



Lisbon School
of Economics
& Management
Universidade de Lisboa

MASTER IN
INNOVATION AND RESEARCH FOR SUSTAINABILITY

MASTER'S FINAL WORK
DISSERTATION

REPACKAGING REGENERATION: A CRITICAL ANALYSIS
OF CORPORATE INNOVATION AND FARMER NARRATIVES

MARIANA FREITAS GATTI

MAY - 2026



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Para quem vive da terra.

GLOSSARY

RA – Regenerative Agriculture

STS – Science and Technology Studies

CDA – Critical Discourse Analysis

ABSTRACT

Regenerative agriculture (RA) has rapidly gained prominence across policy and corporate sustainability agendas as a response to ecological degradation in agriculture. Despite its visibility, the concept remains loosely defined and increasingly mobilised by corporate actors whose business models are historically associated with input- and technology-intensive production systems. This raises questions about how regeneration is governed and legitimised within contemporary sustainability discourse.

This dissertation examines how RA is constructed within the corporate sustainability communication of a multinational agrochemical corporation, and how these constructions contrast with articulations by smallholder farmers in Brazil and Kenya. Drawing on Critical Discourse Analysis, the study analyses corporate reports, website content, and social media communications alongside farmer narratives collected through interviews. Discourse is treated as a social practice through which authority, legitimacy, and future pathways for sustainability are shaped.

The analysis finds that innovation is positioned as the primary driver of regenerative change, linking regeneration to portfolios of seeds, crop protection products, biologicals, and digital platforms; and that authority is established through references to data, scale, scientific expertise, and institutional partnerships, shaping which forms of knowledge count as valid evidence of regeneration. In contrast, farmers describe regeneration as a process of ecological care, long-term stewardship, and autonomy, grounded in place-based knowledge and intergenerational responsibility. Synthetic chemical inputs and proprietary seed systems are largely framed as obstacles rather than enablers of regeneration.

The findings suggest that definitional ambiguity around RA enables continuity with existing input-dependent systems under the language of sustainability. By stabilising regeneration as a managerial and innovation-led framework, corporate discourse marginalises farmer-led regenerative pathways and shapes which agricultural futures are rendered legitimate within dominant sustainability governance systems.

KEYWORDS: Regenerative agriculture; Innovation; Corporate discourse; Sustainability governance; Knowledge asymmetries; Legitimacy

JEL CODES: Q01, Q16, Q56, M14, Q57

RESUMO

A agricultura regenerativa (AR) ganhou rápido destaque nas agendas políticas e corporativas de sustentabilidade como resposta à degradação ecológica na agricultura. Apesar dessa crescente visibilidade, o conceito permanece pouco definido e é cada vez mais mobilizado por atores corporativos cujos modelos de negócio estão historicamente associados a sistemas de produção intensivos em insumos e tecnologia. Isto levanta questões sobre a forma como a regeneração é governada e legitimada no discurso contemporâneo da sustentabilidade.

Esta dissertação analisa como a AR é construída na comunicação corporativa de uma empresa agroquímica multinacional, e de que modo essas construções contrastam com as articulações de agricultores familiares no Brasil e no Quênia. Com base na Análise Crítica do Discurso, o estudo examina relatórios corporativos, conteúdos de websites e comunicações em redes sociais, em paralelo com narrativas de agricultores recolhidas através de entrevistas. O discurso é tratado como uma prática social através da qual se moldam a autoridade, a legitimidade e os futuros possíveis da sustentabilidade.

A análise demonstra que a inovação é posicionada como o principal motor da mudança regenerativa, associando a regeneração a portfólios de sementes, produtos de proteção de culturas, biológicos e plataformas digitais; e que a autoridade é estabelecida por meio de referências a dados, escala, especialização científica e parcerias institucionais, moldando quais formas de conhecimento são reconhecidas como evidência válida de regeneração. Em contraste, os agricultores descrevem a regeneração como um processo de cuidado ecológico, gestão a longo prazo e autonomia, enraizado em conhecimentos situados e em responsabilidades intergeracionais. Os insumos químicos sintéticos e os sistemas proprietários de sementes são, em grande medida, enquadrados como obstáculos, e não como facilitadores, da regeneração.

Os resultados sugerem que a ambiguidade definicional em torno da AR permite a continuidade de sistemas dependentes de insumos sob a linguagem da sustentabilidade. Ao estabilizar a regeneração como um modelo de gestão centrado na inovação, o discurso corporativo marginaliza percursos regenerativos liderados por agricultores e delimita os futuros agrícolas considerados legítimos nos sistemas dominantes de governança da sustentabilidade.

AI DISCLOSURE

This thesis was prepared in accordance with the academic integrity guidelines of the University of Lisbon. For the purpose of transparency, the author discloses the limited use of generative artificial intelligence (AI) tools during the research and writing process.

AI tools were used for language and drafting support, including grammar correction and stylistic refinement. As a non-native English speaker, these tools improved clarity and readability. AI tools also supported organisational tasks, including literature search assistance, keyword identification within qualitative data, and cross-checking quotes and reference lists.

AI tools were not used to substitute scholarly judgment. All analytical decisions and interpretations are the author's own.

The author takes full responsibility for the content and originality of this thesis.

Mariana Gatti.

January 2026.

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1. INTRODUCTION AND LITERATURE REVIEW

*PRAXAGORA: I believe my ideas are good, but what I fear is that the public
will cling to the old customs and refuse to accept my reforms.
BLEPYRUS: Have no fear about that. Love of novelty and disdain for traditions,
these are the dominating principles among us.
Aristophanes, Ecclesiazusae (583)*

At COP30 in Belém, agrochemical and seed corporation Bayer AG presented its PRO Carbono initiative under the banner of regenerative agriculture (RA). The installation linked regeneration to carbon outcomes, scientific partnerships, and a vision of farming described as “where everything begins.” Its presence in a major climate forum illustrates the growing authority of RA within corporate sustainability discourse, while also raising a question: how is regeneration being defined, by whom, and with what implications for agricultural futures?

RA has become a central reference point in contemporary sustainability discourse, increasingly mobilised by corporate actors as evidence of environmental responsibility and future-oriented innovation. Yet the concept remains contested. This thesis examines how RA is constructed and legitimised within corporate sustainability discourse, and how these constructions diverge from farmer-articulated understandings of regeneration rooted in lived agricultural practice.

1.1 From Vice to Virtue: Innovation's Moral Arc

Innovation's path from deviation to virtue is an instructive one. Once associated with disorder and political danger, from the late eighteenth century onward it gradually came to signify progress and promise—from “vice to virtue”, “from an act of condemnation to an act of praise” (Godin, 2015, p. 6). This moral reorientation intensified through the nineteenth and early twentieth centuries, as innovation became intertwined with industrial development, scientific advancement, and economic growth. By the post–World War II period, the association was complete. Particularly within the Schumpeterian tradition, innovation had been institutionalised through economic theory and public policy as not merely a technical process but as the central driver of societal

improvement. Over time, innovation acquired a powerful normative force. It came to be framed as inherently forward-oriented, promising not just any future, but a better one (Godin, 2015).

A growing body of critical scholarship challenges this moralised understanding. Scholars working in Science and Technology Studies (STS), critical development studies, political economy, and postcolonial theory argue that innovation is not a neutral or universally beneficial force, but a normative and ideological framework that legitimises particular forms of authority, expertise, economic organisation, and institutional power (Pansera & Owen, 2018; Jiménez et al., 2022; Arora & Stirling, 2023). Under the guise of progress, innovation discourse has frequently depoliticised social and ecological conflicts, masked power asymmetries, and reinforced hierarchical relations between the Global North and South (Madianou, 2019; Sekalala & Chatikobo, 2024).

Within sustainability agendas, innovation has become the dominant language through which environmental crises are framed and addressed. Climate change and biodiversity loss are progressively translated into problems of optimisation and efficiency. While these approaches promise progress, they also narrow the range of imaginable responses, privileging solutions that are scalable and market-compatible, while marginalising alternative forms of knowledge and practice that do not fit dominant innovation models.

1.2 The Benevolent Face of Extraction

Critical innovation scholarship has further shown that innovation discourse does not operate in a historical or political vacuum. In global sustainability contexts, it intersects with trajectories of colonialism and development, shaping how environmental problems are defined and governed. Innovation-based sustainability frameworks tend to organise ecological challenges as technical problems to be addressed through expertise, metrics, and novel solutions.

In contemporary sustainability governance, climate change, environmental degradation, and resource scarcity are accordingly framed in terms of optimisation, efficiency, and performance. It is within this context that narratives such as green growth, inclusive growth, and “innovation for development” gain prominence. Green

growth approaches, in particular, reframe ecological crises as opportunities for technological advancement and market expansion, allowing economic accumulation to proceed with minimal disruption (Utting, 2015).

Scholars have documented that when applied across unequal global contexts, innovation-driven development strategies often deepen rather than alleviate inequality. Jiménez et al. (2022) argue that such models promote unsustainable forms of extraction and consumption, particularly in the Global South. Pansera and Martinez (2017) show how narratives around the “fortune at the bottom of the pyramid” translate structural inequality into a series of challenges solvable through innovation, preserving conventional capitalist modes of operation while displacing questions of power and responsibility. Under these narratives, inequality itself becomes a site of opportunity.

These dynamics converge in what has been described as *green colonialism*. Green colonialism refers to processes through which environmental protection and climate mitigation reproduce colonial patterns of authority and extraction, often articulated through the moral language of care, responsibility, and repair, and legitimised by claims of innovation (Madianou, 2019; Arora & Stirling, 2023).

Green colonial dynamics rarely take the form of overt domination, operating instead through seemingly benevolent sustainability frameworks. Environmental domains such as soil, carbon, biodiversity, and land use are made governable through scientific metrics and market mechanisms that translate complex ecological processes into comparable and actionable units. Innovation thus extends extractive logics under the guise of environmental repair. Carbon markets and biodiversity credits exemplify how ecological processes are translated into calculable units, enabling intervention and investment that risk masking underlying political–economic interests.

The geographic and epistemic consequences of these processes are especially visible in the Global South. Sustainability governance frequently constructs those resource- and labour-supplying regions as sites of intervention and experimentation, while decision-making authority and definitional power remain concentrated elsewhere (Sekalala & Chatikobo, 2024). Innovation becomes the means through which external actors assert legitimacy over environmental futures, reinforcing asymmetries under the banner of sustainability.

The Green Revolution is an illustrative historical precedent for how technological innovation, when framed as the solution to ecological and social limits, can reproduce the very crises it claims to resolve. Conceived in the mid-twentieth century as a strategy to increase agricultural productivity and prevent famine, it carried the belief that scientific and technological advances could substitute for nature's regenerative capacities. As Vandana Shiva explains, "the Green Revolution was based on the assumption that technology is a superior substitute for nature, and hence a means of producing limitless growth, unconstrained by nature's limits" (Shiva, 1991, p. 15). This faith in technological abundance led to widespread adoption of high-yield crop varieties, synthetic fertilisers, and irrigation systems, which initially boosted output but also generated profound unintended consequences. The intensive use of synthetic inputs degraded soils and water systems, while monocultures eroded genetic diversity and traditional knowledge. "The reduction in availability of fertile land and genetic diversity of crops as a result of the Green Revolution practices indicates that at the ecological level, the Green Revolution produced scarcity, not abundance" (Shiva, 1991 p.15). Beyond ecology, it also reconfigured social relations in rural areas, concentrating land and capital among large producers and deepening farmers' dependencies on external inputs and markets.

1.3 Agriculture and Regenerative Systems: Site of Crisis; Laboratory of hope

Within global innovation dynamics, agriculture assumes an important (and paradoxical) position. It is both a site of crisis, confronting urgent ecological thresholds, and a laboratory of hope, where climate-smart approaches promise recovery. The sector is described as a space of multiple, interconnected crises—food insecurity, soil degradation, biodiversity loss, water scarcity, and climate vulnerability— none of which yield to simple or purely technical solutions (FAO et al., 2023). As a strategic frontier for innovation, technological development is expected to reconcile productivity and sustainability, growth and resilience.

In this context, RA has gained fast prominence across policy, research, civil society, and corporate sustainability agendas. RA is promoted as a forward-looking strategy capable of restoring ecological functions while maintaining or enhancing productivity (FAO, 2023; OECD–FAO, 2025). Despite its growing visibility, it is characterised by a

lack of definitional consensus. The literature shows that it is variously framed as a set of practices, a system of principles, a bundle of outcomes, or a broader worldview (Newton et al., 2020; Giller et al., 2021).

This openness allows RA to travel across institutional contexts, from grassroots agroecological movements to multinational agrifood corporations. It also creates space for divergent and sometimes conflicting interpretations to coexist under the same label. When regeneration is defined through selective outcomes, it can be integrated into existing industrial systems. The implications of this flexibility—particularly when regeneration is articulated by actors with divergent interests and power positions—deserve closer examination.

