

Accepted manuscript

Doro, E. (2023). Introduction. In *Plunder for Profit : A Socio-Environmental History of Tobacco Farming in Southern Rhodesia and Zimbabwe* (pp. 1-33). Cambridge University Press. <https://doi.org/10.1017/9781009093071.001>.

Is a part of: *Plunder for Profit : A Socio-Environmental History of Tobacco Farming in Southern Rhodesia and Zimbabwe*

DOI: <https://doi.org/10.1017/9781009093071.001>

AURA: <https://hdl.handle.net/11250/3126581>

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Introduction

The critical importance of tobacco to the Zimbabwean economy is reflected by the profoundly flattering epithets deployed over the years to describe the crop: ‘leaf of gold’, ‘most promising weed’, ‘crucible’, ‘life-blood’, ‘golden lining’. Tobacco is situated at the nerve centre of the body politic, central to the country’s political economy. Zimbabwe is the largest producer of tobacco in Africa, and the fifth largest producer of flue-cured tobacco in the world after China, Brazil, India and the United States.¹ The crop is the country’s second largest foreign currency earner after gold and contributed 15 per cent to total national export receipts in 2020.² During the 2017/2018 season, Zimbabwe produced what was then a record-breaking flue-cured tobacco crop of 252 million kilograms.³ This surpassed the previous record crop of 236 million kilograms harvested in 2000 at the height of the occupation of white-owned commercial farms by landless black peasants during the Fast Track Land Reform Programme (FTLRP).⁴ The 2017/2018 tobacco season was

¹ BDO Zimbabwe Chartered Accountants, ‘Tobacco Industry and Marketing Board Study into Cost of Tobacco Production in Zimbabwe’, 2015, 1. Also see, ‘Zimbabwe major producer of tobacco in Africa’, *The Herald*, 10 November 2015.

² Historically, tobacco was Zimbabwe’s top foreign currency until production went down after the land reform programme in 2000 and it was overtaken by gold. In 2020, out of a total close to US\$5 billion national export revenue tobacco contributed US\$741 million and gold US\$982 million. See Ministry of Finance and Economic Development, ‘The 2022 National Budget Statement Presented to the Parliament of Zimbabwe by Hon. Prof Mthuli Ncube’, 21.

³ A. Matibiri, ‘Tobacco Production and Marketing Trends in Zimbabwe in the Last Two Decades’, Coresta conference paper, Victoria Falls, 2 April 2019.

⁴ In 2000, a series of land invasions started by war veterans led to the occupation of white-owned commercial farms and the Fast Track Land Resettlement Programme (FTLRP). The land reform programme transferred over 10 million hectares of land to 146,000 black smallholder farmers. Its impact on tobacco production was profoundly felt as, up until then, about 2,000 white commercial farms had dominated tobacco production. See, S. Moyo, ‘Three Decades of Agrarian Reform in Zimbabwe’, *The Journal of Peasant Studies*, 38, 3 (2011), 493–531; I. Scoones

celebrated by the government and the tobacco industry in the country as a milestone and epic achievement crowning the success of the Land Reform Programme and black economic empowerment. It created an ephemeral effervescence of euphoria over the prospects of the crop to improve the economy and boost smallholder agriculture within the new agrarian dispensation. However, in the same year, the international humanitarian watchdog Human Rights Watch (HRW) cast a dark and ominous shadow on this glorious moment by releasing a damning report that chronicled a litany of human rights abuses and infractions within the tobacco farms in Zimbabwe and exposed the sinister side of the tobacco 'success story' narrative.⁵ These included the prevalence of child labour, the hazardous chemicalised tobacco work environments, nicotine poisoning, exposure of workers to toxic pesticides and abuse of small-scale farmers by tobacco contracting companies.⁶ This report was dismissed by the Zimbabwean government as 'not factual' and not 'independently confirmed'.⁷ However, labour exploitation in the tobacco farms and the widespread use of child labour is widely documented and confirmed not only in Zimbabwe but in other tobacco producing countries in the world.⁸

et al., 'Tobacco, Contract Farming, and Agrarian Change in Zimbabwe', *Journal of Agrarian Change*, 28 (2018), 22–42.

⁵ See Human Rights Watch, 'A Bitter Harvest: Child Labour and Human Rights Abuses on Tobacco Farms in Zimbabwe', (April 2018).

⁶ *Ibid.*, 28–73.

⁷ S. Mhofu, 'Zimbabwe Government Dismisses HRW report on Child Labour', available on www.voanews.com/africa/zimbabwes-government-dismisses-hrw-report-child-labor, accessed on 24 July 2019.

⁸ The International Labour Organization (ILO) in its 2009 report on commercial agriculture and child labour notes that the existence of child labour in tobacco production is rampant particularly amongst children from poor and vulnerable backgrounds. These children work under poor conditions such as long working hours, extreme heat, and exposure to pesticides and risks from injuries. The prevalence of child labour in tobacco farming is largely because the crop is labour intensive, and children are a cheap source of labour. See 'Child Labour, Commercial Agriculture and the Role of Tobacco', International Labour Organisation, Geneva, (2009). In 2014 a Human Rights Watch report, based on 141 interviews with children between the ages of 7 and 17 working on tobacco farms in the United States between 2012 and 2013, documented that there was extensive exploitation of children on the farms who worked long hours, were paid poorly and were exposed to harmful tobacco pesticides. See Human Rights Watch, 'Tobacco's Hidden Children: Hazardous Child Labour in United States Tobacco Farming', Washington, (2013). Another report by Human Rights Watch in 2010 documents similar labour exploitation practices in tobacco farms in Kazakhstan. See, 'Hellish

The negative impact of tobacco farming in Zimbabwe has also been felt outside the social and individual human body – on the natural environment. Tobacco farming has caused significant deforestation, land degradation, and both air and water pollution. The country's forestry conservation body, the Forestry Commission of Zimbabwe (FCZ) estimates that between 1998 and 2013 15 per cent of tree cover was lost to tobacco farming.⁹ It further confirmed in 2016 that 50,000 hectares (ha) of forestry cover were being lost annually to tobacco farming and the crop contributed 20 per cent to total national deforestation.¹⁰ Tobacco farmers in Zimbabwe rely almost exclusively on indigenous forestry resources to cure flue-cured tobacco and this has affected forests and woodlands in tobacco farming areas further threatening biodiversity, animal habitats and waters supplies. Environmental experts reckon that 5.3 million trees are hewed every year by tobacco farmers.¹¹ In 2013, for instance, an estimated 46,000 ha of forest (1.38 million cubic metres of wood) were cleared to cure 127 million kilograms of tobacco.¹² Consequently, environmental experts project that with the current rate of wood consumption in the tobacco sector the country will experience devastating desertification by 2048.¹³ Ultimately, the biggest challenge faced by tobacco farmers in Zimbabwe has been the development of measures and strategies to 'maximise use of natural resources while minimising the effect of resource degradation'.¹⁴

Work Exploitation of Migrant Tobacco Workers in Kazakhstan', www.hrw.org/report/2010/07/14/hellish-work/exploitation-migrant-tobacco-workers-kazakhstan, accessed 25 July 2019.

- ⁹ 'The Impact of Tobacco Farming on Deforestation', Forestry Commission of Zimbabwe, Harare, 2013, 6.
- ¹⁰ 'Forests suffer amid Tobacco Record Breaking Euphoria', *The Herald*, 30 July 2018.
- ¹¹ 'Tobacco Farmers Must Stop Deforestation', Available at www.herald.co.zw/tobacco-farmers-must-stop-deforestation/, accessed on 4 July 2021.
- ¹² R. V. Chivheya, 'Indigenous Forest Level of Deforestation, Forest Dependency and Factors Deserving Willingness to Participate in Indigenous Forestry Conservation: Evidence from Resettled Farmers in Shamva' (Unpublished PhD thesis, University of Fort Hare, 2016), 5.
- ¹³ 'Tobacco Farmers Fuel Deforestation', *The Zimbabwe Independent*, 28 March 2014, available at www.theindependent.co.zw/2014/03/28/small-scale-tobacco-farmers-fuel-massive-deforestation/, accessed on 25 July 2019.
- ¹⁴ C. Chivuraise, 'Economics of Smallholder Tobacco Production and Implications of Tobacco Growing on Deforestation in Hurungwe District of Zimbabwe' (Unpublished Master of Science thesis, University of Zimbabwe, 2011), 4.

On a global scale, the socio-environmental panorama presented by tobacco production is no less apocalyptic. In 2004, the World Health Organization (WHO) released a report that revealed the causal link between tobacco farming and poverty in low-income countries.¹⁵ The report noted that, while the profits of the big tobacco companies soar, the burden of tobacco farming on national economies in the form of the cost to public health facilities, the human toll due to pesticide exposure, the circle of debt by farmers owed to tobacco companies and the pernicious effects on the natural environment creates a 'vicious cycle of poverty'.¹⁶ The 'Bellagio Statement on Tobacco and Sustainable Development' also concluded that in the developing world, 'tobacco poses a major challenge not just to health, but environmental sustainability'.¹⁷ Approximate data from the mid-1980s confirmed that tobacco farming depletes between 1 million and 2.5 million hectares of woodlands annually.¹⁸ An authoritative study by Fraser in the mid-1980s drew similar results on the negative ecological effects of

¹⁵ See, 'Tobacco and Poverty: A Vicious Cycle', World Health Organization, Geneva, 2004.

¹⁶ This report critiques the narrative often promoted by tobacco companies to farmers in low-income countries that tobacco farming brings prosperity. It points out that in 2002 the Chief Executive of the largest tobacco company Philip Morris earned US\$ 3.2 million in salaries and bonuses. The reports note that it would take six years for an average Brazilian farmer to earn what the Executive earns in a day and 2140 years to earn his annual salary. Also, in 2002 the net revenue of the three top tobacco companies in the world Philip Morris, Japan Tobacco and British American Tobacco was US\$ 121 billion, which was more than the combined GDP of Zimbabwe, Zambia, Cameroon, Botswana, Albania, Bahrain, Belize, Bolivia, Cambodia, Estonia, Georgia, Ghana, Honduras, Jamaica, Jordan, Macedonia, Malawi, Malta, Moldova, Mongolia, Namibia, Nepal, Paraguay, Senegal, Tajikistan, Togo and Uganda. The report also pointed out that in high income countries the cost of health care attributed to tobacco stood at between 6 per cent and 15 per cent of the total national health care bill. Finally, according to the report in southern Africa, 1400 km² of indigenous woodland are destroyed annually because of tobacco farming, which accounts for 12 per cent of overall annual deforestation.

