

CGIAR RESEARCH THROUGH AN EQUALITY AND EMPOWERMENT LENS

Rhiannon Pyburn and Anouka van Eerdewijk

Over the past decade or so, there has been a renewed, and more concerted and comprehensive, interest in gender equality and women's empowerment in the agricultural development sector. Renowned development organizations have put gender dynamics back in the spotlight by means of a series of publications focused on gender equality.¹ This momentum has generated a unique opportunity to advance gender equality within and through agricultural research and development, and to institutionalize gender research within agricultural research for development (AR4D) organizations. This has also given us a chance to ask whether enough traction has been gained to mark a true turning point. As one key thinker in this field has stated that, "with agriculture now firmly back on the development agenda, it is time to re-socialize the ways that agricultural research, policy and practice deal with women and men, and analyze them both in relation to one another and their wider context" (Okali 2012, 2). This book is both an expression and a consequence of this overall momentum.²

Ester Boserup's landmark book *Woman's Role in Economic Development* (1970) was groundbreaking in its examination of women in African farming systems, addressing women's invisibility in the agricultural economy (Okali 2012) and opening the door for the next 50 years of efforts to embed gender

1 See, for example, the *Gender in Agriculture Sourcebook* (World Bank, FAO, and IFAD 2009); *Gender and Governance in Rural Services—Insights from India, Ghana and Ethiopia* (World Bank, and IFPRI 2010); *Gender Dimensions of Agricultural and Rural Employment: Differentiated Pathways out of Poverty: Status, Trends and Gaps* (FAO, IFAD, and ILO 2010); *The State of Food and Agriculture 2010–2011: Women in Agriculture—Closing the Gender Gap for Development* (FAO 2011); and the *World Development Report 2012: Gender Equality and Development* (World Bank 2012).

2 Note: this book uses a broad definition of agriculture, to include livestock, aquaculture, forestry, and fisheries.

analysis in development. Since then, the evolution from “women in development” (WID) initiatives to “women and development” (WAD) and eventually “gender and development” (GAD)³ and gender mainstreaming⁴ has not only echoed in, but also been firmly rooted in, agricultural and natural resource domains. This book reflects on selected⁵ past gender and agricultural and environmental research by taking stock of progress. What makes it distinctive is that it reexamines this past research using an explicit gender equality and women’s empowerment lens. This implies a shift away from more instrumentalist frames that consider how gender analysis contributes to agricultural and environmental research objectives such as improved productivity or tailoring technologies to ensure better user uptake. Instead, contributors to this book intentionally flip the question to ask: How does agricultural and environmental research and development **contribute to gender equality and women’s empowerment?** The book revisits gender research and development interventions to date across nine themes, reframing the analysis in a way that puts gender equality and women’s empowerment at the center. Each of the thematic chapters uses an adapted version of the “flipped” guiding question as a compass for reassessing the evidence.

This guiding question responds to recent developments within CGIAR—an international partnership of agricultural and environmental research institutes. As an international development research partnership, CGIAR is committed to the Sustainable Development Goals (SDGs) including SDG 5, to “achieve gender equality and empower all women and girls.” In 2020, CGIAR prioritized gender equality as one of the five impact areas—specifically “gender equality, youth and social inclusion”⁶—for the more streamlined reorganization

3 WID espoused an economic argument making women’s work visible and positioning women as productive members of society (Miller and Razavi 1995). Driven by the “efficiency approach,” the idea was that allocating development funding to women, as well as men, made economic sense. WAD brought in neo-Marxist feminist thinking, shifting the focus from women’s relationship to development to the relationship between patriarchy and capitalism (Rathgeber 1990). GAD conceptualizes empowerment—in particular women’s individual and collective agency—as a way of addressing women’s subordination: it addresses the social constitution of gender relations and their context-specific and dynamic nature (Okali 2012).

4 The 1995 Fourth World Conference on Women (FWCW), of the United Nations, in Beijing marked a turning point for gender and development: women’s rights became central and gender mainstreaming was taken on board as a bold new strategy (Mukhopadhyay 2016) with transformative potential. Gender mainstreaming recognized that policymaking and institutions reproduced gender inequalities and needed to be a part of any strategy to address them (van Eerdewijk 2016).

5 Note: book chapters include a selective rather than *exhaustive* review of the gender research on each theme being tackled.

6 See CGIAR 2030 Research and Innovation Strategy: <https://cgspace.cgiar.org/bitstream/handle/10568/110918/OneCGIAR-Strategy.pdf>

of the 15 research institutes into “One CGIAR.” This provides a clear direction and mandate for future gender research. CGIAR both reflects and is a part of evolutions in gender research in/for agricultural and environmental development (see Annex 1: CGIAR background).

The nine thematic chapters are authored by over 55 gender researchers⁷ and reflect cross-cutting areas of CGIAR gender research. The literature and studies reviewed come from both CGIAR institutes and other authors. Six of the nine thematic chapters examine gender equality and women’s empowerment in key agricultural and environmental domains—namely, animal and plant breeding; seed systems; value chains; nutrition-sensitive agriculture; natural resources (specifically water, land, and forests research); and climate adaptation and mitigation. The remaining three thematic chapters examine gender-specific research related to the feminization of agriculture; assessing women’s empowerment; and gender transformative approaches (GTAs). The thematic chapters engage with the “flipped question” in coherent yet diverse ways, in terms of both their focus on research or approaches and interventions and their attention to gender equality and/or empowerment. Chapters 2, 3, 6, 8, and 9 look more at research; Chapters 4, 5, 7, and 10 pay more attention to analyzing approaches and interventions.

Important to note is that this book is directed toward a research audience—both gender researchers and researchers within the broader field of AR4D, within and outside of CGIAR. Co-authors seek to present sharply articulated insights, reflections, and questions on gender equality and women’s empowerment in agricultural and environmental research in an accessible and clear manner for policymakers and researchers who may not be gender specialists. The nine thematic chapters speak to this diverse research audience; by putting gender equality and women’s empowerment at the center, the book allows gaps as well as strengths in the AR4D knowledge base to emerge. It also exposes institutional obstacles to prioritizing gender equality and women’s empowerment in AR4D. The chapters recognize, celebrate, and contextualize significant contributions that have advanced gender equality in and through agricultural and environmental research, and craft a next set of research questions and approaches to support researchers in navigating critical shortcomings. We⁸ hope that this focus on CGIAR—its gender research history and the future-oriented

7 Most contributors are CGIAR (gender) researchers; others are external gender consultants who work regularly with CGIAR partners. See the “Contributors” section of this book for a complete list.

8 In this chapter, “we” refers to the editors of the book.

recommendations—will not only respond to the interests of gender and other researchers within CGIAR but also hold significance and relevance more broadly within AR4D.

This introductory chapter has three parts. Part 1 positions the insights of the book within the evolution of CGIAR gender research, tracing developments since the 1970s and highlighting key programs, evaluations, and contributions. We look at how the institutionalization of this gender research has shuffled forward in fits and starts over time, outlining achievements as well as remaining challenges. Part 2 offers a guide to reading the book. We position the concepts of gender equality and women's empowerment used across the thematic chapters, introduce the chapters by highlighting their key contributions and outcomes, and look at the evidence on which the chapters base their findings and discussions. Part 3 analyzes and reflects on the substance and implications of these thematic chapters. We begin by synthesizing the conceptual threads, looking at the different levels and aspects of women's empowerment and gender equality that the chapters address. We then take steps toward a forward-looking research agenda by crafting a number of meta-level gender research questions and articulating imperatives for the advancement of a gender research agenda. Finally, we discuss the institutional implications of this research agenda before concluding with some final reflections.

Part 1: The evolution of gender research within CGIAR

The past 50 years of efforts to integrate gender analysis into CGIAR's agricultural and environmental research and interventions have unfolded alongside and in iteration with the progression in thinking on gender and development more broadly. To advance toward gender equality, robust gender research and knowledge are essential: reliable qualitative and quantitative data—generated through gender analysis—can expose the nuance, variation, and reality on the ground vis-à-vis gender inequalities and how they affect rural women and men. Solid evidence on gender relations and women and men's resources and constraints is key, as is contextual embedding (Doss et al. 2018). Mandated with purveying agricultural research as an international public good, CGIAR Centers are prominent players in responding to this need for research and knowledge, which encompasses theory, analytical frameworks, methodologies, and valid data. In fact, the capacity to work collaboratively at different scales on improving the quality of data has been recognized as a point of comparative advantage for CGIAR gender research, as has the role of myth-busting

(Baden et al. 2017, 27): challenging “zombie” statistics and ensuring robust evidence to guide practice. CGIAR research clearly has a role to play in advancing gender equality.

As we write this book, CGIAR is at a crossroads vis-à-vis gender research. The past nine years have seen two phases of CGIAR Research Programs (CRPs). The period saw the establishment of an active Gender and Agriculture Research Network,⁹ which established and provided a foundation for the CGIAR Collaborative Platform for Gender Research,¹⁰ operational for three years (2017–2019). In January 2020, a new phase began with the CGIAR GENDER—Generating Evidence and New Directions for Equitable Results—Platform,¹¹ which was repositioned at par with other CGIAR Platforms and Research Programs. This better profiling of the Platform is an important signal that gender research is a priority for the network and its partners. In addition, CGIAR is at a critical moment as it moves toward One CGIAR, with the aim of streamlining the research themes of its institutes. Gender equality and social inclusion feature prominently as one of the five impact areas¹² and thus, in moving forward, gender research has a strategic and visible position within the CGIAR research agenda. Gender researchers are now tasked with crafting a gender research agenda that responds to the aspirations and vision of this next phase.

These two developments—the new GENDER Platform and One CGIAR—mean this is an opportune moment to take stock of the history and wealth of gender knowledge that has been generated on key agriculture and environmental themes to date. In this book, authors look at these bodies of work with a fresh eye and the ambition to build an engaging, forward-looking research agenda. Such a future-oriented gender research agenda can and will draw on past CGIAR gender research but, to be credible and impactful, it also needs to speak and respond to broader developments in gender research, beyond

9 The Gender and Agriculture Research Network was a CGIAR System Management Office (SMO) initiative that was coordinated by the International Center for Tropical Agriculture (CIAT) between 2012 and 2016.

10 The CGIAR Collaborative Platform for Gender Research was housed in the CGIAR Research Program on Policies, Institutions, and Markets (PIM) and was coordinated by KIT Royal Tropical Institute in Amsterdam. This book is a key output of that phase of CGIAR-wide collaboration on gender research.

11 The CGIAR GENDER Platform is hosted by the International Livestock Research Institute (ILRI) in Nairobi, Kenya. See <https://gender.cgiar.org/>

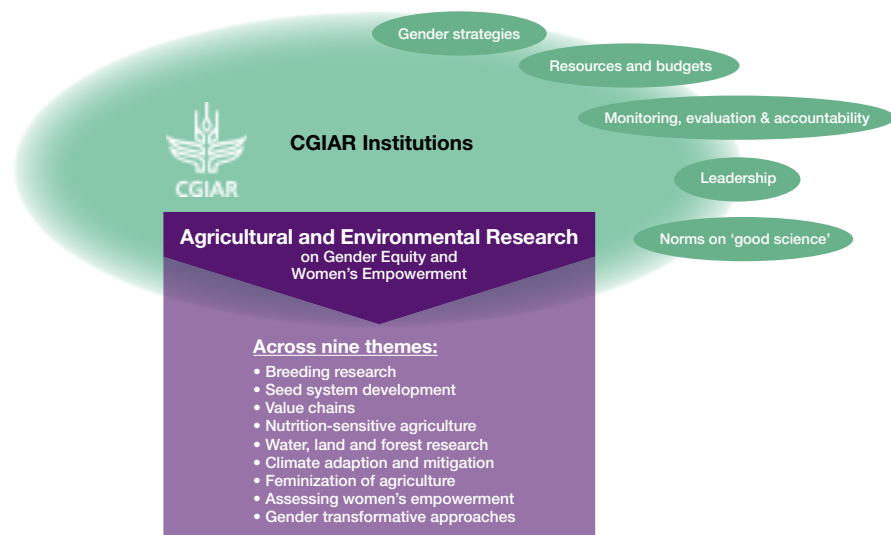
12 The other four One CGIAR impact areas are nutrition, health, and food security; poverty reduction, livelihoods, and jobs; climate adaptation and mitigation; and environmental health and biodiversity.

CGIAR and beyond agricultural and environmental domains: we return to this later in the chapter.

The focus of this book is gender research; in this chapter, we also address institutional dimensions within CGIAR that interfere with, block, advance, or facilitate such research, so we can understand the context in which that research is undertaken. Institutions can be either formal or informal and can be understood as “*the rules of the game in a society or, more formally... the humanly devised constraints that shape human interaction*” (North 1990, 3). For our purposes, formal institutional dimensions include policies, strategies, budget allocations and resourcing, staff expertise (hiring), accountability mechanisms and performance monitoring, coordination, and leadership on gender at higher levels within the governance system. Examples of informal institutions that we address include norms and practices, as well as prevailing beliefs as to what constitutes good science and how research is prioritized, designed, and organized (see Figure 1.1).¹³ This part 1 of the chapter looks at gender research themes and trends as well as the institutionalization of gender research in CGIAR. We refer to notable gender events, CGIAR gender research initiatives, gender reviews, evaluations and assessments, and institutional developments, all in relation to broader milestones in gender and development since the 1970s (see Annex 2: Timeline of key CGIAR gender developments). The gender “struggle” within CGIAR has had two, often conflated, yet distinct, fronts—namely, gender analysis within CGIAR research; and gender equality in CGIAR workplaces. What we deliberately do not address in detail is gender in the workplace and the related human resource issues.¹⁴

13 In Figure 1.1, the dark purple box indicates the focus of this book—namely, research on gender equality and women’s empowerment. Specifically, this is explored through the nine themes listed in the light purple box. The figure shows that research on gender equality and women’s empowerment is embedded within an institutional context (green). As such, we look at both the evolution of CGIAR gender research and the related institutional developments. Figure 1.6 later in the chapter elaborates how this piece—this book—fits into the broader gender theory and empirical context.

14 We heed the call of the *Stripe Review of Social Sciences in the CGIAR*, to challenge an implicit assumption that hiring women scientists leads to more and/or better gender research. The review makes clear the importance of a sharp distinction between gender research and gender equality in the workplace and states, “*Many Centers have troubled histories of mistakenly assuming that female scientists should be the ones to do the work on gender issues. [...] should be everyone’s business, not just that of women with PhDs*” (CGIAR Science Council 2009, 60). For more on gender in the workplace in agricultural research institutes, refer to the *Gender and Diversity Program* of CGIAR, which ran from 1999 to 2011 and focused in particular on career development and staffing. The contributions of AWARD—African Women in Agricultural Research for Development—since its inception in 2007 are also notable, in particular the fellowships, mentoring, and training to support women agricultural scientists.

FIGURE 1.1 The focus of this book

Gender research themes and trends

Gender research across the CGIAR has followed a non-linear path, generating significant and innovative programs, initiatives, and knowledge at different points in time. The 1970s saw the first mentions of women (not yet gender) in CGIAR research—for example, acknowledging the “family factor” in agricultural systems, recognizing female-headed households,¹⁵ and mentioning women in relation to family planning and nutrition (van der Burg 2018). However, these early mentions tended to be observational rather than analytical and did not lead to specific women-related policy or research (van der Burg 2019). Since then, CGIAR gender research has both reflected and contributed to the wider debates and trends on gender and agricultural and environmental development. In this section, we do not attempt to provide a complete or comprehensive overview of all contributions but rather highlight key milestones;¹⁶ detail related to specific themes can be found in the thematic chapters.

¹⁵ CGIAR gender researchers have challenged concepts that were important at particular moment in time (e.g., recognizing female-headed households) but that later research has proven wrong or invalid. In the case of female-headed households, later research demonstrated that using headship as a gender category was imperfect (see Doss and Kieran 2014).

¹⁶ For comprehensive overviews of CGIAR gender research over specific time periods, see, for example, Feldstein (1995, 1998), Okali (2017), and van der Burg (2019). See also Annex 2: Timeline of key CGIAR gender developments.

One of the early research trends offering entry points for gender analysis within CGIAR was Farming Systems Research (FSR), which reflected the increasing relevance of smallholder farming for agricultural development in the 1960s and 1970s (Okali 2012). This was documented as part of discussion at a CGIAR-wide meeting in 1978 (1981 CGIAR Review in van der Burg 2019). FSR was particularly amenable to addressing women and gender relations as it looked at the human dimension of farming and wider “farm constellations” (ibid.). Notably, the work of Hilary Sims Feldstein and Susan Poats embedded gender analysis in FSR; their two-volume publication captured this.¹⁷ FSR played a key role in the integration of gender analysis in agricultural research, and some regard it as central to today’s recognition of gender as a significant analytical category in agricultural research (Feldstein and Jiggins 1994; Okali 2012). FSR continued until the mid-1990s, by which time it was critiqued as being expensive, overly time-consuming for results (Okali 2012), and generally too messy. However, the concept had paved the way for participatory approaches to research—Rapid Rural Appraisal, Participatory Rural Appraisal, and Participatory Learning and Action—which further opened up space for women’s participation and gender analysis (van der Burg 2019). Within CGIAR, this was in part through the *Participatory Research and Gender Analysis* (PRGA) program, discussed below.

In the 1980s, the International Rice Research Institute (IRRI), with the *Women in Rice Farming Systems initiative* (WIRFS),¹⁸ was a leader on women’s research (Chater and Carangal 1996, 9). In 1983, IRRI convened the first international gender conference within CGIAR on the theme of women in rice farming systems in Africa and Asia (Chater and Carangal 1996; van der Burg 2019). The related publication stressed the complexity involved in looking at social norms, family structures, and core social dimensions (e.g., caste, class, economic status, religion, ethnicity, and so on). It covered topics such as the exchange of rice seed through women’s communication networks and the involvement of female respondents in the enumeration of edible plants in Kalimantan (Dey 1985 and Warson 1985 in Jiggins 1986, 17). WIRFS, active from 1986 to 1996 (Kauck, Paruzzolo, Schulte 2010; van der Burg 2018) had two objectives: to develop and test technologies that would benefit

17 *Working Together—Gender Analysis in Agriculture* (Feldstein and Poats 1989a, 1989b). Chapter 8 comprises a case study of women in a rice farming systems project (Paris 1989, 209–239), as part of the work discussed in the next paragraph.

18 WIRFS was set up to address the omission of any conscious effort to target research and extension efforts for women’s benefit. It was a part of the Asian Rice Farming Systems Network (ARFSN) (Chater and Carangal 1996).

rural women in Asia and to instill an awareness of women's needs in national agricultural research and extension systems (Chater and Carangal 1996, 41). It classified three kinds of technology¹⁹ to benefit women: labor-saving, knowledge-based, and livelihood-oriented (ibid.). A key contribution of WIRFS, captured in the words of then IIRI Director General Swaminathan, was that it “fostered collaboration between social and biophysical scientists and translated insights from gender analysis into targeted actions to reduce women’s work and time burdens” (Kauck, Paruzzolo, and Schulte 2010, 5).

