconceptions burn the land to prepare agriculture for processing ... as a selfish act.' A man who sometimes helps his neighbours farm in an upland Karen community made a similar point: 'The smoke occurs, in my personal opinion, because of sneaky actions, because people are not satisfied with their situation in the countryside.' 'The problem is from the "hill tribe" farmers (*chao rai*, *chao doi*) burning their fields too much', I was told by a Northern Thai farmer in Mae Chaem, 'and police forces coming in to put out the fires, arresting those who have done wrong.' These and other explanations like it point both to the complexity of the problem itself, and of the multiple, often damaging perceptions of it.

Two aspects of this rhetoric are particularly significant: first, as mentioned above, the perception of the burning is that farmers problematically continue, at an increasing rate, practices that have gone on long before the current haze crisis. And second, these explanations about the fires significantly mimic a wider discourse about civilisation and margins in Southeast Asia. Agricultural fires are connected in the Thai imaginaire to notorious and traditional fiery agricultural land management techniques, and this imaginaire is often indirectly a part of the blame directed at farmers for the haze crisis today. Traditional upland agriculture, coupled with a stereotypical ignorance about them, underly many of the claims about upland farmers as being at fault for the haze. As Tim Forsyth and Andrew Walker observe in *Forest Guardians, Forest Destroyers*, 'Characterization of the upland population as unruly and problematic easily carries over into discussions of environmental management ... the agricultural activities of upland farmers—who are stereotypically associated with "shifting cultivation" or "slash-and-burn" farming—are often targeted as a primary cause of upland degradation.'³⁵ These narratives point upward: even among the farmers and friends I spoke with in Mae Chaem, living in areas surrounded by diverse local communities, there was a tendency to suggest that those in more upland areas—even those living in communities that in reality are only at an elevation a few feet higher—are responsible for a range of environmental issues, including mudslides, deforestation, and fires.

The narrative of upland/countryside wildness and ignorance has a long history in Thailand. Instead of citing the government's political motivations for searching for communists hiding in the forests, and to restrict the movement of hill communities,³⁶

34 In March 2024 Chiang Mai was cited as being the world's 'worst-polluted city' because of the seasonal haze: 'Stretththa will not declare Chiang Mai a disaster zone to protect tourism', *Bangkok Post*, <https://www.bangkokpost.com/thailand/general/2760136/sretththa-will-not-declare-chiang-mai-a-disaster-zone-to-protect-tourism> (accessed 17 Mar. 2024).

35 Forsyth and Walker, *Forest guardians, forest destroyers*, p. 8.

36 Pingkaew Luangaramsri, *Redefining nature: Karen ecological knowledge and the challenge to the modern conservation paradigm* (Chennai: Earthworm, 2002).

as far back as 1964 in a National Reserve Forest Act the practice of burning was listed in an explanation for the deforestation of the country: ‘Much of the land in the northern provinces,’ it reads, ‘was once densely forested hills, and over the course of years, swidden agriculture ... has destroyed a vast area of forest, one of the nation’s most valuable natural resources.’³⁷ Deforestation, degraded water resources, and erosion are common environmental concerns in Northern Thailand. They connect to ideas about the ostensibly damaging practices of upland peoples that intersect with the current debates on air pollution.³⁸

People in Chiang Mai speak of upland communities as ‘hill tribes’ (*chao khao*), often using words like ‘poor’ and ‘backwards’ to describe them, and implying they are in need of change and development. Although these harmful stereotypes are changing, people in upland communities are often seen as relatively ignorant (by not speaking Thai, for example) and in need of civilising. ‘The negative view of swiddeners as destroyers of the forest,’ Delang notes of global trends, ‘is magnified in countries where they are ethnic minorities.’³⁹ This is certainly the case for Thailand.

