

When crises converge: How Uneven Agrarian Development Influences the Effects of Climate Change in Sri Lanka's North-Central Dry Zone

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In 2016-2017, Sri Lanka's North-Central dry zone suffered what had been described as the worst drought in decades (Fernandez 2017). The severe drought conditions, followed by heavy rainfalls, led to widespread crop failures, particularly affecting the 2016/17 *Maha* and 2017 *Yala* cultivation seasons. The drought had a significant impact on paddy cultivation. Overall, paddy production across 2016/2017 fell by close to 40% from the previous year, yielding the lowest harvest in close to 35 years (WFP 2017; FAO 2017). While it is difficult to attribute climate change as the

primary cause of the 2016-2017 drought, research in Sri Lanka has demonstrated how climate change is contributing towards more extreme weather events throughout the country (Jayawardena *et al.* 2018; Darshika *et al.* 2018).

The effects of the drought were widespread; however, they were also unevenly experienced. For Asoka,^[1] a smallholder farmer from the village of Kalawelpothana in the Anuradhapura district, the drought has had a lasting effect. Asoka cultivates a small plot (around

three acres) of paddy. Like most in the village, Asoka is also reliant on informal and uncertain agricultural daily wage labour work in neighbouring villages. The drought not only affected Asoka's paddy harvest, but also reduced the availability of daily wage labour work that is so essential for his household's finances. With only little paddy and income during this time, Asoka and his family, like many other households in Kalawelpothana, experienced periods of serious financial precarity and food shortages. During the worst periods of the drought, meals were often reduced to just manioc (cassava), *pol sambol*, and black tea, which they consumed only once or twice a day.

Debt and Agrarian Life

As is common among smallholder farmers throughout the North-Central dry zone, Asoka regularly depends on loans for covering the costs of cultivation, harvest, and other household expenses. Debt has long been a feature of agrarian life in rural Sri Lanka. For example, the Royal Banking Commission of 1934 calculated that close to 80% of households in the dry zone were indebted to the tune of Rs.200 (Farmer 1957). The Commission found that large portions of this debt was undertaken to purchase household goods rather than for cultivation purposes and were settled by payments in kind instead of cash (Leach 1961).

However, with the introduction of hybrid seeds and synthetic fertilisers and pesticides at the start of the Green Revolution in the 1960s (Dhanapala 2020) and the neoliberal agricultural modernisation pathway embarked upon post-1977 (Shanmugaratnam 1984), credit has become an essential livelihood resource for many smallholder farmers in the North-Central dry zone as they attempt to navigate rising agricultural costs (Quealy and Yates 2021).

Before the drought – as he does before most cultivation seasons – Asoka took out a small loan to cover the initial costs of cultivating paddy on his small plot. Asoka was already indebted to a commercial bank, so like many others in Kalawelpothana, he often turns to a local *mudalali* (businessman, actually moneylender) for informal lines of credit. Gaining loans from the *mudalalis* is easier, he explains, as they are usually more willing and often travel to the village making them more accessible. Despite the ease of access, the *mudalalis* charge high rates of interest. An interest rate of 10% per month is applied to Asoka's loan – a figure that was regularly quoted by others during our time in Kalawelpothana. The interest rate is compounded by a time lag that exists from the date on which the loan is taken and the income generating commodity sales that

occur after the harvesting period several months later. As the interest begins to accrue from the initial date the loan is taken, by the time Asoka has harvested and sold his paddy, he will often face 3-to-4 months' (depending on the paddy variety) worth of interest on top of the loan principal.

An Indebtedness Treadmill

Taking on debt, however necessary, provides a temporal displacement of risk into the future (Taylor 2013). For Asoka, the poor harvests during 2016-2017 significantly impacted his ability to make debt repayments, while the lack of income created the need to take on additional debt. The self-reinforcing cycle of rural indebtedness in Kalawelpothana can be seen as an indebtedness treadmill (cf. Karamchedu 2023), in which smallholder farmers fall into further debt each time they experience a crop failure, which in turn creates a demand for, and dependency on, additional debt.