¹⁷ Representatives of twenty-two scientific organisations from across the world had a meeting in Bellagio, Italy in 1995 to examine the global impact of tobacco production and consumption. The meeting reached consensus that tobacco cultivation posed a major threat to sustainable development in low-income countries. For the full report see, 'Bellagio Statement on Tobacco and Sustainable Development', *Canadian Medical Association Journal*, 153, 8 (1995), 1109–1110.

¹⁸ H. J. Geist, 'Global Assessment of Deforestation Related to Tobacco Farming', *Tobacco Control*, 8, 1 (1999), 18–28.

tobacco production.¹⁹ Tobacco farming contributes to siltation of rivers, water reservoirs and the extinction of species due to habitat overexploitation.²⁰ Relative to other crops, tobacco facilitates accelerated soil erosion and imposes excessive demands on soil nutrients. Tobacco depletes more than ten times as much nitrogen, twenty-four times as much potassium and thirty times as much phosphorous as cassava, for example.²¹ Farmers growing tobacco also use a lot of fertilisers, chemicals and insecticides. Run-off from these fertilisers and pesticides usually contaminate water bodies.²² Thus, the exceptionality of tobacco farming relative to other crops is that it depletes soils, causes extensive deforestation, requires a lot of (frequently coerced) labour and uses a lot of agrochemicals and pesticides that contaminate both human and natural environments. The consumption of tobacco is also harmful to human health and is responsible for diseases such as lung cancer which has caused millions of deaths.²³

In 2005, WHO came up with a Framework Convention on Tobacco Control (FCTC) to restrict 'the globalisation of the tobacco epidemic' by limiting tobacco demand and supply through multi-lateral cooperation in reducing consumption and counteracting the tobacco

¹⁹ Alastair Fraser, in his 1986 study, revealed that tobacco growing areas are in parts of the developing world that are identified by FAO as being wood deficient. He also argued that most forests in Asia and Africa are now below the levels of meeting the current and future wood fuel needs on a sustainable basis. See, A. Fraser, *The Use of Wood by the Tobacco Industry and the Ecological Implications* (Edinburgh: International Forest Science Consultancy, 1986).

²⁰ N. Lecours et al., 'Environmental Health Impacts of Tobacco Farming: A Review of the Literature', *Tobacco Control*, 21, 2 (2012), 191–196. A recent report published in 2018 confirmed that tobacco farming contributes to climate change through acidification, high fossil energy consumption and soil and water depletion. The report noted that the global production of 32.4 million megatons of green tobacco contributed 82 megatons of carbon emissions which was 0.2 per cent of global emissions in 2014. See M. Zafereidou, N. Hopkinson and N. Voulvoulis, 'Cigarette Smoking: An Assessment of Tobacco's Global Environmental Footprint Across Its Entire Supply Chain', *Environmental Science and Technology*, 52, 15 (2018), 8087–8094.

²¹ R. J. A. Goodland, C. Watson and G. Ledee, *Environmental Management in Tropical Africa* (Boulder, 1984), 78.

²² R. J. Tobin and W. I. Knausenberger, 'Dilemmas of Development: Burley Tobacco, the Environment and Economic Growth in Malawi', *Journal of Southern African Studies*, 24, 2 (1998), 405–424.

²³ Tobacco has been dubbed by WHO the single largest cause of death during the last century estimated to have claimed more than a hundred million casualties through sickness.

industry's lobbying and advertising activities.²⁴ The convention also recommends the development of sustainable models that ameliorate tobacco production's social and environmental costs.²⁵ However, current global tobacco-control intervention regimes have not been very effective.²⁶ The Zimbabwean government has been an outspoken and harsh critic of this convention and of several tobacco-control measures. In 2000, during the WHO public hearings on a global tobacco-control regime in Geneva, the Zimbabwe Tobacco Association (ZTA) criticised the work of the FCTC as arrogant and iniquitous, 'representing an attack on Zimbabwe's national sovereignty'.²⁷ The country also refused to ratify the Tobacco Control Convention when it entered into force in 2005, declaring that the convention would harm its tobacco industry.²⁸ Although Zimbabwe eventually ratified the treaty in December 2014, it has remained highly critical of global tobacco-control initiatives and aloof from much of the efforts to reduce tobacco consumption such as curtailing marketing of tobacco products, illicit trade of cigarettes, limiting tobacco production and searching for alternative crops. This policy negligence raises critical questions about the long-term social and environmental sustainability of tobacco farming in Zimbabwe and the economic prospects for smallholder tobacco farmers within the context of changing global and local pressures such as public health advocacy, falling consumption trends, stochastic market dynamics and socio-ecological factors.

²⁴ J. Chung-Hall et al., 'Impact of the WHO FCTC Over the First Decade: A Global Evidence Review Prepared for the Impact Assessment Expert Group', *Tobacco Control*, 28 (2018), 119–128.

²⁵ This is contained in Article 18 of the convention.

²⁶ Tobacco companies (specifically BAT and Philip Morris) created supply chains in the 1990s to improve production and access to markets. These supply chains were used in the 2000s to legitimate the portrayal of tobacco as socially and environmentally friendly instead of taking meaningful steps to eliminate child labour and deforestation, with the result that the companies benefited to the tune of US\$ 64 million annually in money that would have been used to avoid tobacco related deforestation in the top 12 global tobacco-producing countries, including Zimbabwe. See, M. Ortez and S. Glantz, 'Social Responsibility in Tobacco Production? Tobacco Companies Use of Green Supply Chains to Obscure the New Costs of Tobacco Farming', *Tobacco Control*, 20, 6 (2011), 403–411.

²⁷ A. Lown et al., 'Tobacco Is Our Industry and We Will Support It: Exploring the Potential Implications of Zimbabwe's Accession to the Framework Convention on Tobacco Control', *Globalisation and Health*, 12, 2 (2016), 1–11.

²⁸ *Ibid.*, 1–11.

The FTLRP changed the tobacco farming landscape in Zimbabwe as the whole infrastructure of white commercial production that had sustained tobacco production since the colonial days collapsed and black smallholder farmers took over.²⁹ Smallholder production has grown exponentially over the years with the number of black smallholder flue-cured tobacco farmers rising from 8,537 in 2000 to 140,895 in 2018.³⁰ The production dynamics have also radically shifted in terms of net contribution of smallholder farmers to national output as they have outperformed the commercial sector.³¹ While production figures have been impressive and show a growth trajectory, accelerated production of tobacco has generated anxieties amongst environmental experts over the long-term sustainability of tobacco farming based on the current common property resource use models in the resettlement farming areas and the limits imposed by the availability of such resources in the future.³² Although palliative measures such as afforestation, using fast-growing exotic trees, has been espoused by the tobacco industry as an alternative, implementation of that policy has been weak. A forest control law was introduced through a statutory instrument in 2012.³³ Subsequently, an afforestation levy was imposed on tobacco farmers by the state in 2015.³⁴ However, these regulations are yet to be institutionalised. In July 2016, tobacco farmers confronted the government over the allocation of the funds generated under the

²⁹ By July 2001 half the approximately 2,000 white owned tobacco farms had been designated for resettlement purposes. See D. Cole and J. Cole, 'Tobacco Research and Development', in M. Rukuni et al. (eds.), *Zimbabwe's Agricultural Revolution Revisited* (Harare, 2006), 405.

³⁰ Tobacco Industries Marketing Board Annual Report, 2018, 26.

³¹ Statistics from the Tobacco Industries and Marketing Board show that small-scale farmers produce well over 90 per cent of total national output of flue-cured tobacco. In 2018, small-scale production contributed 91 per cent to national output. See, Tobacco Industries and Marketing Board (TIMB) Annual Report 2017.

³² The Zimbabwe Forestry Commission has constantly pointed out the long-term unsustainability of current tobacco production models on forestry resources. In 2018, a Forestry Commission official noted that 20 per cent of national forestry cover lost was a result of tobacco farming. She added that during the year tobacco farmers had destroyed 60,000 hectares of forests wood to cure tobacco. See 'Forests suffer amid tobacco record breaking euphoria', *The Herald*, 30 July 2018.

³³ This was passed under the Control of Timber and Forests Produce Regulations.

³⁴ This was effected by the Tobacco Afforestation Levy.

afforestation levy.³⁵ The state had collected US\$12 million but had not channelled anything towards supporting afforestation in tobacco-growing areas.³⁶ During the presentation of the 2019 budget statement the Minister of Finance ordered the fund to be shared between the Forestry Commission and the Tobacco Industries and Marketing Board (TIMB) and to be invested in afforestation within tobacco farming areas.³⁷ Also, more worryingly for tobacco farmers, other alternative energy sources for tobacco curing such as coal and fast-growing *Eucalyptus* trees have also come under new global environmental scrutiny.³⁸

Moreover, the social costs of tobacco to the country are ominous. In 2019, the prevalence of tobacco use in Zimbabwe was estimated to be between 19 per cent and 35 per cent of the population.³⁹ A study by WHO in 2016 worryingly revealed that 20 per cent of young people between the ages of 13–15 in Zimbabwe were smokers and 12.5 per cent of children started smoking at the early age of seven.⁴⁰ There is

³⁵ 'Farmers Cry Foul over Levy', *The Zimbabwe Independent*, 29 July 2016.

³⁶ Ibid.

³⁷ The 2019 National Budget Statement by Hon. Prof. Mthuli Ncube Minister of Finance and Economic Development, 22 November 2018, 63.