1.4 Research Problem and Questions

The growing prominence of RA within corporate sustainability strategies raises a question: what happens to the meaning of regeneration when it is articulated by actors whose core business relies on the very inputs that have historically been recognised as incompatible with resilient agroecosystems?

This thesis addresses this tension by examining how RA is discursively constructed within corporate sustainability communication, how innovation operates as a mechanism through which such framings are legitimised, and how corporate framings diverge from farmer-articulated understandings of regeneration. It does not ask whether RA “works” in agronomic terms, but how its meaning is built and contested through language.

The investigation is guided by a main research question:

How is regenerative agriculture constructed and legitimised within corporate sustainability discourse, and how do these constructions relate to farmer understandings of regeneration?

This question is explored through four sub-questions:

- 1. How does Bayer frame RA within its corporate discourse?**
- 2. How is innovation mobilised as a mechanism of legitimisation within this framing?**

- 3. How do these corporate constructions contrast with understandings of regeneration articulated by farmers in Brazil and Kenya?**
- 4. What do these contrasting constructions reveal about the discursive conditions under which agrochemical¹ and proprietary biotechnological² inputs are rendered compatible with RA?**

By addressing these questions, this study positions innovation as an object of inquiry examining how it contributes to structure power, authority and legitimacy, and how these impact sustainability action.

1.5 Methodological Approach

The study adopts a qualitative, comparative research design grounded in Critical Discourse Analysis (CDA), which approaches language as a form of social practice through which power, authority, and legitimacy are constructed and normalised (Fairclough, 1992; Wodak & Meyer, 2016). Corporate sustainability discourse is analysed in dialogue with farmer narratives, allowing for an examination of how dominant innovation framings interact with discourses rooted in lived agricultural practice.

The corporate case selected is Bayer AG, one of the world’s largest agrochemical and seed corporations. Bayer occupies a strategic position within global agricultural innovation systems due to its control over seeds, synthetic crop protection products and digital farming tools, while publicly positioning RA as a core element of its sustainability strategy. Corporate data include sustainability and annual reports, website content, and public communications. These materials are analysed alongside farmer

¹ Throughout this thesis, ‘agrochemical’ (inputs, products, dependence) refers to reliance on synthetic fertilisers, pesticides, and herbicides produced by agribusiness,—proprietary industrial products; not to the presence of chemical compounds per se. Agroecological systems also involve chemistry—through composting, fermentation, mineral amendments—but these are typically produced locally.

² The term *biotechnological* (inputs, technologies, or systems) refers specifically to proprietary, externally controlled agricultural technologies, including genetically engineered or gene-edited seeds, patented traits, and associated breeding and data infrastructures developed and governed by agribusiness firms. It does not refer to biological processes, traditional breeding practices, or farmer-led biological inputs (such as on-farm microbial inoculants or fermentation practices), which are historically embedded in agroecological and regenerative farming systems. The distinction is not between “biological” and “non-biological,” but between forms of biotechnology organised through proprietary, input-dependent regimes and those embedded in locally governed agronomic practices.

narratives collected through interviews and surveys with smallholder and family farmers in Brazil and Kenya. Farmer narratives are not treated as illustrative or anecdotal, but as epistemically significant discourses that show alternative understandings of land stewardship and resilience.

1.6 Contribution of the Thesis

This thesis contributes to a growing body of critical research on the co-optation of RA within corporate sustainability strategies. Recent work, including that of Bless (2025), has shown how regenerative discourse is selectively mobilised across agri-food supply chains. This study complements that analysis by focusing specifically on an agrochemical and seed corporation, and by examining innovation discourse as a mechanism through which legitimacy is constructed.

The contribution of this thesis is not to evaluate Bayer’s environmental performance or to judge RA as an agronomic model. It examines the discursive mechanisms through which RA is made compatible with particular technologies, business models, and forms of expertise. This is important because RA remains definitionally open. In such conditions, actors with greater communicative, scientific, financial, and institutional power may influence not only how regeneration is described, but how it is governed and supported.

By combining CDA of corporate communication—grounded in theories of legitimation, knowledge authority, and green colonialism—with farmer narratives from Brazil and Kenya, the thesis examines how definitional ambiguity around regeneration enables the continued integration of synthetic and proprietary biotechnological inputs into sustainability narratives. It also shows how these differences are tied to unequal capacities to have knowledge recognised within institutional systems. Innovation, data, scale, and partnerships operate as mechanisms through which some claims about regeneration become authoritative, while other forms of ecological knowledge remain harder to recognise within dominant sustainability governance systems.

The thesis therefore shifts attention from whether RA “works” to how regenerative futures are actively shaped through language, institutional authority, and unequal capacities to define what counts as valid knowledge.

1.7 Structure of the Thesis

The remainder of the thesis is organised as follows. Chapter 2 outlines the research methodology and analytical framework. Chapter 3 presents the empirical findings from the analysis of Bayer's corporate discourse and farmer narratives, discussing these findings through theories of organisational legitimacy, critical innovation studies, and green colonialism. Chapter 4 concludes by summarising the main findings and reflecting on their implications for sustainability governance and future research.



FIGURE 1 — Bayer AG's PRO Carbono stand at COP 30, Belém, November 2025. Central banner reads: "Agricultura regenerativa, onde tudo começa" (Regenerative agriculture, where everything begins). Photograph courtesy of Beto Bina.

2. METHODOLOGICAL ORIENTATION AND RESEARCH DESIGN

2.1 *Research Method*

Critical Discourse Analysis, employed as the primary methodological and analytical framework, approaches language as a form of social practice through which power, authority, and legitimacy are constructed and normalised (Fairclough, 1992; Wodak & Meyer, 2016). Rather than treating language as descriptive or neutral, CDA examines how discursive choices construct versions of reality that privilege some actors, interests, and knowledges, over others.

In a neoliberal system, corporations have considerable control over the shaping of individual experience. Like any institution, they seek to legitimise their own interest and existence through discourses which transform or reframe social practices (Mayr, 2008). This demands analytical attention to the discursive strategies corporations use to normalise existing hierarchies and marginalise alternative knowledges. Fairclough (1985) adds that legitimising strategies help institutions present structural inequalities as common sense.

CDA is therefore particularly suited to examining corporate sustainability communication, which operates not only as information but also as a mechanism to build authority and set norm.

2.1.1 *Analytical Framework*

The analysis is guided by Fairclough's three-dimensional model, which links text, discourse, and social practice. These dimensions inform interpretation throughout the analysis, without being applied as a rigid or sequential procedure (Fairclough, 1995; 2010; Wodak & Meyer, 2009).

- *Textual analysis* focuses on how language is used to construct meaning, examining lexical choices, metaphors, and rhetoric in both corporate and farmer discourse.
- *Discursive practice* is considered at a general level, looking at how corporate sustainability narratives circulate through institutional genres such as reports and websites. This dimension is not used for comparison, but to contextualise the texts analysed.

- *Social practice* situates these discourses within broader political and economic structures, including global agri-food systems, sustainability governance, and North–South power relations.

Interpretation is treated as integral to CDA. The researcher's critical stance, oriented toward examining asymmetries of power and legitimacy, is understood as a methodological condition rather than a source of bias.

2.2 Research Design Overview

The research design places corporate sustainability communication and farmer narratives in analytical dialogue, treating each as a distinct discursive site shaped by different conditions of production, circulation, and institutional authority. Corporate sustainability discourse is analysed alongside farmer narratives, and discourse is understood as both reflecting and producing power relations and future imaginaries. The comparative design is intentionally asymmetric: corporate data represents formal, institutional communication across multiple platforms, while farmer data captures lived experience and local knowledge systems. This asymmetry reflects the power relations under examination: the study does not aim for methodological equivalence, but to reveal how different actors construct meaning and authority within unequal structures.

2.3 Case Selection: Bayer AG

Bayer AG was selected due to its central role in the global agri-food system and its prominent positioning of "regenerative agriculture" within its corporate sustainability strategy. The company provides a rich case for examining how contested technologies, such as agrochemical inputs and genetically modified seeds, are reframed within sustainability discourse as components of regeneration.

Bayer AG is a German multinational company founded in 1863, headquartered in Leverkusen, Germany. The company operates through three divisions: Pharmaceuticals, Consumer Health, and Crop Science. The Crop Science division markets seeds and traits (conventional and biotechnological), crop protection products (including herbicides, insecticides, fungicides, seed treatments, and biologicals), and digital farming tools (Bayer AG, 2024a; Bayer AG, 2024b). In June 2018, Bayer completed the acquisition of Monsanto for approximately USD 63 billion (Bayer AG, 2018). Since the acquisition, Bayer has faced extensive U.S. litigation related to Monsanto products,

including glyphosate-based herbicides and historical PCB contamination (Bayer AG, 2024a). In investor communications, Bayer identifies itself as a global leader in crop traits, reporting an estimated global traits market share of approximately 65% (Bayer AG, 2023).

Bayer states that while there is no commonly agreed definition of RA, the term generally refers to farming principles or practices aimed at improving the overall environment with a strong focus on improving soil health and enhancing the ecosystem services provided by agricultural systems (Bayer, 2024). Across its public communications, Bayer consistently reconfigures key concepts in ways that allow continuity of its core business model. Agrochemical and proprietary biotechnological inputs are framed as tools of precision and resilience, dependency is framed as inclusion, and industrial continuity is embedded within ecological language. These discursive strategies make Bayer a valuable case for examining corporate legitimisation through language.

2.3.1 Corporate Corpus: Document Selection and Rationale

The corporate corpus was designed to capture how Bayer communicates RA across formal reporting, promotional materials, and public engagement platforms. This multi-platform corpus enables analysis of patterns that appear in different contexts.

TABLE I
CORPORATE CORPUS COMPOSITION

Document Type	Specific Documents	Selection Rationale
Corporate Reports	Impact Report 2024; Annual Report 2024; Crop Science Sustainability Progress Report 2024	Authoritative discourse directed at investors, regulators, and institutional stakeholders; represents corporate commitments with legal and reputational accountability
Website Content	Selected pages retrieved via site search for "regenerative" (102 pages)	Promotional discourse aimed at customers, media, and general public; reveals how regeneration is framed for non-specialist audiences and semantic organisation of the concept within Bayer's information architecture
Social Media	LinkedIn posts containing "regenerative" (18 posts, 2025 results)	Performative discourse in high-visibility platform; captures strategic positioning for professional audiences and sustainability community engagement

2.3.2 Data Access and Timeframe

All corporate documents and digital materials were accessed directly from Bayer's public platforms. The Bayer Impact Report 2024 was downloaded from the company website on 3 July 2025; the Bayer Annual Report 2024 on 12 August 2025; and the Bayer Crop Science Sustainability Progress Report 2024 on 17 December 2025. Website content was accessed through Bayer's internal search function, with relevant pages retrieved across the year up to 16 December 2025. LinkedIn posts included in the analysis were published between January and November 2025.

2.4 Farmer Interviews and Field Data

“Nothing comes closer to the paradigm of sustainable food production than family farming. Family farmers, when supported with affirmative policies and programmes, have a unique capacity to redress the failure of a world food system” (FAO & IFAD, 2019, p. 7)

To examine differences in communication practices, farmer data were collected in Brazil and Kenya using context-specific methods. Those countries were selected not as representative or comparative national cases, but as two situated Global South farming contexts through which farmer articulations of regeneration could be examined across different ecological, cultural, and methodological settings. They were also selected because the researcher had existing access to trusted local networks in both contexts, which made data collection feasible within the scope of the dissertation. This access supported participation and contextual interpretation, but also shaped the sample toward farmers already connected to agroecological, community-based, or alternative agricultural practices.

Family farmers³ were selected as the focus because they occupy a distinct position within sustainability discourse. Unlike large-scale or corporate producers, they are rarely the primary authors of those narratives, yet they are frequently invoked within them as beneficiaries or adopters. Examining their perspectives aims to shed light into

³ “Family Farming (including all family-based agricultural activities) is a means of organizing agricultural, forestry, fisheries, pastoral and aquaculture production that is managed and operated by a family, and is predominantly reliant on the family labour of both women and men. The family and the farm are linked, co-evolve and combine economic, environmental, social and cultural functions.” (FAO, 2014, p. 9).

forms of ecological knowledge and practice that are typically marginal, while they are central to lived agricultural systems.

Eligibility as family farmers was confirmed through questions on farm size, labour and decision-making, in line with FAO.

Data collection followed an iterative and inductive process. The initial interview guide did not focus on agrochemical inputs. During early interviews in Kenya, farmers repeatedly referred to fertilisers, pesticides, and seed regimes. These references were identified as analytically significant and were explored in more detail through follow-up questions. The original interview guide is retained, and this shift in emphasis is documented as part of the research process, in line with interpretive and CDA approaches.

The interview guides and communication prompts used to elicit farmer narratives are provided in Appendix B.