Yet even as the negative view of hill farmers is slowly improving, it remains a powerful, and significantly convenient representation in popular rhetoric about the haze. Crucially, it adds to the tendency to see contemporary burning as more of the same practices from the past, rather than attending to the changes in the meanings of farming, some of which I have drawn out in the overview above. Wittaya Kongsap, Director of Environment of the Chiang Mai Chamber of Commerce, said as much in a televised conference: ‘Those who are suffering in the city have been outraged as we know the health hazards of the pollution, and we shout at the people in the mountains doing the burning.’ He went on to counter this popular perspective:

yet spending the day listening to representatives of mountain communities, we learned that matters were not so cut and dry. Many ethnic communities have spent centuries managing the forests, using slash and burn rotational farming to effectively keep the soil healthy ... they had it all under control. These are not the people who are the problem, but the front line of people fighting these fires and suffering the most.⁴⁰

Although Kongsap and others clearly respect the agricultural knowledge of upland communities, few people living in the cities, including those in positions of power, actually spend a day or more in these communities. From extended periods of

37 Claudio O. Delang, ‘Deforestation in Northern Thailand: The result of Hmong farming practices or Thai development strategies?’, *Society & Natural Resources* 15, 6, (2002): 483–501. This attitude to swidden agriculture continues even if many studies show that the practice is environmentally sound, especially when population pressures are low. See, for example, *ibid.*, p. 490; Forsyth and Walker, *Forest guardians, forest destroyers*; and Clifford Geertz, *Agricultural involution: The processes of ecological change in Indonesia* (Berkeley: University of California Press, 1963).

38 See, for example, Fahn, *A land on fire*; Nikolas Århem, ‘Forests, spirits and high modernist development: A study of cosmology and change among the Katuic peoples in the uplands of Laos and Vietnam’, PhD diss. (Uppsala: Acta Universitatis Upsaliensis, 2014); and Rachel Dunn, ‘Perspectives, problems, and pesticides: The discrepancies between institutional and local environmental conservation perspectives in Northern Thailand and the implications for natural resource management model development’ (PhD diss., Cornell University, 2012).

39 Delang, ‘Deforestation in Northern Thailand’, p. 484.

40 Thai PBS, 19 Mar. 2019; <https://www.chiangmaicitylife.com/citynews/features/clean-air-white-paper/> (last accessed 15 Feb. 2024).

fieldwork in upland villages over the years, especially in a Karen village in Mae Chaem that has seen increased tourism and other forms of development around nearby mountain waterfalls, I have observed how, when organised groups visit, they often do so to carry out programmes to help the people there ‘develop’ their cultural and economic situations: to teach or train them in their own (traditional but supposedly forgotten) sustainable land management techniques. NGO workers and multinational organisations like the United Nations work on programmes to help educate upland communities about safe and sustainable farming practices, often successfully working to mitigate the crisis. But rarely do those at the higher levels of authority in these organisations speak the local languages, know about past farming practices, or often even differentiate among the different kinds of swidden styles of agriculture or the ethnic communities that practice them. A British UN employee tasked with combating the problem from his office in Bangkok cited to me the need to educate the ‘hill tribes’ in sustainable forest management strategies, but when I asked him to tell me more he was not able to mention even one of these groups by name. The ‘upland ethnic minority group’, or ‘hill tribes’ as they only recently were called, are often subsumed into one large minority of relatively uneducated farmers. Although many organisations do advocate for the inclusion of local practices in solutions to the haze crisis, the specifics of what this looks like in practice are often not so clear, with top-down solutions implemented much more often than ground-up ones. Even as upland groups increasingly work with governmental, academic, and non-governmental organisations to tackle the haze, the scapegoating of farmers, especially upland farmers, provides a viable and convenient target for the haze. If only the farmers knew better, such a perspective suggests, they would decrease their terrible burning, and the problem would end.

Spirits of civilisation and capital, in the centre and the periphery

The shift away from attention to local spirits of the land and toward cash-crop contract farming may look like another example of cosmologically meaningful relationships being overtaken by a global capitalist enterprise. In some way it is certainly this: where in the past the more-than-human spirits of place were part of the cultural ways of interacting with the land, now these spirits are relatively absent as farming is increasingly engaged with broader international and market-driven discourses about profit. As the Hmong village leader I spoke with had put it, in helping to ensure a successful harvest the chemical pesticides are replacing the need for spirit rituals.