³⁸ Scientific studies have established that *Eucalyptus*, which is the ideal afforestation tree for the tobacco industry, rapidly depletes the water table and threatens water security. See J. M. Albaugh, P. J. Dye and J. S. King, 'Eucalyptus and Water Use in South Africa', *International Journal of Forestry Research*, (2013), doi.10.1155/2013/852540; 'Mounting Pressure Against Eucalyptus in Kenya Described as a Water Guzzler', World Rainforest Movement, Bulletin 147, October 2009, available at <https://wrm.org.uy/articles-from-the-wrm-bulletin/section2/mounting-pressure-against-eucalyptus-in-kenya-described-as-the-water-guzzler/>, accessed on 22 August 2019; V. Engel et al., 'Hydrological Consequences of Eucalyptus Afforestation in the Argentine Pampas', *Water Resources Research*, 41 (2005), 1–14. Another alternative source coal has high carbon emissions and greenhouse gas effects. As a result of these concerns major global cigarette manufacturers such as Philip Morris have resolved to eliminate the use of coal in tobacco curing processes by 2020 under the sustainable tobacco programme by not purchasing tobacco cured with fossil fuels. This is a serious threat to Zimbabwe's tobacco industry and prompts more proactive and cost-effective renewable energy sources for tobacco curing. This becomes even much more imperative considering that the country has struggled with a huge energy deficit since 2000 and relies on electricity imports from its neighbours particularly South Africa, Mozambique and Democratic Republic of Congo (DRC).

³⁹ S. Hayson, 'The Illicit Tobacco Trade in Zimbabwe and South Africa', Working paper, Scowcroft Centre for Strategy and Security, (March 2019), 4.

⁴⁰ 'Waking Up to Teenage Smoking in Zimbabwe', www.dw.com/en/waking-up-to-teenage-smoking-in-zimbabwe/a-19026965, accessed 24 November 2019.

also laxity in regulations to reduce demand for tobacco products as well as limited central government investment in tobacco-control agencies and public awareness on the dangers of smoking. The global health body pointed out that existing laws designed to curb smoking amongst school children were not being implemented.⁴¹ The long-term public health burden that the escalating use of tobacco might impose on the country's health sector will be substantial. The financial gains from tobacco farming will not be able to cover these social costs. Even more, farm incomes from tobacco have declined year-on-year, to the point that 'tobacco success story narratives' have become contested. The country's economic decline over the past twenty years or so has also affected tobacco farmers whose earning has significantly dwindled with the result that many are not growing the crop profitably.⁴² Between 2000 and 2010, the country experienced an unprecedented inflation rate of 231,000,000 per cent and an unemployment rate of over 90 per cent.⁴³ Although the economy significantly improved between 2010 and 2020, the country is still burdened by high inflation rate, cash shortages, arbitrage in forex exchange regulations and high cost of goods and services. Despite selling their crops in United States Dollars, tobacco farmers get part of their incomes in local currency at official exchange rates which are usually undervalued. This has snuffed out the prospects for capital investments in afforestation, agricultural innovation and diversification. In the end, tobacco-growing communities have been caught in the vicious cycle of indebtedness to tobacco contracting companies, while failing to sustain themselves.⁴⁴

⁴¹ Ibid.

⁴² These are perennial concerns that haunt every tobacco marketing season. See 'Zimbabwe Tobacco Sector Booming but Farmers Growing It Are Not', Voice of America, 30 May 2017, available at www.voanews.com/africa/zimbabwe-tobacco-booming-farmers-growing-it-are-not, accessed on 22 August 2019; 'Tobacco Farmers Cry Foul over Forex Payments', *The Herald*, 23 April 2019; 'Farmers Cry Foul over Pricing of Golden Leaf', www.zbc.co.zw/farmers-cry-foul-over-pricing-of-golden-leaf/, accessed on 22 August 2019; 'Tobacco Farmers Cry Foul over Cash Withdrawal Limits', accessed on 22 August 2018; 'Tobacco Prices Go up in Smoke', available at www.businesslive.co.za/fm/features/africa/2019-06-13-tobacco-prices-go-up-in-smoke-in-zimbabwe/, accessed 22 August 2019.

⁴³ C. Munangagwa, 'The Economic Decline of Zimbabwe', *The Gettysburg Economic Review*, 3, 9 (2009), 110–129.

⁴⁴ R. Chingosho, C. Dare and C. Van Walbeek, 'Tobacco Farming and Current Debt Status among Smallholder Farmers in Manicaland Province in Zimbabwe', *Tobacco Control*, 30, 6 (2021), 610–615.

However, despite these apparent negative socio-environmental effects the expansion of the country's tobacco sector continues to be framed largely in terms of livelihoods and rural incomes for small-scale tobacco producers.⁴⁵ These triumphalist discourses permeate much of the discussions on tobacco production in Zimbabwe where tobacco is a political crop inextricably tied to the successes of the political status quo. These dominant and hegemonic narratives gained traction and momentum after the Land Reform Programme when the state conscripted tobacco farming within the script of national survival, black empowerment, and national sovereignty.⁴⁶ Within this political landscape responsible environmental policy interventions in tobacco farming have been neither effectively nor robustly articulated.

⁴⁵ Literature on contemporary tobacco farming in Zimbabwe after the year 2000 generally falls into two categories. The rural livelihoods and accumulation approach examine the changing patterns of production from dominance by white commercial farmers to the rise of black smallholder producers (which intensified after the land invasions in 2000) within the context of increased incomes and new patterns of rural accumulation. See, I. Scoones et al., 'Tobacco, Contract Farming, and Agrarian Change', 22–42; J. Masvongo, J. Mutambara and A. Zvinavashe, 'Viability in Tobacco Production Under the Smallholder Farming Sector in Mount Darwin District', *Journal of Development and Agriculture Economics*, 5, 8 (2013), 295–301; D. Magadla, 'A Smoky Affair: Challenges Facing Some Smallholder Burley Tobacco Producers in Zimbabwe', *Zambezia*, XXIV.1, (1997), 13–30. The environmental scholarship emphasises the ecological disruptions instigated by the surge in the number of tobacco producers on the limited land and natural resources. See P. Nyambara and M. Nyandoro, 'Tobacco Thrives, but the Environment Cries: The Sustainability of Livelihoods from Small-Scale Tobacco Growing in Zimbabwe, 2000–2017', *Global Environment*, 12, 2 (2019), 304–320; T. G. Nhapi, 'Natural Resource Degradation through Tobacco Farming in Zimbabwe: CSR Implications and the Role of the Government', *South African Journal for Communication Theory and Research*, (2019), 1–15.

⁴⁶ On 27 October 2017, *The Patriot* newspaper, which is a mouthpiece for the ruling party ZANU PF, published an article in which it attacks WHO for policies against tobacco farming. The article eulogises (then) President Robert Mugabe for his stance in defending the black-dominated tobacco farming industry and protecting the interests of his nation and people. The article points out that tobacco is key to the economy as it brings in billions in foreign currency and capital investments, supports 1.2 million people directly and another 4.8 million who are dependent on the crop. It adds that tobacco production 'testifies to the success story of the Land Reform and Resettlement Programme which empowered 400,000 indigenous families from the previous 4,000 commercial white farmers'. See, 'WHO can't change Mugabe standing', *The Patriot*, 27 October to 2 November 2017.

This book integrates the contemporary narratives on tobacco farming in Zimbabwe into socio-environmental history research as a way towards understanding not only how the present crisis is linked to bigger historical patterns in cultures of predatory agricultural production but also to illuminate on the context and potential of tobacco-control policy within the country. A long *durée* approach to environmental history is important during the age of the Anthropocene, to connect the past, present and future in understanding the outstanding issues that must shape economic choices and policies in agricultural production during a time of volatile climate, ecological and social uncertainty.⁴⁷ It is important to write stories that locate environmental change in historical time and show how contemporary environments and environmental systems have been shaped across history and how these have also shaped humans and human culture. Contemporary environmental crises in Africa and the rest of the world are connected to past human activities and policies that continue to shape the present – with future implications.⁴⁸ This study connects with contemporary narratives and historicises the environment, society and commercial tobacco farming in Zimbabwe (Southern Rhodesia).⁴⁹ It

⁴⁷ The term ‘Anthropocene’ was introduced by J. P. Cruitzten and E. F. Stoermer in 2000 to designate a new geological age distinct from the Holocene era. They argue that the Anthropocene is the ‘age of humans’ and is defined by rapid climate change, expansion of human and livestock populations, rapid urbanisation, increased consumption of fresh water, extinction of animal species, landscape and waterway modification, and the decline of natural resources. They designate this era as beginning between 1750 and 1800. The debate has been taken up and although there are disagreements on when exactly the age began there is unanimity that human activity has altered the planet more significantly during this era. See, J. P. Cruitzten and E. F. Stoermer, ‘The Anthropocene’, *Global Change Newsletter*, 41 (2000), 17–18. For debates on the age of the Anthropocene see N. Möllers, ‘Cur(at)ing the Planet – How to Exhibit the Anthropocene and Why?’, *RCC Perspectives*, 3 (2013), 57–66; T. J. Braje, ‘Earth Systems, Human Agency, and the Anthropocene: Planet Earth in the Human Age’, *Journal of Archaeological Research*, 23, 4 (2015), 369–396; M. P. Diogo, I. Louro and D. Scarso, ‘Uncanny Nature: Why the Concept of Anthropocene is Relevant for Historians of Technology’, *Icon*, 23 (2017), 25–35.

⁴⁸ A. Isaacman, ‘Historical Amnesia or the Logic of Capital Accumulation: Cotton Production in Colonial and Post-Colonial Mozambique’, *Environment and Planning: Society and Space*, 15 (1997), 757–790; M. Tiffen et al., *More People, Less Erosion: Environmental Recovery in Kenya* (London, 1994).

⁴⁹ Present-day Zimbabwe was known as Southern Rhodesia from 1890 to 1964. In 1964 when Northern Rhodesia (present day Zambia) got its independence the

focuses on the interaction between tobacco farmers and the environment from 1893 onwards and how that relationship shaped socio-economic and political landscapes, physical environments, agrarian ecosystems, and even impacted on the human body.