2.4.1 Brazil: WhatsApp-Based Survey

In Brazil, data were collected through a WhatsApp-based survey. This method was selected due to its widespread use among rural communities and its suitability for accessible participation. Participants were invited to respond in writing or via audio messages, with audio responses actively encouraged due to their relevance for discourse analysis.

The survey yielded 22 completed entries from individual participants. Respondents were family farmers operating at smallholder scale in the states of Pará, Paraíba, Ceará, and Mato Grosso. Reported farm sizes ranged from approximately 1 to 14 hectares, with an average of 3.3 hectares. Labour and decision-making were primarily family-based, sometimes supported by hired or seasonal labour, or the help of community members.

The survey consisted of six open-ended questions addressing meanings of land care and regeneration, agricultural practices and philosophies, perceived needs for the future, and views on inputs such as chemical fertilisers and pesticides, and seeds. To reduce respondent fatigue, questions were delivered in two sequential batches.

2.4.2 Kenya: In-Person Interviews

In Kenya, data were collected through in-person, semi-structured interviews conducted with smallholder farmers connected to Green World Campaign Kenya's community-based agroforestry and land restoration work in coastal Kenya, particularly in communities in or around Mombasa, Kilifi, and Kwale counties. This method was selected due to limited digital access in some rural areas, the importance of trust-building, and the cultural centrality of oral and collective forms of communication.

Thirty-three farmers were interviewed individually or in groups, allowing for conversational flexibility. Interviews were audio-recorded with consent, and transcribed. Some interviews were conducted in English, while others required translation support.

2.5 Data Preparation

Audio responses were transcribed verbatim. Written WhatsApp responses were retained in their original form.

Brazilian Portuguese interviews were translated into English by the author, a native Portuguese speaker. Kenyan interviews conducted in Swahili and Mijikenda were translated by members of the non-governmental organisation Green World Kenya, who work closely with participating communities and supported both live interpretation and transcript review.

Translators were asked to translate as literally as possible while maintaining natural English, preserving participants' own language choices. A translation protocol is provided in Appendix C.

Interview excerpts reproduced in this thesis have been lightly edited for readability, including punctuation, capitalization, and grammatical corrections. No substantive changes were made to meaning or evaluative content.

2.6 Analytical Approach

Analysis followed an iterative process based on CDA principles. The coding scheme combined deductive codes informed by CDA and legitimation theory with inductive codes that emerged from the texts. Coding was conducted using Atlas.ti.

The analytical process followed three main steps:

1. Separate coding of the two corpora. Corporate and farmer materials were first coded separately to avoid forcing farmer narratives into categories derived from corporate discourse. Corporate texts were analysed for recurring constructions of authority, expertise, responsibility, ambiguity, and continuity: how existing business practices are reframed as new, sustainable, or regenerative. Farmer texts were analysed for understandings of land, care, soil health, resilience, seeds, inputs, autonomy, and structural constraints.

2. Refinement of codes through repeated reading. Initial deductive codes were drawn from van Leeuwen's (2007) framework of legitimation in discourse and communication, alongside Fairclough's analytical categories of agency, representation, and legitimation. These were expanded through inductive coding as recurring patterns emerged from repeated reading of the corpus. In the corporate material, inductively generated codes included: outcome-based RA framing, innovation as solution, data as authority, flexible definitions, partnerships for legitimacy, selective inclusion of farmers, and input compatibility. In the farmer material, they included: regeneration as healing and care, practice-based knowledge, chemical-input rejection and ambivalence, seed autonomy and corporate dependence, structural constraints, and intergenerational responsibility. The full coding scheme, with codes associated with each evidence box, is provided in Appendix D.

3. Comparative interpretation. The two corpora were compared through three analytical questions: how regeneration is defined; which forms of knowledge are recognised as legitimate; and how agency and responsibility are assigned. Evidence boxes in Chapter 3 were constructed from excerpts that represented repeated discursive patterns across the coded material. The purpose of the comparison was not to establish methodological equivalence between corporate communication and farmer narratives, but to examine how different actors construct meaning and authority from unequal institutional positions.

Interpretation moved between textual patterns, discursive practice, and social practice, following Fairclough's three-dimensional model. The analysis therefore considered not only what was said about RA, but how language contributed to the construction of authority, legitimacy, and knowledge within broader agri-food and sustainability governance systems.

2.7 Positionality and Ethics

2.7.1 Sampling and Reflexivity

Participants in the Brazilian survey were recruited through agroecology and agroforestry networks with which the researcher has prior engagement. This position facilitated access, trust, and interpretation, but it resulted in a sample skewed toward farmers already engaged with alternative agricultural practices. This sampling approach presents a limitation but also reflects an analytical choice: the study does not aim to represent average farmer behaviour but to examine how regeneration is articulated by farmers who are actively reflecting on, or experimenting with, alternatives to dominant agricultural models.

2.7.2 Ethical Considerations

In line with a non-extractivist research orientation, the study sought to minimise the instrumentalisation of participant knowledge by emphasising voluntary participation, flexible modes of response, and careful contextualisation of farmer narratives within the limits of academic representation.

Participation was voluntary and based on informed consent. Participants were informed that responses could be provided in audio or text, that there were no right or wrong answers, and that identifying information would not be used. All names were anonymised, and data were stored securely and used exclusively for academic purposes.

3. FINDINGS AND DISCUSSION

3.1 Bayer's Constructions of Regenerative Agriculture

3.1.1 Regeneration as Measurable Outcomes

A recurring pattern across Bayer's corporate communications is the framing of RA as an outcome-based model. Regeneration is repeatedly defined through measurable results in sustainability and productivity, with emphasis on indicators such as soil health, greenhouse gas emissions, carbon sequestration, biodiversity metrics, and water use efficiency. This pattern is visible across website content, sustainability reports, and public-facing communications.

EVIDENCE BOX 3.1A – REGENERATION AS MEASURABLE OUTCOMES

"Bayer promotes a concept of regenerative agriculture (mainly downstream in our value chain) that is defined as an outcome-based production system aiming to increase food production, farm incomes and resilience in a changing climate, while restoring nature, especially the health of our customers' soil."

"For us, regenerative agriculture is an outcome-based production model based on two key building blocks: productivity, which focuses on helping farmers maintain or increase yield with fewer inputs for improved social and economic well-being outcomes, and regeneration, which focuses on delivering a positive impact on nature. Positive impacts on nature include improvements to soil health, reduction in field-level greenhouse gas emissions and an increase in carbon sequestration to mitigate climate change, preservation and restoration on-farm biodiversity and enhancement of plant genetic diversity, and conservation of water resources."

Bayer Impact Report 2024, p.40

"Regenerative agriculture is not just a buzzword – it describes systems that have measurable outcomes in sustainability and productivity."

Bayer Website

This aligns with larger patterns in corporate sustainability reporting, where environmental performance is translated into indicators and benchmarks (Cho & Patten, 2007; Tregidga et al., 2014). Such practices privilege forms of knowledge that can be standardised and audited, reinforcing what van Leeuwen (2007) describes as *authorisation through technical and procedural legitimacy*.

The problem is not that RA is associated with outcomes per se. Regeneration necessarily has effects, and outcome-based models of verification have been considered more inclusive than industry certifications within expert and industry circles. The issue arises when environmental metrics, often vaguely or imprecisely supported, function to

legitimise the system as a whole, displacing attention from social and structural dimensions that are incompatible with corporate interests.

The consistent association of sustainable farming with productivity reinforces this idea. Environmental benefits are presented next to yield increases and return on investment, creating credibility through its compatibility with metrics.

EVIDENCE BOX 3.1B – METRICS AS PROOF OF SUSTAINABILITY

“By developing drought-tolerant maize varieties, we aim to enhance food security and support smallholder farmers in building a sustainable agricultural future. We successfully brought 'Direct Seeded Rice' to around 18,700 hectares in India, with the goal of reaching 1 million hectares by 2030. Direct Seeded Rice is a less resource-intensive rice cultivation system, offering several environmental benefits, such as reduced water use and lower greenhouse gas emissions.”

Bayer Impact Report 2024, p.3.

“Based on data from the PRO Carbono program, participating farms in Brazil saw their yield increase by 11% and also an average rise of 16% in carbon sequestration in just two years.”

Bayer Website

This reflects what scholars identify as a core feature of innovation ideology: the treatment of complex social and environmental problems as technical issues, favouring solutions that fit existing economic and institutional systems (Pansera & Owen, 2018; Birch, 2022). Regeneration is therefore integrated into dominant production logics and treated as a performance upgrade to existing production systems. The issue is not that outcomes or technologies are irrelevant, but that this framing narrows the forms of change that can be recognised as regenerative.

The emphasis on outcomes also erases social and historical dimensions of regeneration. Issues such as land tenure, labour relations, seed sovereignty, and farmer autonomy are mostly absent from the definitional core. Even when biodiversity, soil, or water are mentioned, they are framed as ecosystem services that deliver quantifiable value. This reflects a technocratic view of ecology, in which nature is treated as a system to be optimised and monetised.

This logic has historical precedents in agricultural innovation discourse. Analyses of the Green Revolution show how productivity metrics were used to legitimise technological interventions while obscuring ecological degradation and social disruption (Shiva, 1991; Patel, 2013). Contemporary discourse on regeneration reproduces a similar structure. In "Regenerative Agriculture — Agroecology Without

Politics?” Pablo Tittone and colleagues argue that, within RA, many implicitly assume that specific practices or technologies will inevitably deliver desired environmental results, and that this assumption is empirically weak, as the relationship between processes and outcomes is contextual, shaped by soil types, climate, production systems, and social conditions—not technical interventions alone. They emphasise that sustainable soils and resilient agroecosystems cannot be separated from the sustainability of rural livelihoods themselves, nor from the power relations that shape farmers’ capacity to adopt or refuse particular practices.

The outcome-based framing creates a strategic flexibility. Corporate discourse frequently acknowledges that RA has no single definition and that practices must be adapted to local conditions. However, this apparent openness is constrained by who controls evaluation: farmer practices are legitimised as regenerative as long as they deliver corporate-recognized outcomes, validated through corporate data systems. From a CDA perspective, this represents what Fairclough (2003) identifies as a characteristic legitimisation pattern: openness operates at the level of form (what practices are allowed), while closure operates at the level of evaluation (what counts as valid).

EVIDENCE BOX 3.1C – FLEXIBLE DEFINITIONS

“We are at the beginning of our journey toward regenerative agriculture. We also realize there is not one single solution for all farms, but that there instead must always be a combination of different solutions that deliver a regenerative agriculture system and related benefits. In the coming years, we intend to develop specific models for different regions and help farmers implement them by passing on knowledge and offering suitable products and services.”

Annual Report 2024, p.170

“But this also means that a concept of regenerative agriculture must be understood as a flexible framework rather than a rigid one. Data is the foundation for identifying optimal solutions for each farm and for assessing progress toward nature-related outcomes (beyond just bushels of yield and income generated).”

Bayer Impact Report 2024, p.40

In conclusion, stripping RA of its socio-political dimensions by narrowing it to productivity and scalability outcomes makes it compatible with the same dominant models it hopes to restore. This continuity supports critiques of green growth, and sets the conditions for the discursive patterns examined in the following sections—especially the role attributed to innovation as the driver of regenerative change, and the authority claimed through data and scale.

3.1.2 Innovation as the Driver of Change

A second dominant pattern across the corporate material is the positioning of innovation as the primary driver of regenerative change. RA is consistently described as something that can be achieved through the deployment of innovations, understood as technologies, products, platforms, and integrated solution systems. Innovation is presented as the causal force that enables regeneration to occur, and framed as the catalyst that allows agriculture to reconcile productivity with climate mitigation. Statements show that innovation makes it possible to “optimize resource use,” “reduce environmental impact,” and “enhance agricultural productivity”, sometimes within the same sentence. The discourse suggests that challenges once considered incompatible can now be solved through the ‘right combination of innovations’.

EVIDENCE BOX 3.1D – INNOVATION AS ENABLER OF REGENERATION

“This past year has been a stark reminder of why our work matters. Record-breaking heat, devastating floods, and rising food insecurity have affected millions. Meanwhile, billions of people still struggle to access essential medicines and healthcare, and effective treatments for many critical diseases simply don't exist. And while these challenges may seem overwhelming, I firmly believe in the power of science and collaboration to create meaningful change.”

Bayer Impact Report 2024, p.3

“Increasing crop production and reversing global warming were once considered incompatible, but we now have solutions to do both.”

Bayer Website

“Inputs that Enable: Our high-performing seeds and crop protection solutions are designed to enhance productivity while contributing to regenerative outcomes.”

“Climate change makes it even more important for countries to embrace gene editing in crops.”