In 1985, two years after the conference on women in rice systems, a follow-up at the “senior-CGIAR level” was organized by the International Service for National Agricultural Research (ISNAR)—then a member of the CGIAR consortium—and co-sponsored by The Rockefeller Foundation (RF and ISNAR 1985).²⁰ The conference—*Women and Agricultural Technology: Relevance for Research*—took place in Bellagio, Italy, and marked the beginning of a system-wide²¹ dialogue on gender. It focused on integrating women into the “modernization” of agriculture and user perspectives in technology development—those of women users in particular. Women were framed as farmers or beneficiaries of agricultural research. The concluding statement of the seminar affirmed gender as an important variable and confirmed the heterogeneity among women as users of technologies—as producers of crops and livestock; as participants on family farms in processing, marketing, storing, and preparing food; and as wage laborers and urban consumers. It articulated the need for a “do no harm” approach (van der Burg 2019). The longer-term strategy was to consider women in all phases of research and development, including feedback from female farmers (RF and ISNAR 1985; van der Burg 2018).

It is important to recognize CGIAR gender research in the 1970s and 1980s as these researchers were pioneers who often had to navigate institutional hurdles to carve out space for their work. These initiatives got “women” and “gender” on the CGIAR research agenda and produced a diversity of studies. Key contributions of these early efforts to the evolution of CGIAR gender

19 Examples of the technologies they developed included ultra-lite and “extra-ultra-lite” rice transplanters, a micro rice mill, rice husk stoves, and training schemes on seed handling, as well as income-generating projects such as poultry-keeping in Thailand and glutinous rice in the Philippines (Chater and Carangal 1996: 41–46).

20 Participants included directors-general or representatives from the international Centers, the CGIAR Secretariat, and the Technical Advisory Committee; the president and representatives of The Rockefeller Foundation; and experts with research experience on the role of women in agricultural development in less developed countries (RF and ISNAR 1985).

21 Then referred to by CGIAR partners as “intercenter.”

research include (a) impact studies looking at the effect of innovations on women and men, establishing *gender as a variable*; (b) user perspectives that enabled the development of technologies with *women as a target group*; and (c) farming systems approaches that viewed farmers as agents within their livelihood strategies, which led to *the recognition of women and gender relations as part of different farming constellations* (van der Burg 2019). Attempts to integrate gender starting from the mid-1980s started to question gender-biased assumptions and employ gender as a *category of analysis* within social science research (Kauck, Paruzzolo, Schulte 2010). They built a foundation of *gender analysis as part of scientific capacities and systems* and included *more women farmers* in agricultural research and development (ibid.). However, the depth and types of the studies from the 1970s into the 1990s varied considerably. For example, an International Livestock Research Institute (ILRI) review of gender-related research in livestock in the 1980s and 1990s observes that this did not use conceptual or theoretical tenets (e.g., in analyzing gender roles in small ruminants research) and that reference to women or gender relations tended to be “more rhetorical than empirical” (Tangka et al. 2000, 46).

By the mid-1990s, two overview reports of CGIAR gender research had been produced that covered all gender research published in their respective periods (Feldstein 1995, 1998). Feldstein’s inventory for 1990 to 1995 found that, when it came to gender-related research and gender training, “*all Centers are doing something*” (Feldstein 1995, 4). For that period, the inventory documented 140 gender-related studies from across CGIAR, with the International Food Policy Research institute (IFPRI) and the Center for Tropical Agriculture (CIAT) being the most prolific, followed by the International Institute of Tropical Agriculture (IITA) (ibid.). The follow-up inventory (1996–1998) observed progress in using gender analysis as a research tool, with the number of studies using gender analysis increasing to 207—a 48 percent increase since the first review (Feldstein 1998). The International Water Management Institute (IWMI) had become a leader in publishing gender research, and there was increasing recognition throughout the system of the value of women’s contributions to agriculture and of the usefulness of gender analysis (ibid.). The review noted progress toward more proactive consideration of gender relations in research, training, and dissemination activities, and that Centers were still developing approaches to gender analysis to fit their mandates (ibid.). The two reviews found the vast majority of CGIAR gender studies to be either characterization and diagnostic studies or on women-specific technologies. The second review saw an increasing number of methodology development papers, adoption studies, and impact assessments as well as a

sharp increase in literature reviews, workshops, and seminars (Feldstein 1998). It was not until the later 1990s that more concerted programs began to emerge.

Almost 20 years later, a 2016 evaluation recognized the significant bodies of work within CGIAR on women's empowerment; collective action, nutrition, health, and food security; and gender norms and innovation (Baden et al. 2017). This kind of strategic gender research—that which moves beyond the commodity and natural resource domains of CGIAR Centers—has often been undertaken through multi-year cross-Center projects or programs. Examples of thematic research programs include *Strengthening Development Policy through Gender and Intra-Household Research* (IFPRI); the *CGIAR System-Wide Program on Participatory Research and Gender Analysis* (PRGA); *Collective Action and Property Rights* (CAPRi); the *Gender, Agriculture, and Assets Project* (GAAP), including the *Women's Empowerment in Agriculture Index* (WEAI) and its adaptations; *GENNOVATE*—on gender norms and innovation; and the *Gender and Breeding Initiative* (GBI).²² We elaborate on some of these here as examples; others—CAPRi (Chapter 7), WEAI (Chapter 9), GENNOVATE (Chapter 10 and Annex 3), and GBI (Chapter 2)—are discussed in more detail elsewhere.

IFPRI's Strengthening Development Policy through Gender and Intra-Household Research, which ran from 1992 to 2003, is a notable example of high-quality gender research (Kauck, Paruzzolo, Schulte 2010; van der Burg 2018, 2019). The program was an “example of the transformative use of sex-disaggregated quantitative data to assess and identify ways to reach gender equitable policy outcomes” (Kauck, Paruzzolo, Schulte 2010, 5). It began by testing economic models of household behavior, spurred by the development of the collective model of the household. The finding that individuals within households did not necessarily share the same preferences or completely pool resources—suggesting that it mattered who received cash transfers—had important implications for development policy. This led to an effort to test household models using sex-disaggregated primary data collected in four high-concentration countries and several other countries. A

22 GBI, led by the CGIAR Program on Roots, Tubers, and Bananas and the International Potato Center (CIP) (2016–2018) is notable in its tackling of the long-standing challenge of bringing a gender perspective and gender analysis to breeding research. GBI questioned and problematized the way in which breeding programs work, and this resulted in new approaches to product profiling and engagement with the populations that new varieties and breeds aim to serve. This is an example of how gender analysis can trigger institutional change in the sense of changing practices—in this case how breeding work is undertaken within CGIAR. For more on GBI, see Chapter 2 and <http://www.rtb.cgiar.org/gender-breeding-initiative/>

2005 multi-country study measured the food policy response impacts of this program and found it was effective; its results were central to policy formation (ibid.).

Participatory research offered an exceptional entry point for gender analysis (see Sachs 1996; Okali 2012). A spearheading program on gender research began in 1997 with the CGIAR System-Wide Program on Participatory Research and Gender Analysis (PRGA).²³ PRGA ran across three phases—1997–2002 (phase 1), 2003–2007 (phase 2), and 2008–2012 (phase 3). By the time of the 2000 internally commissioned review (Prain et al. 2000), there was still a need to consolidate and more consistently integrate gender analysis into the participatory research component of the program. The second phase included a “deeper theoretical exploration of processes of transformational change... investigating lessons about gender-sensitive and pro-poor development, strategies for change, multi-stakeholder development of food chains, and livelihood diversification” (CGIAR Science Council 2007). However, the second phase was critiqued heavily for focusing more on advocating for the mainstreaming of gender analysis rather than building a constituency of gender researchers within CGIAR (ibid.).²⁴ The third phase strategic platform had three overarching themes: climate change, food security (building on its legacy of research on plant breeding and natural resources), and, despite the critique, gender mainstreaming. Perhaps the most significant contribution of PRGA was in relation to participatory plant breeding (PPB), outside of CGIAR. PRGA passed on small grants to partners and, while PPB did not take hold within CGIAR, it did externally: it was commended for success in mainstreaming gender analysis within the African National Agricultural Research Systems (ibid.).

The Gender, Agriculture, and Assets Project (GAAP)²⁵ is a research initiative making important contributions toward understanding the dynamics of gender assets in agricultural development programs. It looks at both tangible assets, including productive assets like land, livestock, labor, and finance, and intangible assets like social capital, social networks, and education. The first phase (2009–2013) was co-led by IFPRI and ILRI and worked with eight

23 For more on PRGA, see Gomez (2009).

24 This critique is contradictory to that of the internally commissioned review seven years earlier, which noted the need for advocacy and awareness-building to address entrenched gender blindness vis-à-vis research methods, including in research considered “participatory” (Prain et al. 2000, 23).

25 For more information see <https://gaap.ifpri.info/>

development projects. Among other findings,²⁶ the project supported the development of the asset, social capital, and time use components of the Women's Empowerment in Agriculture Index (WEAI).²⁷ A 2014 evaluation articulates three main contributions of GAAP1 as shedding light on (a) the complexity and cultural specificity of both asset ownership (particularly joint ownership by women and men) and its contribution to women's empowerment; (b) the unintended consequences produced by agricultural projects, which non-gender-sensitive outcome measures can mask; and (c) the importance of measurement of sex-disaggregated assets in agriculture projects to show how men and women make decisions and how to engage them more effectively (Firetail 2014). The second phase—GAAP2²⁸—began in 2016 and is ongoing: it builds on the phase 1 work with nutrition and income projects from South Asia and Africa south of the Sahara.

It is possible to link some of the more recent gender research to three CGIAR-wide ambitions²⁹ to improve gender equality and inclusion within the portfolio: (a) gender-equitable control over productive assets and resources; (b) development and dissemination of technologies that reduce women's labor and energy expenditure; and (c) women's (and youth's) equitable participation in decision-making. A comprehensive 2011–2015 review found that there had historically been more research on the first and third points than on the second: “complex social change processes arising from technological change are not yet widely documented” (Baden et al. 2017, 26).

To sum up, the history of gender research across the CGIAR system can be characterized as uneven, unstable, and enduring. Uneven, because it has evolved in fits and starts, with exciting moments of great potential often followed by fallow periods; Centers have also progressed at very different rates. Unstable, because progress has often been tied to specific funding or projects, research trends that are overshadowed by a subsequent trend, or thought leaders who eventually move on (see the detailed research reviews of the 1990s: Feldstein 1995, 1998). Finally, enduring, as gender research clearly has a long history within CGIAR and continues to grow in prominence: it has stood the test of time and progressed with the support of patient and persistent advocates.

26 For more on GAAP1 findings, see Meinzen-Dick et al. (2014a), Njuki et al. (2014), Quisumbing et al. (2015) and Johnson et al. (2016), among others. See also this technical guide produced by the project: <http://ebrary.ifpri.org/utils/getfile/collection/p15738coll2/id/128594/file/128805.pdf>

27 See Chapter 9 for more on WEAI.

28 Led by IFPRI.

29 Within CGIAR, these are referred to as sub-Intermediate Development Outcomes, or sub-IDOs.

Enduring also because it is possible to trace the CGIAR gender story, owing to the public nature of CGIAR research and the transparency and availability of evaluations, assessments, and reviews. The thematic chapters ahead will further elaborate substantive progress on gender research.

Institutionalizing gender research within CGIAR

A number of assessments and reviews conducted since the 1980s have fueled waves of effort to institutionalize gender research within CGIAR. These underscore the vital nature of institutionalizing gender research and make recommendations as to how to proceed. The first review, in 1980, assessed the responsibility and value of the CGIAR system to the “most disadvantaged groups, including resource-poor farmers and women” (Consultative Group Meeting, October 1980, in van der Burg 2019, 41). The second review, a year later, was blunt in stating that women must be considered in agricultural production otherwise CGIAR risked reduced impact or the total failure of its programs (van der Burg 2019). In 1984, Janice Jiggins was commissioned to study gender impacts in CGIAR for a 1982–1988 CGIAR-wide assessment (*ibid.*). She concurred with the 1981 review: that CGIAR would not reach its goals if it did not take women’s roles in production and food systems seriously (Jiggins 1986; van der Burg 2018). What stands out in her revealing report are the institutional constraints to doing gender research within CGIAR. She found “in general a conservative record of hesitation and cautious exploration fueled mainly by donor-financed initiatives outside of core budgets and implemented by temporarily attached staff. Moreover, there is much in the way the research process is organized and research criteria are derived which stands in the path of more substantive efforts” (Jiggins 1986, 9). Tellingly, the overall 1982–1988 review reduced the detailed analysis in her paper to a single box (Anderson, Herdt, Scobie 1988).

Points raised in that study from over 35 years ago continue to be relevant today. For example, Jiggins lamented that, “it seems uncommonly hard to convince researchers that women possess skills, knowledge and experience which is not replicated in the knowledge and skills held by men and yet which is of use to breeders in the task of setting the research agenda (Fortmann 1981; Fresco and Jiggins 1985)” (Jiggins 1986, 16–17). Other critiques resurfaced in an internal PRGA review in 2000: “advocacy and awareness building are needed because of the entrenched nature of gender-blind research methods, even among researchers who consider their work to be participatory” (Prain et al. 2000, 23). An input paper for the 2008 review also found that some of the commissioned external program and management reviews claimed that “good

science was blind to gender” and that guidelines at the time were “silent on the need for attention to gender in the reviews’ assessments of the Centers’ science” (Gibbs 2008 in Kauck, Paruzzolo, Schulte 2010, 27). Clearly, epistemological biases remain strong and persistent.

As early as 1995, reviews commended individual Centers for stand-alone efforts to institutionalize gender research: “ICRISAT [the International Crops Research Institute for the Semi-Arid Tropics] and IRRI are incorporating a gender dimension in their priority setting... CIP [the International Potato Center] and ICRISAT now include a question concerning the gender implications of research and training in their project proposal or reporting forms” (Feldstein 1995, 7). However, system-wide this was not the case. It was not until 1990 that the first CGIAR Gender Program was put in place: this ran until 1996 and addressed both gender equality in the workplace and gender in research (Prain et al. 2000). After that, the two prongs of the program were separated: research through PRGA (see above) running 1997–2011 and the Gender and Diversity Program focusing on human resource issues running 1999–2011. All these programs were voluntary and worked with interested Centers.

Despite these efforts and some achievements, CGIAR has struggled to position and mainstream gender analysis, as can be seen in a Science Council comment: “there is need to accelerate gender analysis into the wider CGIAR system (across all research themes)... a real need for more focused research on gender analysis leading to mainstreaming gender analysis into all CGIAR research. This is not being achieved in the current PRGA program (nor was it achieved when the gender analysis was part of the Gender and Diversity program)” (CGIAR Science Council 2007, vii). An important independent review in 2008 concurred, noting that a pattern of “misplaced reliance by CGIAR leaders on sub-managerial staff functions has shunted responsibility for gender away from operations management and professional staff” (CGIAR Independent Review Panel 2008, 4, 46). The *Stripe Review of the Social Sciences in CGIAR* (CGIAR Science Council 2009) that followed also found that gender was not yet well integrated into CGIAR research. It remarked that there was little evidence of consistent attention to gender issues by senior-level Center or System management, either in research prioritization, research design, or performance monitoring. It also provided a gender-specific recommendation that stated that, to “mainstream gender equity as a basic axiom of CGIAR research.... operationally, this requires managers take explicit responsibility for gender equity in research...” (ibid., 60). This strong statement to leadership, along with an explicit recommendation in the 2008 review to adopt

a gender strategy and system-wide strategic objectives for gender integration with instruments to ensure accountability (CGIAR Independent Review Panel 2008, 12), paved the way for the advancement of gender research in the decade that followed.

Optimistically, the 2008 review further observed a readiness to adopt both empirical (research-oriented) and institutional approaches—including a system-wide policy, strategy, and results framework—to gender mainstreaming within CGIAR (CGIAR Independent Review Panel 2008, 4, 48). Acknowledging champions and good work to date, it called for a shift from an advocacy-based approach reliant on personal persuasion to an accountability approach addressing institutional standards (*ibid.*). It framed an accountability approach as the “professional responsibility” of CGIAR leadership, linking it to development effectiveness, and insisted on the need to move beyond ad hoc efforts dependent on individual initiative toward embedded system-wide instruments (e.g., impact assessments) (*ibid.*, 46–47). In 2010, the International Center for Research on Women (ICRW) was commissioned centrally to undertake the *CGIAR Gender Scoping Study* (Kauck, Paruzzolo, Schulte 2010) to further inform the mainstreaming of gender across the soon-to-be-developed CGIAR Research Programs (CRPs). Like earlier reviews, the scoping study acknowledged a number of strategic gender research initiatives but also observed that such initiatives were spotty and inconsistent. It concluded that there had been no attempts to embed gender analysis across the CGIAR system with proper resourcing and supported effort (*ibid.*, 7). The scoping study confirmed that a CGIAR-wide gender policy—including gender strategies and action plans—was needed, and echoed that its absence was part of the reason for the mixed success (Kauck, Paruzzolo, Schulte 2010).

At the same time as the scoping study, the decision to integrate gender system-wide was finally taken and the major task of gender mainstreaming began (Okali 2017). Since that decision, considerable strides have been made toward institutionalizing gender research, including (a) the development of CGIAR-wide and CRP gender strategies, accompanied by budget allocations and operational plans; (b) the integration of gender equality in the overall CGIAR-wide Strategy and Results Framework; (c) the cultivation of a system-wide Gender Network and later Platform; and (d) the hiring of gender researchers and the appointment of gender research coordinators. We look at some of these elements in the paragraphs to come. However, it is worth noting that this system-wide gender mainstreaming effort within CGIAR came very

late relative to gender initiatives in development more broadly—over 16 years after gender mainstreaming³⁰ was introduced in Beijing.³¹

A key milestone in institutionalizing gender equality was the first CGIAR-wide Gender Strategy,³² put in place in 2011 for all CGIAR Centers, CRPs, the Consortium Office, and Center Boards. It included objectives, deliverables, and accountability mechanisms with related timelines. The overall objective in relation to research was “to improve the relevance of CGIAR research to poor women as well as men (reduced poverty and hunger, improved health and environmental resilience) in all geographical regions where the work is implemented” (CGIAR Consortium Board 2011, 5). It acted as a systematic roadmap for all Centers and CRPs to develop their own strategies. As part of the Gender Strategy, a system-wide gender advisor was appointed on a part-time basis, tasked with initiating a Gender Network and with supporting gender researchers and CRPs in strengthening their gender strategies (CGIAR Consortium Board 2011). As such, gender staffing and coordination were also starting to be strengthened. The 2017 gender evaluation referred to the CGIAR-wide Gender Strategy as having “played a catalytic role” in getting gender on the CGIAR research program agendas (Baden et al. 2017, xiv).

30 The aim of gender mainstreaming was ambitious: to fully integrate gender equality concerns into “analyses and formulation of all policies, programmes and projects; initiatives to enable women as well as men to formulate and express their views and participate in decision making across all issues” (Mukhopadhyay 2016, 78). The most often-used definition of gender mainstreaming in international development stems from the Economic and Social Council 1997 and reads as follows: “Mainstreaming a gender perspective is the process of assessing the implications for women and men of any planned action, including legislation, policies or programmes, in all areas and at all levels. It is a strategy for making women’s as well as men’s concerns and experiences an integral dimension of the design, implementation, monitoring and evaluation of policies and programmes in all political, economic and societal spheres so that women and men benefit equally and inequality is not perpetuated. The ultimate goal is to achieve gender equality” (United Nations 1997, 1, in e.g. Moser and Moser 2005, 2).