While scientific approaches to the tobacco-control debate concentrate on contemporary practices in tobacco production systems and the tobacco value chain, this book broadens this understanding by critically historicising tobacco culture and the attendant production institutions and regimes. These were forged over a hundred years from the pioneer settler tobacco farms to the contemporary small-scale producer in the resettlement areas. Tobacco production in Southern Rhodesia and Zimbabwe always defined the political economy and constructed agricultural landscapes and social relations since the early colonial days. But while farmers grew the crop and made decisions on how to grow it that in turn affected the environment, the tobacco crop itself also exerted a significant amount of subtle agency. Richard Foltz argues that crops and nature also carry agency so much that historians who have focused exclusively on humans have missed the complexity that all human actions take place in an ecosystem that involve other non-human agents.⁵⁰ Emily Gorman and Andrea Gaynor emphasised the imperative for historians to tell ‘more than human histories’ and embrace other species to give primacy to the dynamic relations of entities, organisms and multiple voices to uncover novel methodological and theoretical approaches.⁵¹ Thus, while humans developed the social, economic, political and cultural milieu that dictated how the tobacco crop was to be grown, the crop itself has biological features that determined its requirements for growth and lifespan that in turn influence human choices and the concomitant socio-economic institutions for its production. This book also discusses how crops carry hegemonic symbols of power through their cultivation and production, which reified certain

country changed its name to Rhodesia until 1980 when it got majority rule and independence. The term ‘colonial Zimbabwe’ is used to refer to the colonial state (1890 to 1980). The name shall be used interchangeably with Southern Rhodesia and Rhodesia to reflect the period before and after 1964 respectively.

⁵⁰ R. C. Foltz, ‘Does Nature Have Agency? World History, Environmental History, and How Historians Can Help Save the Planet’, *The History Teacher*, 37, 1 (2003), 9–28.

⁵¹ E. O’Gorman and A. Gaynor, ‘More-than-Human Histories’, *Environmental History*, 25 (2020), 711–735.

racial ideologies, identities and stereotypes within and beyond the colonial state.

This book illuminates not only on the effects of tobacco farming on the environment, but how the tobacco environment affects the human body. This dimension is important because the interaction between humans and nature is not unidirectional, but a dialectical process, a dialogue in which human and natural systems shape and influence each other.⁵² In studying environmental change therefore, it is necessary to understand that human activities have environmental consequences, and change in natural ecosystems, whether induced by humans or not, inevitably affects humans, and the human body.⁵³ To this end, farming landscapes must not be viewed as ‘just’ physical spaces of production but also as socio-environmental sites of struggle on which humans and nature interact to produce not only new ecosystems and environmental change but also new relations of society. The dialectical nature of human and landscape interaction is central to historical change and natural landscapes are not neutral external backdrops to human activities.⁵⁴ Tim Ingold emphasises the temporality of physical landscapes as they are neither ‘built nor unbuilt but are perpetually under construction’.⁵⁵

This book explores how tobacco farming systems, shifts in politics and cultural practices by white settler farmers and African farmers

⁵² In essence this can be distilled as the most basic definition of ‘socio-environmental history’, that is narratives that explain the human past using the lens of how humans and nature have interacted, influencing each other in the process and creating new social institutions, economic systems, physical landscapes, ecologies and ecosystems.

⁵³ W. Cronon, ‘The Uses of Environmental History’, *Environmental History Review*, 17, 3 (1993), 1–22.

⁵⁴ See, T. Ingold, ‘The Temporality of Landscapes’, *World Archaeology*, 25, 2 (1993), 152–174.

⁵⁵ *Ibid.* Ingold further explains that humans do not act upon the landscape to ‘do things to it’ but rather move along with it and are integral to the transformation of the landscape. Also see, W. Cronon, *Changes in the Land: Indians, Colonists, and the Ecology of New England* (New York, 2003). Cronon presents nature and landscapes as being more than stages for human activity but also actors. For an engaged reading on the construction of landscapes in Zimbabwe see, J. Fontein, *Remaking the Mutirikwi: Landscape, Water and Belonging in Southern Zimbabwe* (Suffolk, 2015). Fontein examines the construction of landscapes around Lake Mutirikwi in Zimbabwe during both the colonial and post-colonial periods and shows that this process is both ‘imaginative and material’. Also see, D. M. Hughes, ‘Hydrology of Hope: Farm Dams, Conservation, and Whiteness in Zimbabwe’, *American Ethnologist*, 33, 2 (2006), 269–287.

changed landscapes, environments and social relations over time in Southern Rhodesia and Zimbabwe. The book shows that this process was complex and shaped by factors outside the domain of the environment such as global economic and political conditions like the Great Depression, the two World Wars and the ‘Dust Bowl’ environmental disasters in the USA and accompanying conservation discourses. The book uses the broader historiographical theories on the rise of conservation ideologies within white settler agriculture in southern Africa and global discourses on modern environmentalism to interrogate how tobacco farming practices contributed to environmental degradation, contamination or improvement.

The political ecology of tobacco farming also involved power relations constructed along lines on race. Africans suffered both as labourers in the white settler tobacco farms and then as tobacco farmers themselves. As labourers, Africans were exploited and exposed to dangerous tobacco chemicals, and as farmers they were marginalised and deprived of access to land and natural resources, capital and markets. But indeed, Africans were not just passive victims under the colonial tobacco economy. Between 1900 and the early 1930s they seized the market opportunities offered by the establishment of mining settlements and towns to produce their ‘indigenous’ tobacco and sell it to earn enough money to pay their taxes and buy goods.⁵⁶ During the 1950s, 1960s and 1970s – at the height of state promotion of Turkish and Burley production in African areas – a few African farmers were also able to benefit and invest some of their tobacco capital in soil and water conservation.

Tobacco in Southern Rhodesian Environmental History

In 1935 the Rhodesia Tobacco Association (RTA) sent out circulars to white settler tobacco growers plaintively imploring them to reduce acreages. This appeal ruefully noted that overproduction by itinerant, peripatetic and speculative tobacco farmers was creating desolate and derelict farming landscapes within the Rhodesian countryside:

⁵⁶ B. Kosmin, ‘The Inyoka Tobacco Industry of the Shangwe People: The Displacement of a Pre-colonial Economy in Southern Rhodesia; 1898–1938’, in R. Palmer and N. Parsons (eds.), *The Roots of Rural Poverty in Africa in Central and Southern Africa* (London, 1977), 268–287.

One sees a number of farms which are entirely useless for tobacco production, and will be for many years to come, with not one piece of timber worthy of that name left; with soil erosion tremendously hastened because of its barrenness and with the soil palpably exhausted, so that a reduction of acreage is not all loss for it extends the life of the farm.⁵⁷

The 1937 circular reiterated – in apocalyptic imagery – that ‘miserable derelict farms reminiscent of the Sahara desert’ were now a familiar sight within the tobacco belt in Southern Rhodesia.⁵⁸ In 1939, the Natural Resources Commission of Enquiry that had been set up by the state to investigate the destruction of the resources of the colony attributed a plethora of environmental infractions to the ‘careless and indifferent’ tobacco farmers.⁵⁹ Three years later, the Veterinary Branch raised the alarm on the high mortality of livestock and wildlife due to poisoning caused by tobacco fertilisers and field sprays.⁶⁰ During the 1960s medical studies in Southern Rhodesia established a causal relationship between *Carcinoma of the Bronchus* and smoking and showed that 87.5 per cent of African males with lung cancer were cigarette smokers.⁶¹ During the 1970s and 1980s, several incidences of mortality amongst African labourers due to chemical poisoning were reported in the tobacco farms.⁶² The Natural Resources Board (NRB) also noted a widespread depletion of fauna on most tobacco farms due to chemical sprays.⁶³ These incidences extensively documented in Southern Rhodesia’s agricultural archives shine a critical spotlight on a dimension that is not only shockingly unexplored up until now, but rings a familiar and doleful note to

⁵⁷ National Archives of Zimbabwe (NAZ), Harare (Salisbury), S1827/1245/3, Tobacco cultural practices; 1931–1941, RTA circular to growers, February 1935: Regulation of production.

⁵⁸ NAZ, S1827/1245/3, Tobacco cultural practices; 1931–1941, RTA circular to growers, February 1935: Regulation of production.

⁵⁹ See, NAZ, S2496/1080/1/5, Report of the Commission of Enquiry into the Conservation of the Colony’s Natural Resources, 1939.

⁶⁰ P. D. Huston, ‘Veterinary Notes: A Note on the Poisoning of Stock by Nitrate of Soda’, *Rhodesia Agricultural Journal*, 39, 2, (March–April 1942), 88–89.

⁶¹ M. Gelfand, A. Graham and E. Lightman, ‘Carcinoma of the Bronchus and the Smoking Habits of Rhodesian Africans’, *British Medical Journal*, 3, 5616 (1968), 468–469.

⁶² See, for instance ‘Poisonings Caused by Careless Handling’, *Rhodesia Sunday Mail*, 18 December 1979; ‘Farm Workers Exposed to Killer Sprays, Says Survey’, *Sunday Mail*, 15 April 1983.

⁶³ Natural Resource Board, ‘The Pesticide Dilemma’, *Newsletter*, 8 (September 1981).

contemporary observers of Zimbabwe's tobacco industry – that is how tobacco farming plunders natural ecosystems, physical landscapes and human bodies for profit.

There are two distinct scholarly traditions within the historiography of the Southern Rhodesian tobacco industry: the first one – ‘the virgin land’ scholarship valorises and glorifies white settler pioneer tobacco farmers for their entrepreneurship and pioneering endeavour in opening vast ‘untamed bushes’ and establishing thriving tobacco settlements that transformed the ‘wilderness’. This brand of scholarship is more accurately represented by Frank Clements and Edward Harben's (themselves tobacco farmers) pioneering literature sponsored by the RTA in 1962 as an official history of the industry.⁶⁴ The second historiographic school belongs to a more critical tradition that looked past the romanticised façade of individual white male settler tobacco growers' resilience – to interrogating the role of the state in the growth of the industry and the exploitation of African labour. The latter school offered critical insights into the role of the colonial state's coercive power in the development of the Rhodesian tobacco industry through the creation of an infrastructure that buttressed the interests of white tobacco growers.⁶⁵ Victor Machingaidze trail-blazed this critical tradition by showing how the white settler tobacco farmer (far from being an independent entrepreneur) benefited from the racial infrastructure of the colonial state.⁶⁶ Steven Rubert joined the critical tradition with a rich social history of colonial labour narratives that weaves the odyssey of the Rhodesian tobacco industry through the lives of Africans whose bodies became raw

⁶⁴ See F. Clements and E. Harben, *Leaf of Gold: The Story of Rhodesian Tobacco* (London, 1962). Both Frank Clements and Edward Harben were themselves tobacco farmers which make their accounts even much more liable to subjective ‘insider’ views. Other works from the first-generation literature include H. R. Roberts, ‘The Development of the Southern Rhodesian Tobacco Industry’, *South African Journal of Economics*, 19, 2 (1951), 177–188; W. E. Haviland, ‘Tobacco Farm Organisation, Cost and Land Use in Southern Rhodesia’, *The South African Journal of Economics*, (1953), 367–380; W. E. Haviland, ‘The Use and Efficiency of African Labour in Tobacco Farming in Southern Rhodesia’, *The Canadian Journal of Economics and Political Science*, 20, 1 (1954), 100–106.