Bayer LinkedIn

Innovation here appears as the active agent driving transformation. Farmers are positioned as recipients or users of innovation, and regeneration becomes something that happens through adoption or implementation. This aligns with Fairclough’s (2003) remarks that agency can be strategically used to naturalise certain actors or processes as inevitable.

The discourse also relies on future-oriented language. RA is described as “the way of the future,” and urgency is created through references to climate change, population

growth, and global food demand. Innovation is presented as the mechanism through which this future can be reached at speed and scale.

EVIDENCE BOX 3.1E – FUTURE-ORIENTED URGENCY

“There has never been a more important time for innovation in agriculture. Our world faces enormous challenges — from a changing climate, limited natural resources to a growing population. And we believe agriculture is part of the solution.”

Bayer Crop Science LinkedIn — Overview Section

“Regenerative agriculture is the way of the future, but only if we scale it up to reach more farms and have impact in the fight against global warming.”

Bayer Website

This temporal orientation limits reflection on past experiences with agricultural innovation. Historical trajectories of technological change, including their unintended ecological and social consequences, risk being obscured. Critical analyses of the Green Revolution show how innovation-driven interventions produced unequal social and ecological consequences, particularly in the Global South, while deepening dependence on external inputs (Shiva, 1991; Patel, 2013). The assumption that technological systems can substitute for ecological processes remains embedded in present innovation narratives.

Innovation is also framed as a matter of scale: RA is presented as effective only when it can be expanded to reach more farms, hectares and regions.

EVIDENCE BOX 3.1F – SCALE AND REACH AS CONDITIONS FOR IMPACT

“Our vision is to transform the agricultural sector at scale by enabling the adoption of regenerative farming systems to create a more prosperous and resilient food production system.”

Annual Report 2024, p.33 (4:14)

“Compared to our peers and competitors, we are therefore uniquely positioned to provide farmers with an entire system of solutions as part of our offering, and to bring this to scale with our global reach, local presence and strong partnerships.”

Bayer Website

“With our global presence, leading market position and comprehensive farming solutions, we're driving towards regenerative agriculture... Our vision of scaling regenerative agriculture is powered by five Innovation Engines: Breeding, Biotechnology, Small Molecules, Biologicals, Digital Farming.”

Crop Science Report 2024, p.22

This emphasis on scale resonates with development paradigms that emerged during the neoliberal turn of the 1980s, when innovation became a vehicle for governance tied to private-sector leadership and global competitiveness. This period consolidated the idea that progress would be delivered through free markets and technological diffusion, and limited attention was given to local contexts or power relations (Moore and Westley, 2011; Silva, 2020).

Within the analysed discourse, Bayer positions itself as uniquely capable of driving regenerative change because of its scientific partnerships and global reach. The ability to innovate at scale becomes basis for authority. As van Leeuwen (2007) notes, such claims work as authorisation strategies, where legitimacy is derived from expertise and institutional status, stripped from democracy and social values.

EVIDENCE BOX 3.1G – CORPORATE CAPACITY AND LEGITIMACY THROUGH INNOVATION

“We are an innovation leader in the agricultural sector, with over €2.6 billion invested annually by our Crop Science Division in research and development and a strong global presence.”

Annual Report 2024, p.224

“We believe that Bayer has a competitive advantage in regenerative agriculture because, along with our agronomic expertise, we have all the scientific innovation platforms needed for such a holistic approach under one roof.”

Bayer Website

“Some of the innovations and solutions developed by Bayer have the potential to advance the future of regenerative farming.”

Bayer Website

“We are also uniquely positioned to help companies across the agriculture value chain to reduce their carbon emissions, gain insights on the co-benefits of regenerative agriculture and together, cultivate a healthy planet for generations to come.”

Crop Science Sustainability Progress Report, p. 74

This has relevant implications. By presenting innovation as the driver of regeneration, the discourse limits actors and practices that can be recognised as regenerative. Pathways that do not rely on proprietary technologies become less visible. This contributes to what Unsworth et al. (2023) describe as *geographic and epistemic lock-in*, where innovation knowledge and authority are concentrated in high-income, corporate-dominated contexts.

In summary, innovation operates as a mechanism that sets boundaries defining what counts as regenerative change and who can deliver it. These dynamics lead to the next

discursive pattern examined in this chapter: the central role of data and digitalisation for building authority and governing RA.

3.1.3 Data and Authority

A third recurring pattern in the corpus concerns the role of data and digital tools in establishing authority over RA. Across reports and website content, the capacity to measure, standardise, and aggregate environmental performance across farms and regions are presented as essential conditions for regenerative outcomes to be validated. Digital farming tools and analytics platforms, alongside verification protocols, are shown as enabling “reliable proof points,” “evidence-based decisions,” and “impact measurement.”

EVIDENCE BOX 3.1H – DATA AS THE FOUNDATION OF CREDIBILITY

“Data and digital farming tools, powered by advanced data analytics and artificial intelligence, allow farmers to make informed decisions about crop management.”

Bayer Website

“In the future, we expect that both data from the field and carbon stored in the soil will be as important as yield. Today, our accessible market has an estimated value of more than 100B EUR globally. By 2030, we expect our systems to unlock new opportunities – from regenerative agriculture to digital platforms – with an estimated value of over 200B EUR.”

Crop Science Report 2024, p.25

“Combine innovative physical products and regenerative practices with AI- and data-driven insights to unlock even more potential.”

Bayer LinkedIn

From a CDA perspective, this position assigns authority to those who control data. As Fairclough (2003) argues, discourse shapes not only meaning but social relations, including who is positioned as a legitimate “knower.” In this case, legitimacy is tied to the ability to gather and certify data. Farmers appear primarily as data providers or users of systems, while interpretation and validation are at another hierarchical level.

This aligns with common practices in sustainability governance, where quantification and metrics function as tools of control and coordination (Cho & Patten, 2007; Tregidga et al., 2014). By translating complex ecological processes into indicators, data systems see regeneration as comparable and auditable.

The discourse also positions digital platforms as enablers of scale. References to global reach, millions of hectares, and operations across countries signal impact and

legitimacy. As in innovation discourse, scale functions as a condition of recognition within data narratives. The capacity to aggregate information across farms and regions is presented not only as a technical requirement, but as a prerequisite for regeneration to be recognised and governed. Authority is thus derived less from ecological responsiveness in place, than from the ability to make diverse practices legible at scale.

The emphasis on data and scale also introduces discursive ambiguity. Statements refer to “potential,” “estimates,” and “model-based recommendations,” without clarifying assumptions or uncertainties, which allow authority to be asserted without making assumptions or uncertainties explicit.

EVIDENCE BOX 3.II – AMBIGUITY IN MEASUREMENT AND MODELLING

“Our services provide estimates or recommendations based on models.”

“It’s estimated that every hectare cultivated with regenerative farming has the potential to save the equivalent of one car’s total annual emissions.”

Bayer Website

Van Dijk’s (2008) work on discourse and power is relevant here. He shows how control over knowledge production enables actors to shape what is accepted as common sense. In the corpus, as often in sustainability communication strategies, ambiguity ends up strengthening (not weakening) authority. Sophisticated data systems and scientific language create the perception of credibility even when claims lack precision.

The authority produced through data and scale is therefore not neutral, as it helps shape whose knowledge counts. While corporate discourse frequently refers to collaboration with farmers, NGOs, and partners, decision-making authority remains in the hands of those who design platforms, define indicators, and control verification processes. This reflects what van Leeuwen (2007) identifies as *authorisation through expertise*: legitimacy is based on institutional capacity without participatory consent. Similar dynamics have been observed in agricultural innovation. Analyses of the Green Revolution show how scientific authority and yield metrics justified large-scale interventions (Patel, 2013; van Etten, 2022).

In the context of RA, data and scale legitimise relevance and investment. This reinforces asymmetries between corporate actors with access to data infrastructures and farmers whose knowledge is embedded in practice and place. The asymmetry is therefore not only institutional, but epistemological: data systems do not simply

communicate evidence of regeneration; they help establish the conditions under which regeneration becomes recognisable as evidence. Practices and forms of knowledge that cannot be easily standardised or verified through these systems risk becoming less visible within the governance architectures that increasingly shape RA.

This is not a separate dynamic from power, but one of the ways power operates. The capacity to measure becomes connected to the capacity to define, and the capacity to define shapes which actors, practices, and futures are recognised as regenerative.

3.1.4 Partnerships and Managed Inclusion

An identified discursive pattern concerns the prominence of partnerships in the presentation of RA. Across Bayer’s corporate communications, partnerships with farmers, NGOs, governments, and value-chain actors are repeatedly highlighted as essential to scaling regenerative practices and delivering impact. Collaboration is framed as inclusive and necessary for addressing complex sustainability challenges.

This is visible in repeated references to working “together with key stakeholders,” “partnering across the value chain,” and collaborating with farmers to advance regenerative systems.

EVIDENCE BOX 3.1J – PARTNERSHIPS AS CONDITION FOR IMPACT

“When we combine our expertise with the knowledge, technologies and power of NGOs, governments, international organizations, farmers, consumers and food chain members, together we can achieve profound impact.”

Bayer Website

“As no one can overcome every challenge alone, we establish crop value chain partnerships to provide smallholder farmers with high-quality inputs, agronomic knowledge, cost-effective financing and risk mitigation solutions, as well as market access to sell their products. These partnerships include collaborations with government research institutes, nongovernmental organizations (NGOs) and international financial institutions.”

Bayer Impact Report 2024, p.15

From a CDA perspective, partnership discourse is an important legitimising tool, signaling inclusivity and shared responsibility. As Suchman (1995) notes, organisational legitimacy is often constructed through alignment with socially valued norms. In sustainability contexts, collaboration has become one such norm. By highlighting partnerships, corporate actors position themselves as part of broader collective efforts, deflecting attention from asymmetries in power and decision-making.

Closer examination of the discourse reveals that inclusion is selective and structured. Farmers are consistently acknowledged as important participants, yet assigned roles as adopters or demonstrators of programmes designed elsewhere. Initiatives such as ForwardFarming are presented as spaces where “independent” farmers illustrate regenerative approaches and share experiences.

EVIDENCE BOX 3.1K – SELECTIVE INCLUSION OF FARMERS

“Through the ForwardFarming network, Bayer collaborates with independent farmers to illustrate how a customized regenerative agriculture production system approach—integrating practices, tools, and inputs—can support successful farm operations while contributing to resilient farming systems.”

Bayer Website

“We lead by example and innovate for impact, empowering farmers to adopt regenerative practices, remain resilient, and adapt their operations to a changing world.”

Bayer LinkedIn

“Many of these smallholder farmers are facing significant challenges. Their yields are often low because they do not have access to high-quality crops and practical knowledge about more productive and environmentally friendly cultivation methods.”

Bayer Impact Report 2024, p.14

Farmers appear as valued actors, but not positioned as definers of agendas. Their role is to implement, demonstrate, and validate systems strategically framed through corporate innovation and data infrastructures. Van Leeuwen’s (2007) work on authorisation is, again, relevant here: legitimacy is derived from recognised expertise and institutional power.

The discourse also consistently frames farmers as assets within regenerative systems. Statements describe farmers as “our single greatest asset for generating soil carbon” and highlight new business models designed to ensure their participation. While this language acknowledges farmer contribution, it also instrumentalises it. Farmers are valued for their role in delivering measurable outcomes, particularly those connected to carbon markets and ecosystem services.

EVIDENCE BOX 3.1L – FARMERS AS ASSETS

“We aim to create market models that generate benefit and reduce business risks for all partners in the value chain, including smallholder farmers. This is implemented by helping smallholder farmers gain access to the agricultural value chain and increase their productivity and income.”

Bayer Impact Report 2024, p.15

"Our work on the ground with farmers puts us in the right position to help them improve their practices and, in turn, their businesses."

"Recognizing that farmers are our single greatest asset for generating soil carbon, we have created new business models that will help to ensure their participation far and wide."

Crop Science Report 2024, p.73-74

By partnering with NGOs, certification schemes and global institutions, corporate actors borrow credibility and social trust. Collaboration is presented as consensus, even when actors may hold different priorities and definitions. Partnerships therefore signal that regenerative approaches are credible and aligned with broader sustainability schemes.

However, the structure of these partnerships is uneven. Decision power remains concentrated among actors with access to capital, reach, and data infrastructure. Smallholders and local producers are included, but often as adopters, demonstrators, or participants in externally defined programmes. This reflects patterns in development and innovation research, where participation is encouraged within bounded spaces that do not challenge underlying hierarchies (Unsworth et al., 2023).

The discourse of partnership therefore does not dissolve power asymmetries. Inclusion becomes a means of positioning RA as a corporate-led innovation pathway. Alternative models grounded in farmer governance are peripheral.

By framing regeneration as a collective endeavour led through partnerships, corporate actors maintain legitimacy and concentrate control over the terms of participation.