The analysis I am offering here does not, however, suggest a simple replacement of local spirituality with Western or scientific non-spiritual engagement, nor represent an ideologically romanticised wish for a return to an imagined enchanted state of past indigenous knowledge.⁴¹ Instead, the insights offered by attending to the shift from spirits to pesticides suggest a contemporary contractual orientation to the land that is, in its own way, also reflective of a spirituality—one that needs to be taken into account when we think about the haze crisis in Southeast Asia. Nils Bubandt points to this connection in a related discussion on necropolitics: ‘In the Anthropocene,

41 Arun Agrawal, ‘Dismantling the divide between indigenous and scientific knowledge’, *Development and Change* 26, 3 (1995): 413–39.

necropolitics operates under the sign of metaphysical indeterminacy rather than certainty, unintended consequences rather than control. As it so happens, spirits exist under the same conditions of uncertainty and possibility.⁴² The capitalism that is replacing other kinds of relationships with the land in Thailand is making use of chemicals in some of the same ways that spirits used to, resulting in a shift in the cosmopolitics of the environment. Both the chemicals and the spirits serve a similar purpose, helping to mitigate an uncertain connection between what is planted and what ends up being harvested and sold.

This becomes all the more the case when we combine a ‘spirit of capitalism’ with views of the civilising spirit of the Thai state. The presence of the agribusinesses—and the largely absent rhetoric surrounding them—suggests a politics that is itself cosmological in nature. The idea that certain big businesses are beyond reproach is not just due to their financial or political power; it is also due to ideas—cosmological ideas—about power accrued through affiliations with spiritually potent others, in this case royalty, religion, money and government.

The relative silence that I found to surround the role of agribusinesses in the haze crisis is, in an important sense, related to the silence of politics in Thailand. The businesses, as with problematic political actors in Thailand, are more of an open secret than a mystery. But there is nevertheless an air of silence around state matters in Thailand, long the case but especially since the military coup in 2014. This air of silence extends past what is considered formally political, and reaches into the business sphere, where CP and other large firms are known to have strong ties to the ruling classes. The size of the large agribusinesses, and especially their connections to a wide network of industry and financial capital, rather than causing them to loom large in public discourse, counterintuitively instead contributes to their relative invisibility. Because of their financial and political clout, their ability to control media coverage is comprehensive, and the ability to speak against them almost impossible. It is for this reason that so many people hesitated, or laughed nervously, when I brought up the role of the businesses. The agribusinesses exert soft power in intimidation practices that are in some ways an extension of the *lèse majesté* laws that are increasingly extended past the royal family itself and on to the military rulers and other political and economic actors in the country.⁴³

The idea of spiritual power civilising, or conquering, the wilderness at the margins of the state is a rich, historically dense component of the religious and political world of Buddhism in Mainland Southeast Asia.⁴⁴ In contrast to the spirit of political clout and civilisational, cosmological supremacy that emanates from centres of power,

42 Bubandt, ‘Haunted geologies’, p. 125.

43 Links between CP and the military, royal family, and other members of the elite are difficult to document, but there is evidence of personal connections and ideological alignments. CP members often are present at military-political and royally sponsored events, and collaborate with the military and government in public projects. See, for example, Michael J. Montesano, ‘Thailand: A reckoning with history begins’, *Southeast Asian Affairs* 1 (2007): 309–99.

44 See, for example, Stanley Jeyaraja Tambiah, *Buddhism and the spirit cults in north-east Thailand* (Cambridge: Cambridge University Press, 1970); Erik W. Davis, *Deathpower: Buddhism’s ritual imagination in Cambodia* (New York: Columbia University Press, 2015); Århem, ‘Forests, spirits and high modernist development’.

rural farmers in Thailand, and particularly those in the uplands, become aligned in a popular cosmopolitical vision that associates them with untamed wildness.