Despite being unable to repay the full loan amount, Asoka was able to negotiate both a repayment extension and an additional loan. Faced with little other choice, taking on additional debt allows Asoka some financial breathing space in the short-term. However, the additional debt compounds the risks of default and asset dispossession into the future as interest rapidly accrues, while at the same time deepening the unequal relations of dependency and exploitation between Asoka and the credit-providing *mudalali*.

Dynamics of debt and land are central to the socio-politics of agrarian society in Kalawelpothana and the surrounding area. By controlling lines of credit, the *mudalalis* are able to expand their control over land, either directly or indirectly. For Asoka and many other smallholder farmers in Kalawelpothana, access to credit through *mudalalis* is contingent on providing a portion of land as a guarantee. This practice appears as a mode of informal mortgaging (*ukas*), in which the land in question falls under the control of the *mudalali* until the loan is repaid. If the loan cannot be repaid, the *mudalali* may eventually assume ownership of the land.

Andē and Mudalalis

For smallholder farmers who are rendered either landless, without full access to their lands, or reliant upon reduced landholdings, *andē* (sharecropping) is commonly practiced throughout Kalawelpothana. *Andē* has a long history in Sri Lanka and usually involves an agreement in which the smallholder rents a portion of land from another landowner in exchange for a percentage of the harvest. In some cases, the costs of cultivation and

harvest will also be shared – although not always equally – between the sharecropper and the landholder. Earlier accounts of *andē*, such as Leach’s study of Pul Eliya (a village which directly neighbours Kalawelpothana), depict a largely reciprocal arrangement, usually taking place among kinship groups (Leach 1961). More recent experiences from Kalawelpothana, however, reveal far more lopsided and exploitative arrangements.

In Kalawelpothana, smallholders such as Asoka almost always enter into *andē* arrangements with the same *mudalali* to whom they are both indebted and who has acquired control of their land. In this sense, smallholders such as Asoka, become tenants on their own lands. While numerous efforts have been made to regulate the practice of *andē* to provide rights and security for the sharecropper (see Moore 1985), these regulations appear scarcely enforced in Kalawelpothana. As a result, smallholder farmers who are indebted, without control over all or part of their land, and/or unable to afford the costs of production, are poorly positioned to negotiate the terms of *andē* agreements, meaning it is the *mudalali* who mostly commands a large majority of the harvested paddy (regularly reported as two-thirds of the yield).

Socio-Political Consequences

In some cases, *andē* proves the possibility of cultivating a small volume of paddy that would be otherwise unaffordable and/or unattainable without access to sufficient land. However, experiences from Kalawelpothana illustrate two important socio-political consequences of *andē* that underpin the social power hierarchies in the village and between those in neighbouring villages. First, the small share of harvest received by many smallholder farmers, like Asoka, makes it difficult to profit from cultivating paddy, while at the same time the paddy received is regularly insufficient to meet household consumption requirements. Second, under the weight of insufficient profits, many smallholder farmers in Kalawelpothana expressed feeling trapped within a cycle of *andē* and debt to cover household and cultivation expenses. Over time, the dependency on *andē* and informal lines of credit provided by local *mudalalis* have embedded deep socio-political power hierarchies within Kalawelpothana and neighbouring villages.

Although Asoka was able to navigate the worst of the drought, the future appears precarious under the weight of increasing indebtedness and concerns over land control. While not representative of all smallholder farmers in the North-Central dry zone, Asoka’s struggles appeared relatively common throughout the village

of Kalawelpothana. The context of Kalawelpothana is reflective of broader patterns of uneven agrarian development that have emerged in particular since the introduction of colonial capitalism under British rule, and more recently accelerated under the neoliberal turn post-1977, in which economic growth has coincided with the pauperisation of large numbers of smallholder farmers (Shanmugaratnam 1984; Shanmugaratnam 1985). For Asoka, the processes of uneven agrarian development have clearly impacted his ability to navigate the “climates of uncertainty” that emerge through the entwining of climatic variabilities and agrarian capitalism (Matthan 2022). However, for politically and economically powerful *mudalalis*, crises such as the 2016-2017 drought provide the opportunity to consolidate their power by controlling lines of credit and accumulation through the dispossession of indebted farmers’ lands.