3.2. Farmer Constructions of Regeneration

This section examines how regeneration is articulated in farmer narratives collected through interviews and surveys in Brazil and Kenya. These articulations are not treated as illustrative responses to corporate discourse, but as epistemically significant accounts of regeneration grounded in observation, ecological relationship, intergenerational memory, and place-based practice. In contrast to corporate framings that privilege scalable indicators, data systems, and formalised expertise, farmer narratives operate through forms of knowledge that are cumulative and relational, and often difficult to translate into standardised metrics.

Across the Kenyan and Brazilian contexts, regeneration is consistently framed as healing and care, articulated through affective language, metaphors of health and life, and references to intergenerational responsibility. At the same time, some farmers explicitly resist the terminology of “regenerative farming” itself, describing their practices instead as agroecological and noting that the label is a recent, externally introduced naming of practices that long predate it. This renaming is not neutral: by absorbing established agroecological and indigenous practices under the RA label, external actors can claim association with those practices while retaining definitional authority over what regeneration requires and how it is evaluated. What the label makes visible is the existence of farmer-led alternatives; what it risks obscuring is the prior knowledge, autonomy, and ecological grounding from which those practices derive their coherence. This resistance is analytically significant as it suggests that RA as a category is contested when it means that existing practices are renamed to make them legible or appealing to external actors.

Additional excerpts from farmer interviews, which informed the analysis but could not be included in full due to space constraints, are provided in Appendix E.

3.2.1 *Regeneration as nature-led healing and care*

A dominant pattern in the data frames regeneration as allowing nature to recover from damage caused by human activity. Farmers repeatedly describe regeneration using Portuguese verbs such as *curar* (to heal) and *cuidar* (to care), and Swahili terms such as *kuponya* (to heal), which people present during the interviews identified as the closest term to regeneration. Soil is spoken of as a living entity that can be sick or healthy, requiring protection and patience.

EVIDENCE BOX 3.2A – REGENERATION AS HEALING AND CARE

“When we do those things, I personally feel like we are going back to our indigenous knowledge. During the ancient times there were no chemicals to buy from the shop, to treat our crops. They would use trees to treat the crops. So it's almost like we are going back to our roots and for us, that is affordable because even if one does not have money you can use those indigenous methods and your crops stay healthy.”

Kenya, Farmer KE-27

“It's about having the presence of life on Earth, that which had already been lost...”

Brazil, Farmer BR-14

“To heal the land is to work without harming the environment... Mistreated land is unhealthy land. When you care for land, you heal yourself.”

Brazil, Farmer BR-22

“I strongly believe in this connection between human beings and nature, in this care for the Earth.”

“When you start to take care, you are automatically taken care of as well. For me, regeneration of the land is care for life.”

Brazil, Farmer BR-13

“For me, regeneration is letting nature itself take responsibility for reversing the damage that men have caused to it.”

Brazil, Farmer BR-01

“We need to heal the soil, to treat the soil well.”

Kenya, Farmer KE-01

This framing aligns with agroecological and political ecology scholarship that understands soil not as a substrate for production but as a living system embedded in socio-ecological relations (Altieri, 2002; Gliessman, 2015). It also connects with critiques of innovation narratives that privilege intervention and optimisation (Godin, 2015; Jiménez et al., 2022).

From a CDA perspective, the farmers’ discourse repositions agency. Regeneration is not something delivered through external solutions but something that emerges from relationships between humans and ecosystems. Nature is an active participant in recovery.

3.2.2 Regeneration as agroecology and practice-based knowledge

A second recurring pattern positions regeneration within agroecology and agroforestry practices: soil cover, crop diversity, composting, syntropic systems, and reduced disturbance. Knowledge is described as cumulative, experiential, and transmitted across generations or through peer learning.

EVIDENCE BOX 3.2B – REGENERATION AS AGROECOLOGY / PRACTICE-BASED KNOWLEDGE

“I use animal manure. I sweep in the morning and pour it on my farm. I use the indigenous seeds I don’t buy from the agroveter, and after I plant it and it is infected I use neem water, chilli, and sodom apple. I mix them together and apply in the maize and my maize do well.”

Kenya, Farmer KE-09

“Yes and the maize stalks are also manure and organic pesticides... They will act as manure also when we cut down we just leave them in the soil dry stalks are also used as organic fertiliser. You are giving back to the soil.”

Kenya, Farmer KE-01

“Agroecological planting, following traditions of grandparents and parents. Example: without pesticides, intercropped planting, manual work, use of organic insecticides from the property itself.”

Brazil, Farmer BR-02

“Care for the soil is the main thing. And then management does the rest of the work. So, taking great care of the soil, just caring for the soil. This is the fundamental principle of the forest system we work with here.”

Brazil, Farmer BR-019

This articulation resonates with literature that defines agroecology as, simultaneously, a science, a set of practices, and a social movement (Wezel et al., 2009;

Levidow et al., 2021). Farmers' emphasis on observation and adaptation contrasts with innovation models that prioritise standardisation.

Farmers do not frame agroecology as nostalgic or backward, but rather as adaptive and responsive to climate stress, particularly drought and soil degradation. Knowledge is presented as situated and relational, reinforcing STS critiques of universalised innovation models that detach solutions from place (Jasanoff, 2015; Unsworth et al., 2023).

3.2.3 Chemical inputs: rejection and ambivalence

Farmer narratives overwhelmingly reject chemical inputs as incompatible with regeneration. Pesticides, herbicides, and synthetic fertilisers are described as harmful to soil life, human health, and long-term productivity. Dependence on modern agro-inputs is associated with soil exhaustion and loss of autonomy.

EVIDENCE BOX 3.2C – REJECTION OF CHEMICAL INPUTS

“Our ancestors did not use fertiliser or chemicals and they had plenty of maize in their homestead. But nowadays people have to use chemicals and fertilisers from shops, and if you do not use it you do not harvest anything at all. People want western knowledge, but it has made us lose our farms.”

Kenya, Farmer KE-15

“With the use of insecticides, pesticides and other chemical inputs has decimated the life of agriculture and family farmers... emergence of various diseases that affect people's lives such as cancer of various types (skin, stomach) among others.”

Brazil, Farmer BR-04

“We don't work with chemicals. We try to work only with organic fertiliser for soil recovery, because when we use chemicals, they also start to destroy the soil.”

Brazil, Farmer BR-20

“Since 2010, we don't use any pesticides... Our health improves, right? When we stop using pesticides. And the health of the land too.”

Brazil, Farmer BR-19

“I can read from the phone that some weed kills chemicals that can kill weeds, but I have never used them because I don't trust them; I might pour it and it can kill even the maize or the cowpeas.”

Kenya, Farmer KE-01

“Not doing burning, keeping the forest standing, not using agrottoxins, doing reforestation.”

Brazil, Farmer BR-21 to ‘what is the meaning of regeneration in your own words’

At the same time, a minority of respondents articulate ambivalence. Some recognise short-term productivity gains or express concern about feeding the community or large populations without chemical inputs.

This ambivalence reflects tensions identified in the literature between yield-centred food security narratives and agroecological transitions (Tittonell, 2014; Giller et al., 2021). Importantly, even ambivalent farmers frame chemical inputs as a constraint imposed by broader systems, not as an inherent feature of regeneration.

EVIDENCE BOX 3.2D – AMBIVALENCE AROUND CHEMICAL INPUTS

“When you work the way I do, from 2010 onwards, regenerating my property, where I work with my family, I don't use these chemical inputs, and we reduce production, but it improves our quality of life and the land's. But we are many people, and we know how many millions of people there are in the world. I think these chemical inputs are still important, because unfortunately, if we only use agroecology, without chemicals, it's not enough to supply the large number of people who need to eat. That is my opinion.”

Brazil, Farmer BR-19

“Producing organically is very labor-intensive and most of the time we do not have support.”

Brazil, Farmer BR-13

“I still don't know much about this [inputs], but I believe that since it's about regeneration, everything we do that is on the healthy side is the best to be done.”

Brazil, Farmer BR-19

“According to my opinion, you must spray the farm, because we have those that are being sprayed by some, to kill weeds, and we are not doing that, we just go to the agroviet we buy medicine from companies like Bayer, we have Fisons, so we buy and then you spray only the maize so the other ones you leave them alone.”

Kenya, Farmer KE-01

3.2.4 Seeds, autonomy, and corporate dependence

Seed sovereignty emerges as a central concern. Farmers distinguish between ancestral or *crioulas* seeds and corporate or genetically modified varieties. Seeds are framed as repositories of memory, adaptation, and autonomy. Corporate seeds are associated with dependence, declining yields over time, and loss of control.

EVIDENCE BOX 3.2E – SEEDS AND DEPENDENCE

“The moment I harvest, my harvests are good, some I am selling. Once I sell, the next rainy season I have to go back to the agroviet, and get some seeds, so I don't replant the same, because I saw what happened, the place I had intended to get more than 100 bags, I got 20 bags.”

Kenya, Farmer KE-01

“The GMO at first... in a place where I had harvested 90 bags, now I harvested 20 bags. There are some community members who did the same, and the results were very much poor.”

Kenya, Farmer KE-01

“This is my concern, right? Because there will come a time when you want to plant corn, you have to buy it... if we're not careful, at some point we will have this dependence on big companies that have the detention of seed germination.”

Brazil, Farmer BR-08

“Genetically modified seeds, I believe it's just human illusion to produce more. But in the regeneration process ancestral seeds should be used. Which combine with nature, with the soil.”

Brazil, Farmer BR-01

These narratives directly echo critiques by Shiva (1991) and Kloppenburg (2010) on the political economy of seeds. From a CDA perspective, seeds here function as symbols of power: who controls reproduction, continuity, and the future of farming.

3.2.5 Structural constraints and moral responsibility

Farmers consistently emphasise that regeneration is constrained by lack of credit, infrastructure, water access, and supportive public policy. Regeneration is described as possible, but difficult without structural support.

EVIDENCE BOX 3.2F – STRUCTURAL CONSTRAINTS

“There is no regeneration without infrastructure... So it's necessary first to have investment in minimum infrastructure, which is to have water... But we need technical support. We need to have this awareness work.”

Brazil, Farmer BR-17

“Continuous training and labor. Labor for agriculture is difficult, and even more difficult is qualified labor in agroforestry. With advancing climate change our farms, even in forest systems, are suffering from drought and many plants dying. Resources are needed for implementation of forest irrigation systems.”

Brazil, Farmer BR-012

“There are too many challenges, lack of money to till your farm, when you do not have seeds to plant in your farm.”

Kenya, Farmer KE-13

“If there was a credit line that financed families to do agroforestry... without resources it's very difficult to do it. It's expensive, right? The return takes a while... when we go to the bank, what they ask us... if we have cattle, if we work with pasture. When we say we do agroforestry systems, they immediately say no, there's no credit line, that it's a system that doesn't pay, that doesn't pay for itself, that doesn't make profit.”

Brazil, Farmer BR-07

Despite these constraints, farmer discourse is strongly moralised. Regeneration is framed as an obligation toward community and generational health and survival, and planetary life.

EVIDENCE BOX 3.2G – INTERGENERATIONAL RESPONSIBILITY

“Love for nature, love for our common home... I dedicate myself body and soul so that I can recover at least half of what it once was of native forests... It's very sad. So my philosophy is this, love. Love is love.”

Brazil, Farmer BR-11

“For the future of children, our youth, the community in general. We hope they follow a bit of the example we have... We have the obligation for each one to do a little... today everything is possible if you have good willpower.”

Brazil, Farmer BR-22

“Today we farmers in general from the largest to the smallest need to have a main focus of consciousness (...) The end of forests is the end of our lives.”

Brazil, Farmer BR-05

Farmers' moral framing contrasts sharply with corporate sustainability discourse, which emphasises risk management and opportunity. Farmers speak of duty and care, reinforcing critiques that sustainability transitions often marginalise ethical dimensions of change (Puig de la Bellacasa, 2017).

Together, farmer narratives build regeneration as withdrawal from chemical dependence, restoration of soil life, and reclaiming of autonomy and knowledge. These meanings challenge corporate framings that position regeneration as an innovation frontier compatible with continued chemical and technological intensification.

From a CDA perspective this is more than a difference of opinions. It represents a conflict in which one discourse legitimises authority through innovation, data, scale and institutional partnerships, and another finds meaning in care, continuity, lived knowledge and ecology. This tension is the heart of this thesis, where innovation functions as a legitimacy device, and regeneration as a contested political terrain.

3.3 Comparative Interpretation: Knowledge, Authority, and Regeneration

The comparison between corporate and farmer discourse shows that the tension around RA is not only a disagreement over practices. It is also a disagreement over the forms of knowledge through which regeneration becomes defined and recognised. Bayer's discourse constructs regeneration through measurable outcomes, innovation systems, data infrastructures, and partnerships. Farmer narratives construct regeneration through soil care, ecological observation, seed autonomy, reduced dependence on external inputs, and responsibility toward future generations.