⁶⁵ For the systematic disruption of African tobacco producers by the state in colonial Zimbabwe see Kosmin, ‘The Inyoka Tobacco Industry of the Shangwe People’, 268–287.

⁶⁶ V. E. M. Machingaidze, ‘The Development of Settler Capitalist Agriculture in Southern Rhodesia with particular Reference to the Role of the State, 1908–1939’ (Unpublished PhD thesis, University of London, 1980).

materials in producing the ‘golden leaf’.⁶⁷ His research exposes the grisly world of child labour in dingy tobacco barns, gangs of labourers toiling in the settler tobacco fields and the festering farm compounds. A more recent addition to this school has been Sibangeni Ncube’s works on the politics of colonial tobacco industry from the watershed 1945 tobacco boom, through the stormy years of isolation and the tobacco embargo when Rhodesian tobacco was placed under international sanctions until independence in 1980.⁶⁸ Ncube focuses on the nexus between local and international politics in the development of the Rhodesian tobacco industry and closes a hitherto yawning gap in post-World War II Southern Rhodesian tobacco grower-state relations that had only been addressed by David Rowe’s 2001 publication on state-grower relations during the Unilateral Declaration of Independence (UDI).⁶⁹

However, despite their profundity as texts on the political economy of Rhodesian tobacco, this new critical historiography on colonial tobacco history neglects the fundamental dialectical interaction between political economy, materialities, landscapes and human bodies. The silence of existing tobacco literature in Southern Rhodesia on how physical landscapes were shaped and transformed by agrarian encounters and how the transformation of landscapes in turn affected the political economy of production is very conspicuous and deafening. Much so when juxtaposed within a milieu of historical writing that has come to examine how imperial power and capital restructured indigenous landscapes.⁷⁰ Streams of historical literature have sprung up and

⁶⁷ S. Rubert, *A Most Promising Weed: A History of Tobacco Farming and Labour in Colonial Zimbabwe, 1890–1945* (Athens, 1998).

⁶⁸ See S. Ncube, ‘Colonial Zimbabwe Tobacco Industry: Global, Regional and Local Relations, 1949–1979’ (Unpublished PhD thesis, University of the Free State, 2018); S. Ncube, ‘We Must Adapt to Survive: International Sanctions, Settler Politics, and White Tobacco Farmers’ Struggles for Economic Survival in Rhodesia, 1966–1979’, *African Economic History*, 48, 2 (2020), 67–91; S. Ncube, ‘Beyond the State? Organised Settler Tobacco Interests and the Consolidation of Southern Rhodesia’s Tobacco Industry in the Early Post-Second World War Years’, *Journal of Southern African Studies*, DOI: 10.1080/03057070.2022.2049492.

⁶⁹ D. M. Rowe, *Manipulating the Market; Understanding Economic Sanctions, Institutional Change and the Political Unity of White Rhodesia* (Ann Arbor, 2001).

⁷⁰ Much scholarship from the 1970s has looked at how colonial agrarian encounters changed indigenous environments. More recently the work of Hannah Hollerman focused on how the spread of white settler colonialism at the

reconstructed landscapes of the past to tell stories of environment and society.⁷¹ That said, Ian Phimister perhaps in a sense pioneered an environmental history of tobacco farming in Southern Rhodesia over three decades ago in his 1986 article on conservation.⁷² He pointed to the deteriorating soil conditions in tobacco farms that were conspicuous during the inter-war years as a result of speculative farming and limited state conservation intervention. He argued that this pattern continued in the post-war boom years as prices improved and tobacco farms took much-needed capital and resources from other crops, resulting in unbalanced agricultural development and a concomitantly delayed impeded pace of conservationism. This book draws on Phimister's seminal research but nevertheless diverges from it in two key respects. First, the corpus of tobacco environmental history contained in his article is too thin to constitute a comprehensive environmental history of tobacco farming as it covers a short period, 1938 to 1950. Second, even in that narrow coverage of time, his article neglects the fundamental transitions in the tobacco farm environment and landscapes that were generated by

end of the nineteenth century brought with it the cultivation of new areas and the development of new systems of coercive labour. Imperial capitalism led to land dispossession, displacement of indigenous people and the establishment of plantation agriculture and intensive cultivation that precipitated widespread environmental degradation in most colonial states. See, H. Hollerman, *Dust Bowls of Empire: Imperialism, Environmental Politics, and the Injustice of 'Green' Capitalism* (New Haven, 2018) Also see, D. Worster, *Rivers of Empire: Water Aridity and the Growth of the American West* (New York, 1985); D. Worster, *Under the American Skies: Nature and History in the American West* (New York, 1992); Henry Nash Smith, *Virgin Land: The American West as Symbol and Myth* (Cambridge: Harvard University Press, 1970); Cronon, *Changes in the Land*.

⁷¹ See, for instance, O. M. Wapulumuka, *Conservation Song: A History of Peasant State Relations and the Environment in Malawi, 1860–2000* (Cambridge, 2010).

⁷² I. Phimister, 'Discourse and the Discipline of Historical Context: Conservatism and Ideas about Development in Southern Rhodesia, 1930–1950', *Journal of Southern African Studies*, 12, 2 (1986), 263–275. This article was also later reproduced in Phimister's ground-breaking 1988 book publication. See, I. Phimister, *An Economic and Social History of Zimbabwe, 1890–1948: Capital Accumulation and Class Struggle* (London, 1988), 228–234. Phimister was responding to William Beinart's 1984 article that argued colonial governments in southern Africa were preoccupied with the conservation of natural resources and soil erosion from the 1930s to the 1950s. See, W. Beinart, 'Soil Erosion, Conservationism and Ideas about Development: A Southern African Exploration, 1900–1960', *Journal of Southern African Studies*, 15, 1 (1984), 52–83. The debate is more comprehensively covered in Chapter 4 of this book.

the post–World War II tobacco boom and indeed private capital. Thus, an unintentionally uniform reading of environmental change between 1938 and 1950 was constructed, while this book argues that the tobacco farms were not static, but a fluid set of landscapes being structured and restructured by a plethora of factors.

In contributing to the environmental history of Southern Rhodesia, this book integrates the conservation historiography of southern Africa to show how ideas about the environment and conservation ideologies proliferated into Southern Rhodesia and influenced tobacco farmers and state policy from around the late 1920s.⁷³ It further draws from American environmental historiography that locates the origins of environmental degradation within wasteful and predatory capitalist agricultural systems. This book critiques romanticised narratives of pioneer colonial agricultural settlements based on the agrarian myth of progressive tobacco farming. American environmental historians such as Donald Worster, Henry Nash Smith, Richard Hofstadter, Leslie Hewes and Douglas Hurt have all pointed out the severe impacts

⁷³ While there is also scant focus on the environment from the tobacco history literature, other agrarian history works have looked at conservation within the white settler agrarian sector in the region and in Southern Rhodesia. Regional studies have focused on the development of conservationism in Southern Africa from the seventeenth century and the proliferation of these ideas into colonial doctrines and their application in white and African agriculture. See, R. Grove, *Green Imperialism: Colonial Expansion, Tropical Island Edens and the Origins of Environmentalism, 1600–1860* (Cambridge, 1996) and also R. Grove, ‘Scottish Missionaries, Evangelical Discourses and the Origins of Conservation Thinking in Southern Africa, 1820–1900’, *Journal of Southern African Studies*, 15, 2 (1989), 163–184; W. Beinart, *The Rise of Conservation in South Africa: Settlers, Livestock, and the Environment, 1770–1950* (Oxford, 2003); William Beinart, ‘The Politics of Colonial Conservation’, *Journal of Southern African Studies*, 15, 2 (1989), 143–162; W. Beinart, ‘Soil Erosion, Conservationism and Ideas about Development: A Southern African Exploration, 1900–1960’, *Journal of Southern African Studies*, 15, 1 (1984), 52–83; K. Showers, ‘Soil Erosion in the Kingdom of Lesotho: Origins and Colonial Responses, 1830s–1950s’, *Journal of Southern African Studies*, 15, 2 (1989), 143–162; K. Showers, *Imperial Gullies: Soil Erosion and Conservation in Lesotho* (Athens, 2005); J. McGregor, ‘Woodland Resources: Ecology, Policy and Ideology: An Historical Case Study of Woodlands Use in Shurugwi Communal Area, Zimbabwe’ (Unpublished PhD thesis, Loughborough University of Technology, 1991); J. A. Tropp, *Natures of Colonial Change: Environmental Relations in the Making of the Transkei* (Athens, 2006); I. Phimister, ‘Discourse and the Discipline of Historical Context’, 263–275.

of colonial farming systems on labour exploitation, class conflict and the environment.⁷⁴

Much of the pioneering work on soil conservation in the settler agrarian sector in colonial Zimbabwe offers a rich analysis and an entry point into the debates framed around conservationism in the colonial state and the history of soil conservation in the white settler farms. However, their focus is broad and general extending to a myriad of sectors in agriculture presenting white farmers as a homogenous block.⁷⁵ Indeed, Paul Mosley in his study of the Rhodesian and Kenyan settler economies stressed the importance of zooming in on ‘the settler economics of fault lines’ between economic sectors.⁷⁶ He emphasised that the category of white capital must not be seen as one sector, but several if policy is to be understood. This book thus extends Mosley’s contention to include not only differences between economic sectors but the fault lines within an economic sector – the intra sectoral dynamics within the agrarian economy. To this end therefore, merely homogenising state policy on settler agriculture without unpacking the internal heterogeneities that differed from one sector to the other, and from one crop to the other, leads to unfortunate historical generalisations about conservation in white farms. Angus Selby criticises such historical constructions that perceive white farmers as a homogenous rural bourgeoisie since it shrouds their differences when viewed

⁷⁴ See, D. Worster, *Dust Bowl: The Southern Plains in the 1930s* (Oxford, 1979); D. Worster, *Rivers of Empire; Water Aridity and the Growth of the American West* (New York, 1985); D. Worster, *Nature’s Economy: The Roots of Ecology* (San Francisco, 1972); D. Worster, ‘The Dirty Thirties: A Study in Agricultural Capitalism’, *Great Plains Quarterly*, 6, 2 (1986), 107–116; H. N. Smith, *Virgin Land: The American West as Symbol and Myth* (Cambridge, 1970); R. Hofstadter, *The Progressive Historians: Turner, Beard and Parrington* (New York, 1968) and L. Hewes, *The Suitcase Farming Frontier: A Study in the Historical Geography of the Central Great Plains* (Lincoln, 1973).