A spectrum emerges, then, from the wild spirits of nature on one hand to what is referred to as the spiritual potency (*barami*) of civilisational religious power on the other.⁴⁵ The propagation of Buddhism has been historically tied to that of the ‘righteous king’ (*Dhammaraja*) as a powerful central civilising force, working as a corollary to the kinds of political and financial powers of the centre. Buddhism in Thailand often co-exists with local spirit practices, but it is also often represented as working against them. *Thu dong* (wandering forest monks) and other Buddhist virtuosi, for example, are understood to gain power from the forest by subduing the wildness of the jungle with Buddhist teachings, as a method to counter the life-affirming distractions and attachments that spirits represent.⁴⁶ A monk I spoke with in the hills outside Mae Chaem pointed to this when he explained that part of his spiritual disciplinary training is about controlling, or refusing to be involved with or distracted by, the spirits of nature.⁴⁷

Central Thai sites of financial and spiritual power thus combine to operate in tension with the country’s supposedly more ‘wild’ upland periphery. In their research on the haze pollution in Thailand, Mary Mostafanezhad and Olivier Evrard make this widely-known but not often explicitly articulated binary clear: ‘the dichotomy between lowlands and uplands continues to be widely associated with a series of other conceptual oppositions (majority/minority, homogeneity/fragmentation, rice

45 I do not mean to suggest that Buddhist principles are fundamentally entwined with the kind of destructive agricultural practices supported by agribusiness, only that the agribusinesses can be seen to be making use of a civilisation/wilderness rhetoric that aligns them with a cosmologically powerful perspective of which Buddhism is also a part. Many perspectives on Buddhism and its relationship to environmental issues show it to offer much to the preservation of land. As Rojjana Klechaya and George Glasson point out, Buddhism as taught in schools throughout Thailand instructs that one should live with nature mindfully and respectfully. (Rojjana Klechaya and George Glasson, ‘Mindfulness and place-based education in Buddhist-oriented schools in Thailand’, in *Weaving complementary knowledge systems and mindfulness to educate a literate citizenry for sustainable and healthy lives*, ed. Malgorzata Powietrzynska and Kenneth Tobin [Rotterdam: Sense, 2017], pp. 159–70.) And Susan Darlington reports on activist monks in Nan province in Thailand who advocate a move away from maize farming in what they call a shift ‘from capitalist agriculture to dhammic agriculture’. (See Susan Darlington, ‘Buddhist integration of forest and farm in Northern Thailand’, *Religions* 10, 9 [2019]: 1–13.) Martin Seeger writes of the motivational force for environmental protection in Thai Buddhist approaches to forests as spiritual ‘training grounds’, (Martin Seeger, ‘Ideas and images of nature in Thai Buddhism: Continuity and change’, in *Environmental and climate change in South and Southeast Asia*, ed. Barbara Schuler: How are local cultures coping? [Leiden: Brill, 2014], p. 47.) Phra Paisan (cited in Seeger) suggests that there is complementarity in Thai Buddhism and the spirits of nature, and Pairin Jotisakulratana suggests that while early Buddhist myths in Thailand point to ongoing tensions between Buddhism and nature, such as one that says that ‘The death ... of the goddess is caused by people valuing money over rice, and the Buddha claiming that he was greater than the Rice Mother’, they also instruct followers to ‘humbly respect nature’ and ‘help bring the rice back’ (Pairin Jotisakulratana, *Mothers of all peoples: Goddesses of Thailand from prehistory until the present* [San Francisco: California Institute of Integral Studies, 2012], pp. 142–3.) An emphasis on the co-construction of Buddhist and other spiritual traditions, rather than a separation of them, may represent a potentially constructive counter to the pernicious over-alignment of Buddhism with the Thai state.

46 Kamala Tiyavanich, *Forest recollections: Wandering monks in twentieth-century Thailand* (Honolulu: University of Hawai‘i Press, 1997); and Charles Hallisey, personal communication.

47 Julia Cassaniti, *Remembering the present: Mindfulness in Buddhist Asia* (Ithaca, NY: Cornell University Press, 2018), p. 139.

fields/forests, Buddhism/Animism etc) which has long framed the relationships between the Thai State and its cultural and ecological margins.⁴⁸ Michael Rhum makes a similar observation: 'At the boundaries of civilization we find the mountains with their dark forests, wild animals, and strange folk who speak incomprehensible tongues, the wild forest (*pii thuean*) is nature beyond human control, violent and full of threatening forces, but at the same time full of vital energy which can be put to human use if only it can be domesticated.'⁴⁹

As a powerful Central Thai, globally connected economic and political force, CP and the other large agribusinesses can be thought of as having a spiritual potency that emerges in part through alignments in a cosmological hierarchy that places them in relative proximity to the civilised sacred. The spirits of the fields and the farmers that interact with them, in contrast, are placed relatively low on this cosmopolitical spectrum, towards the wild and uncivilised.