These positions do not circulate with equal institutional weight. Corporate discourse appears in reports, websites, professional platforms, partnerships, and institutional sustainability spaces. It is supported by scientific language, global reach, financial resources, and data systems. Farmer discourse is grounded in lived agricultural practice, but it does not carry the same institutional force. This difference matters because RA remains definitionally open. In the absence of agreed principles, actors with greater capacity to measure, communicate, and verify regeneration are better positioned to stabilise its meaning.

The central contrast therefore concerns knowledge and authority. In Bayer's discourse, regeneration becomes legible through outcomes that can be measured, aggregated, and linked to productivity, carbon, biodiversity, and market value. In farmer narratives, regeneration is understood through situated forms of knowledge: knowing when soil is healthy, which seeds adapt, how land responds to care, and how farming practices affect household and community resilience. These forms of knowledge are not absent from regeneration. They are less easily recognised within systems that privilege standardised evidence and scalable verification.

This contrast also clarifies the discursive conditions under which agrochemical and proprietary biotechnological inputs can be rendered compatible with RA. Farmer narratives make visible what outcome-based framings tend to obscure: questions of dependence, autonomy, seed continuity, chemical exposure, and decision-making within specific ecological and economic conditions.

4. CONCLUSION

Regenerative agriculture promises renewal. Yet the findings of this thesis show that regeneration does not enter sustainability discourse as a fixed or neutral concept. Its meaning is constructed through language, institutional authority, and unequal capacities to define what counts as legitimate knowledge.

This thesis examined how RA is constructed and legitimised within Bayer AG's corporate discourse, and how these constructions relate to understandings expressed by smallholder and family farmers in Brazil and Kenya. It did not assess whether RA works agronomically, but how regeneration is made meaningful, credible, and governable through discourse.

The findings show that Bayer constructs RA through four main discursive mechanisms: measurable outcomes, innovation, data authority, and managed inclusion. Regeneration is defined as an outcome-based production model assessed through yield, carbon sequestration, greenhouse gas reduction, biodiversity, and water indicators, and positioned as compatible with Bayer's existing portfolio of seeds, crop protection products, biologicals, and digital farming platforms. Scale operates as a condition of legitimacy: RA matters, in this discourse, when it can be extended across farms, hectares, and regions through global reach and institutional partnerships. Authority is grounded in R&D investment, scientific expertise, and data infrastructure, including the capacity to aggregate farm-level evidence and verify regenerative outcomes. Farmers appear in this architecture primarily as adopters of programmes, demonstrators of regenerative models, providers of data, or beneficiaries of value-chain access, not as definers of what regeneration means.

Farmer narratives construct regeneration through different terms and on different ground. Across both contexts, regeneration is articulated as a process of healing and care, expressed through terms such as *curar*, *cuidar*, and *kuponya*, in which soil is understood as a living system requiring patience and relationship, not optimisation. It is practised through seed saving, intercropping, composting, organic fertilisers, and the recovery of ancestral or local varieties. Chemical inputs, including pesticides, synthetic fertilisers, and herbicides, are described not as enabling tools but as sources of soil exhaustion, health risk, and dependence. Farmers also name the structural conditions

that make regeneration difficult, including lack of credit for agroforestry systems, water infrastructure, qualified labour, and supportive policy. Regeneration therefore appears not only as a set of practices, but as situated knowledge shaped by ecological care, memory, material constraint, and autonomy.

The central finding is not only that corporate and farmer meanings differ, but that they circulate with unequal institutional force. Farmer knowledge is harder to register within systems that privilege standardised evidence. This matters because RA remains definitionally open: in the absence of agreed principles, actors with greater capacity to measure and communicate regeneration are better positioned to stabilise its meaning.

This helps explain how agrochemical and proprietary biotechnological inputs can be rendered compatible with RA. When regeneration is defined primarily through outcomes, crop protection products, advanced breeding technologies, and digital platforms can be positioned as enabling tools if linked to measurable environmental or productivity gains. Questions of dependence, autonomy, seed control, and chemical exposure become less central, although farmer narratives show that regeneration also depends on ecological and economic autonomy within specific farming realities.

The study has limitations. It examines one corporation, though one with significant influence within global agricultural systems. The farmer narratives are drawn from specific farming contexts in Brazil and Kenya, with participants largely connected to agroecological, traditional, or community-based practices. This sampling choice likely intensifies the contrast with Bayer's discourse. The findings should therefore be read as an analysis of a specific corporate discourse and situated farmer counter-discourse, not as a general account of RA. Future research could examine how farmers outside agroecological networks articulate regeneration, how other agribusiness actors frame RA, and how policy frameworks mediate between competing definitions.

The implications extend beyond Bayer. If regeneration is to function as more than a flexible sustainability vocabulary, its governance cannot depend only on metrics and scalable verification. It also requires attention to the forms of knowledge, autonomy, and material support that make regeneration possible in practice. The question is not only whether farmers are included, but under what terms their knowledge is recognised.

Regeneration remains a contested discursive field. It can name ecological care, soil recovery, and agricultural continuity. It can also become a language through which existing input-dependent systems are rearticulated as sustainable. At stake is not only the definition of RA, but the systems of knowledge and authority through which some agricultural futures become credible, fundable, and governable under its name.

REFERENCES

- Altieri, M.A. (2002) 'Agroecology: the science of natural resource management for poor farmers in marginal environments', *Agriculture, Ecosystems & Environment*, 93(1), pp. 1–24. doi: 10.1016/S0167-8809(02)00085-3.
- Arora, S. and Stirling, A. (2023) 'Colonial modernity and sustainability transitions: A conceptualisation in six dimensions', *Environmental Innovation and Societal Transitions*, 47, p. 100733. doi: 10.1016/j.eist.2023.100733.
- Bayer AG (2018) Bayer completes acquisition of Monsanto. Press release, 7 June. Available at: <https://www.bayer.com/media/en-us/bayer-completes-acquisition-of-monsanto/> (Accessed: 20 January 2026).
- Bayer AG (2023) Capital Markets Day 2023: Investor Presentation.. Available at: https://www.bayer.com/sites/default/files/2023-09/CMD23_Presentations.pdf (Accessed: 20 January 2026).
- Bayer AG (2024a) Annual Report 2024. Leverkusen: Bayer AG. Available at: <https://www.bayer.com/sites/default/files/2025-03/bayer-annual-report-2024.pdf> (Accessed: 12 August 2025).
- Bayer AG (2024b) Impact Report 2024. Leverkusen: Bayer AG. Available at: <https://www.bayer.com/sites/default/files/2025-03/bayer-impact-report-2024.pdf> (Accessed: 3 July 2025).
- Bayer AG (2024c) Crop Science Sustainability Progress Report 2024. Leverkusen: Bayer AG. Available at: <https://www.bayer.com/en/agriculture/publications> (Accessed: 17 December 2025).
- Bayer (2024) 'Regenerative Agriculture at Bayer'. Available at: <https://www.bayer.com/en/agriculture/regenerative-agriculture-definition> (Accessed: 20 January 2026).
- Birch, K. (2022) 'Technoscience Rent: Toward a Theory of Rentiership for Technoscientific Capitalism', *Science, Technology, & Human Values*, 47(1), pp. 3–33. doi: 10.1177/0162243920979163.
- Bless, A. (2025) 'The co-optation of regenerative agriculture: revisiting the corporate environmental food regime', *Globalizations*, 22(4), pp. 590–612. doi: 10.1080/14747731.2024.2397260.
- Cho, C.H. and Patten, D.M. (2007) 'The role of environmental disclosures as tools of legitimacy: A research note', *Accounting, Organizations and Society*, 32(7), pp. 639–647. doi: 10.1016/j.aos.2006.09.009.
- Fairclough, N. (1985) 'Critical and descriptive goals in discourse analysis', *Journal of Pragmatics*, 9(6), pp. 739–763. doi: 10.1016/0378-2166(85)90002-5.
- Fairclough, N. (1992) *Discourse and Social Change*. Cambridge: Polity Press.

- Fairclough, N. (1995) *Critical Discourse Analysis: The Critical Study of Language*. London: Longman.
- Fairclough, N. (2003) *Analysing Discourse: Textual Analysis for Social Research*. London: Routledge.
- Fairclough, N. (2010) *Critical Discourse Analysis: The Critical Study of Language*. 2nd edn. London: Routledge.
- FAO (2014) *The State of Food and Agriculture: Innovation in Family Farming*. Rome: FAO. Available at: <https://www.fao.org/3/i4040e/i4040e.pdf> (Accessed: 20 January 2026).
- FAO (2023) *FAO (2023) 'Regenerative agriculture'*. Available at: <https://www.fao.org/regenerative-agriculture> (Accessed: 20 January 2026).
- FAO and IFAD (2019) *United Nations Decade of Family Farming 2019–2028: Global Action Plan*. Rome: FAO and IFAD. Available at: <https://openknowledge.fao.org/handle/20.500.14283/ca4672en> (Accessed: 20 January 2026).
- FAO et al. (2023) *The State of Food Security and Nutrition in the World 2023*. Rome: FAO. doi: 10.4060/cc3017en.
- Giller, K.E. et al. (2021) 'Regenerative Agriculture: An agronomic perspective', *Outlook on Agriculture*, 50(1), pp. 13–25. doi: 10.1177/0030727021998063.
- Gliessman, S.R. (2015) *Agroecology: The Ecology of Sustainable Food Systems*. 3rd edn. Boca Raton, FL: CRC Press.
- Godin, B. (2015) *Innovation Contested: The Idea of Innovation Over the Centuries*. London: Routledge.
- Jasanoff, S. (2015) 'Future Imperfect: Science, Technology, and the Imaginations of Modernity', in Jasanoff, S. and Kim, S.-H. (eds) *Dreamscapes of Modernity: Sociotechnical Imaginaries and the Fabrication of Power*. Chicago: University of Chicago Press, pp. 1–33.
- Jiménez, A. et al. (2022) 'A Decolonial Approach to Innovation? Building Paths Towards Buen Vivir', *The Journal of Development Studies*, 58(9), pp. 1633–1650. doi: 10.1080/00220388.2022.2043281.
- Kloppenburg, J. (2010) 'Impeding Dispossession, Enabling Repossession: Biological Open Source and the Recovery of Seed Sovereignty', *Journal of Agrarian Change*, 10(3), pp. 367–388. doi: 10.1111/j.1471-0366.2010.00275.x.
- Levidow, L., Sansolo, D. and Schiavinatto, M. (2021) 'Agroecological innovation constructing socionatural order for social transformation: two case studies in

- Brazil', *Tapuya: Latin American Science, Technology and Society*, 4(1), p. 1843318. doi: 10.1080/25729861.2020.1843318.
- Madianou, M. (2019) 'Technocolonialism: Digital Innovation and Data Practices in the Humanitarian Response to Refugee Crises', *Social Media + Society*, 5(3). doi: 10.1177/2056305119863146.
- Mayr, A. (2008) *Language and Power: An Introduction to Institutional Discourse*. London: Continuum.
- Moore, M.-L. and Westley, F. (2011) 'Surmountable chasms: networks and social innovation for resilient systems', *Ecology and Society*, 16(1), article 5. doi: 10.5751/ES-03812-160105.
- Newton, P. et al. (2020) 'What Is Regenerative Agriculture? A Review of Scholar and Practitioner Definitions Based on Processes and Outcomes', *Frontiers in Sustainable Food Systems*, 4, p. 577723. doi: 10.3389/fsufs.2020.577723.
- OECD/FAO (2025) *OECD-FAO Agricultural Outlook 2025–2034*. Paris: OECD Publishing; Rome: FAO. doi: 10.1787/601276cd-en (Accessed: 20 January 2026).
- Pansera, M. and Martinez, F. (2017) 'Innovation for development and poverty reduction: an integrative literature review', *Journal of Management Development*, 36(1), pp. 2–13. doi: 10.1108/JMD-02-2015-0013.
- Pansera, M. and Owen, R. (2018) 'Innovation for De-Growth: A Case Study of Counter-Hegemonic Practices from Kerala, India', *Journal of Cleaner Production*, 197, pp. 1872–1883. doi: 10.1016/j.jclepro.2016.06.197.
- Patel, R. (2013) 'The Long Green Revolution', *The Journal of Peasant Studies*, 40(1), pp. 1–63. doi: 10.1080/03066150.2012.719224.
- Puig de la Bellacasa, M. (2017) *Matters of Care: Speculative Ethics in More Than Human Worlds*. Minneapolis: University of Minnesota Press.
- Sekalala, S. and Chatikobo, T. (2024) 'Colonialism in the new digital health agenda', *BMJ Global Health*, 9(2), p. e014131. doi: 10.1136/bmjgh-2023-014131.
- Shiva, V. (1991) *The Violence of the Green Revolution: Third World Agriculture, Ecology and Politics*. London: Zed Books.
- Silva, E.B. (2020) 'Innovating Inequalities: The Unspoken Dimensions of Innovation Studies', *Sociology*, 54(6), pp. 1089–1108. doi: 10.1177/0038038520938337.
- Suchman, M.C. (1995) 'Managing Legitimacy: Strategic and Institutional Approaches', *The Academy of Management Review*, 20(3), pp. 571–610. doi: 10.2307/258788.
- Tittonell, P. (2014) 'Ecological intensification of agriculture—sustainable by nature', *Current Opinion in Environmental Sustainability*, 8, pp. 53–61. doi: 10.1016/j.cosust.2014.08.006.