⁷⁵ See, S. Maravanyika, ‘Soil Conservation and the White Agrarian Environment in Colonial Zimbabwe, 1908–1980’ (Unpublished PhD thesis, University of Pretoria, 2013); M. Musemwa, ‘Contestation Over Resources: The Farmer-Miner Dispute in Colonial Zimbabwe, 1903–1939’, *Environment and History*, 15, 1 (2009), 79–109. Also, see, T. Madimu, ‘Farmers, Miners and the State in Colonial Zimbabwe, c.1895–1961’ (Unpublished PhD thesis, University of Stellenbosch, 2017); V. Kwashirai, ‘Dilemmas in Conservationism in Colonial Zimbabwe, 1890–1930’, *Conservation and Society*, 4, 4 (2006), 541–561.

⁷⁶ P. Mosley, *The Settler Economies: Studies in the Economic History of Kenya and Southern Rhodesia, 1900–1963* (Cambridge, 1983), 45.

through lenses of land and race.⁷⁷ White farmers as an interest group and an economic sector were enduringly divided by their backgrounds, geography, land uses and crop types as Selby Angus and Rory Pilosof have shown.⁷⁸ Also, the cultural practices and the production systems of tobacco differed very much from other crops, as this book argues. To this end a general conservation history of the white agrarian environment does not suffice to explore the nuanced socio-environmental attributes of tobacco and its production context, which differed markedly from those of maize and other crops.

Besides being general agrarian conservation historical narratives, most pioneering works on agrarian environmental histories of Southern Rhodesia focused on conservation-based discourses that were fashionable before the rise of modern environmentalism in the 1960s. These discourses looked at the environment through the prism of preservation of the wilderness and conservation of resources such as timber and soil enforced through legislations and regulations on the consumption of nature. Frank Uekotter designates this conservation dispensation as having been born in traditions of nature protection, the establishment of national parks and western conservation efforts that became more discernible from 1900.⁷⁹ The rationale for these conservation efforts was to protect space, govern access to ownership of natural resources and limit conflict in a way that conferred power and legitimacy to the state. Charles Maier further adds that these 'space-based' conservation efforts were a result of the age of 'territoriality' when nation states had to enforce rules in peripheral regions.⁸⁰ Thus, in this regard conservation regulations in colonial systems can be seen as one of the ways used to control peripheral spaces, an important tool of colonial intervention into control of people and scarce resources.⁸¹ Indeed, as this

⁷⁷ A. Selby, 'Commercial Farmers and the State: Internal Group Politics and Land Reform in Zimbabwe' (Unpublished PhD thesis, University of Oxford, 2006), 10.

⁷⁸ Selby, 'Commercial Farmers and the State', 10. Also see, R. Pilosof, 'The Unbearable Whiteness of Being: White Farming Voices in Zimbabwe and their Narration of the Recent Past, c.1970–2004' (Unpublished PhD thesis, Sheffield University, 2010), 4. Rory Pilosof argues that 'a singular and cohesive white rural identity does not exist'.

⁷⁹ F. Uekotter, 'Consigning Environmentalism to History? Remarks on the Place of the Environmental Movement in Modern History', *Rachel Carson Center [RCC] Perspectives*, 7 (2011), 1–36.

⁸⁰ C. Maier, 'Consigning the Twentieth Century to History? Alternative Narratives for the Modern Era', *American Historical Review*, 105 (2000), 807–831.

⁸¹ Wapulumuka, *Conservation Song*, 3.

book argues, conservation laws such as the Land Apportionment Act (1930) and the Native Land Husbandry Act of 1951 became subtle strategies used by colonial officials in Southern Rhodesia to control Africans and contain them in geographic spaces amenable for effective coercive administration.

From the end of the Second World War, with the expansion on the use of agrochemicals, the discourse of environmentalism began to change in fundamental ways to become global, and to emphasise more on environmental degradation and its relationship to human health as problems of pollution and industrial waste became endemic. Post-war environmental activism emphasised global ecological interconnectedness and was given great impetus by the publication of Rachel Carson's epoch-defining book *Silent Spring* in 1962.⁸² The book birthed modern environmentalism and made the environment a subject for government policy and global governance.⁸³ This book draws on, but also challenges and extends, the pioneering agrarian environmental histories of Southern Rhodesia in that it goes beyond conservation discourses to engage with these new insights on the environment generated in the 1960s and to show how the global environmental seismic wave generated by Carson on pesticides use played out in Southern Rhodesia. In engaging with Carson, the book uses Rob Nixon's twin concepts of 'slow violence' and 'the environmentalism of the poor', which reflect on how disempowered social groups disproportionately suffer the effects of environmental violence, and how this violence happens

⁸² P. Warde, L. Robin and S. Sörlin, *The Environment: A History of the Idea* (Baltimore, 2018), 6–18. Also see, A. Rome, 'Give Earth a Chance: The Environmental Movement and the Sixties', *The Journal of American History*, 90, 2 (2003), 525–554. Prior to the publication of Carson's work that ignited a global environmental avalanche other writers had begun advocating for planetary environmental histories showing how ecological disruptions in local settings had global ramifications and consequences. See, W. Vogt, *Road to Survival* (New York, 1948), 283–288.

⁸³ See, R. Carson, *Silent Spring* (London, 1963). For discussions on how the book changed discourses on environmentalism see M. H. Lytle, *The Gentle Subversive: Rachel Carson, The Silent Spring and the Rise of the Environmental Movement* (New York, 2007); L. J. Lear, 'Rachel Carson's Silent Spring', *Environmental History Review* 17, 2 (1993), 23–48; R. H. Lutt, 'Chemical Fallout: Rachel Carson's Silent Spring, Radioactive Fallout and the Environmental Movement', *Environmental History Review* 9, 3 (1985), 210–225; L. Culver, 'Reading *Silent Spring* as a Challenge for Contemporary Environmentalism', *RCC Perspectives*, 7 (2012), 31–34.

slowly and invisibly over time.⁸⁴ The concept is used to reflect on the impact of tobacco farming on the human body by pointing to the violence tobacco farming wrought on African labour through rigid labour control, mechanisms, exposure to tobacco chemicals and other unsafe working conditions within which they became victims of ‘slow death’.

The International Tobacco Context

This book similarly engages the global history of tobacco to understand the overarching political, economic, social and environmental forces that shaped the production dynamics in the past and continue to determine contemporary production processes. These global narratives are important because they contextualise the study in broader historiographies to show interconnectedness, historical continuities and change and the construction of farming traditions and socio-environmental change on a global scale. During much of the eighteenth century, tobacco cultivation was attached to colonialism and the establishment of European settlements. Its expansion in the twentieth century as a commercial agricultural commodity to most parts of the world including Asia and Africa was principally a result of the association between European settlement and tobacco culture. The crop went through various transitions in production systems from the planter slave economy during the seventeenth and eighteenth centuries into the globalised cultures of production in the nineteenth century which saw the rise of dependent producers and huge powerful global tobacco co-operations. Therefore, tobacco is best understood in historical terms, as there is a complex process of cultural accretion associated with changes in its cultivation, production and marketing, and only by such a historical understanding can its amelioration – maybe even eradication – as a harmful socio-environmental product be successful.⁸⁵

Peter Benson’s anthropological and ethnographic study looks at tobacco farming through the lens of the globalisation of tobacco capitalism and the changing models of production in tobacco farms,

⁸⁴ R. Nixon, *Slow Violence and the Environmentalism of the Poor* (Cambridge, 2011), 2.

⁸⁵ J. Goodman, *Tobacco in History: The Cultures of Dependence* (New York, 1993), 245.

the global tobacco economy and the accompanying social changes.⁸⁶ His work explores the evolution of labour regimes in production from the jungle tobacco plantation farms in the Americas to modern mechanised tobacco farm systems that still thrive on conditions of structural violence, endemic poverty, racism, stigma and economic exploitation. He delves into the role of big cigarette manufacturers like Philip Morris in obfuscating the debates on public health and smoking as well as the global tobacco-control initiative in the new millennium and the prospects for the future of tobacco-control. Benson makes the poignant observation that although many people feel they have no relationship with tobacco, the crop has shaped society in so many determinate ways that they do have a relationship – just not of their own choosing.⁸⁷

The globalisation of the tobacco epidemic is part of the historical structural changes of the tobacco industry from national to multinational and changes in tobacco consumerism to the cigarette whose revolutionary power transformed the political economy of smoking.⁸⁸ The cigarette century revealed the drama of historical change: ‘before the cigarette, there was tobacco’, but the rise of the cigarette technology in the twentieth century popularised Virginia tobacco and flue-curing technology.⁸⁹ The cigarette also led to changes in the harvesting techniques from those used before the twentieth century that constructed newer labour regimes and made tobacco farming more labour intensive.⁹⁰ Sarah Milov identifies the political dynamic to the cigarette and how its history was significantly shaped by political institutions during the twentieth century.⁹¹ The history of the cigarette is the history of the government complex machinery and its levers of power through ‘associational state-making’.⁹² Thus, the growth of cigarette technology in the twentieth century resulted in a lot of significant changes in tobacco cultivation and culture – that in turn affected social relations, the environment and the human body.