31 The 1985 United Nations Conference on Women in Beijing, marking the end of the United Nations Decade for Women (1976–1985), marked a turning point for gender and development, introducing gender mainstreaming and framing the next decade or more of gender and development work. Women’s rights became central and gender mainstreaming was taken on board as a bold new strategy (Mukhopadhyay 2016) with transformative potential. This was based on recognition that policymaking and institutions reproduced gender inequalities and needed to be a part of addressing them (van Eerdewijk 2016).

32 The CGIAR Consortium Level Gender Strategy (CGIAR Consortium Board 2011) addressed both gender mainstreaming in research, and gender and diversity in the workplace (at the Centers), as mutually reinforcing branches of an integral plan (Baden et al. 2017). We focus on the gender mainstreaming in research component, as justified earlier in the chapter.

To adhere to the CGIAR-wide Gender Strategy, all CRPs developed gender strategies over the period 2011–2013.³³ These included (CGIAR Consortium Board 2011):

- An evidence-based statement providing justification and rationale as to why gender should be addressed within the domain of the CRP;
- Gender-responsive goals and objectives of the program;
- A description of impact pathways with explicit attention to gender;
- A description of gender activities;
- A description of the monitoring and evaluation system in place to track progress;
- A budget;
- A management system; and
- A review of capacity within the CRP for gender analysis and gender research.

The gender strategies the Centers and CRPs developed distinguished between gender-integrated and gender-specific (or strategic) research. In addition, many sought to differentiate gender research along a gender awareness continuum from gender-blind to gender-aware, and from accommodative approaches that work within existing gender relations to those that are transformative—that is, actively working to transform existing gender relations.³⁴

In 2016, these gender strategies were referred to and further articulated as part of the proposals for a second phase of the CRPs, including a gender narrative and a gender annex, which operationalized the plans. The gender narratives in these proposals covered issues such as gender in the program's theory of change; summaries of key publications and knowledge generated on the theme to date (e.g., throughout the first phase of the related research program); an explanation of how gender is integrated into the CRP; and staff and partner gender research capacities. The annexes were concise overviews that brought to the fore aspects such as how gender would be integrated substantively into the Research Programs' thematic areas (flagships), as well as necessary institutional

³³ More precisely, this concerned all phase 1 CRPs, which ran from 2011 to 2016. Phase 2 CRPs ran from 2017 to 2021. (See Annex 1: CGIAR background.)

³⁴ Otherwise stated, gender accommodative approaches treat gender as a variable, whereas gender transformative approaches are systemic in nature (van der Burg 2019).

dimensions such as meeting staffing needs, gender budgeting, gender advisor representation on management committees, and so on.

In 2016, six years after the decision to mainstream gender, CGIAR commissioned a thorough assessment of its gender research and gender equality in human resources. This evaluation, the most recent to date, found that the system-wide Gender Strategy³⁵ had “largely achieved its purpose of catalyzing gender mainstreaming in research” across CGIAR (Baden et al. 2017, 22). However, the CRP gender strategies were described as “overly ambitious and thus difficult to fulfil in relation to the resources that were available, and which fell significantly short of original expectations” (ibid., 22). The report concedes that, despite their “piecemeal nature,” system-level decisions created incentives for gender integration and laid the basis for accountability mechanisms to ensure that CRPs delivered on their gender commitments. It further recommended that CRPs update their strategies, bearing in mind resources available and adjusting ambitions accordingly. Allocating appropriate, realistic, and sufficient budgets for gender research and integrating gender into other agricultural and environmental research remain a challenge: budget allocations for both strategic gender research and gender-integrated research are critical.

Some CRP gender strategies were indeed updated and further refined and developed during CRP phase 2 implementation. Another important milestone in this phase was the embedding of gender (and youth³⁶) inclusion as a cross-cutting theme in the *2016–2030 CGIAR Strategy and Results Framework*, which set the objectives for that phase and beyond. Gender and youth inclusion were identified as a key ambition³⁷ for CGIAR research. This explicit articulation of gender research ambitions in strategic planning provided institutional anchoring. Most recently, the One CGIAR³⁸ framework has elevated institutional commitment, with gender equality, youth, and social

35 The report refers to this as the “Consortium Level Gender Strategy” (CGIAR Consortium Board 2011).

36 The linking of gender to youth has been debated and criticized, with good reason. The 2017 CGIAR gender evaluation report remarks that the conflation of youth and gender in the Strategy and Results Framework (SRF) and CRP gender strategies is “*unhelpful to the conceptual clarity needed to support gender mainstreaming*” (Baden et al. 2017, 22).

37 CGIAR refers to these key ambitions as Intermediate Development Outcomes (IDOs). The Gender and Youth Inclusion IDO has three sub-IDOs: gender-equitable control over productive assets and resources; the development and dissemination of technologies that reduce women’s labor and energy expenditure; and women’s (and youth’s) equitable participation in decision-making.

38 One CGIAR is described as a “*dynamic reformulation of CGIAR partnerships, knowledge, assets and global presence*.” It comprises a sharper mission statement, unified governance, institutional integration (regarding policies, services, and regional presence), a new research modality, and more and pooled funding. For details see <https://www.cgiar.org/impact/one-cgiar/>

inclusion as one of five impact pillars. This important milestone marks how, after decades of effort, gender equality has finally moved to the center of the CGIAR research and impact agenda.

As discussed earlier, coordination among gender researchers grew from a network focused on institutional issues into the CGIAR Collaborative Platform for Gender Research, and then into the GENDER Platform. This responded to one of the recommendations in the 2010 review, to institute a platform for gender knowledge-sharing and collaboration (Kauck, Paruzzolo, Schulte 2010). In around 2014, more concerted efforts began to hire social scientists, gender researchers, and post-doctoral fellows,³⁹ with the aim of building a critical mass of gender experts and responding to growing demand for gender integration in agricultural and environmental research. Alongside this development, each CRP appointed a gender research coordinator to participate in system-wide discussions among gender researchers. Even though gender expertise was still heterogeneous across the CRPs, with an overreliance on junior staff (Baden et al. 2017), the growing institutional commitment, including the hiring of gender staff, fueled further coordination system-wide on gender research, strategies, and institutional concerns.

To sum up, developments in institutional support and the advancement of gender research and gender equality itself are inextricably entwined. As such, assessments and reviews have articulated the need to address and remove institutional stumbling blocks within CGIAR over and over again, with increasingly compelling arguments, vigor, and specificity. Gender researchers, individual Centers, and other champions have advocated and fought for the recognition of gender research and continue to push the needle. But institutional anchoring is necessary to safeguard progress and avoid the risk of advances remaining ad hoc, ephemeral, and reliant on individual motivations. Looking at the institutionalization of CGIAR gender research, it has clearly been something of a slog since the 1980s. Yet persevere it has. In fact, the speed of institutional progress over the past 10 years is quite remarkable given the late and cumbersome start. Today, gender analysis is being positioned within the established research agendas of these international agricultural and environmental research centers and programs. This strengthened institutional support creates space for gender

39 The CGIAR Gender Post-Doctoral Fellowships Program awarded 18 2-year social science fellowships over 2 calls (in 2015 and 2016). The intention was for these young professionals to develop unique expertise “on the job” and apply gender analysis in technical research on agriculture and natural resource management. For more on the Program see https://cgspace.cgiar.org/bitstream/handle/10568/108588/CGIAR%20Gender%20Research%20Action%20Plan-Fellowship%20Program_Brief3.pdf?sequence=1&isAllowed=y

research, as the growing number of gender-related or gender-integrated publications, research projects, and programs shows. Nonetheless, as the 2017 review states, “the process of institutional mainstreaming is ongoing, and incentives, accountability systems, resources and networks are needed to retain the growing momentum” (Baden et al. 2017, xiii). Institutional challenges persist. In particular, norms and practices, which include long-standing biases as to what constitutes knowledge and “good science,” remain a challenge. This goes hand in hand with recognizing and revaluing qualitative alongside quantitative research, and the social sciences alongside the technical or life sciences. Overcoming implicit epistemological preferences and biases is a next obstacle.

Part 2: Guide to reading this book

Here we provide guidance on reading this book. We begin by defining key concepts and positioning the work. We then introduce the thematic chapters and their contributions to the book as a whole. Finally, we provide some insights and analysis on the evidence base for the chapters.

Conceptual positioning

Two concepts at the heart of this book are gender equality and women’s empowerment—concepts that tend to surface in similar research, policies, or debates. Some chapters in the book focus on gender equality; others take women’s empowerment as central. Despite this variation, the chapters share conceptual foundations in their understanding of gender equality and women’s empowerment. Both concepts are concerned primarily with gender as a social *marker*, manifesting itself in social hierarchies affecting the lives of women and men. Both are concerned with the power imbalances, and the resulting inequalities and disempowerment—and hence with gender as a social *relation*. Both also express a more desirable state, where gender as a social relation no longer limits people’s lives.

Gender equality refers to:

“the equal rights, responsibilities and opportunities of women and men and girls and boys. Equality does not mean that women and men will become the same but that women’s and men’s rights, responsibilities and opportunities will not depend on whether they are born male or female. Gender equality implies that the interests, needs and priorities of both women and men are taken into consideration, recognizing the diversity of different groups of women and men. Gender equality is not a women’s issue but should concern and fully engage men as well as women. Equality between women and men is seen both as a human

rights issue and as a precondition for, and indicator of, sustainable people-centered development.”⁴⁰

The understanding of gender equality and women’s empowerment in this book problematizes and challenges unequal power relations between, and among, women and men. Gender inequality and women’s disempowerment are understood in terms of unequal social relations and hierarchies, rather than as a characteristic of individual women, or concerning only women. And, while recognizing gender as a primary social marker and conceptualizing it as a social relation, both concepts acknowledge the diversity and heterogeneity among women and among men. We return to this point about intersectionality later.

Gender and development work uses many frameworks, from the *Harvard Analytical Framework*⁴¹ of the 1980s to the *Gender and Development Framework*⁴² (Moser and Levy 1986) and the *Social Relations Framework*⁴³ (Kabeer 1994), among others. In this book, we analyze gender equality and women’s empowerment outcomes against the backdrop of the *Reach-Benefit-Empower* framework (Johnson et al. 2018). This framework comes up in several thematic chapters and is useful for categorizing interventions in terms of the types of gender outcomes aimed for or realized (see also Danielsen et al. 2018). It distinguishes between agricultural interventions aimed at reaching, benefiting, or empowering women. Interventions focused on *reaching women* tend to assess women and men’s participation in (project) activities, whereas strategies designed to *benefit women* emphasize outcome indicators, such as income, productivity, or assets. The third category, interventions that aim to *empower women*, however, focuses on “outcomes that are inherently

40 <https://trainingcentre.unwomen.org/mod/glossary/view.php?id=36&mode=letter&hook=G&sortkey=&sortorder=>

41 Developed initially by a team at Harvard University—C. Overholt, M. Anderson, K. Cloud, J. E. Austin—and published in 1985, the *Harvard Analytical Framework* (also referred to as the *Gender Roles Framework*) was developed at the request of the World Bank and in collaboration with the United States Agency for International Development as an assessment on women in development projects. It comprises a set of data collection and analysis tools to analyze gender roles and access to and control over assets.

42 The *Gender and Development Framework* for gender policy and programming focused on women’s triple roles—reproductive, productive, community management—making a distinction between women’s practical and strategic needs, and women’s interests (Moser and Levy 1986). It redirected attention from women to gender relations and recognized the inherent male bias of efficiency approaches (Elson 1991; Moser 1993; Miller and Razavi 1995) that shifted the costs of welfare to the household, where women did a greater share of labor and thus bore the brunt of such initiatives.

43 The *Social Relations Framework* squarely shifted attention to gender relations, rather than men and women’s roles in development, and positioned gender relations as relations of power (Okali 2012): “... do not make the assumption that raising women’s productivity is simply a matter of reallocating resources, nor will reallocating resources to women necessarily lead to women’s equality or autonomy” (Kabeer 1994, 97).

FIGURE 1.2 Gender outcomes typology

Source: Kleiber et al. (2019) and CGIAR Research Program on Fish Agri-Food Systems (2020) based on Johnson et al. (2018).

empowering (e.g., women’s agency), inherently disempowering (e.g., gender-based violence, time burden) or indicators of women’s position relative to men (e.g., degree of control over income, participation in joint decision making, gender-asset gap)” (Johnson et al. 2018, 5). The CGIAR Research Program on Fish Agri-Food Systems further developed the original framework to include “transform” as a fourth change category, to emphasize interventions that aim to *transform constraining gender norms, attitudes and behaviors* towards those that support gender equality (CGIAR Research Program on Fish Agri-Food Systems 2017; Kleiber et al. 2019). Figure 1.2 presents the adapted framework, including transformation as a fourth dimension. In our understanding of gender equality and women’s empowerment, they are both concerned with shifting and transforming the (formal and informal) structures that underpin inequalities and the marginalization and disempowerment of women.

Our understanding of *empowerment* is informed by Naila Kabeer’s conceptualization as “the expansion of the capacity to make strategic and meaningful choices by those who have previously been denied this capacity, but in ways that do not merely reproduce, and may indeed actively challenge, the structures of inequality in their society” (Kabeer 2017, 651). Specifically, we use the following definition of empowerment:

“... the process by which those who have been denied the ability to make strategic life choices acquire such an ability... The ability to exercise choice incorporates three inter-related dimensions: **resources**

(defined broadly to include not only access, but also future claims, to both material and human and social resources); **agency** (including processes of decision making, as well as less measurable manifestations of agency such as negotiation, deception and manipulation); and **achievements** (well-being outcomes)” (Kabeer 1999, 435).

Empowerment refers to processes and outcomes shaping women’s capacity to make strategic life choices that take place at individual, relational, and structural levels (Hillenbrand et al. 2015). Empowerment is multilevel and multidimensional, encompassing a number of often-interlinked social, economic, and political dimensions. Women’s—and men’s for that matter—experiences of empowerment or disempowerment vary across different societal domains in their lives, including the household, the community, the market, and the state (Kabeer 1999; van Eerdewijk et al. 2017).

Each thematic chapter focuses on particular aspects of women’s empowerment or gender equality—for example choice and power to choose (Chapter 2); participation (Chapter 4); agency, decision-making, work burden, access to and use of productive resources, and collective action (Chapter 7); decision-making and the division of labor and resources (Chapter 5); or ways of measuring or assessing changes in different domains of women’s empowerment (Chapter 9). Others argue for a shift in how a theme is approached—for example, embedding gender perspectives more meaningfully within seed system development to move beyond simply “reaching” women as beneficiaries (Chapter 3); iterating between feminist analyses and natural resource discourses to the benefit of both (Chapter 6); reframing studies on the “feminization” of agriculture to instead interrogate gender equality advances or lost ground in rural transformation processes (Chapter 8); or getting to the roots of gender inequality and using approaches that address structural change (Chapter 10).

To come back to diversity and heterogeneity among and between women—as well as men—different women experience inequalities in different ways, depending on their age, race, class, marital status, caste, religion, ability, position within the family, education, or sexual orientation. Empowerment and gender equality are fundamentally entwined with other intersecting axes of social power relations, and women—just like men—are a socially heterogeneous group (Colfer, Basnett, Ihalainen 2018). Whereas feminist thinking has introduced gender as a concept so as to be able to analyze women’s disempowerment and the inequalities they experience, this by no means implies that gender is the only basis on which these are experienced. *Intersectionality* is hence a core concept to underline and unpack how such other social markers

intersect with gender in hierarchies, inequalities, and marginalization. It draws attention to the intertwining effects of multiple deprivations and overlapping disadvantages, and warns of the risks of reducing all analysis of and approaches to gender inequalities to “gender alone.” Such intersecting inequalities mean that different women may face different constraints and have different opportunities. Intersectionality is also a key concept as it allows and calls for a more explicit understanding of how intersecting social markers and inequalities affect the most marginalized groups of women (Yuval-Davis 2006; van Eerdewijk et al. 2017).

In our understanding of gender equality and women’s empowerment for this book, the change that is entailed is inherently transformative in nature. Empowerment is directly tied to inequalities and disempowerment, and the ways in which women previously lacked “the capacity to make strategic and meaningful choices”; gender equality and women’s empowerment directly challenge the structural inequalities and the way power operates in women’s lives (Kabeer 2017; van Eerdewijk et al. 2017). Gender equality and women’s empowerment are, however, not always, or often not, approached and used in this way. The depoliticization, technocratization, and instrumentalization of core feminist concepts as empowerment has turned them into “light” versions, which emphasize women’s individual self-improvement rather than collective transformative struggle. This is problematic, because it isolates women from the social inequalities that govern their lives; these versions tend to end up trying to “fix women” or, alternatively, leaving the responsibility for change in their hands while institutional dimensions go untouched and unquestioned (Batliwala 2007; Batliwala and Dhanraj 2007; van Eerdewijk 2016; Cornwall 2018).⁴⁴

Navigating the chapters

This book comprises nine thematic chapters. What all of them have in common is a fresh analysis of evidence related to the theme tackled, which is reviewed using a gender equality and women’s empowerment lens, responding

44 In fact, after its introduction in mainstream development in the 1990s, the term “empowerment” was widely adopted, and in the process co-opted, diluted, and watered down. “Light” versions of empowerment tend to emphasize economic aspects of gender equality and empowerment over other elements, and often focus on measurable and tangible dimensions. Women’s empowerment is not the only transformative concept that, in its introduction to and uptake in research, institutions, and development, has become subject to “discursive ambiguity” (Eyben 2010, 57), and “simplification” and “sloganization” (Cornwall, Harrison, Whitehead 2007a, 4). It is in this “struggle for interpretive power” (ibid.) that the intentional and explicit positioning of our understanding of gender equality and women’s empowerment gains significance.

to the guiding question of the book: **How does agricultural and environmental research and development contribute to gender equality and women's empowerment?** We begin with a set of themes under which technical topics have integrated gender (breeding, seed systems, value chains). We then move into themes where gender analysis is well integrated and even pivotal to the theme (nutrition-sensitive agriculture, climate adaptation and mitigation, natural resource governance). Finally, we have a set of strategic gender-specific themes (the feminization of agriculture, assessing women's empowerment, gender transformative approaches). Roughly sketching the progression of chapters, gender analysis becomes a more integrated and significant component of the theme as we move further into the book.

Chapter 2 tackles gender in a long-standing and foundational domain within CGIAR: breeding. Animal and plant varieties developed are key technologies that CGIAR contributes as international public goods to agricultural development internationally. This chapter—*Examining choice to advance gender equality in breeding research*—zeroes in on the work done to integrate gender into breeding programs. It dissects the institutional dimensions of breeding research, investigating in detail the steps needed to advance toward gender equality, starting at the beginning; with setting breeding objectives. The chapter not only points to critical entry points for considering gender along the breeding cycle but also explains the implications of integrating gender needs, preferences, and constraints for institutional practices in breeding.