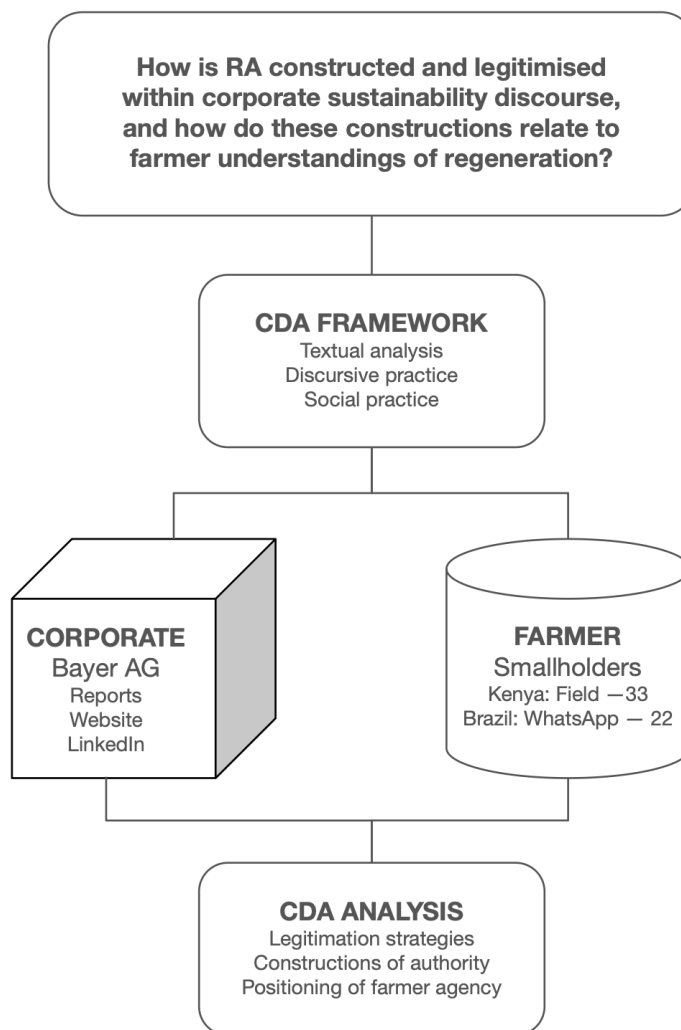
- Tittonell, P. et al. (2022) ‘Regenerative agriculture—agroecology without politics?’, *Frontiers in Sustainable Food Systems*, 6, p. 844261. doi: 10.3389/fsufs.2022.844261.
- Tregidga, H., Milne, M. and Kearins, K. (2014) ‘(Re)presenting “sustainable organizations”’, *Accounting, Organizations and Society*, 39(6), pp. 477–494. doi: 10.1016/j.aos.2013.10.006.
- Unsworth, S. et al. (2023) ‘Agency, directionality, location and the geographic situatedness of knowledge making: The politics of framing in innovation research on energy’, *Environmental Innovation and Societal Transitions*, 49, p. 100780. doi: 10.1016/j.eist.2023.100780.
- van Dijk, T.A. (2008) *Discourse and Power*. Basingstoke: Palgrave Macmillan.
- van Etten, J. (2022) ‘The Green Revolution and Its Consequences: Lessons From the Mexican Experience’, in *Agricultural Systems, Technology and Development*. London: Routledge.
- Utting, P. (ed.) (2015) *Revisiting Sustainable Development*. Geneva: UNRISD.
- van Leeuwen, T. (2007) ‘Legitimation in discourse and communication’, *Discourse & Communication*, 1(1), pp. 91–112. doi: 10.1177/1750481307071986.
- van Leeuwen, T. (2008) *Discourse and Practice: New Tools for Critical Discourse Analysis*. Oxford: Oxford University Press.
- Wezel, A. et al. (2009) ‘Agroecology as a science, a movement and a practice. A review’, *Agronomy for Sustainable Development*, 29(4), pp. 503–515. doi: 10.1051/agro/2009004.
- Wodak, R. and Meyer, M. (2009) *Methods of Critical Discourse Analysis*. London: Sage.
- Wodak, R. and Meyer, M. (2016) *Methods of Critical Discourse Analysis*. 3rd edn. London: Sage.

APPENDICES

Appendix A — Research Design

Appendix A shows the schematic overview of the research design and comparative CDA framework used in this study.

FIGURE 2 – Research design and CDA framework



This figure presents a schematic overview of the research design employed in the thesis. It outlines the application of a Critical Discourse Analysis (CDA) framework to two distinct corpora: corporate sustainability discourse produced by Bayer AG and farmer articulations of RA from Brazil and Kenya.

Appendix B — Farmer Interview Scripts

Appendix B presents the data collection instruments used to elicit farmer articulations of regeneration across different field contexts. It includes the interview guide used during in-person fieldwork in Kenya, as well as screenshots of WhatsApp messages used to conduct interviews with farmers in Brazil. Together, these materials document the questions and prompts used to generate the farmer discourse analysed in this study.

B.1 Kenya – Farmer interview guide (in-person)

The following interview guide was used during in-person interviews with farmers in Kenya. It did not assume a shared understanding of “regenerative agriculture”, allowing farmers to articulate practices and values using their own terms before introducing the concept as a probe.

Introduction

Thank you for taking the time to speak with me for this research project. I am interested in understanding how you work the land and what ancestral practices are part of your culture; how farmers see ideas like improving or healing this land, or using new ways of farming.

I would like to understand your perspective, in your own words. There are no right or wrong answers. Everything you share will be treated confidentially, and you can choose not to answer any question.

About your farm and community

1. Community profile

- Community size and engagement (assess community maturity in collaborating and self-organizing)
- Families profile

2. Farm profile

- Can you tell me about your farm? What crops do you grow?
- How long have you been farming here? (Trajectory)
- Who helps you on the farm? (Is family involved?)
- How do you sell the crops, and to whom? Are there intermediaries?

3. Changes over time

- Over the years, have you made changes in how you farm? What led to those changes? (Prompt: climate, soil, market, programs, advice, community practices)
- Are there things you do now that your parents or grandparents also did?

About regeneration and innovation

4. Practices that help the land and future

- In your view, what helps keep your land, soil, and water healthy for the future?
- Are there particular farming practices that are important in your community or family? (Prompt: seed saving, soil care, grazing, planting patterns, water use, traditional and/or spiritual practices)

5. Your vision

- Tell me the story of a great year/production cycle on your farm. What happened? (What does success mean to them? Indicators)
- When you think about the future of farming here, what do you hope will stay the same? What do you hope might change?
- What would you like others — companies, governments, or outsiders — to understand about how you care for your land?

6. Prompt “regeneration” and “innovation”

- Some people use the word regeneration when they talk about keeping land healthy or healing it. Is this a word or idea you use? Or how would you describe that kind of work?
- Sometimes companies or governments talk about innovation in farming — new ways, new tools, or new methods. Is this something you’ve heard about? What does it mean to you?
- Can you think of anything new that was introduced to your farm, and whether it helped or not?

< Iteratively prompt Qs based on relation to the concept of regeneration for each >

7. Power, autonomy and decision-making

- Who decides what changes happen on your farm?
- What do you wish you could decide more freely about?
- When working with outside actors, do you feel your community has a voice?

- Prompt relation to/use of external inputs - chemicals, seeds

Additional remarks

8. Closing

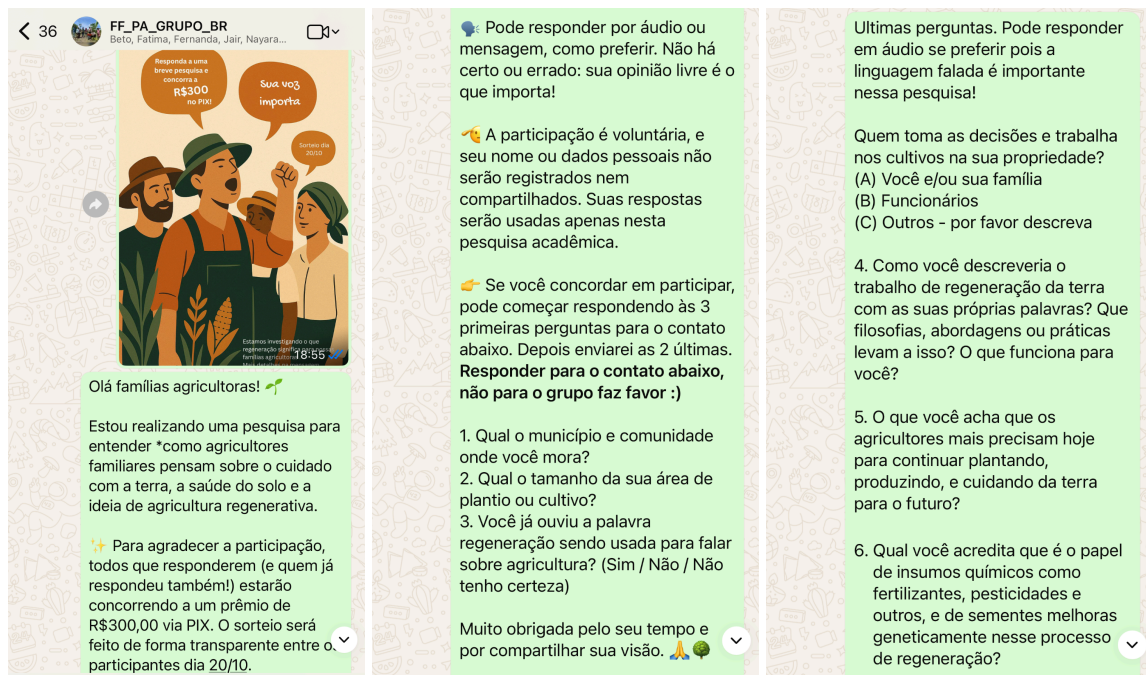
Is there anything else you'd like to share about your farming, your land, or your experiences

B.1.1 Note on iterative adaptation of the interview guide

The interview guide presented above reflects the initial structure used during early fieldwork in Kenya. As interviews progressed, recurring references to agricultural chemicals, seeds, and external input programmes emerged organically in farmer narratives. In response to this pattern, additional time was dedicated in later interviews to discussing experiences with chemical inputs and seed use, using follow-up prompts. This iterative adaptation aligns with qualitative and inductive research approaches.

B.2 Brazil – WhatsApp interview prompts used with farmers in Brazil

FIGURE 3 – Screenshots of WhatsApp messages used to conduct interviews with farmers in Brazil



The figures show screenshots of WhatsApp messages used to conduct semi-structured interviews with farmers in Brazil, documenting the wording and sequencing of prompts used to elicit farmer perspectives.

Below is the English translation, preserving tone and emojis:

Hello farming families! 🌱

I am conducting a research study to understand *how family farmers think about caring for the land, soil health, and the idea of regenerative agriculture.*

✨ As a way of thanking you for participating, everyone who responds (including those who have already responded!) will be entered into a draw for a prize of R\$300.00 via PIX. The draw will be conducted transparently among participants on 20/10.

🗣️ You can respond by audio or text message, whichever you prefer. There are no right or wrong answers — your honest perspective is what matters!

😊 Participation is voluntary, and your name or personal data will not be recorded or shared. Your responses will be used only for this academic research.

👉 If you agree to participate, you can start by answering the first 3 questions to the contact below. I will then send the final 2 questions. Please reply directly to the contact below, not to the group 😊

1. Which municipality and community do you live in?
2. What is the size of your planted or cultivated area?
3. Have you heard the word “regeneration” being used in relation to agriculture?
(Yes / No / Not sure)

Thank you very much for your time and for sharing your perspective. 🙏🌳

Final questions:

Who makes decisions and works on the crops on your farm?

- (A) You and/or your family
- (B) Employees
- (C) Others – please describe

4. How would you describe the work of regenerating the land in your own words?

What philosophies, approaches, or practices are involved? What works for you?

5. What do you think farmers need most today to continue planting, producing, and caring for the land into the future?

6. What do you believe is the role of chemical inputs such as fertilisers, pesticides, and others, as well as genetically improved seeds, in this regeneration process?

Appendix C — Translation Protocol for Multilingual Interview Data

This appendix documents the procedures followed for the translation of interview data conducted in multiple languages across Brazil and Kenya, in order to ensure transparency, consistency, and analytical integrity in the context of CDA.