2021 Chemical Fertiliser Ban

The unequal socio-political power relations in Kalawelpothana, especially those related to land and debt, are particularly salient as multiple crises converge across rural Sri Lanka. For example, the crises that emerged through former President Gotabaya Rajapaksa’s overnight chemical fertiliser ban in 2021 amplified existing inequalities, while also creating new inequalities in the process. Like elsewhere, the overnight fertiliser ban caught farmers in Kalawelpothana by surprise. Indebted, ill prepared, and unable to afford the prohibitive prices of the remaining chemical fertilisers available in the market, farmers in Kalawelpothana experienced sharp agricultural yield declines. For those still recovering from the 2016-2017 drought, the fertiliser ban, among other things, resulted in heightened indebtedness, inflamed concerns related to land access and control, and deepened the hierarchical relations of dependency and exploitation between smallholders and *mudalalis*.

For Asiri, a farmer from the neighbouring village of Bellankadawala, the fertiliser ban was one crisis too many. Having only just overcome the enduring effects of the 2016-2017 drought and faced with the uncertainties of an ongoing political and economic crisis, the fertiliser ban led him to stop commercial farming all together. While Asiri still cultivates a small plot of land for his household consumption, he has loaned out the rest of his paddy lands to his brother in return for a marginal percentage of the harvested paddy. Asiri now relies on income derived from driving his tuk-tuk and on finding daily wage labour work. By shifting away from agriculture, Asiri can potentially begin

untangling himself from the exploitative debt relations with local *mudalalis*. However, for many indebted small-scale farmers in Sri Lanka and elsewhere, waged labour is frequently precarious, informal, low paid, with poor conditions, and unsafe (Withers and Piper 2018; Akram-Lodhi 2021).

Vulnerability is Produced

For Asoka, Asiri, and other smallholder farmers in the villages of Kalawelpothana and Bellankadawala, “vulnerability does not just fall from the sky” (Ribot 2013: 164). Rather, it is produced through histories of uneven agrarian development and contemporary relations of power. Climate change deepens existing inequalities, while also co-producing new forms of injustice as it becomes entangled with multiple overlapping crises (Sultana 2021).

Understanding climate change as part of an entanglement of multiple crises in rural Sri Lanka therefore demands challenging the prominence of approaches that seek to understand the effects of climate change by focusing primarily on biophysical events, while silencing the uneven agrarian histories and political economic dynamics that shape climate change and the converging of crises across the dry zone (Ribot 2022; Matthan 2022; Paprocki 2021).

For example, a recent report by the Hector Kobbekaduwa Agrarian Research and Training Institute (HARTI) assesses the vulnerability of farming communities in the dry zone to climate change by focusing on a range of biophysical and socio-economic indicators (i.e., frequency of exposure to droughts and floods, reliance on natural resource-based incomes, access to crop insurance, etc.) to measure levels of climatic exposure, sensitivity, and adaptive capacities (Samarasinha *et al.* 2020). For policy makers and practitioners, the report provides functional and straightforward insights into the generalised vulnerabilities of farming communities to climate change in the dry zone. However, the approach appears both ahistorical and apolitical in that it is limited to identifying *who* is vulnerable, rather than uncovering the more-than-climatic processes through which the vulnerabilities of smallholder farmers, such as Asoka and Asiri, are first produced (i.e., revealing *why* they are vulnerable) (Kashwan and Ribot 2021; Quealy and Yates 2021).

In the villages of Kalawelpothana and Bellankadawala, climate change converges with histories of uneven agrarian development, a long-standing neoliberal modernisation drive, the enduring effects of former

President Gotabaya Rajapaksa’s fertiliser ban in 2021, political uncertainties, and the ongoing economic crisis (among other things). Climate change must therefore be understood, and addressed, together with the historically produced political economic dynamics that shape its influence across the dry zone (Shattuck *et al.* 2023; Borras *et al.* 2021).

In this regard, and through a focus on power relations, political economic dynamics, and socio-ecological concerns in rural settings, insights from the interrelated fields of political ecology and critical agrarian studies are crucial within ongoing climate change debates in Sri Lanka. Through an engagement with these analytical fields, we argue that working towards more just agrarian futures under climate change in Sri Lanka’s dry zone demands critical attention towards understanding the ways in which climate change is shaped by, and in turn shapes, the politics, and trajectories of agrarian change across the region.

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Notes

[i] All names used here are pseudonyms.