Chapter 3 focuses on seed, as a vital and first component of food systems. The chapter examines how gender equality and women's empowerment are or could be connected to seed system development and performance, and vice versa. This chapter—*Moving beyond reaching women in seed systems development*—examines work from across CGIAR on this relatively new domain for gender research. The chapter finds that seed system interventions often reach women, and that some may benefit them. However, stronger recognition of women's involvement and leadership in seed production and management would offer further benefits (like access to quality seed) as well as opportunities for empowerment outcomes. That said, the latter is not well documented in most seed systems research. Gender norms and power asymmetries demand attention for seed system interventions.

Chapter 4 draws on 20 years of research on gender and value chain development, bringing critical analysis to a theme that virtually all CGIAR research programs cover. This chapter—*Promise and contradiction: Value*

chain participation and women's empowerment—finds evidence on the complexity of the relationship between participation in value chain development and women's empowerment. Participation can be empowering by enhancing positioning, social capital, confidence, skills, and leadership; it can be disempowering through loss of control over production processes, loss of social status, exploitative labor conditions, marginalization, and time poverty. And it is both at the same time. Gains in one aspect of women's empowerment do not necessarily coincide with gains in another, and the broader socio-political and economic context—including the structure of the value chain and gender relations and norms in households, communities, and society at large—plays a role in mediating this. Notably, the chapter finds that most interventions with empowerment outcomes have a deliberate, and often exclusive, focus on women and gender relations.

Chapter 5 re-examines the body of work on gender and nutrition, putting gender equality at the center of analysis, rather than positioning it as an instrumental means to achieve nutrition objectives. This chapter—*Nutrition-sensitive agriculture for gender equality*—digs into a domain that has long been associated with women and the household. It finds that most nutrition-sensitive agricultural programs (NSAPs) are gender accommodative (work within existing gender norms) rather than transformative in nature. Where interventions do consider gender relations, they tend to aim to “reach” or “benefit” women, but rarely to empower them. Where empowerment is an objective, poor implementation—lack of intentionality and consideration of an impoverished range of empowerment domains—often leads to failure. Where NSAPs do empower women, monitoring, evaluation, and learning systems are unlikely to capture this. The chapter outlines features emerging from NSAPs with the most potential for empowerment outcomes.

Chapter 6 goes beyond agriculture per se, entering into a second major research domain within CGIAR, that of natural resources. This chapter—*A gender-natural resources tango: Water, land, and forest research*—reviews significant research from within CGIAR and beyond. It explores and critically analyzes how gender research paves the way for analysis of social and political dimensions of natural resource management. The field's shift from management to governance, and then to plurality of rights, not only opened up space for gender analysis but also proved to be a “game-changer”: it enabled better understanding of how inequalities based on gender and other social markers played out around natural resources so they could be addressed. The chapter underscores the need to go further in tackling root causes and systemic

barriers to gender equality and women's empowerment, including through stronger synergies between research for development agendas on natural resources and feminist approaches.

Climate change research, including climate-smart agriculture, is a more recent, but critically important, topic for CGIAR. Chapter 7 re-examines and reframes work on gender and climate change in the light of gender equality objectives. Climate change research and interventions tend to be systemic in nature—looking at human and natural conditions and focused on increasing resilience and reducing vulnerability for climate change adaptation and mitigation. This chapter—*From vulnerability to agency in climate adaptation and mitigation*—emphasizes women's agency in relation to climate resilience and the role of collective action in supporting enhanced agency. The chapter argues that the next generation of climate change research will need to do more than diagnose women's vulnerability or understand gender differences in perceptions and impact of and response to climate change. The focus must shift to understanding how to promote gender equality and increase climate resilience.

Chapter 8—*From the “feminization” of agriculture to gender equality*—looks at bigger picture trends and drivers of rural transformation that affect the livelihoods of rural women and men, including migration, war, and conflict; the commercialization of both large-scale and smallholder agriculture (including value chain development); technologies and innovation; and climate change. This chapter unpacks how the term “feminization of agriculture” is used and reviews state-of-the-art research, looking at the impacts of these rural transformations on both women and men in terms of labor patterns and workload, decision-making, and/or management roles and visibility. It sets a clear and comprehensive research agenda along two lines. The first is about reconceptualizing the feminization of agriculture and more systematically and comprehensively measuring the domains in which gender equality is advancing (or not) amid the process of rural transformation. The second is about addressing data gaps with improved measures. Importantly, the authors make a call to broaden the scope to look beyond agriculture and explore what else may be empowering for women, or other domains that may (better) advance gender equality for rural men and women.

Chapter 9—*Assessing women's empowerment in agricultural research*—reviews, compares, interrogates, and reflects on key qualitative and quantitative measures of empowerment developed and used within CGIAR and more broadly. Assessment can advance women's empowerment, especially when done in ways that engage with existing inequalities and challenge obstructive

power relations. How empowerment is conceptualized and operationalized can limit or enable the extent to which both institutional dimensions of inequalities and change, as well as immaterial aspects such as norms and sense of self, come into the analytical frame. The chapter challenges practitioners and researchers to shake free of instrumental uses of assessments of “empowerment” and to return to its political and transformative foundations. It reflects on the challenges in assessing women’s empowerment, from the difficulties of capturing certain aspects of empowerment over others (e.g., economic versus psychological) to the politics and complexity of measurement over the dynamics of space and time. The ways in which the research process contributes to gender equality are central.

Chapter 10—*Toward structural change: Gender transformative approaches*—pulls together relatively recent pilots, think pieces, and research, arguing for approaching gender analysis and gender and development differently. It calls for CGIAR researchers to go beyond gender integration and start engaging with deeper inequalities—like entrenched gender norms as to how women and men can/should behave—including institutional constraints to this. In addition to a clear articulation of the distinctive features and ambitions of GTAs, the chapter’s value lies in the timely collection and review of emerging studies on actual experiences with and outcomes of GTA efforts. A challenge for work on gender norms and for GTAs is that, despite recognizing the need for structural change, they tend to focus on norms and local dynamics, rather than engaging with structural issues and trends, especially beyond local scales. This chapter, particularly in the research agenda laid out, calls for scaling up (and out) of GTAs, including these higher-level issues.

The evidence

All thematic chapters described above are based on extensive literature reviews. At the end of each chapter, just before the reference list, the reader will find four visuals that aim to provide an impression of the coverage of the evidence on which the chapter discussion and conclusions are based. These visuals consist of:

- A map that illustrates the geographies of case studies in the cited publications;
- A pie chart that shows the proportion of publications from the CGIAR versus those with other institutional origins (non-CGIAR);

- A second pie chart showing the methodology used in the publications reviewed—whether the publication is based on qualitative, quantitative, or mixed-methods data, or methodological in nature (citations that do not fit into these categories are considered "other"); and
- A timeline illustrating when the papers reviewed were published.

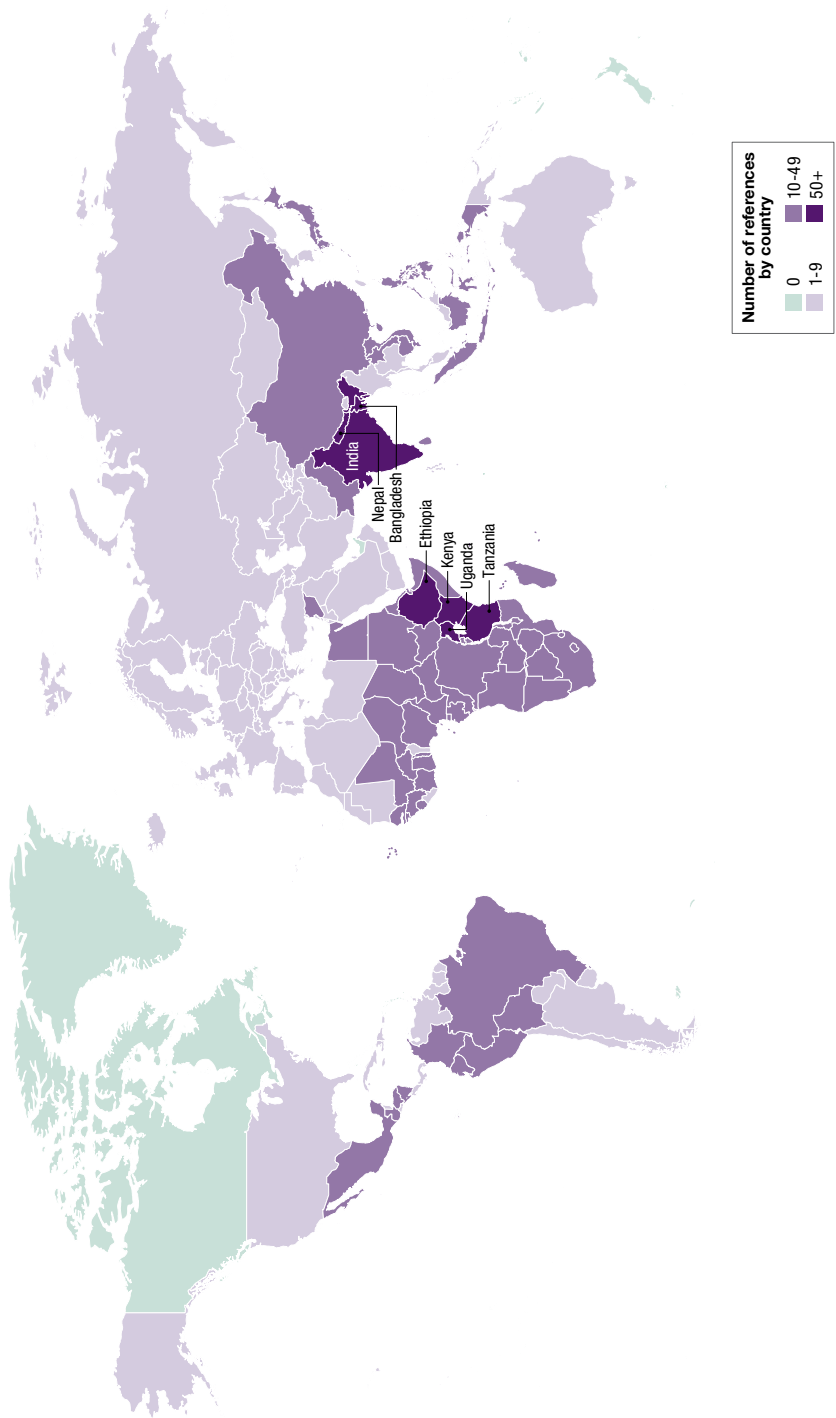
Here, we briefly synthesize the compiled coverage of evidence from across all chapters, offering visuals that represent the book as a whole (see Annex 3 for details).

To begin, Map 1.1 illustrates where the studies cited are located **geographically**.

Unsurprisingly, geographic coverage of the evidence is uneven globally, with more studies across the book coming from Asia and East Africa: India (92 publications), Bangladesh (83), Kenya (69), Uganda (67), and Nepal (57) are the most cited. However, there are significant variations from one chapter to another, with clusters of studies linked to specific themes. In considering the evidence, this variation—the regional specificities—needs to be weighed against more generalizable trends in drawing conclusions. The geographic prevalence of studies cited may correspond loosely with either having CGIAR Centers based there (e.g., Bangladesh, Ethiopia, India, Kenya) or being priority countries for CGIAR research or donor investments. It may also reflect data limitations, with more studies possible in countries where the sex-disaggregated data exist. Next generations of gender research in agricultural and environmental domains may want to consider the geographies studied in order to build up a body of work in specific regions or to break new ground by venturing into less-known terrain. Annex 3 provides more detail on the geographies and variations across the thematic chapters.

A second visual pertains to the **institutional origins** of the reviewed studies: CGIAR versus non-CGIAR. Writing teams reviewed both CGIAR research, from 1 or more of the 15 CGIAR Centers, as well as key studies carried out and/or published elsewhere. A publication was considered to be CGIAR if (a) one of the co-authors was based at a CGIAR Center at the time of publication; (b) the publication was funded by a CGIAR Center or a CRP; or (c) it was published by CGIAR. Figure 1.3 shows that a slightly higher proportion of the studies cited are from CGIAR sources. All chapter teams began with a wide outreach within CGIAR for related publications so the visibility of CGIAR publications is not surprising and was, in fact, purposive.

MAP 1.1 Geography of study sites for publications cited in this Book

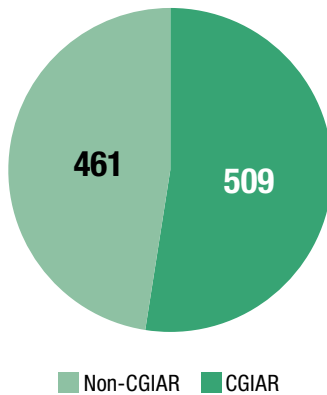


Literature reviews were not intended to be exhaustive but rather a (re-)examination of evidence on key CGIAR gender research themes using a gender equality and women’s empowerment lens.

While Figure 1.3 illustrates the overall institutional origins across the book as a whole, it does not show variations across the chapters. Comparing the chapter-specific pie charts, it is evident that some chapters rely more on CGIAR research than others. This speaks to both the methodologies used for the literature reviews and the evidence available within CGIAR and externally on each theme, as well as the maturity of the theme—that is to say, how long it has been studied. In some domains, CGIAR emerges as a clear thought leader; for others, it is one contributor among many.

A third category for consideration of the evidence is the **research methodology** of the studies cited: qualitative, quantitative, mixed methods,

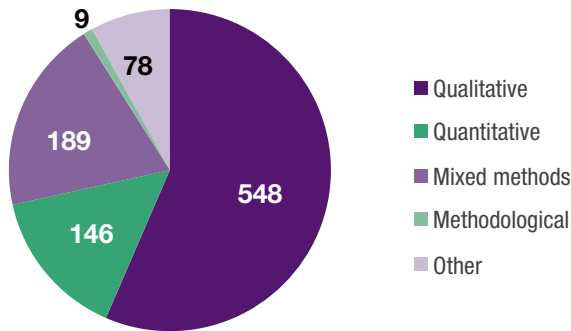
FIGURE 1.3 Number of studies by institutional origin (N=970)



methodological, and “other.”⁴⁵ The research methodologies for all studies cited in the book are compiled here in one pie chart (see Figure 1.4). Note that Figure 1.4 does not capture the size or scale of the studies.

More than half of the publications (56 percent) reviewed are qualitative studies; about 15 percent are quantitative and 20 percent use mixed methods.

⁴⁵ The category “methodological” refers to publications that deal with methodological issues or approaches. The “other” category includes guidance documents, presentations, reviews, indices, analytical frameworks, brochures, manuals, webinars, PowerPoint presentations, interviews, and documents that do not fall into the other categories distinguished.

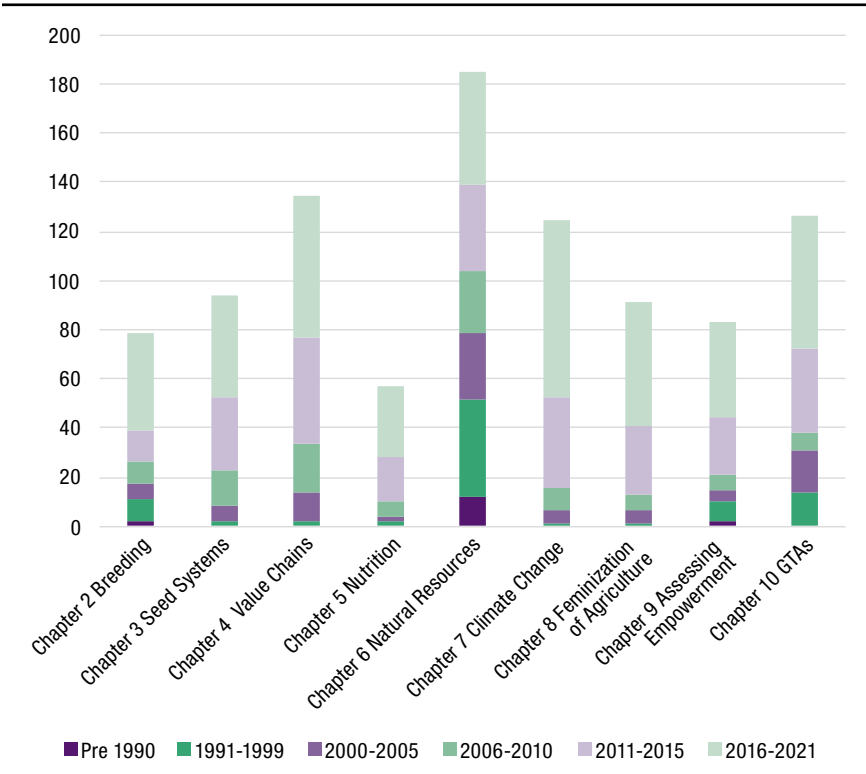
FIGURE 1.4 Number of cited studies by research methodology (N = 970)

Just a handful are methodological and less than 10 percent fall into the “other” category. Interesting to note is the variation across themes, which can be seen when comparing chapter-specific pie charts. Overwhelmingly, the chapters rely on qualitative publications; however, Chapter 5 (nutrition-sensitive agriculture) and Chapter 8 (“feminization” of agriculture) are exceptions: they refer more to quantitative publications than to qualitative work. Chapter 4 (value chains) has the highest number of mixed-method studies cited (43) and the highest proportion of mixed-methods studies overall (32 percent).

While gender researchers advocate for more mixed-methods research, the studies available seem to be limited for most themes explored in this book. That a limited proportion of studies are mixed methods in character—at best between 21 and 32 percent—is relevant for CGIAR research because it speaks to ongoing discussions on the value of interdisciplinary approaches and mixed methods. Some thematic domains may be more or less amenable to mixed-methods studies. The low number of mixed-methods studies may also be because CGIAR research is most often published in journals, with specific audiences and limited word counts. Accordingly, researchers may send a quantitative paper to one journal and a qualitative paper to another; this may not show if papers are part of a mixed-methods study. There is room for further exploration of opportunities for more mixed-method studies and why they are (or are not) undertaken.

Finally, we consider the **timelines of cited studies** reviewed. The timelines visually represent the publication periods for the citations in each chapter and are compiled for all chapters in one graph (Figure 1.5).

FIGURE 1.5 Timeline of cited studies in this book per chapter



For all chapters, unsurprisingly, a significant proportion of the citations are from the past 10 years (the periods 2011–2015 and 2016–2021). However, some themes have a longer history within CGIAR, with the work on gender and natural resources (Chapter 6) standing out: its citations extend back before 1990. Other themes have emerged more recently (e.g., climate adaptation and mitigation, Chapter 7). Some themes, while more recently emerging, draw significantly from past research, for example that of gender dynamics in seed systems (Chapter 3) or on GTAs (Chapter 10). Figure 1.5 also illustrates the total number of publications reviewed per chapter.

Part 3: Analyzing and reflecting on the book chapters

To begin this part of the chapter, we draw out the main conceptual threads along which the book’s nine chapters engage with the key question of **how**

agriculture and natural resource management research and development contribute to women's empowerment and gender equality. We look to the chapters to see what we are learning in relation to the core question of this book, drawing out several conceptual threads. We then turn our attention to a forward-looking gender research agenda and considering what is needed to make it effective, before sharing concluding reflections.