Far from being an issue only in Thailand, there is an aura of, if not silence fully, then a kind of timidity and respect surrounding business activities at a global level. A kind of magical power becomes attached to capital in a way that, in a Marxist reading, increases as more and more capital is accrued. This makes corporate agriculture similar to other forms of multinational businesses around the world, as an ideological field of actors that are negotiating with businesses through an ostensibly value-free discourse of capital, even as this cosmopolitan perspective usually comes with ethical problems of market-driven social inequality. These practices extend beyond Southeast Asia, through networks of a Weberian 'spirit of capitalism': the elevation of profit and business success as a sign of morality and spiritual blessings in and of themselves. Jason Moore critically refers to this ethic as the current state of the 'capitalocene', a 'system of power, profit and re/production in the web of life'.⁵⁰ Thai agribusiness' ties to politicised capital, as part of a powerful entourage of actors, make them cosmologically potent in their own right. The logic of global capitalism intersects here with the logic of the Thai state apparatus, and turns what Anna Lowenhaupt Tsing calls 'the cultural specificity of capitalism'⁵¹ into a cosmologically loaded force behind the haze crisis in Southeast Asia. The spirits of land mingle with the spirits of capital, as the fields become 'haunted' by the 'spectre of big business'.⁵² By attending to the decrease in spirit rituals we can see how contract farming comes to almost literally 'dispossess' the land and its resources from the people who work most closely with them, and moves the locus of spiritual potency elsewhere.

Conclusion: What can be done?

Although the burning of fields may have the same 'fiery' physical qualities in the past as they do today, I have argued in this article that the social change from paying attention to spirits in agricultural rituals to the contract-farming practices of large

48 Mostafanezhad and Evrard, 'Environmental geopolitics of rumor', p. 4.

49 Rhum, 'The cosmology of power in Lanna', p. 92.

50 Jason W. Moore, 'The Capitalocene, part I: On the nature and origins of our ecological crisis', *Journal of Peasant Studies* 44, 3 (2017): 594.

51 Anna L. Tsing, 'Natural resources and capitalist frontiers', *Economic and Political Weekly* 38, 48 (2003): 5103.

52 Bubandt, 'Haunted geologies', p. 135.

agribusinesses in fact represents a significant shift in cosmological realities. I have suggested that a shift in attitudes about farming reflect the meaningful replacement of one cosmological view with another, more politically powerful one. Such a read of the haze crisis speaks to a growing interest in anthropology and environmental politics on cosmopolitical ecologies,⁵³ and the importance of analysing even material, capital-driven ecological practices for their cosmopolitical dimensions.⁵⁴ It works toward a larger project of decolonising the role of Western knowledge in global environmental activism, and rethinking the meaning of capitalism in global economies.

Attention to this shift points not just to an underrecognised cause but also, indirectly, to a few solutions. By revealing some of the largely taken-for-granted ‘civic epistemologies’ transforming the cultural and physical landscape of upland Southeast Asia, the analysis I have offered here helps to make room for new, alternative visions of environmental politics in the region. Civic epistemologies are ‘knowledge orders stabilized in institutionalized epistemic and political practices’,⁵⁵ and in Thailand they contribute to the continued tendency to view the farmers in the hills, rather than the corporations at the centre of the state, as the primary bad actors in the haze crisis. Drawing attention to the way that this move has occurred suggests a potential for renewed focus to the local spirits of the land as guides for environmental projects. ‘Government influence and encouragement of various ethnic groups to turn to cash crop production has shown a lack of understanding and a total disregard for the cultural dimensions of localised production and resource management,’ writes Santasombat,⁵⁶ as such, an increased recognition of the cultural dimensions of agriculture, such as the role of local spirit rituals, may help to make farming practices and the fires that accompany them more sustainable.