⁸⁶ See, P. Benson, *Tobacco Capitalism: Growers, Migrant Workers, and the Changing Face of a Global Industry* (Princeton, 2012).

⁸⁷ *Ibid.*, 269.

⁸⁸ See, A. M. Brandt, *The Cigarette Century: The Rise, Fall, and Deadly Persistence of the Product that Defined America* (New York, 2007), 12; S. Milov, *The Cigarette: A Political History* (Massachusetts, 2019).

⁸⁹ Brandt, *The Cigarette Century*, 30.

⁹⁰ N. M. Tilley, *The Bright Tobacco Industry* (Chapel Hill, 1948) 57–58.

⁹¹ Milov, *The Cigarette*. ⁹² *Ibid.*, 79–85.

The ‘cigarette century’ made tobacco the single largest cause of preventable death in the world: killing one hundred million people in the twentieth century, and projected to kill one billion in this century.⁹³ WHO estimates that the majority of tobacco deaths will occur in the developing world where the tobacco industry has popularised smoking and is subtly recruiting youths through its commercial and public relations machinery.⁹⁴ The popularisation of the cigarette has globalised tobacco consumption and production into the developing world and multinational tobacco companies have gained significant foothold and secured political leverage and government support.⁹⁵ The globalisation of tobacco poses significant challenges to developing countries which unlike their peers in the western world are less capable of effectively regulating tobacco companies. In the developing world, illicit cigarettes trade, smuggling of tobacco products and tobacco tax evasion has created a criminal underworld involving government officials and state institutions in corrupt scams benefiting tobacco multinationals. In 2015, British American Tobacco (BAT) was accused of bribing civil servants in east Africa to undermine anti-smoking measures.⁹⁶ Recent studies have revealed how tobacco companies besmirch law enforcement officials in southern Africa leading to the capture of state institutions and the corruption of politicians, businessmen and ordinary citizens.⁹⁷ Independent estimates suggest that South Africa alone loses five billion Rand (approximately US\$322,272,000) annu-

⁹³ Benson, *Tobacco Capitalism*, 37.

⁹⁴ ‘Report on the Global Tobacco Epidemic’, WHO, Geneva, 2008, 4.

⁹⁵ The shrinking market space in the developed world because of tobacco control regulations has been a cause for concern for most cigarette companies. Between 1975 and 1994 cigarette sales in the USA declined by 20 per cent, while production rose by 11 per cent prompting cigarette manufacturers like Philip Morris to look for other markets. The globalisation of free trade and world commerce has helped this initiative so much that new frontier markets have been found in the developing world where demographic and population explosion create conducive conditions. In addition to opening of frontier markets another feature of the globalisation of the tobacco industry has been the proliferation of international companies such as BAT in the developing world where tobacco contract farming is now prevalent. See, Brandt, *The Cigarette Century*, 449–458.

⁹⁶ ‘The Secret Bribes of Big Tobacco’, www.bbc.com/news/business-34964603, accessed 10 July 2021.

⁹⁷ J. Van Loggerenberg, *Tobacco Wars: Inside the Spy games and Dirty Tricks of Southern Africa’s Cigarette Trade* (Cape Town, 2019).

ally to this illicit tobacco trade.⁹⁸ Big tobacco companies like BAT have stimulated intensive contract production of flue-cured tobacco in the third world resulting in a breakdown of ecologies and social relations. In Honduras, flue-cured tobacco production at the behest of BAT between 1952 and 1995 reinforced social inequality and environmental degradation such that when the tobacco industry collapsed it left behind ‘a mess of mud, fallen trees and a crisis in the agricultural economy’.⁹⁹ In Kenya, tobacco contract farming disrupted the existing pastoral economies and resulted in ecological disruption, deforestation and a disruptive reordering of social relations.¹⁰⁰

The tobacco industry’s responses to its withering criticism on the harmful impact of their product has always been flexible and creative. These range from sponsoring and funding parallel scientific studies to advancing protectionist arguments and whitewashing the industry’s complicity in socio-environmental violence through its public relations machinery.¹⁰¹ Furthermore, the tobacco companies have used political donations to lobby favourable legislative and policy decisions from governments to eschew regulative scrutiny.¹⁰² The last chapter of the book

⁹⁸ G. Hosken, ‘Smoking out the Conspirators’, *Sunday Times*, 28 July 2019.

⁹⁹ W. Loker, ‘The Rise and Fall of Flue-Cured Tobacco in the Copan Valley and Its Environmental and Social Consequences’, *Human Ecology*, 33, 3 (2005), 299–327.

¹⁰⁰ B. K. Chacha, ‘From Pastoralist to Tobacco Peasants: The BAT and Socio-ecological Change in Kuria District Kenya, 1969–1999’, (Unpublished paper), available on www.academia.edu/4153302/From_Pastoralists_to_Tobacco_Peasants_The_British_American_Tobacco_B.A.T_and_Socio-ecological_Change_in_Kuria_District_Kenya_1969-1999, accessed on 26 July 2019; S. Heald, ‘Tobacco, Time and the Household Economy in Two Kenyan Societies: The Teso and the Kuria’, *Comparative Studies in Society and History*, 33, 1 (1991), 130–157; S. Heald, ‘Agricultural Intensification and the Decline of Pastoralism: A Case Study from Kenya’, *Journal of the International African Institute*, 69, 2 (1999), 213–237.

¹⁰¹ Benson, *Tobacco Capitalism*, 43–62. For a wider discussion on how the tobacco industry has sponsored parallel research to scuttle evidence linking its product to cancer and other diseases see, N. Oreskes and E. M. Conway, *Merchants of Doubt: How a Handful of Scientists Obscured the Truth on Issues from Tobacco Smoke to Global Warming* (New York, 2010), 136–165.

¹⁰² WHO estimates that between 1995 and 2000 tobacco companies in the USA alone spent over US\$ 32 million in donations to political candidates and federal officials, See www.who.int/tobacco/en/atlas24.pdf?ua=1, accessed 6 August 2019. Also, *The Guardian* reporter Jessica Glenza reported in 2017 that the tobacco industry had a strangle-hold on top White house officials and the industry had a ‘pervasive’ influence upon Capitol Hill. She added that tobacco industry representatives held frequent meetings with administration officials on

engages with how the tobacco industry in Southern Rhodesia and Zimbabwe created a mutual relationship with the state bureaucratic institutions to entrench the tobacco export economy and how this defended it from the global public health scrutiny that arose from the 1950s. The power of 'big tobacco' is still visible in Zimbabwe as tobacco corporations influence tobacco-control politics through political donations.¹⁰³ In September 2021, BAT was implicated by the British Broadcasting Corporation (BBC) in a huge financial racket that involved funding the controversial election campaign of Zimbabwe's ruling party ZANU PF to the tune of between US\$300,000 and US\$500,000 in 2013.¹⁰⁴

Structure and Layout of the Book

This book is divided into eight chapters. Chapter 1 begins from 1893 (which is roughly the year tobacco production by white settler farmers in Southern Rhodesia began) and ends in 1945. The chapter explores the early history of settler pioneer tobacco settlements and their interaction with land and natural resources in their production systems. The chapter integrates the tobacco cultural practices of the pioneer farmers in Southern Rhodesia within the global historical narratives of pioneer

regulation of e-cigarettes, tobacco packaging and advertisement. America's biggest tobacco companies Reynolds and Altria are rumoured to have donated US\$ 1.5 million for the inauguration of President Donald Trump. During the first quarter of 2017, tobacco companies spent \$US 4.7 million on political lobbies resulting in politicians with deep ties to the industry heading the health department, the attorney offices and the Senate. In 2001, later USA Vice-President, but then member of the House of Representatives Mike Pence argued that 'smoking doesn't kill'. See J. Glenza, 'Tobacco Companies Tighten Hold on Washington under Trump', available on www.theguardian.com/world/2017/jul/13/tobacco-industry-trump-administration-ties, accessed on 6 August 2019.

¹⁰³ In 2015, BAT signed a Memorandum of Understanding with the government of Zimbabwe towards the creation of the Zimbabwe Tobacco Empowerment Trust – a funding facility for youths to have access to credit for tobacco farming. The funding was worth US\$ 527,000. See 'Government, BAT sign MoU', available at www.herald.co.zw/govt-bat-sign-mou/, accessed on 6 August 2019. This funding violates Article 5.3 of the FCTC that emphasises states to protect public health from the vested commercial interests of the tobacco industry and not have conflict of interests.

¹⁰⁴ 'British American Tobacco Negotiated Bribe for Mugabe, New Evidence Suggests', available on www.bbc.com/news/world-58517339, accessed on 10 July 2021.

agricultural settlements to give a dense context and broader perspectives on the construction of new landscapes and ecologies. The chapter also examines the impact of global forces such as the Great Depression and the Dust Bowl disaster in the USA on farming landscapes in the colonies and the writ of colonial conservation and production intervention. The chapter argues that tobacco opened new farming frontiers in Southern Rhodesia that led to deforestation and the degradation of soils in the sand veld. The chapter further examines the exploitation of African labour and the various systems of labour recruitment, control and discipline that were used by white settler tobacco farmers. The chapter reflects on how the construction of labour regimes in tobacco farming that accentuates social violence and rigidifies racial and class hierarchies are part of the historical heritage of the crop.