Languages and Data Sources

Interviews in Brazil were conducted in Brazilian Portuguese. Interviews in Kenya were conducted in Swahili, Mijikenda, and English. English-language interviews are quoted verbatim in the thesis.

Translation Responsibility and Roles

Brazilian Portuguese interviews were translated into English by the author, a native Portuguese speaker.

Kenyan interviews conducted in Swahili and Mijikenda were translated into English by members of the Green World Kenya team, a local NGO that works on a continuous basis with participating family farming communities. The Green World Kenya team members were involved in the research both during in-person interviews and in post-interview transcription review, including reading and validating interview transcripts prior to translation.

Translator Briefing and Alignment

Prior to translation, the Green World Kenya team was briefed on the research aims of the thesis, the importance of fidelity to participants' language, tone, and meaning.

Translators were asked to prioritise loyalty to participants' expressions, including everyday language and culturally embedded meanings.

Appendix D — CDA Coding Framework

Appendix D documents the qualitative coding framework developed and applied during the CDA of corporate and farmer corpora. Codes were developed iteratively through inductive analysis, beginning with initial observations of the data and progressively refined to capture recurring discursive patterns relevant to the research questions. Table 2 lists each evidence box presented in Chapter 3 alongside the specific codes that informed its construction, demonstrating the systematic analytical process underlying the findings.

TABLE 2 – CDA Coding Framework

Evidence Box		Codes
3.1A	REGENERATION AS MEASURABLE OUTCOMES	<i>Outcome-based RA Framing; Regeneration Without Principles; Technocratic Reframing of Ecological Terms</i>
3.1B	METRICS AS PROOF OF SUSTAINABILITY	<i>Regeneration + Productivity; Outcome-based Innovation Framing; Outcome-based RA Framing; Innovation as Competitive Advantage; Blurred Science–Marketing Boundary</i>
3.1C	FLEXIBLE DEFINITIONS	<i>Discursive Ambiguity / Strategic Vagueness; Power in Knowledge Production; Legitimation Strategies; Discursive Ambiguity; Global North Gatekeeping</i>
3.1D	INNOVATION AS ENABLER OF REGENERATION	<i>Innovation as Solution; Techno-fix Framing; Depoliticization of Systemic Issues; Technocratic Reframing of Ecological Terms</i>
3.1E	FUTURE-ORIENTED URGENCY	<i>Future-Oriented Urgency; Innovation as Competitive Advantage; Global North Gatekeeping; Legitimation Strategies</i>
3.1F	SCALE AND REACH AS CONDITIONS FOR IMPACT	<i>Global North Gatekeeping; Innovation as Competitive Advantage; Legitimation Strategies; Outcome-based Innovation Framing</i>

3.1G	CORPORATE CAPACITY AND LEGITIMACY THROUGH INNOVATION	<i>Legitimation Strategies; Innovation as Competitive Advantage; Power in Knowledge Production; Corporate Co-optation of RA Terms</i>
3.1H	DATA AS THE FOUNDATION OF CREDIBILITY	<i>Power in Knowledge Production; Legitimation Strategies; Technocratic Reframing of Ecological Terms; Global North Gatekeeping; Innovation as Competitive Advantage</i>
3.1I	AMBIGUITY IN MEASUREMENT AND MODELLING	<i>Discursive Ambiguity; Strategic Vagueness; Blurred Science–Marketing Boundary; Legitimation Strategies</i>
3.1J	PARTNERSHIPS AS CONDITION FOR IMPACT	<i>Partnerships for Legitimacy; Stakeholder Inclusion; Legitimation Strategies</i>
3.1K	SELECTIVE INCLUSION OF FARMERS	<i>Selective Inclusion of Stakeholders</i>
3.1L	FARMERS AS ASSETS	<i>Regeneration + Productivity, Power in Knowledge Production; Corporate Co-optation of RA Terms</i>
3.2A	REGENERATION AS HEALING AND CARE	<i>Regeneration as Nature-Led Healing / Holistic</i>
3.2B	REGENERATION AS AGROECOLOGY / PRACTICE-BASED KNOWLEDGE	<i>Regeneration as Nature-Led Healing / Holistic</i>
3.2C	REJECTION OF CHEMICAL INPUTS	<i>Rejection of Chemical Inputs</i>
3.2D	AMBIVALENCE AROUND CHEMICAL INPUTS	<i>Ambivalence towards chemical inputs</i>
3.2E	SEEDS AND DEPENDENCE	<i>Seeds: Ancestral vs Corporate Control</i>
3.2F	STRUCTURAL CONSTRAINTS	<i>Seeds: Structural Constraints</i>
3.2G	INTERGENERATIONAL RESPONSIBILITY	<i>Moral / Intergenerational Responsibility</i>

Appendix E — Additional Farmer Quotes

This appendix presents additional excerpts from farmer interviews that could not be fully incorporated into the discussion due to space constraints. This inclusion reflects the analytical richness of the empirical data, which exceeds what can be selectively quoted within the body of the thesis. For quotes where audio quality or overlapping speech prevented definitive speaker identification, quotes are attributed as “Kenya, Farmer (attribution unclear)”, maintaining research integrity over false precision.

E.1 Regeneration as agroecology and practice-based knowledge

“We should practice the old ways. We visit the Kaya⁴, build terraces in that it helps with soil erosion, plant trees.”

Kenya, Farmer KE-32

“We normally plant maize in lines. Then between the lines, we can plant the green grams, the cowpeas, and cassava. We normally do rotation, multi-cropping and rotation. Once this season we plant this type, the next season we might shift it from one side to avoid parasites or insects and to provide nutrients for another plant. Moringa, you can plant Moringa with anything you want.”

Kenya, Farmer KE-01

“It was our suggestion; planting was upon the community or land owner. They used to tell us once you dig the zai pits you are allowed to plant maize. Zai pits are mainly for maize and then from zai pit to zai pit there is a distance, so we used to plant other crops between them. We were innovating on our own now and the outcome was amazing.”

Kenya, Farmer KE-01

“In my opinion people should invest in animals that's why people do not have animal manure when they buy the animals like goat they will get manure using that as an investment, planting trees like moringa when they grow it together with maize in terraces we should incorporate the banana trees so that we can trap moisture.”

Kenya, Farmer KE-09

“I think we should do the old ways by planting trees that give nutrients to the farm to help our soil trees like the banana tree and moringa. We do terraces so that to prevent soil erosion if we do that it will make our soil be fertile as the past.”

Kenya, Farmer KE-02

“If the elder people were to return, most of the things would also return to normal.”

Kenya, Farmer KE-05, referring to the Kaya visits and other ancestral rituals

“When I realised that my traditional ways were working, people started thinking that I was doing something else to get high yields, but it is just the expertise and knowledge that I use. (...) During planting, I used chicken manure and placed it inside the holes, so when the maize germinated, the plants were already healthy. When they reached a certain stage, I applied ash so that worms had no role to play. The crops received enough nutrients to grow well all around, and I achieved high yields. I harvested eight bags of maize, 90 kg each. During low-yield seasons, I usually get three to four bags.”

Kenya, Farmer KE-28

⁴ “Kaya” (often spelled Kaia) refers to sacred, fortified forest settlements of the Mijikenda communities along the coastal region of Kenya and Tanzania. Among other traditions, people would go to the Kayas to pray for a good farming season, and expect rain when returning to the community after 7 days. The Kayas are considered the ancestral homes, spiritual centers, and symbols of identity for the Mijikenda groups.

E.2 Chemical inputs: rejection and ambivalence

“To heal the land, we need to use traditional methods, because if I pour ash in a place, or charcoal dust, the soil becomes fertile. But if we use chemicals, we burn the nutrients in the soil, and there will come a time when it will lose its fertility.”

Kenya, Farmer KE-28

“I do not have the capacity to go to the agrovet and buy insecticides. I use the manure and in return i get the african indigenous vegetables. I am the chairlady of the group so yes i train them.”

Kenya, Farmer KE-31

“To change farming, most times people are using chemicals to spray. They buy them from Agrovet. But I came to realize that our ancestors did not use this chemicals and they used to get maize. But now people are using the chemicals, they apply the chemicals, but still worms still eat the leaves. And when the maize mature, inside the maize there is still worms. The seeds that I use as an individual, until recently I have harvested, it is the Indigenous seeds. I do not plant the one being sold in Agrovet, I do not like them.”

Kenya, Farmer KE-28

“When modern farming changes to the old way of farming (ancestral ways) that's regeneration for me.”

Kenya, Farmer KE-28

in previous sentence referring to the use of insecticides and GMO seeds

“It is something modern that is something that has been developed now for the modern world, like things that even change our world. In the context of the environment, people right now are worshipping the chemicals and new seed. Even when you use as you are told, they say you are poor, you do not have money. But I have money. I just use my knowledge and I get what I want. But for them, they buy the first time at like 600, or if it is one acre they will spend like two thousand shillings, and that is once. He will go back again.”

Kenya, Farmer KE-28

“Recovering the soil without chemical fertilisers is the BASE of the entire agroforestry process.”

“I do not have enough information about the effects on health. That is why I am afraid to consume.”

Brazil, Farmer BR-06

“In my opinion, returning to where things are in the past we used to see our grandparents after sweeping. They take the chicken and goat manure and pour it in their farms. Right now we are using modern fertilisers and to heal the land for me is to use the old ways that is the manure. It will take a lot of time because today you will pour in a specific place and tomorrow another place.”

Kenya, Farmer KE-04

E.3 Seeds, autonomy, and corporate dependence

“I bought the seeds from the shop in the beginning. When I planted I mixed them with the indigenous seeds and they changed. For instance if i plant this year the ones from the agrovet and harvest i save the seeds when i plant them again next year they change to indigenous seeds. You harvest really well because I no longer buy seeds from the agrovet.”

Kenya, Farmer KE-28

“The sugar content in the maize for the ones we are planting now and the indigenous is different. The hybrids are not sweet. The indigenous ones had more flavour than the GMO they are bland. For instance when you roast a GMO maize it tastes like it's a week old from the farm and you have literally plucked it from the farm.”

Kenya, Farmer KE-19

“We stopped using the indigenous (seed) because we had 5 years of no rain, five seasons — all that we

had stored as planting seeds, people used it and we ate it because there was no alternative.”

Kenya, Farmer KE-01

“I also try to use creole seeds. I only use another when I cannot find creole ones.”

“What I really want is to keep diversity and not have anything transgenic.”

Brazil, Farmer BR-06

“Because we did not have seeds to plant, that's how they were introduced. Farmers did not have enough food to plant. We did not have enough seeds because we had low yields, so we depended on the ones from the government. Also seeds were infested with pests that also contributed to no seeds.”

Kenya, Farmer KE-13,
about government seeds introduced
as emergency response

E.4 Structural constraints and moral responsibility

“The biggest challenge to me is water. Because sometimes there is rain, sometimes there is no rain. Here, cultivating through irrigation does not work. There are some months in our area where even if you pour water, you will see land is cracking, it is too hot. So our biggest challenge is water. And some, still is knowledge.”

Kenya, Farmer KE-01

“When we see, the change it's very beneficial, not just for us who take care, but also for our planet... Many people sell their land to go to the city because they don't have knowledge of how to plant, how to produce.”

Brazil, Farmer BR-16

“Trees will have been planted well... the situation will change in the future... our children will find it in good condition in the future.”

Kenya, Farmer (attribution unclear)

“In terms of farming, these people can come together and help one another. Before, these people couldn't come together and work for a person. But now, for example, if I am cultivating six acres and I am very busy, the community comes together and says 'Let's go and help him or her complete the work'. By the end of the season, he or she might have what is meant for them”

Kenya, Farmer KE-01

“So that the moment we will be leaving this world, one day, we need to make it better for the young generation to come and inherit something which is so good. We need to do it better, and this is not somebody's effort, it's not one person's effort, it is the communities' effort.”

Kenya, Farmer KE-01

"There was a time they had a lot of togetherness, and then something happened and they stopped, and now they are back to it again. What made them stop? Of course, there are multiple issues, but she wanted to touch especially on the lack of water for women. You have to go around looking for water and it's an individual task, so you don't have time for others. But then came the lessons about doing things together in social groups. Because they are in groups, they have self-regulation rules—like if you are late, there's a fine—which makes them want to help each other. So if Mary is going to fetch water, she carries the jerry cans for Mwanapili, and then Mwanapili stays and helps her in the house. There's a lot of time saved. So when they can't access resources, like water, they leverage the social systems to step in for each other."

NGO staff member working with the community (contextual observation).

The quote offers an external perspective on community organisation, complementing farmer accounts.

Appendix F — Photographs of field work in Kenya

FIGURE 4 – Seeds presented by farmer during fieldwork in Kenya, showing native seeds saved from previous harvests, and commercially purchased seeds.