If local spirits of the land are recognised as important forces that have the potential to counter the dispossessing spirits of capital, then advocacy that emphasises their importance may help to create systems of less problematic land management practices. In thinking about a cosmologically loaded epistemology that operates on literally the same ground as more localized spiritual forces, we may be able to move past the almost taken-for-granted binaries of centre and periphery to see the tense coexistence of multiple forms of spirits in the fields of Northern Thailand. Following Tim Forsyth’s point that revealing taken-for-granted civic epistemologies can create new forms of activism,⁵⁷ highlighting the hierarchy may help to alter it.

53 See, for example, Riamsara Kuyakanon, Hildegard Diemberger, David Sneath Diemberger, and David Sneath, eds, *Cosmopolitical ecologies across Asia: Places and practices of power in changing environments* (London: Routledge, 2021); and Isabelle Stengers, *Cosmopolitics I* (Minneapolis: University of Minnesota Press, 2010).

54 See Julia Cassaniti, ‘Up in smoke: Cosmopolitical ecologies and the disappearing spirits of the land in the haze crisis of Southeast Asia’, in Kuyakanon et al., *Cosmopolitical ecologies across Asia*, pp. 62–80; Anna L. Tsing, Andrew S. Mathews and Nils Bubandt, ‘Patchy Anthropocene: Landscape structure, multispecies history, and the retooling of anthropology’, *Current Anthropology* 60, 20 (2019): 186–97.

55 Tim Forsyth, ‘Beyond narratives: Civic epistemologies and the coproduction of environmental knowledge and popular environmentalism in Thailand’, *Annals of the American Association of Geographers* 109, 2 (2019): 593–612, citing Clark A. Miller, ‘Civic epistemologies: Constituting knowledge and order in political communities’, *Sociology Compass* 2, 6 (2008): 1896–919.

56 Santasombat, ‘Biodiversity’, p. 209.

57 Forsyth, ‘Beyond narratives’, p. 593.

It seems clear at this point that regulation alone will not be enough to solve the problem, while a more collaborative approach may be. In an interview-based study on the causes and solutions to the haze with 400 Northern Thai villagers, Liwa Pardthaisong and colleagues found that top-down approaches for policy formation are largely seen as inadequate: 'As the state has preferred to control burning by strong regulation, the brainstorming and integration of local wisdom and academic knowledge, private and civil society standpoint through public hearing for adjusting and launching policies is very limited and imbalanced.'⁵⁸ This may be changing, at least to some extent. During a 2022 visit to Mae Chaem my friend P'Duang, who had helped me to interview farmers in the area, told me that he is now his Karen village's representative to the district's administrative office: 'We've been having a lot of meetings about the burning. I'm in charge of leading the meetings, but everyone has different opinions about it, it's a really tough situation!' The involvement of local farmers like P'Duang in formal discussions about the burning points to the potential for an increased reclamation of the land from the agribusinesses.⁵⁹

Many farmers in the valleys and upland communities around Mae Chaem have advocated for changes to the new regime of contract farming, with different tactics and degrees of success. Attention to the haze problem in Mae Chaem has certainly helped to alleviate it, at least in some respects: because of its infamous reputation for haze-producing maize-debris burning, activist farmers in Mae Chaem have in the last few years taken strides to reduce its ritually absent corn production, and in particular the involvement of CP. According to the 'Mae Chaem' Network, from 2018 to 2019 1,000 *rai* of corn fields were replanted with other crops, and CP has been to some extent driven from the area.

Attending to locally meaningful spirits in farm management may help to further reorient the practice of burning to those for whom the land is loaded with local cosmological meanings. It suggests that one of the policy implications—or ways to integrate local knowledge⁶⁰—is to increase popular and professional attention to and engagement with land spirit rituals in Northern Thailand. Local practices like these do not usually appear in public policy programmes, but they could meaningfully come to do so. As the Lawa farmer Vasuthep put it, the rituals to the fire spirit help to control the fire, in a practice that indexes the kind of environmentally sound relationship to the land that will help to mitigate the haze crisis in the long term. Although the use of pesticides is likely to continue, there are already programmes in place that