Gender equality through agricultural and environmental initiatives: conceptual threads

First, we synthesize whether and how agricultural and environmental research contributes to gender equality and women's empowerment. We then reflect on three interrelated conceptual threads emerging from the chapters: on conceptualizing beyond the individual, beyond the material; on bringing "bigger picture" trends into focus; and, finally, on inequalities and intentional approaches.

CHANGE HAPPENS, BUT NOT ALWAYS AND NOT AUTOMATICALLY

The chapters show that agricultural and environmental research and development approaches and interventions can, and do, lead to empowerment and gender equality outcomes for women. Women's engagement as seed producers, for example, can enhance their confidence and status in the community and household, contribute to increased income, and enhance their decision-making in the household. Nutrition-sensitive agricultural programs can and do lead to women becoming more able to make decisions in the household, and may increase their control over assets and affect perceptions of their abilities. Climate change adaptation strategies can promote women's participation in household decision-making, on agricultural production as well as income or children's education. Climate-smart agriculture (CSA) technologies, more specifically, can potentially have empowering effects by reducing women's workloads. Value chain participation and value chain development interventions do lead to increases in women's social capital, confidence, leadership, and overall positioning, as well as increased power in household decision-making and enhanced status for women, and sometimes to shifts in gender norms. At the level of communities or rural institutions, women can gain more access to agricultural enterprises and bodies that govern community resources, or the production and management of seed; some women also have more voice in their management and can take on formal and informal leadership positions in such institutions. In short, a range of empowerment and gender equality outcomes are found across the thematic domains covered in this book.

Yet the chapters all underscore that agricultural and environmental developments and interventions also have negative effects on women's empowerment, and, worse, can actually exacerbate gender inequalities. Negative effects include increasing women's workload, in the context of nutrition-sensitive agricultural programs or as a result of climate change adaptation strategies. Such increases to the labor burden, and women's subsequent time poverty, are common because broader shifts in the gender division of labor—including men taking on larger shares of reproductive work—typically do not occur. Other prominent disempowering effects concern women's loss of control over agricultural production processes, in the context of, for instance, value chain development strategies. Critical, yet often undocumented, disempowering effects include increases in household conflict and intimate partner violence. These occur, for instance, if men feel threatened or insecure when patriarchal gender norms—regarding paid work, women's household and reproductive labor, their mobility, and their interactions outside the household—are challenged and start to shift. Also at the community level, changes in women's positions, self-confidence, access, and “power to” can, unfortunately, lead to stigmatization of women who are perceived as having crossed boundaries.

The review of existing evidence not only illustrates the empowering and disempowering effects of agricultural and environmental development but also, strikingly, demonstrates that these two effects can happen *at the same time*. There is a need for explicit attention to these often-contradictory effects. Improvements in one dimension of empowerment can be accompanied by deterioration in another; positive changes at the household level can correspond with negative changes in, for instance, value chain or natural resource governance. Moreover, and maybe even more importantly, across all thematic domains, it is clear that positive and empowering effects *do not happen automatically*. The extensive literature reviewed across the nine thematic chapters confirms the validity of the Reach-Benefit-Empower-Transform framework, and underscores that, “reaching women does not ensure that they will benefit from a project, and even if women benefit [...], that does not ensure that they will be empowered” (Johnson et al. 2018, 5). Increased opportunities to earn can translate into control over that income and a larger say in household decision-making—but often do not. Participation in training can offer women opportunities to use newly acquired knowledge—for instance on the use of new technologies—but women are too often unable to use their new knowledge. Changes in women's involvement and participation in seed production and management, in value chains, in CSA, or in forest or water

management can contribute to shifting perceptions and attitudes on appropriate work, roles, and leadership potential for women—but often do not.

ON CONCEPTUALIZING BEYOND THE INDIVIDUAL, BEYOND THE MATERIAL

The simultaneous and often contradictory positive and negative empowerment outcomes of agricultural and environmental development interventions, and approaches, underline the pivotal importance of explicit and comprehensive conceptualizations of gender equality and women's empowerment. This means positioning the type of change underway and articulating a theory of change vis-à-vis how transformative change comes about. We highlight two steps in this direction: (a) look beyond the individual and (b) look beyond the material. The first step requires looking at changes in gender equality and women's empowerment at three levels: the individual,⁴⁶ the **relational**, and the **systemic** (Hillenbrand et al. 2015; Lombardini, Bowman, Garwood 2017; van Eerdewijk et al. 2017; Lombardini and McCollum 2018). The second step takes **informal** and ideational aspects into account. This mainly means considering social and gender norms and attitudes (at the systemic and relational levels) and self-confidence and critical consciousness (at the individual level) (Rao and Kelleher 2005; Wong et al. 2019).

The nine thematic chapters reveal that the existing literature tends to conceptualize women's empowerment and gender equality in quite narrow ways, focusing most commonly on individual-level material gains for women. Most of it focuses on what individual women have, do, use, control, gain, or lose (e.g. income, knowledge, skills, assets, time, and so on). The dimensions of empowerment considered often derive from the logic of the field, for example value chain studies looking at market indicators or nutrition studies focusing on nutrition-related ones. The choice of indicators is different if the starting point is a comprehensive understanding of gender equality and empowerment, and exploring how agriculture and natural resource management and interventions contribute to this (or not). Combined, these shortcomings of individual, sector-driven conceptualizations and indicators constrain our ability to understand women's empowerment as a process of social change that goes beyond individual self-improvement and "fixing the women" (see also Chapters 4, 6, 9,

46 Lombardini, Bowman, Garwood (2017) differentiate between three similar level: personal, relational, and environmental. It is worthwhile to note that their understanding of "personal" refers to immaterial aspects ("*within the person [...] changes in how a woman sees herself, how she considers her role in society and that of other women, how she sees her economic role, and her confidence in deciding and taking actions that concern herself and other women*", p. 6). Our understanding of the individual level encompasses both material and immaterial dimensions. This is also the case for the relational and systemic levels.

and 10; van Eerdewijk et al. 2017; Wong et al. 2019). In a variety of ways, the nine chapters go “beyond the individual,” drawing attention to relational and systemic levels of gender equality and women’s empowerment.

At the *relational* level, the role and engagement of men and other influential household or community members come into the frame. In the context of NSAPs (Chapter 5), for instance, recognition of the importance of involving men in nutrition training or in gender awareness interventions, rather than exclusively targeting women, is growing. Similarly, in the context of climate change adaptation (Chapter 7), participatory and collective action approaches engage with men’s roles and their responses to changes in women’s incomes or resilience. In so doing, these approaches seek to overcome the resistance of men and other power-holders to gender equality by encouraging recognition of women’s realities and challenges, and through discussion of patriarchal and constraining attitudes and norms. Engagement of men and boys in change means exploring how they can become allies in transforming power relations toward gender equality, rather than acting as gatekeepers of the status quo in the context of male power and dominant masculinities (Levtov et al. 2014; Edström et al. 2015; van Eerdewijk et al. 2017). Women’s relations with partners, relatives, and/or community members also feature prominently in gender transformative approaches (see Chapter 10). GTAs position themselves against an exclusive focus on interventions that engage women only as “atomized units”; they often promote transformative learning within as well as between individuals.

The third level of gender relations—*systemic*—requires looking at the institutional and structural arrangements under which women live, work, and shape their lives. The thematic chapters speak to the systemic level in various ways. Chapter 6 on natural resources explicitly argues for the need to “fix the system.” Women’s access to and use and control of (irrigation) water, forest resources, or land tenure rights are shaped and constrained, and can be enabled, by informal and formal factors of their governance, at community as well as macro levels. These include legal regulations, policies, customary law, local rules in resource user associations, or social relations that recognize or deny the use of certain resources by certain groups. These systemic factors in rural institutions also affect women’s voice in decision-making on such resources, with trends toward privatization and commercialization often contributing to exclusion and marginalization. Chapter 3 highlights how institutional factors in seed governance and management are key to the lack of recognition and further exclusion of women, which directly undermines their benefits and

empowerment. On the positive side, stronger engagement of women in seed management, and in particular their voice and leadership in decision-making, carries potential for benefits from seed system and other empowerment indicators, as has been most visible in farmer-managed systems and participatory breeding programs.

The systemic nature of gender relations and inequalities also manifests itself in gender norms. Here, the second step comes into play: *going beyond the material* by taking into account the *informal* and *immaterial*. Social norms on gender are featuring ever-more prominently in gender research in agricultural and environmental domains; recognition is increasing that underlying structural barriers, in particular patriarchal norms, hamper women's ability to adopt and benefit from technological innovations, their expanding engagement in formal employment, or their leadership positions. Gender norms⁴⁷ are "collectively held expectations and beliefs as to how women, men, girls and boys should behave and interact in specific social settings and during different stages of their lives" and "are key aspects of institutional structures that shape the empowerment of women and girls" (van Eerdewijk et al. 2017: 35, 40). Despite norms being key dimensions of social practices, they are often largely ignored in AR4D. Chapter 10 discusses how GTAs identify and focus on gender norms as leverage for transformative shifts in underlying structures and barriers, a point that resonates across many other thematic chapters.

The *immaterial* is also at play in how perceptions and stereotypes of what is appropriate for women's work shape whether women's labor is recognized, what (paid) jobs women have access to, how much they are paid (Chapters 4 and 8, for instance), and how perceptions of "who is the farmer" overlook women and act as a barrier to them being approached and included as farmers and farm managers (Chapter 3) or agents of change in climate change adaptation and mitigation (Chapter 7). At an individual level, the immaterial is a core dimension of women's empowerment and change toward gender equality: it relates directly to self-confidence and self-esteem. Shifts toward a critical consciousness are not only at the heart of women's empowerment—as in women

47 Gender norms pertain to, among others, women's behavior and interactions outside the household, assumptions about their reproductive labor and responsibilities, beliefs about male authority and women's submissiveness, and perceptions of women's leadership and decision-making capacities or of appropriate benefits and assets to be owned or controlled by women, and to the acceptability of harassment of and violence against women in public and private spheres. Gender norms are a critical enabling (or disabling) factor affecting agricultural livelihoods and are determinants of the distribution of (material) benefits and resources. Social norms on gender are dynamic and context-specific and present in all domains of social life: in families, communities, the state, private companies, and modern development organizations (Wong et al. 2019; Badstue et al. 2020).

gaining *power within*—but also key to women jointly organizing and engaging in collective action to challenge power hierarchies—women’s *power with* (Batiwala 1993, 2007; Cornwall and Edwards 2014; van Eerdewijk et al. 2017). We come back to collective organizing below.

The different chapters highlight different ways of going beyond the individual and the material; together, they illustrate and indeed underscore that an answer to the core question of the book requires a comprehensive conceptualization of gender equality and women’s empowerment. Women’s empowerment and gender equality occur when shifts happen across different levels (individual, relational, and systemic), and when they encompass both material and immaterial, and formal and informal, dimensions.

ON BRINGING “BIGGER PICTURE” TRENDS INTO FOCUS

The comprehensiveness of the conceptual frameworks pertains not only to the conceptualization of empowerment and gender equality but also to the extent to which the bigger picture comes into view and is interrogated. The chapters point to the commercialization of agriculture (of both large-scale agriculture and smallholder farming), climate change, migration, and conflict and insecurity as larger and fundamental structural processes that affect women and men’s lives, and shape processes of gender equality and women’s empowerment. These trends, and in particular commercialization and privatization, are manifestations of *neoliberal*⁴⁸ logics that have come to dominate economic trends and public policies. In this book, several chapters use the term “neoliberal,” for example when discussing the limits of value chains for advancing gender equality (Chapter 4) or in lamenting the development of natural resources thinking (Chapter 6). Neoliberal logics manifest themselves in the context of “markets” but also in relation to challenges to measuring women’s empowerment (Chapter 9) and in laying out the limits of individual and instrumental approaches to make the case for GTAs (Chapter 10).

In the seed sector, *privatization* poses challenges to gender equality, as most formal seed systems—private and public—fall short in reaching women smallholder users and producers, let alone meeting their needs and preferences.

48 “Neoliberalism” is a term used to refer to “a macroeconomic doctrine [... that includes] a valorization of the private enterprise and suspicion of the state, along with what is sometimes called ‘free-market fetishism’ (Ferguson 2009, 170). It is also used to refer to “a regime of policies and practices associated with or claiming fealty” to this doctrine, which in practice have come down to “loss of public services, and a general deterioration of quality of life for the poor and working class” (ibid., 170). In addition, “neoliberalism” is used to describe “the deployment of new, market-based techniques of government within the terrain of the state itself”, with new public management techniques applied so that “core functions of the state [...] are ‘run like a business’” (ibid., 170–171; Eyben 2013).

Promising pathways for women's empowerment emerge when women are engaged as seed producers, although gender inequities in the market affect these pathways and outcomes (Chapter 3). The observed finding of simultaneous empowering and disempowering effects surfaces prominently in the context of *commercialization*. Whereas commercialization opens up formal employment or income generation opportunities for women in commercial and smallholder agriculture, the terms under which women participate in value chains or agricultural markets can be biased and gender-unequal. Market logic and inequalities constrain women's empowerment gains in income, professional confidence, or control over productive assets; examples of these constraints include insecure and temporary contracts, gender wage gaps, poor working conditions, and gender segregation of tasks. These constraints hamper the empowering effects of income earning on, for instance, women's bargaining power in the household and in value chains/markets. Both Chapter 4 (on value chains) and Chapter 7 (on the feminization of agriculture) further conclude that the impacts of such trends—commercialization and privatization—are affected by, and contingent on, existing gender relations, inequalities, and patriarchal structures. In addition, empowerment benefits gained through women's participation in value chains or commercial smallholder agriculture do not necessarily mean that these biased market and societal inequalities are being challenged and addressed.

An important driver of rural transformation is *climate change*, and it has both direct effects on agricultural productivity, livelihoods, and natural resources and indirect effects that occur as a result of adaptation responses. Climate change has different impacts on women and men, and can alter gender relations. Climate change adaptation and mitigation responses, in turn, also affect gender inequalities and women's empowerment. *Migration* is a third trend, and has implications for both agricultural and environmental development, and women's empowerment and gender equality. Migration patterns are of particular significance when economic transformations and crises, combined with declining agricultural productivity and landholding sizes, translate into the out-migration of men and young people. Such out-migration directly affects labor patterns in agriculture, and may or may not be accompanied by changes in control over assets and women's say in household and farming decisions. Trends of women being left behind in rural areas and agriculture, with men moving to cities to earn a living, raise questions as to whether agriculture as a sector is actually empowering at all. Finally, *conflict and insecurity* are important drivers of rural transformation and are likely to disrupt the

functioning of markets, shift labor patterns, constrain women's mobility and affect their safety, and lead to (gendered) migration. Research on conflict and insecurity in relation to rural transformation and gender (in)equality has been limited and merits more consideration.

These “bigger picture” trends and shifts, and their negative and undermining effects on gender equality and women's empowerment, raise critical questions as to how to interpret specific positive and empowering improvements in women's employment, income, or technology adoption, given that they are at the same time accompanied by declines in resilience and increases in wage or asset gaps. They also raise questions as to what “women's empowerment” means in the context of commercial markets that are driven by neo-liberal logic, including the extent to which further incorporation of women into these labor markets is expected. Is it possible to challenge and address the embedded power inequalities and imbalances? It is clear that individual empowerment gains alone are insufficient to effectively challenge the broader inequalities that constrain women's choices and lives and are exposed when we look also at “bigger picture” trends.

ON INEQUALITIES AND INTENTIONAL APPROACHES

The final conceptual thread that merits explicit attention here highlights the importance of recognizing gender as a social relation, thus embedded in power relations and inequalities. To be able to make sense of whether agricultural and environmental research and interventions contribute to gender equality and women's empowerment, it is essential to explicitly consider and address power and inequalities. Agricultural and environmental research and interventions occur in a context that is characterized by structural constraints, power imbalances, and the disempowerment of women. Whether, when, and how they successfully contribute to gender equality and empowerment outcomes is contingent on *pre-existing* inequalities, based on gender and its intersections with other social markers, in the household, the community, and the economic and political domains. This is further shaped by rural transformations that in themselves entail power shifts across many levels, and that interact with efforts to advance women's empowerment and gender equality. In this dialectical interplay and complex context, research and development interventions can either exacerbate inequalities and contribute to disempowerment or have positive empowering effects. Because the desired gendered effects and empowerment outcomes of agricultural and environmental research and interventions do not happen in a vacuum, approaches

and interventions need to be *intentional* in recognizing, and then overcoming, prevailing imbalances (see also van Eerdewijk et al. 2017).

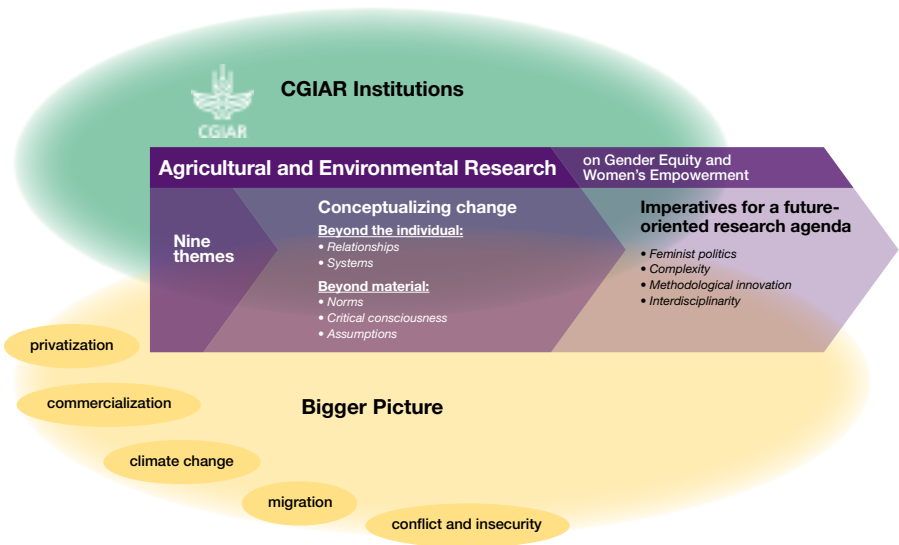
From the chapters, two approaches that engage intentionally with power inequalities and dynamics stand out: gender transformative approaches (GTAs) and women's collective action and organizing. Both are proposed as necessary and effective approaches to promote women's empowerment and gender equality in agricultural and natural resource management. GTAs target gender norms as underlying structural barriers to women's empowerment and social change. With this focus on the immaterial and systemic, GTAs explicitly seek to bring about more sustainable and lasting shifts in women's agency and in gender relations, including positive changes in women's decision-making, control over assets, and the division of productive and reproductive labor between women and men. Because gender norms are collective held beliefs and values that transpire in dominant masculine behavior, GTAs not only address attitudes and beliefs but also actively engage with men and masculinities. By focusing on underlying barriers that are limiting women's expression of agency, GTAs challenge watered-down versions of empowerment. Further, their often-participatory tools and methods promote women's—and men's for that matter—reflection and transformative learning, which can strengthen their critical consciousness, “power within,” and agency.