Chapter 2 looks at the post-war tobacco boom and the concomitant changes to tobacco farming environments brought by the huge flow of capital as tobacco overtook gold as the colony's chief export commodity. Simultaneously, the chapter engages the key historiographical debates on the evolution of colonial conservation in southern Africa and the roots of conservation thinking in Southern Rhodesia.¹⁰⁵ The debates are situated within the chapter as a theoretical fulcrum to trace the genesis and development of colonial environmental policy and the distinctive characteristics of state-led conservation initiatives. The chapter examines how the post-war tobacco boom and flow of capital changed the landscape of tobacco farms in Southern Rhodesia. The chapter concludes that the impact of the tobacco boom to farming landscapes was more nuanced and transcended degradation narratives. The dynamic of tobacco capital and high production costs was changing farming systems and bringing in

¹⁰⁵ The debate is linked to the beginning of conservation thinking in Southern Rhodesia. William Beinart views the colonial state as a significant agent in conservationist intervention before the twentieth century. Beinart, further argues that these ideas had become established at the Cape around the 1860s where future capitalist agrarian development came to be viewed as dependent on rational planning, the application of technology, and the unbridled freedom to exploit natural resources for private gain was condemned. Ian Phimister vehemently rejected the importance attached to conservationism in shaping the pattern of state intervention in Southern Rhodesia. He maintains that the roots of the conservation movement were shallow in Southern Rhodesia, and these were applied only assiduously in relation to African peasants, and not settler farmers. See Beinart, 'Soil Erosion, Conservationism and Ideas about Development', 52–83; Phimister, 'Discourse and the Discipline of Historical Context', 263–275.

biological conservation that integrated cropping systems with dairying and beef production.

Chapter 3 offers an insight into the use of pesticides in tobacco production from 1945 when there was a huge global revolution in pest control technology. The chapter traces the evolution of pest and disease control in Southern Rhodesia's tobacco farms from 1945 and the attendant socio-environmental challenges. This chapter engages with the global debates on environmentalism that emerged in the global north in the 1960s with the publication of Rachel Carson's book *Silent Spring* in 1962. It critiques the application of these ideas in the global south by reflecting on how the Rhodesian tobacco industry appropriated the banning of certain pesticides and their controlled use. The chapter shows how the use of pesticides in tobacco farming claimed casualties in the human and natural environment.

Chapter 4 discusses African peasant tobacco producers in Southern Rhodesia from 1900 to 1980. It analyses shifting state policy towards African tobacco producers, the concomitant impact on peasant economies, accumulation patterns and the rural physical landscape and peasant responses. It focuses on the changing agricultural commodity value chains, cash crop asymmetries and global market forces to explain colonial responses to peasant production and peasant agency. The chapter discusses the various colonial tools that were employed to curtail the rise of independent African tobacco producers until the 1950s when state policy under the new post-war modernisation thrust changed to begin to actively encourage Africans' cultivation of Turkish and Burley tobacco in the Native Purchase Areas and Tribal Trust Lands. The chapter concludes that the nature of colonial policy on African tobacco producers was premised on the need to limit African participation in the colonial tobacco economy where their role was supposed to be that of labourers and consumers of European produced tobacco.

Chapter 5 engages with the politics of the UDI from 1965 to 1980, the tobacco embargo and international sanctions and its impact on tobacco farming landscapes in Southern Rhodesia. Unlike previous histories that examined the impact of the UDI in strictly political and economic categories, this chapter extends the historical projection to the impact of economic sanctions on conservation farming and agricultural ecologies. It looks at the impact of resultant agricultural diversification into cotton and other crops on tobacco sand veld ecosystems and how financial constraints compelled tobacco farmers to abandon progressive

conservation practices such as ‘contour farming’ that led to massive land degradation. The chapter also examines the environmental impact of the War of Liberation (1972–1980) on tobacco farms, as most of them were abandoned during the worst of the civil conflict.

Chapter 6 focuses on the debates on smoking and public health and the evolution of tobacco-control narratives and how these were articulated in Southern Rhodesia and the post-colonial Zimbabwean state from the 1950s to 2000s. It also looks at the changing dynamics of tobacco farming in post-colonial Zimbabwe from 1980 to the present with the increasing participation of black growers and growth of smallholder production. The chapter discusses the nature of the tobacco lobby in Southern Rhodesia and its activities in protecting tobacco vested interests at the height of the non-smokers’ movement during the 1960s and 1970s. It discusses the transition of this lobby into the post-colonial period and the role of the state in obfuscating the social costs of tobacco and the public health implications in contemporary Zimbabwe. The conclusion sums up the central arguments of the book and discusses the implications of tobacco’s socio-environmental historical legacy on contemporary landscapes and the tobacco-control narrative. It engages current conversations on the globalisation of the tobacco epidemic and offers historicised policy recommendations.

Sources for Reconstructing Socio-environmental Change in the Tobacco Farms

While change in physical landscapes, environmental ecosystems and social conditions is discernible qualitatively, evaluating socio-environmental change in quantitative scientific terms can be difficult. The major methodological challenge in the study, however, was in quantifying the impact, and levels of socio-environmental degradation caused by tobacco farming during the colonial period in quantitative environmental science and epidemiological categories. This study acknowledges and confronts the challenges in coming up with objective scientific data to measure the extent over time. The colonial state concealed certain information for the purposes of constructing flattering narratives, as well as because they lacked more technologically sound means during the period of measuring environmental impact assessments. This problem is aptly captured by Kate Showers who, in her study of colonial Lesotho and the problem of soil erosion noted that the colonial state lacked technical expertise in landscape evaluation

and surveys: so much that the records on early development of soil erosion and soil conservation is primarily a collection of incomplete anecdotal observations and perceptions by missionaries and colonial administrators who were untrained in landscape evaluations.¹⁰⁶ To remedy a similar shortfall, this study relied on qualitative testimonies, reports and evaluations on socio-environmental impacts that captures the historical magnitude of the problem. Moreover, statistical figures on land conservation, contour farming and land use patterns in the tobacco farms are provided in the book to demonstrate environmental and landscape change over time.

Most of the sources are primary archival sources from the National Archives of Zimbabwe, official documents, correspondences, reports, statistical data, minutes of meetings, newspapers, agricultural magazines, and journals. These were important in understanding the attitudes of all the major players in the tobacco industry towards the environment, the factors that shaped those attitudes and how these changed over time. Also, the archive offered an official vantage point from which to glean the nature of state intervention in tobacco production and how environmental policy and legislation was crafted and enforced upon tobacco farmers.

The Tobacco Research Board (TRB) in Harare also houses collections of tobacco journals such as the *Rhodesian Tobacco Journal* (which was a publication of the Rhodesian Tobacco Association (RTA) and launched in 1949), *Tobacco Today*, *The Rhodesian Tobacco Grower and Food Producer*, *The Tobacco Forum of Rhodesia* and *Nyasaland*, which later changed its name to *The Tobacco Forum of Rhodesia* when the Federation ended in 1963. The tobacco journals contain a huge collection of material on the technical issues on tobacco cultural practices from as early as 1903. The journals provide crucial primary material on production changes and policy shifts across time and the impact on the land and environment. The technical articles contained in the journals shed light on how the tobacco farming shaped the environment through tobacco cultural practices such as the control of eel worm in tobacco, rotation practices, tobacco curing systems, the evolution of mechanisation models on tobacco farms, farm planning and chemical control of pests, diseases and weeds.

Although the archive is a useful source of colonial tobacco history, it does not tell a very objective story of about the experiences of African tobacco producers and African tobacco farm workers. The archive

¹⁰⁶ Showers, 'Soil Erosion in the Kingdom of Lesotho', 143–162.

constructs the colonial state and the European tobacco farmer as a benevolent patron dispensing a lot of technical and financial assistance towards African tobacco farmers to develop their areas through promoting cash crop production. These sources ignore the challenges African farmers had to face to compete with white farmers who had the benefit of access to the colonial state's socio-environmental infrastructure conducive for production such as land, water resources, labour and capital. The archive also ignores the plight of farm workers who were exploited and poisoned in the European tobacco farms. To fill in this gap, I have had to complement archival sources with a range of oral interviews with African tobacco farmers and farm workers to understand their experiences and challenges. Indeed, as Brian Williams and Mark Riley argue, oral sources are important for environmental history research to avoid the pitfalls of the top down biases contained in colonial archival sources.¹⁰⁷ Unfortunately, but understandably, given the huge lapse of time and geographic displacement of people that has happened across the years within these areas, I could only get a limited number of participants (seven), but their oral testimonies were valuable in understanding the plight of African tobacco producers and farm workers and the levels of socio-environmental challenges they faced. I tried to interview white commercial farmers to get their perspectives, but unfortunately the attempt to approach them through the Commercial Farmers Union (CFU) was a failure. However, this was not much of a methodological inconvenience as the voices of the white tobacco farmers are contained in the sources at the archives and the various tobacco journals previously mentioned. Interviews were conducted with small-holder farmers in Muzarabani district most of whom are beneficiaries of the FTLRP and their views helped to construct narratives on post-land-reform tobacco farming.

Embedded ethnography and personal experiences were also used to reflect on the socio-environmental experiences of tobacco farming landscapes. I have had personal lived experiences in a tobacco farming area from the late 1980s. I grew up on a commercial white tobacco farm, lived in a black

¹⁰⁷ B. Williams and M. Riley, 'The Challenge of Oral History to Environmental History', *Environment and History*, 26, 2 (2020), 207–231. For methodology on environmental history research Donald Worster also pointed out that the primary object of environmental history must be to discover how a whole culture perceived nature and not only fragments of it. See, D. Worster, 'Doing Environmental History', in D. Worster (ed.), *The Ends of the Earth: Perspectives on Modern Environmental History* (Cambridge, 1988), 303.



Figure I.1 The author standing in his tobacco field during harvesting in 2016

resettlement where my father grew tobacco on a small-scale basis, and I myself have grown tobacco, when I needed to. The image in Figure I.1 is the author during his time as a tobacco farmer. From 2011–2016, I grew 2–3 hectares of flue-cured tobacco each season in Centenary district northern Zimbabwe, Mashonaland central province. The 12-acre farm is part of land the government parcelled out to African peasant farmers at Jutland farm under Land Resettlement Programme during 1990–1991. My family still grow tobacco on this farm, albeit on a smaller scale. These experiences compose a large body of personal knowledge on conditions of tobacco farm labour and labour practices, cultural practices, relations of production, exploitation of natural resources in tobacco farms and general changes in landscapes and farm environments observable across time. These experiences form a latent body of knowledge that also inspired me to write this history and some of them are contained in this book.¹⁰⁸

¹⁰⁸ From 2011–2016, I grew 2–3 hectares of flue-cured Virginia tobacco each season in Muzarabani district northern Zimbabwe, Mashonaland central province. The 12-acre farm is part of land the government parcelled out to African peasant farmers at Jutland farm in Mukwengure ward under Land Resettlement Programme during 1990–1991.