58 Pardthaisong et al., 'Haze pollution in Chiang Mai', p. 91.

59 The importance of local involvement is clear, but difficult to do in practice, as local organisations often work under the auspices of government and agribusinesses. Even the 'Mae Chaem Model' project, which claims to be a local advocacy group, is actually a state-directed project with substantial CP Group involvement. See British Council Newton Fund, University of York and Chiang Mai University, 'Research brief: The Mae Chaem model: A new blueprint for sustainable rural development in Northern Thailand?', 2019; <https://www.york.ac.uk/media/yes/yesinew2018/sustainablefood/The%20Mae%20Chaem%20Model-%20A%20new%20blueprint%20for%20sustainable%20rural%20development%20in%20northern%20Thailand.pdf>. The project claims that the main problem is to end 'irresponsible agricultural practices' by farmers, and includes a quote from CP's vice president Apaichon Vacharasin about 'the need for marketing mechanisms to boost public awareness' (ibid.).

60 Christopher M. Raymond et al., 'Mapping community values for natural capital and ecosystem services', *Ecological Economics* 68, 5 (2009): 1301–15.

are helping to decrease their use, and the integration of spirit practices with this and other aspects of contract farming may further help to curtail environmentally destructive practices. Calling out the agribusinesses for their role in promoting the narratives of blaming the farmers is clearly needed, and while doing so is a more formidable task than most of us understand, one way to do so productively is to frame the destruction in terms of spiritual and not just material damage in a way that resonates with a local and governmental audience. Susan Darlington and others have reported on the successes of pairing Buddhist spiritual ideals with nature spirits in Thailand's tree ordination movement, for example;⁶¹ such a melding of religious values may go far in altering the trajectory of haze pollution as well.

This may mean advocating for increased attention to the *jao thi* in a general sense of spirits of place, or for the more specific spirits and rituals that can accompany sustainable burning among the different ethnic groups across the region. Andrew Paul et al. make this point for Karen perspectives:

Conservation, in this context, cannot be fulfilled merely by eliciting, documenting and enforcing rules and regulations. Rather, it requires the cultivation of conditions necessary for the continuation of respectful relationships between humans and the *Htee K'Sah Kaw K'Sah, Tah Mu Kha, Nah Htee*, and other more-than-human beings of the *Kaw*.⁶²

What this looks like in practice, of course, will vary from community to community, as local groups of farmers may promote different ways to incorporate spirits into new economic realities. Disaggregating the meanings of the burning, by separating out fires that have been started through a recognition that one would not want to disrespect the land (which is what the offerings to spirits are largely all about) from those that have been started without this recognition in place (as is increasingly the case in contract farming), can help both farmers and policymakers advocate for sustainable practices, rather than obscuring the differences between them. The focus from the Thai government on ending the burning of fields may be misplaced. Rather than calling for yearly blanket burning bans, policy can shift to the meanings and practices that happen alongside it. Advocacy can support the involvement of local actors and the continuation of spirit rituals as part of burning, if not in place of chemicals and contracts, then perhaps along with them. Attention to the rituals involved in propitiating spirits of the land and the sustainable environmental relationships that undergird them may engender new ways of relating to the land by the agricultural businesses as well as the farmers, which may in turn mean a decrease in the unsustainable burning causing the current crisis.

In focusing on cosmological changes in this article, I have sought to add to a large and promising corpus of approaches that are currently being promoted by scholars and practitioners dedicated to decreasing the haze pollution in the region. I am hopeful that attention to the politics of spiritually rich ecologies in Southeast Asia may help in some small way to move our analytic framework toward a recognition of the importance of local engagements with more-than-human aspects of environmental

61 Darlington, 'Buddhist integration of forest and farm'.

62 Andrew Paul, Robin Roth and Saw Sha Bwe Moo, 'Relational ontology and more-than-human agency in indigenous Karen conservation practice', *Pacific Conservation Biology* 27, 4 (2021): 382.

practice. Such a view asks how different spiritually imbued orientations affect and are affected by political engagements with the land, and how these different orientations come to speak with each other on the world stage. A farmer told me that 'Before, we would thank the spirits of the land; we asked them to protect our fields.' Now the more certain outcome of using chemical pesticides means that these spirits aren't thought by many to be needed as much, but as the land is slowly destroyed it may become clear that the spirits are needed after all.