Women's organizing and collective action feature in interventions that contribute to women's empowerment in, for instance, seed systems, climate change adaptation, or NSAPs. Women's group-based programming, combined with approaches that engage with masculinities and exclusionary norms, has been a key factor in the realization of empowerment outcomes in NSAPs. In climate change adaptation, strategies that promote women's organizations and groups lead to empowerment outcomes, and in particular strengthen women's voice, shift their sense of self, and contribute to overcoming patriarchal gender norms. The significance of women's organizing and collective action for promoting empowerment underlines the importance of women's agency and voice—rather than a narrow concern with individual choice—so that women can gain control over their lives and futures (see also van Eerdewijk et al. 2017). However, not all interventions promoting women's organizing activate this potential, and some risk “using” women's groups in an instrumental way to facilitate access to resources and services. Moreover, the inclusive character of collective action groups is a key concern: not addressing inequalities between women in women-only groups can lead to the exclusion

of poorer, less educated, and marginalized women, or to them benefitting less (Meinzen-Dick et al. 2014b). It is possible to leverage the transformative potential of these strategies only when they are recognized and employed as feminist strategies for change that challenge and overcome power imbalances. As with GTAs, such collective organizing approaches must further engage with macroeconomic dimensions of power shifts and transformation processes, including the disempowering effects of climate change, privatization, and commercialization.

To conclude, we return to and elaborate a figure from earlier in the chapter. Figure 1.6 shows the conceptual threads on gender equality and women’s empowerment that emerge out of the gender research in CGIAR, and it shows that the bigger picture trends are (to be) part and parcel of that research. The Figure also seeks to capture that gender research and the emerging insights and threads are, in turn, part of and shaped by, not only the larger research environment, but also these “bigger picture” trends like privatization and migration. Against that background of influences, the conceptual threads emerging from the nine thematic chapters are translated into imperatives that frame a future-oriented research agenda, which is presented in the next and final section of this chapter.

FIGURE 1.6 Situating the content of this book



Toward a next-generation gender research agenda

Here we build on the gaps and priorities outlined in the thematic chapters, and set the course for a forward-looking gender research agenda by foregrounding “meta-level” gender research questions that cut across the agricultural and environmental domains. With those research questions in mind, we turn our attention to how to advance this agenda, by articulating imperatives for effective and transformative gender research. We then point to the institutional implications of embracing this research agenda and the imperatives, and call for addressing lingering institutional constraints that persist in hindering progress. We close the chapter with some final observations to further support a next generation of gender equality in agricultural and environmental research.

META-LEVEL GENDER RESEARCH QUESTIONS

Now is the time to be bold and transformative in articulating a next generation of gender research, and to advance and do justice to the fascinating and revealing gender work undertaken since the 1970s. This foundation, coupled with the firm delineation of gender equality as an impact area, can act as a springboard for CGIAR to lead in norm-busting, path-breaking transformative gender research in agricultural and environmental development. Core to a next-generation gender research agenda is a sharper focus on transformative change. This entails further engagement with both the relational and the systemic levels of gender equality and women’s empowerment, as well as the ideational, immaterial, and informal dimensions. Another critical element is to move beyond pilot or project-level analysis to understand gender equality and women’s empowerment at scale. This speaks to the tough-to-crack relationship between context specificities and, more generalizable conclusions and broader trends. Three sets of research questions that follow start exploring these less explored elements.

Gender research is context-specific, and this context specificity remains critical to understanding local social and gender dynamics, including gender relations, social norms, and power structures. To advance the gender research agenda and enhance the transferability of evidence, we need to develop conceptual frameworks and shared methods that can be implemented across different contexts but that at the same time allow for local contextualization of the learning. It will also be necessary to unpack the relevance of conclusions beyond specific contexts, and the variability between and within different contexts. The mixed evidence emerging from the rich, often case-study based

existing body of knowledge calls for research designs and analysis that move **beyond specific settings**, and advance insights into how gender equality and empowerment outcomes vary by context and for different groups of women and men (e.g., by age, socioeconomic status, and other social categories) within the same contexts. Leading research questions that merit further exploration include the following:

- Under what conditions do agricultural and environmental programs and policies have (dis)empowering outcomes?
- How are patterns of empowerment (or disempowerment) outcomes related to specific agricultural and environmental contexts?
- How are these (dis)empowerment outcomes and processes experienced by different groups of women (and men)?

Answers to this set of questions will lead to sharper articulations of the type of change required and will inform interventions to advance gender equality and women's empowerment through agricultural and environmental initiatives.

A second set of research questions seeks to relate what is happening in specific sub-systems—like a value chain or seed system, in nutrition interventions, or related to the governance of natural resources—to the dynamics of **broader rural transformations** within which women and men, their households, and communities live.

- Which broader trends—within and beyond agricultural and environmental domains—affect gender equality and women's empowerment most significantly, and in what ways?
- Specifically, how do these broader rural transformations—economic, institutional, and environmental—enhance or narrow down the options, outcomes, and resilience of women and men?
- Which entry points can harness the potential for positive gender equality and women's empowerment outcomes within these broader rural transformations?
- How can adaptation to (or mechanisms used to cope with) these broader rural transformations sustainably contribute to women's empowerment and gender equality?

Research on how broader processes of rural transformation interlock to produce and reinforce disadvantage is key, as is reflection on how to harness

the potential that these transformations may unlock. Interestingly, and perhaps unsurprisingly, “analysis of rural transformations and their gender implications” was identified as a comparative advantage for CGIAR gender work (Baden et al. 2017, 27). More evidence to identify the conditions under which rural transformations increase gender equality is needed, particularly where agrarian change is unfolding in conflict and post-conflict situations or where migration is a factor. This prominent set of questions is about addressing the systemic inequalities that constrain progress on gender equality—looking to the systemic level for insights into transformative change. They connect individual, relational, and systemic change and look at the relationship between specific contexts and more systemic change—and in particular push for future research to explicit position itself in and interrogate macro-level trends of rural transformation.

The third set of questions is about **intentional approaches** to gender equality and women’s empowerment, and the challenges involved in scaling them. Building on the premises above, intentional approaches should be explicit in how they offset both the negative effects of broader rural transformations (as well as climate change and other macro-processes) and the potential disempowering effects of interventions and research themselves. This combines comprehensive insight into existing power inequalities with an explicit articulation of gender equality and women’s empowerment as core objectives in their own right. A body of work has been developing over the past 10 years within CGIAR and more broadly on gender transformative approaches (see Chapter 10). Work and research on collective action has also been present and evolving across the CGIAR for many years now. More understanding is critical on how approaches that explicitly seek to address systemic inequalities fare (and work).

- How does gender transformative change happen in different contexts?
- How/when can interventions support processes of gender transformative change?
- How to activate the transformative potential of collective action to strengthen women’s voice and agency and contribute to overcoming patriarchal gender norms?
- How to address inequalities between women in women-only groups and challenge and overcome power imbalances?
- How can GTAs and collective action challenge systemic gender inequalities and reverse the negative effects of broader trends?

- (How) can inclusive, context-specific, and localized approaches interrelate with more generic “broad-brush” approaches generally necessary for scaling-up, without losing their critical edge and transformative potential?

These sets of meta-level questions offer direction in the move toward a robust next-generation gender research agenda in the agricultural and environmental spheres. Such a research agenda is ambitious: it must meet the expectations of the women and men it is meant to serve, of the dedicated gender researchers working in agricultural and environmental domains within CGIAR and beyond, and of the partners and donors who provide resources. To be impactful, it must be grounded in sincere and profound institutional commitment, including the introspection and self-reflection called for by GTAs.

IMPERATIVES FOR GENDER RESEARCH IN THE AGRICULTURAL AND ENVIRONMENTAL DOMAINS

In consciously “flipping the frame” and positioning women’s empowerment and gender equality at the center of agricultural and environmental research and development, this book sharpens analysis to focus on achieving meaningful transformative and empowering change. Reframing inevitably exposes the constraints of prevailing paradigms and approaches. Two cross-cutting imperatives for further research efforts crystallize.

Embrace complexity and feminist politics

Gender relations are complex and messy: “Conflicts of interest between men and women are unlike other conflicts, such as class conflicts. A worker and a capitalist do not typically live together under the same roof, sharing concerns and experiences and acting jointly. This aspect of ‘togetherness’ gives the gender conflict some very special characteristics” (Sen 1990, 147). Recognition of the complexities and specificities of gender relations in agriculture and in resource governance demands that researchers and their institutes boldly (re-)embrace a feminist research agenda. Adopting empowerment and equality as primary topics of inquiry is critical, as is the assessment of related outcomes in their own right, not merely as a means to an end. This may include more attention for critical consciousness and women’s collective action; and a focus on changes in norms and values and in relationships that are often less visible, less tangible, and thus more difficult to measure. Approaches and interventions that address men and masculinities are an integral part of a feminist agenda (Cole et al. 2015; Farnworth et al. 2020)—for example, how to engage with men and power-holders to overcome resistance to gender equality at household, community and organizational/institutional level(s).

The growing hunger for critical approaches that push the boundaries is palpable, yet neither new nor easy: “feminists and some gender advocates have, since the 1970s, fought to retain a transformative agenda” (Okali 2012, 3). To be effective, agricultural and environmental gender research must not shy away from a feminist, transformative agenda that interrogates and confronts power and politics—whether between women and men, within households, communities, and countries, or between different groups in a community. Moving forward, CGIAR gender researchers will do well to engage with feminist research beyond their own agricultural and environmental domains to stay conceptually sharp and effective. Engagements in these broader feminist debates—in particular engaging with feminist thought leaders from the Global South—will be critical to making meaningful, fresh, and up-to-date contributions that advance the field. Exciting, cutting-edge work from Afro-feminists is flourishing, including work exploring decolonization with a feminist lens (e.g., Tamale 2020) as well as an important and innovative “reading of patriarchy... well beyond the exploitation of women”⁴⁹ emerging from feminist scholars and activists worldwide. Keeping abreast of such developments, engaging with them, and positioning CGIAR gender research vis-à-vis other feminist research are all critical.

Catalyze methodological innovation and interdisciplinarity

Building a transformative agenda entails making choices on methods and methodologies. The choice and use of quantitative and qualitative methods and measures affect the knowledge generated; they also reflect which voices and perspectives are recognized as valid and knowledgeable (Newton et al. 2019). Making choices on methods and methodologies includes consideration of the paradigms and approaches that emerge, gain space and recognition, and often dominate empirical research on specific themes. Methodological and epistemological preferences and biases reveal the power dynamics at play and the politics of measurement—a point featuring prominently in the thematic chapters calling for greater recognition of qualitative research and, in particular,

49 Renowned development anthropologist, Arturo Escobar commented on this in 2018, in reference to the work of Claudia von Werlhof, Maria Mies, Veronica Bennholdt-Thomsen, Silvia Federici, Barbara Duden, and Frédérique Apffel-Marglin. He noted that related perspectives were found in the work of Vandana Shiva, Carolyn Merchant, Australian ecofeminists Ariel Salleh and Val Plumwood, and political ecologist Wendy Harcourt, and that some of these approaches increasingly dovetailed with Latin American decolonial and autonomous feminists like María Lugones, Rita Segato, Raquel Gutiérrez Aguilar, Silvia Rivera Cusicanqui, Betty Ruth Lozano, Sylvia Marcos, Aura Cumes, Julieta Paredes, Aída Hernández, Yuderkis Espinosa, Diana Gómez, Karina Ochoa, Brenny Mendoza, Rosalba Icaza, Karina Bidasaca, and Ochyo Curiel.

of participatory and action learning methodologies (see also Cole et al. 2014; Morgan 2014; Nazneen, Darkwah, Sultan 2014). Many chapters underline and reinforce the need for more mixed-methods research, to take advantage of the strengths of both qualitative and quantitative methods. Action-oriented, participatory methods with multiple actors (such as researchers, diverse local groups, non-governmental organizations, local authorities, government, etc.) may contribute to understanding and addressing the underlying causes of women's disempowerment and gender inequalities, especially to unearth structural barriers (e.g., Newton et al. 2019). An imperative for researchers is to widen the analytical frames, so as to explore non-conventional domains, question common assumptions, and be open to different kinds of evidence on how gender relations are changing. Prioritizing interdisciplinarity, addressing epistemological biases, and promoting the use of mixed methods are integral to invigorating a new wave of methodological innovation.

These two imperatives challenge barriers and biases that hamper or undermine further and meaningful integration of women's empowerment and gender equality into AR4D. They provide a foundational positioning to the robust and innovative directions of a gender research agenda that this moment demands: one with an intentional and explicit focus on gender equality and empowerment. The feminist politics and methodological innovation called for also reveal institutional barriers that constrain (but can also enable) that transformative and robust gender research agenda. Thus, there is a need for institutional change in AR4D, including in how research institutes function, to support and promote this forward-looking research agenda.

INSTITUTIONAL IMPLICATIONS FOR CGIAR: "WALKING THE TALK"

Any serious consideration of the systemic levels involved in gender equality and women's empowerment inevitably puts the spotlight on agricultural and environmental research itself, including the CGIAR Centers and Research Programs where research is undertaken. The final, tricky and perhaps sensitive, though nonetheless critical, aspect of a next generation of CGIAR gender research is that of tackling organizational and institutional change within research institutions themselves. Analysis of the developments in gender research from a feminist perspective shows that, despite significant progress since the 1980s, the challenges to institutionalizing gender research in CGIAR are striking. Gender researchers have struggled to carve out space and have their contributions valued and recognized. Indeed, "... feminist advocates have changed their approaches, but institutional change continues

to be elusive (except in a few corners)” (Mukhopadhyay 2016, 77). The many reviews and research and institutional initiatives over time illustrate that ground has been lost and gained. Understanding the dynamics, exposing the mechanisms behind these institutional constraints and trying out strategies to addressing them is a first step to prevent a repetition of these cycles.

One recurring bottleneck relates to the slow and uneven progress vis-à-vis interdisciplinarity. The practice and uptake of gender research in agricultural and environmental fields has been affected by paradigmatic biases of the agricultural and environmental disciplines and their particular understandings of what constitutes “good science.” Resistance to gender and feminist analyses—which can be seen in how dominant notions of what constitutes “science” fail to recognize and allow space for feminist approaches, frameworks, data, and insights, and also gender researchers and specialists—undermines the huge potential for stronger synergies (do Mar Pereira 2012; van Eerdewijk and Davids 2014; van Eerdewijk 2016). Indeed, there is a chasm to bridge between feminist analysis and a critical definition of the “gender problem,” and the way in which development policy, practice, and research redefine and renegotiate it (Okali 2012, 12). Interdisciplinarity, and addressing disciplinary biases and epistemological differences, is part and parcel of the kinds of institutional change required to further a dynamic, future-oriented research agenda. The compelling example of the iterative developments between natural resources and feminist discourse over the past 30 years or more (discussed in Chapter 6) provides inspiration and optimism as to what is possible on this front.

As CGIAR institutes and portfolios progress towards One CGIAR, with gender equality firmly on the agenda as a priority area, and under the direction of talented gender researchers and the new GENDER Platform, institutional support is needed and organizational change is both inevitable and desirable. CGIAR leadership has an important role to play in setting the tone and in making this happen. Some specific actions are to:

- Ensure strong consultation with gender scientists to thoroughly infuse gender analysis across the One CGIAR portfolio from the start. This will contribute substantially to the quality and value of that work as well as to the effective design of policies and programs through the impact evaluations that will follow: make gender a “spice” permeating all CGIAR work, not a “topping” that can be removed!⁵⁰

50 With thanks to Agnes Quisumbing for the analogy.

- Use the Reach-Benefit-Empower-Transform framework to better articulate the gender-related objectives, outcomes and change processes of a project or policy and to better integrate gender equality and women's empowerment.
- Generously resource strategic gender research to advance gender equality through agriculture and environmental research and development where gender research is the “main ingredient”: gender research must be well-embedded in core funding streams.
- Investigate higher-level gender research questions that cut across specific agricultural or environmental domains through comparative research and by synthesizing transferable and robust evidence and broader lessons. Gender research cannot be piecemeal: it must both speak to other bodies of gender research as well as to broader agricultural and environmental work.
- Staff permanent, strong, senior gender scientists providing ample resourcing and clear mandates, including that of mentoring junior researchers and supporting them in navigating both the body of work, as well as complex organizational contexts.
- Ensure effective accountability and performance monitoring mechanisms are in place.
- Confirm commitment to gender equality research from CGIAR leadership at all levels (e.g., Centers, platforms, research programs, governance bodies), and coordination on gender research throughout the governance system.
- Facilitate internal reflection on norms and practices as to how research is prioritized, designed, and organized vis a vis gender knowledge, including prevailing beliefs as to what constitutes good science.

Fostering and maintaining an internal culture of gender equality is a foundation for gender transformative change: in this case, we are referring to organizational and institutional change that prioritizes gender research. Addressing the outstanding institutional obstacles—including politics, norms, and practices—is critical for CGIAR if gender equality is truly a priority moving forward: the call is to lead by example, by “walking the talk.”

Concluding reflections

Many aspects of this emerging research agenda are not unique to agricultural and environmental research and development: they resonate with broader feminist research. In the broader international development arena, the call to reclaim the transformative potential of gender strategies has been pertinent for over a decade, and has been accompanied by critical concerns about the technocratization and depoliticization of core gender and feminist concepts, practices, and strategies. The conceptual positioning of this book gains weight against this backdrop of lessons, critiques, and innovative debates that highlight the institutional and organizational dimensions and complexities of “getting institutions right for women and development,” and the politics at play in feminist knowledge transfer (e.g. Goetz 1998; Cornwall, Harrison, Whitehead 2007a, 2007b; Mukhopadhyay 2007; Chant and Sweetman 2012; van Eerdewijk and Davids 2014; Bustelo, Ferguson, Forest 2016; Davids and van Eerdewijk 2016; van Eerdewijk 2016; Harcourt 2016). The threads among the chapters in this book strongly align with existing and recurring feminist and transformative critiques. In the directions for future research, we are taking them to heart to advance them within agricultural and environmental research for development. We hope that this book will not only inspire and provide clear directions for a next generation of CGIAR gender research, but also play a role in catalyzing the institutional change required for sustained advancement toward gender equality. The time is ripe: the question and challenge for One CGIAR leadership and its research portfolio, is whether and how to embrace this golden opportunity.

Acknowledgments

The authors are extraordinarily grateful for the insightful and detailed feedback on the chapter provided by four external reviewers. The substantive input was challenging and thought-provoking. Further, we thank Frank Place, PIM Director, who both coordinated the double-blind review process and provided very practical and strategic feedback. Thanks are owed to Laura Avila who did the leg work in analyzing the evidence across all book chapters (results found in Annex 3). And, finally, profound gratitude goes to the lead and co-authors of the book chapters, who provided input and critique on the chapter, strengthening and refining the formulation of meta-questions for future research and key messages for CGIAR leadership.

Annex 1: CGIAR background

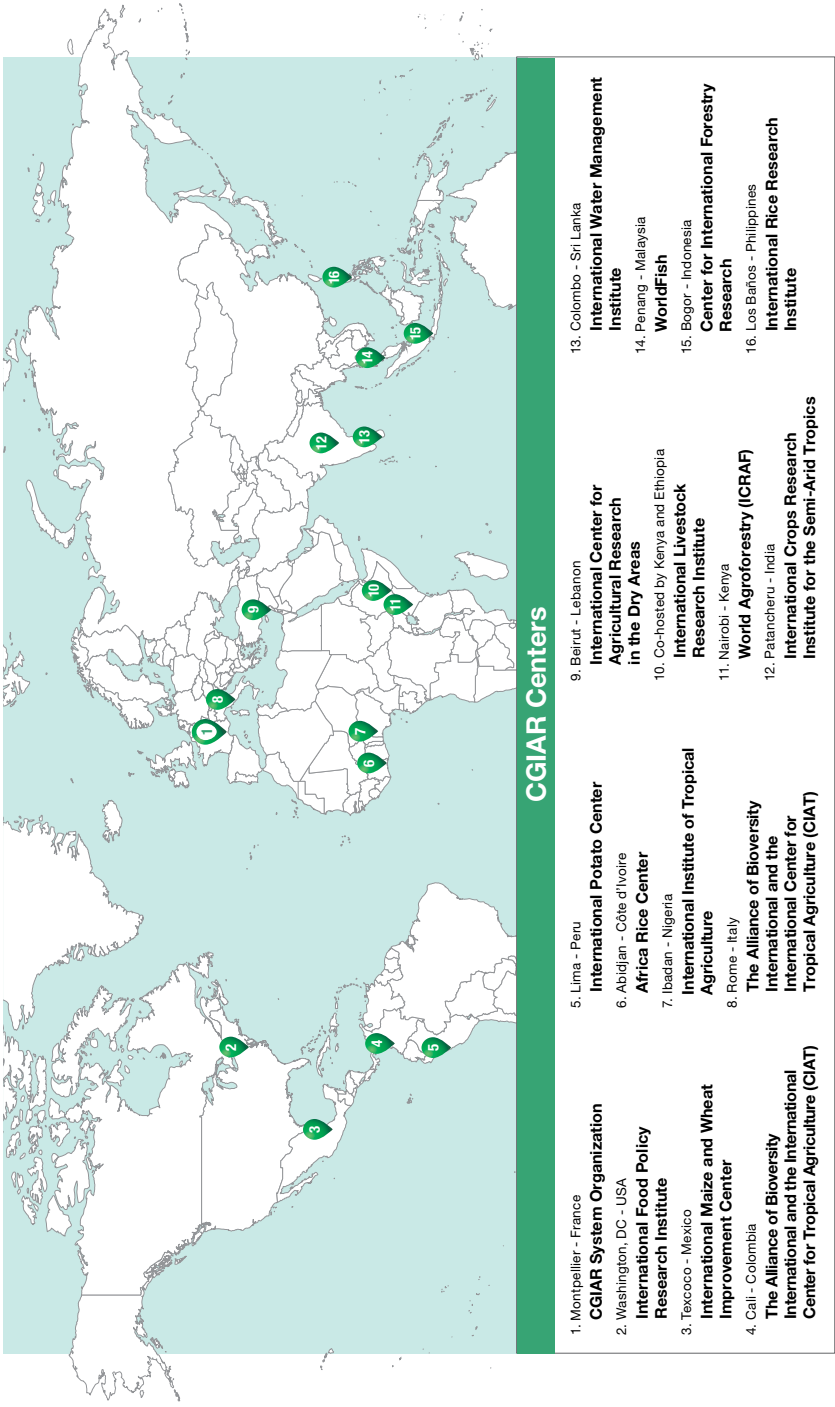
CGIAR is a global research partnership comprising 15 agricultural and environmental research institutes internationally. It was founded in 1971 as a worldwide consultative group and in 2010 repositioned itself as a Consortium. The International Rice Research Institute (IRRI) and the International Maize and Wheat Improvement Center (CIMMYT) were among the first members of the CGIAR network, which then had the goal, responding to Green Revolution demands, “*to end world hunger by increasing food production*” (CGIAR 2015, 4). The CGIAR system expanded throughout the 1970s and 1980s, broadening in terms of both the range of commodities and agro-ecological regions addressed, and its objectives, which came to include “*poverty eradication and protection of the environment*” (ibid.). The 1990s saw the addition of Centers devoted to agroforestry, forestry, and fisheries. Today, the mandate of CGIAR is to produce international public goods to support a food-secure future, “*dedicated to reducing poverty, enhancing food and nutrition security, and improving natural resources.*”⁵¹ The System Management Office, based in Montpellier, France, is the voice of the CGIAR network as a whole, representing all 15 Centers and all 12 CGIAR Research Programs.

Cross-Center collaboration has been fostered through two phases of CRPs, on agri-food systems and global integrating themes, running 2011–2016 and 2017–2021, respectively. These CRPs have a lead Center and contributing Centers, as well as external partners. Agri-food systems CRPs cover wheat; maize; rice; livestock; fish; forests, trees, and agroforestry; grain legumes and dryland cereals; and roots, tubers, and bananas. The global integrating CRPs are on topics that are cross-cutting: agriculture for nutrition and health; climate change, agriculture, and food security; policies, institutions, and markets; and water, land, and ecosystems.

Gender researchers and social scientists have increasingly been a part of CGIAR scientific staff teams. Growing social science contributions within CGIAR began in 1974, with the hiring of recently graduated PhDs through two-year Rockefeller Foundation fellowships—a program that continued until 2001 (Conway et al. 2002; van der Burg 2019). In the 1980s, more headway was made toward gender research, and anthropologists became a part of the research staff at CGIAR Centers (van der Burg 2018). In 2014 and 2015, two cohorts of gender post-doctoral fellows were hired to bolster gender research in phase 1 of the CRPs. Each Center now has a gender focal point and, in phase 2 of the CRPs, each of the 12 CRPs has a dedicated gender research coordinator and

51 <https://www.cgiar.org/how-we-work/strategy/>

Location of CGIAR Centers worldwide



Source: <https://www.cgiar.org/research/research-centers/>

a team comprising gender researchers across different Centers internationally working on the domain of that Research Program.

The Gender and Agriculture Research Network (2012–2016) supported concerted mobilization of CGIAR gender researchers system-wide. The Network focused on institutional reform, including supporting gender teams in developing gender strategies at Research Program and Center levels that would meet the strategy laid out system-wide in 2011. Other points of discussion among gender researchers in the Network were around the integration of gender into phase 2 CRP proposals, gender budgeting of 10 percent system-wide,⁵² and making gender research more visible. The set-up of the network was a Systems Office initiative, with the International Center for Tropical Agriculture (CIAT) coordinating communications (including regular webinars, a website, annual meetings, and so on).

Building on the work of the Network, as part of phase 2 of the CRPs, the CGIAR Collaborative Platform for Gender Research⁵³ (2017–2019) came into operation. The Platform focus was on gender research and, as part of that focus, it convened the first CGIAR-wide gender research conference in 2017 at KIT Royal Tropical Institute, in Amsterdam, the Netherlands, and another in 2018 at the IRRI campus in Addis Ababa, Ethiopia. By 2019, a jointly convened scientific conference with the Australian Center for International Agricultural Research (ACIAR) and the University of Canberra was held in Canberra, Australia. This third scientific conference opened up participation to a much broader network of gender researchers and practitioners in agricultural and environmental domains.

As of January 2020, the latest iteration of a system-wide gender entity came into being—namely, the CGIAR GENDER—Generating Evidence and New Directions for Equitable Results—Platform.⁵⁴ This is housed at the International Livestock Research Institute (ILRI) in Nairobi.

52 Up to 14 percent of program budgets (CGIAR Consortium 2012; Russell et al. 2015; CGIAR-IEA 2017; comp. Karlsson and Russell 2017, all cited in van der Burg 2019).

53 The Platform was housed within the CRP on Policies, Institutions, and Markets (PIM), coordinated by KIT Royal Tropical Institute, and had an elected Advisory Committee representing gender researchers from other Research Programs and Centers. Regular communications between Center and CRP gender coordinators were facilitated through virtual meetings as well as an annual face-to-face meeting during the scientific conferences. For more on the achievements of the CGIAR Collaborative Platform for Gender Research, see https://gender.cgiar.org/wp-content/uploads/2020/01/SC_KIT_CGIAR_Ewen_4pager_11.pdf

54 See CGIAR GENDER Platform website for ongoing developments: <https://gender.cgiar.org/>

Annex 2: Timeline of key CGIAR gender developments

TABLE A2.1 Key gender developments in CGIAR (and beyond)

	1970s	1980s	1990s	2000s	2010-2014	2015-2019	2020
Notable CGIAR gender events	<p>Periodic mentions of women, no analysis</p> <p>Late 1960s-early 1970s Farming Systems Research – greater focus on economic and social issues and smallholder farming</p>	<p>1983 first conference on women in rice farming systems (IRRI)</p> <p>1985 Inter-Center Seminar (ISNAR) on Women and Agricultural technology: relevance for research</p> <p>1985 Bellagio conference on user perspectives</p>	<p>1999 Participatory Research for Natural Resource Management: Continuing to Learn Together workshop held at the Natural Resources Institute (NRI), Chatham, UK</p>	<p>2001-ongoing CGIAR-wide program on Collective Action and Property Rights (CAPRI)</p> <p>2009-2013 GAAP 1: Gender, Agriculture and Assets Project (phase 1)</p>	<p>2014 Annual Gender meeting at CIAT, Cali, Colombia</p> <p>2016 Gender, Breeding and Genomics meeting (Nairobi)</p> <p>2017 Innovation workshop on Gender and Breeding (Nairobi)</p>	<p>2015 Annual Gender meeting at IRRI in Los Banos, Philippines</p> <p>2016 Annual Gender meeting at CIAT, Cali, Colombia</p> <p>2017 First annual CGIAR-wide gender scientific conference at KIT Royal Tropical Institute, Amsterdam</p> <p>2018 Second annual CGIAR-wide gender scientific conference at ILRI in, Addis Ababa, Ethiopia</p> <p>2019 Third annual CGIAR-wide gender scientific conference and first one that is jointly convened with non-CGIAR partners (with ACIAR and University of Canberra); Seeds of Change in Canberra, Australia</p>	
CGIAR gender research initiatives		<p>IFPRI Commercialization of Agriculture Studies</p>	<p>1992 Household dynamics (IFPRI)</p> <p>1996-2003 IFPRI Strengthening Development Policy through Gender and Intra-Household Research</p> <p>1996-2011 Participatory Research and Gender Analysis (PRGA) Program based at CIAT, co-sponsored by CIMMYT, ICARDA and IRRI</p> <p>Women and Technology Initiative (PRGA-lead)</p> <p>IMWI prolific gender and water research</p>	<p>2001-ongoing CGIAR-wide program on Collective Action and Property Rights (CAPRI)</p> <p>2009-2013 GAAP 1: Gender, Agriculture and Assets Project (phase 1)</p>	<p>2014-2018 GEN-NOVATE Enabling Gender Equality in Agricultural and Environmental Innovation</p> <p>2016 Gender and Breeding Initiative (RTB-lead)</p> <p>WorldFish initiated research on Gender Transformative Approaches in Agriculture/Aquaculture</p> <p>2012 Women's Empowerment in Agriculture Index (WEAI) launched</p> <p>WEAI adaptations for livestock (WEI), fish (WEFI)</p>	<p>2016-ongoing GAAP2: Gender, Agriculture and Assets Project (phase 2)</p> <p>2018-2020 Gender and Big Data Platform collaboration</p> <p>Research grants via CGIAR Collaborative Platform for Gender Research on:</p> <ul style="list-style-type: none"> • 2017 gender dynamics in seed systems • 2018 feminization of agriculture • 2019 gender dynamics in value chains <p>2019 European Commission report on Gender Transformative Approaches in Agriculture (Platform lead, drawing on CGIAR experiences)</p> <p>WEAI adaptations developed: an abbreviated version (A-WEAI); for projects (pro-WEAI); and for market inclusion (pro-WEAI-MI)</p>	

continued

	1970s	1980s	1990s	2000s	2010-2014	2015-2019	2020
Gender evaluations, reviews and assessments	Mentions of women but without analysis or action	1980 First CGIAR Review 1981 Second CGIAR Review 1986 Gender-related impacts study paper (Jiggins) for the 1982-1988 CGIAR-wide assessment	1990 Assessment of WIRFS 1990-91 Gender Assessment of CGIAR (Poats) 1995 CGIAR Gender Research Inventory (Feldstein) 1998 CGIAR Gender Research Inventory (Feldstein) 1996 Annual Report	2005 Assessment of the Strengthening Development Policy through Gender and Intra-household Research (referred to as the Gender Program) (Oecle Jackson) 2008 Independent Review: Bringing together the best of science and the best of development (Elizabeth McAllister Chair) 2000 PRGA review	2010 CGIAR Gender Scoping Study by the International Center for Research on Women (Kauk et al) 2011 Assessment of Participatory Research and Gender Analysis (PRGA)	2016 CGIAR-wide Gender Evaluation (2017 report Baden et al)	
Institutional developments to support gender research		1986-1986 Women in Rice Farming Systems WIRFS Network (IRRI)	1990-1996 First CGIAR Gender Program (both gender staffing and gender research) 1999-2011 Gender and Diversity Program (staffing and workplace issues) led by ICRAF Center liasons on gender (set up by the first Gender Program in the early 1990s and inherited by PRGA in 1998)		2011 CGIAR-wide Gender Strategy 2011-2013 Gender Strategies put in place in CGIAR Research Programs and Centers 2012-2016 Gender and Agriculture Network coordinated by CIAT	2016 Gender/Inclusion an Intermediate Development Outcome in the SRF 2016 Gender strategies in phase 2 proposals 2017-2019 CGIAR Collaborative Platform for Gender Research (housed in the Policies, Institutions, and Markets Research Program -PIM) 2018 Gender representatives appointed in the CGIAR System Council 2015/2016 Gender and Breeding post-doctoral fellows (2 rounds)	2020 GENDER Platform (ILRI)
Gender and development milestones beyond CGIAR	1970 Esther Boserup book Women in Development (WID) paradigm 1975 First UN Women's conference (Mexico City) 1975 UN International Year of Women 1975-1985 UN Decade for Women 1979 CEDAW Convention on the Elimination of Discrimination Against Women	1980 UN World Conference on Women Copenhagen, Denmark 1985 UN World Conference on Women, Nairobi Kenya 1980s Women and Development (WAD) paradigm 1985 Harvard Gender Framework 1986 Gender Relations Framework	1992 UN Earth Summit, Rio de Janeiro, Brazil (Agenda 21) 1995 Fourth UN Conference on Women in Beijing 1995 Gender and Development (GAD) paradigm 1995 Gender mainstreaming begins 1999 Social Relations Framework (Kabeer) Late 1980s-1990s Ecofeminism gains momentum (Shiva 1988 and others)	2000 Millennium Development Goals (MDGs) MDG 3: "Promote Gender Equality and Empower Women" 2009 start of major agricultural development organizations' publication profiles on gender	2010-2012 Proliferation of agricultural development publications profile on gender	2015 Sustainable Development Goals (SDGs) SDG 5: "Achieve gender equality and empower all women and girls"	

Source: Adapted and further developed from van der Burg (2019).

Annex 3: Coverage of evidence⁵⁵

This book reviews evidence on different themes to take stock of the gender research agenda and craft a new one within agricultural and environmental domains. At the start of the references for each chapter, four visuals provide the reader with an impression of different aspects of the evidence. First, a map illustrates the geography of case studies in the citations, showing where the evidence for the theme in hand comes from. Second, a pie chart shows the institutional origins of the studies reviewed—the proportion from CGIAR research institutes or programs or with inputs from CGIAR researchers, and that from outside of CGIAR. Third, another pie chart shows the research methodologies used in the publications reviewed—whether qualitative, quantitative, mixed-method, methodological, or other. Fourth and finally, a timeline illustrates when the papers reviewed were published.

In this annex, we reflect on the coverage of the evidence used in the thematic chapters, on which chapter discussions and conclusions are based. We compile the data from the separate thematic chapters to provide an impression of the evidence referred to across the book as a whole.

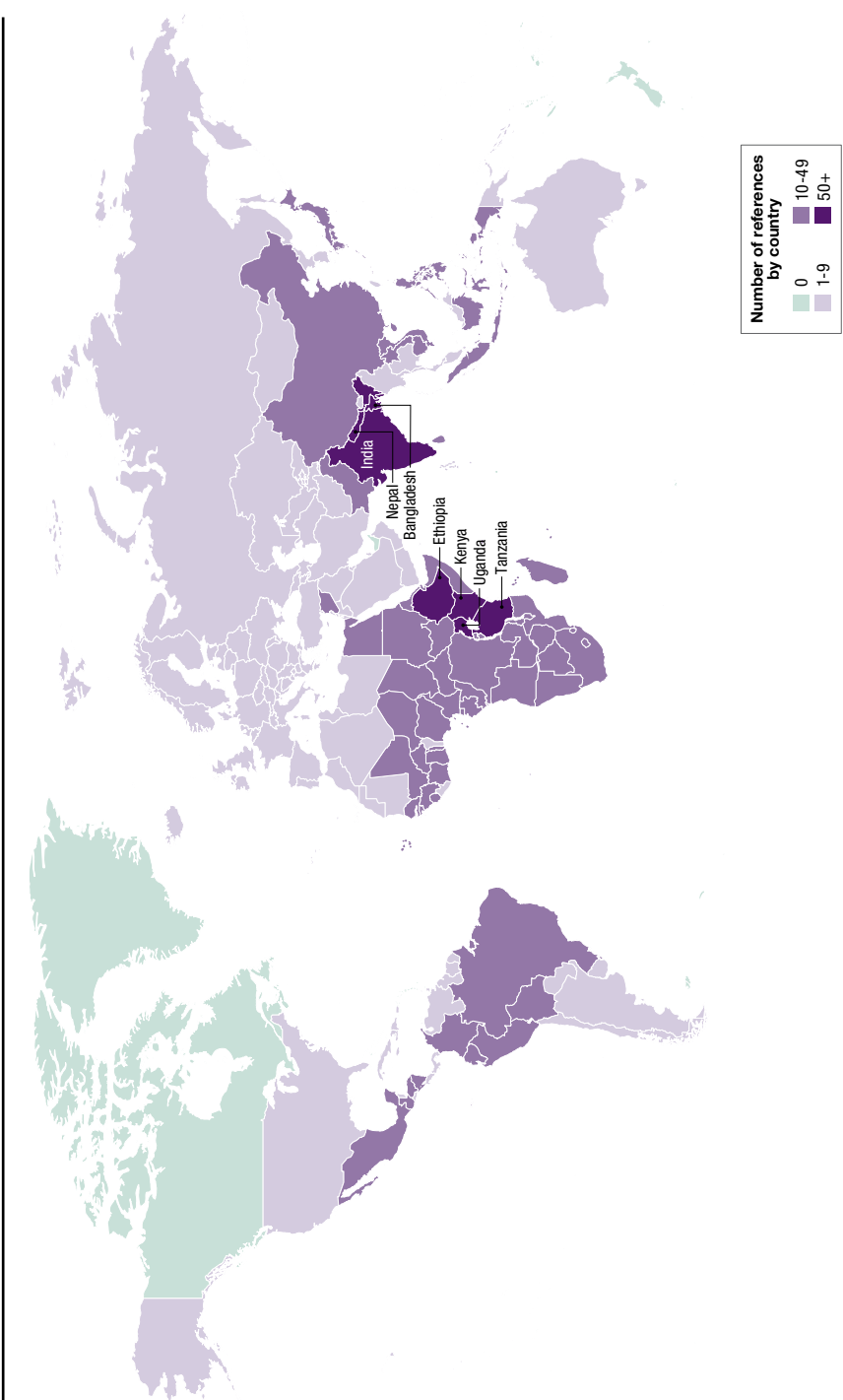
First, we look at the **geographies** covered in the references for each chapter.⁵⁶ Map A3.1 presents the compiled data for all thematic book chapters. Unsurprisingly, coverage is uneven globally, with more studies from Asia and East Africa, with several countries standing out as particularly well cited—namely, **India** (92 publications), **Bangladesh** (83), **Kenya** (69), **Uganda** (67), and **Nepal** (57).

In Asia, after India, Bangladesh, and Nepal, other highly cited countries are Indonesia (34), Viet Nam (30), Syria (22), and the Philippines (21). In Africa, after Kenya and Uganda, other highly studied geographies include Ethiopia (50), Tanzania (50), Ghana (44), Burkina Faso (37), Zambia (33), Malawi (32), Nigeria (25), and South Africa (25). Latin America has much less coverage overall, likely because of reasons related to language: the chapters are written in English, which may have resulted in Spanish language publications being cited less. It may also be explained in part by the decline in development and research funding in Latin America in recent years. That said, the most cited Latin American references are from Bolivia (18), Nicaragua (18), Peru (18), Ecuador

55 Many thanks to Laura Avila, who acted as a research assistant on this section, reviewing all book references and providing the background information needed for the visuals.

56 To determine the countries covered, the abstracts were reviewed, along with tables of contents (where applicable) and any case studies included in the publication. All countries mentioned were noted. Where a region was mentioned rather than specific countries, all countries in that region were noted.

MAP A3.1 Geographical coverage of all studies cited in thematic chapters



(16), and Guatemala (14). The geographic prevalence of studies cited may loosely correspond with either having a CGIAR Center based there⁵⁷ (e.g. Kenya, India, Ethiopia, Bangladesh) or being a priority country for CGIAR research or donor investments. It may also reflect data limitations, with more studies possible in countries where the sex-disaggregated data exists.

While useful and telling as an overview, the compiled map (Map A3.1) blurs significant **variation in geographical referencing** across the thematic chapters. For example, while India is the most cited geography overall and Kenya the third most cited, Chapter 5 (nutrition-sensitive agriculture) has only one publication referring to each. While Tanzania is well cited in most chapters, again Chapter 5 has only one publication from that country, as do Chapter 8 (feminization of agriculture) and Chapter 9 (assessing women's empowerment). Most chapters have multiple publications from Burkina Faso, but Chapter 8 has just one. Likewise, all chapters have several publications from Ethiopia, with the exception of Chapter 6 (natural resources) and Chapters 7 (climate adaptation and mitigation), which both have just one citation each. Finally, all chapters have multiple references on Ghana, with the exception of Chapter 10 (gender transformative approaches), which has just one citation. The compiled map does not capture the differences between the citing of geographies by theme, but this does come out clearly in the chapter-specific maps.

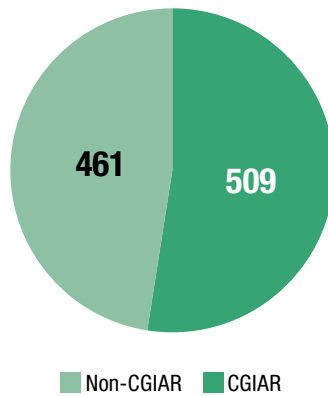
When we compare the chapter-specific maps, it becomes clear that **some themes rely heavily on evidence from specific countries**. For example, a striking 24 of the citations in Chapter 4 (value chains) are from Kenya, and 12 in Chapter 7 (climate adaptation and mitigation) are from that country. Tanzania is the most cited in Chapter 3 (seed systems), with 12 citations, in Chapter 4, with 13 citations, and in Chapter 7, with 10 citations. Uganda, Nepal, and Bangladesh are more evenly cited throughout. While all chapters cite Bangladesh, Chapter 5 (nutrition-sensitive agriculture) and Chapter 9 (assessing women's empowerment) stand out with 17 citations each. Uganda is the most cited in Chapter 4 (12 citations) and Chapter 7 (13 citations), followed by Chapter 2 (breeding), with 8 citations. Nepal is the most cited in Chapter 7 (12 citations). This makes sense as some regions are the focus of multiple studies on specific topics or are more amenable to research on a specific theme. Kenya

⁵⁷ CGIAR headquarters are based in the following southern countries: Colombia, Côte d'Ivoire, Indonesia, Kenya, Malaysia, Mexico, Nigeria, Peru, the Philippines, and Sri Lanka (see also Map A1.1 in Annex 1). The International Livestock Research Institute also has a campus in Ethiopia, as does WorldFish in Bangladesh. Given the political situation in Lebanon, staff of the International Center for Agricultural Research in the Dry Areas are dispersed internationally.

has for a long time been the location for value chain studies, for example, as the citations for Chapter 4 clearly illustrate.

Striking in comparing the chapter-specific maps is the fact that, while a region may not have abundant citations across all themes of this book, some **theme-specific geographies** emerge. For example, while less cited overall, several clusters of citations from Latin America are noteworthy, including 7 publications from Bolivia on natural resources (Chapter 6); 6 publications from Guatemala on nutrition-sensitive agriculture (Chapter 5); 5 publications from Nicaragua on each of natural resources and climate adaptation and mitigation (Chapters 6 and Chapter 7); and 6 publications from Peru on seed systems (Chapter 3). Likewise, several clusters from Africa stand out, including 4 publications from Burundi on seed systems (Chapter 3); 5 publications on climate adaptation and mitigation from Cameroon and 6 from Senegal (Chapter 7); 10 publications related to gender transformative approaches from Zambia (Chapter 10) and 6 on climate change adaptation and mitigation (Chapter 7); 6 publications from Malawi on breeding (Chapter 2), 7 on seed systems (Chapter 3), and 7 on climate change adaptation and mitigation (Chapter 7); 5 publications from Mozambique on value chains (Chapter 4); 10 publications about Nigeria on breeding (Chapter 2); and, from South Africa, 7 on each of value chains (Chapter 4) and climate change adaptation and mitigation (Chapter 7). From Asia, a notable anomaly are the 9 citations from Syria on seed systems (Chapter 3). The strong representation of some countries related to specific themes is noteworthy. In considering the evidence, this variation—the regional specificities—needs to be weighed against more generalizable trends in drawing conclusions.

A second visual in each chapter's references is a pie chart that shows the number of publications reviewed by **institutional origin**: CGIAR versus non-CGIAR. Writing teams reviewed both CGIAR research, from one or more of the 15 CGIAR Centers, and key studies carried out and/or published elsewhere. A publication was considered to be CGIAR if (a) one of the co-authors was based at a CGIAR Center at the time of publication; (b) the publication was funded by a CGIAR Center or Program; or (c) it was published by CGIAR. Figure A3.1 illustrates the institutional origins of evidence and literature reviewed in this book. A narrow majority of the publications are from CGIAR, which is logical, given the purpose of this book: to look at CGIAR gender research using a gender equality and women's empowerment lens.

FIGURE A3.1 Institutional origins (N= 970)

While Figure A3.1 illustrates the institutional origins of publications across the book as a whole, variations come out in the chapters, with some relying more on CGIAR research than others. Chapter teams were asked to begin their reviews with wide outreach across CGIAR and, as such, the visibility of CGIAR publications is not surprising and was, in fact, purposive. Literature reviews were not intended to be exhaustive but rather a (re-)examination of evidence on key CGIAR gender research themes using a gender equality and women's empowerment lens. Notably, 80 percent of the citations (71/89) in Chapter 8 (feminization of agriculture) draw on evidence generated by CGIAR, 74 percent (42/57) in Chapter 5 (nutrition-sensitive agriculture), and 70 percent (87/125) in Chapter 7 (climate change adaptation and mitigation). Chapter 2 (breeding) follows with 56 percent (43/77) of citations from CGIAR publications. The other chapters have between 35 and 48 percent. This speaks to the methodologies used for the literature reviews, the evidence available within CGIAR and externally on each theme, and the maturity of the theme—that is to say, how long it has been studied. In some domains, CGIAR emerges as a clear thought leader; for others, it is one contributor among many.

A third category considered in relation to evaluating the evidence is the **research methodology** of the studies cited. References were reviewed to determine the research methods used or the nature of the publication. The following categories were used: qualitative, quantitative, mixed-method, methodological, and "other."⁵⁸ To determine the methodology used, the abstracts,

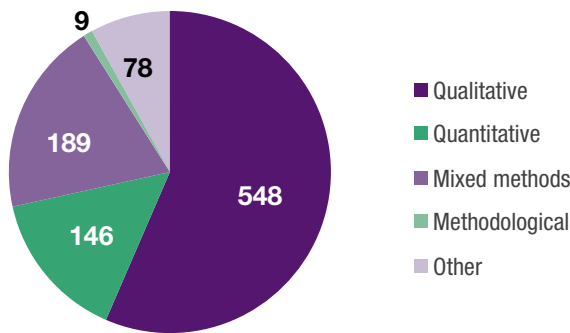
58 The category "methodological" refers to publications that deal with methodological issues or approaches. The "other" category includes guidance documents, presentations, reviews, indices, analytical frameworks, brochures, manuals, webinars, PowerPoint presentations, interviews, and documents that do not fall into the other categories distinguished.

introductions, and methodology sections were reviewed and cross-checked. As Figure A3.2 shows, for all chapters in the book, more than half of the publications (56 percent) reviewed are qualitative studies; about 15 percent are quantitative; 20 percent use mixed methods; just a handful are methodological; and less than 10 percent fall into the “other” category.

The kind of research undertaken is influenced by the research questions and gender researchers involved, as well as the budget available. What is interesting is that about 35 percent of the studies are quantitative or mixed-method (which includes both quantitative and qualitative) and 76 percent are qualitative or mixed-method. Our review shows that the gender research cited is largely qualitative.

Figure A3.2 is a compiled visual for the book as a whole; the research methodology for publications reviewed for each chapter are illustrated in a similar visual to be found at the start of the reference sections. Interesting to note is the variation across chapters. Overwhelmingly, the chapters rely on qualitative publications, as already discussed. However, there are exceptions. For example, Chapter 5 (nutrition-sensitive agriculture) and Chapter 8 (feminization of agriculture) refer more to quantitative publications than to qualitative work, with 68 and 66 percent (quantitative and mixed-method studies combined) respectively. From this light analysis, we cannot see why this would be the case, but it would be interesting to explore: are these themes more amenable to quantitative research or is there another explanation, for example the literature review methodology?

FIGURE A3.2 Number of cited studies by research methodology (N= 970)



Chapter 4 (value chains) has the highest number of mixed-method studies cited (43) and the highest proportion of mixed-method studies overall (32 percent), followed by Chapter 7 (climate adaptation and mitigation), with 29 mixed-method publications, comprising 23 percent of all mixed-method study references. Proportionally Chapter 5 (nutrition-sensitive agriculture) and Chapter 9 (feminization of agriculture) both have mixed-method studies at 26 percent, with Chapter 2 (breeding) following closely behind with 21 percent. That such a limited proportion of studies use mixed methods—at best between 21 and 32 percent—is relevant for CGIAR research because it speaks to ongoing discussions as to the value of interdisciplinary approaches and mixed methods. While gender researchers advocate for more mixed-method research, the studies available seem to be limited for most themes explored in this book. The low number of mixed-method studies may also be because CGIAR research is most often published in journals, with limited word counts and specific audiences. Accordingly, researchers may send a quantitative paper to one journal and a qualitative paper to another, thus hiding the fact that papers are part of a mixed-method study.

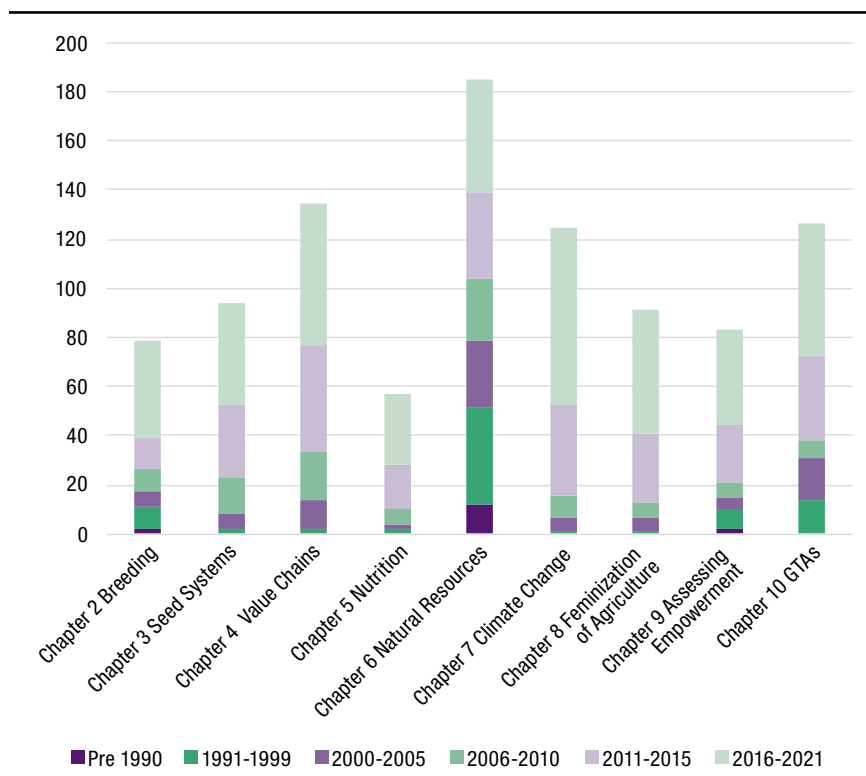
Some thematic domains may be more or less amenable to mixed-method studies. The review of the references in this book shows a lower proportion of mixed-method studies in Chapter 3 (seed systems), at 16 percent, Chapter 6 (natural resources), at 14 percent, Chapter 10 (gender transformative approaches), at 13 percent, and, perhaps most surprisingly, Chapter 9 (assessing women's empowerment), at just 6 percent. While this may make sense for some subjects—for example gender transformative approaches (Chapter 10), with its focus on qualitative issues like gender norms—it is more surprising for publications on the assessment of women's empowerment (Chapter 9), where one might expect the use of mixed methods. A partial explanation for this may be that Chapter 9 refers mostly to tools and measures rather than studies: tools and measures tend to use one methodology rather than a mix. There is an opening here to further explore opportunities for more mixed-method studies and why (or why not) they are being undertaken.

What we do not see from our review of the citations is the size and scale of the studies. For some qualitative research, particularly when it is exploratory, the size of the sample may be of less importance than what the sample offers in terms of insights. For example, earlier studies on the feminization of agriculture or on gender and value chains tended to be smaller in scale, seeking nuance and testing concepts. Generally, there seems to be a move toward larger-scale studies, as exemplified by, for instance, the work on nutrition-sensitive agriculture

(Chapter 5). While Chapter 5 cites more quantitative studies, this shift toward larger studies can also be seen for qualitative research. GENNOVATE—a large-scale qualitative research program running from 2014 to 2018 looking at gender norms and innovation—is perhaps the most striking example of this in recent years. GENNOVATE brought attention to the importance of gender norms research in getting at the less visible aspects of gender inequality and in stimulating normative change (e.g., via gender transformative approaches) (Badstue et al. 2020). GENNOVATE research teams worked with more than 7,500 women and men from 137 communities in 26 countries in Africa, Asia, and Latin America, through both focus group discussions and individual interviews (Petesch et al. 2018). Smaller examples are the clustering of thematic studies to explore broader issues, like grants offered through the CGIAR Collaborative Platform for Gender Research: 2017–2019 on gender dynamics in seed systems; 2018–2020 on the feminization of agriculture; and 2019–2021 on gender dynamics in value chain development, beyond the production node.

Finally, we consider the **timelines of cited studies** reviewed. The timelines visually represent the publication periods for the citations in each chapter and are compiled for all chapters in one graph (Figure A3.3). Figure A3.3 also illustrates the total number of publications reviewed per chapter.

For all chapters, unsurprisingly, a significant proportion of the citations are from the past 10 years (the periods 2011–2015 and 2016–2021). However, some themes have a longer history within CGIAR, with the work on gender and natural resources (Chapter 6) standing out for its citation of work back before 1990. Other themes have emerged more recently (e.g., climate adaptation and mitigation, Chapter 7). Some themes, while more recent, draw significantly from past research, for example that of gender dynamics in seed systems (Chapter 3) and that of gender transformative approaches (Chapter 10).

FIGURE A3.3 Compiled timeline of references cited in this book per chapter

References

- Anderson, J.R., R.W. Herdt, and G.M. Scobie. 1988. "Science and Food: The CGIAR and Its Partners." *Agricultural Systems* 31 (3): 315–316.
- Baden, S., L. Brown, D. Merrill-Sands, R. Percy, and F. Coccia. 2017. *Evaluation of Gender in CGIAR – Volume I, Evaluation of Gender in Research*. Rome: Independent Evaluation Arrangement of CGIAR.
- Badstue, L., M. Elias, V. Kommerell, P. Petesch, G. Prain, R. Pyburn, and A. Umantseva. 2020. "Making Room for Manoeuvre: Addressing Gender Norms to Strengthen the Enabling Environment for Agricultural Innovation." *Development in Practice* 30 (4): 541–547.
- Batliwala, S. 1993. "Empowerment of Women in South Asia: Concept and Practice." Report for Asian-South Pacific Bureau of Adult Education and FAO's Freedom from Hunger campaign/Action for Development.
- . 2007. "Taking the Power Out of Empowerment: Experiential Account." *Development in Practice* 17 (4–5): 557–565.
- Batliwala, S., and D. Dhanraj. 2007. "Gender Myths that Instrumentalize Women: A View from the Indian Frontline." In *Feminisms in Development: Contradictions, Contestations and Challenges*, edited by A. Cornwall, E. Harrison, and A. Whitehead, 21–34. London: Zed Books.
- Boserup, E. 1970. *Woman's Role in Economic Development*. London: Allen & Unwin.
- Bustelo, M., L. Ferguson, and M. Forest. 2016. *The Politics of Feminist Knowledge Transfer: Exploring Gender Training and Gender Expertise*. New York: Palgrave MacMillan.
- CGIAR. 1981. "Second Review of the CGIAR." Report of the Review Committee.
- . 2015. "Strategy and Results Framework 2016-2025." Final draft for consultation.
- CGIAR Consortium Board. 2011. "Consortium-Level Gender Strategy." Montpellier, November.
- CGIAR Independent Review Panel. 2008. "Bringing Together the Best of Science and the Best of Development." Independent Review of the CGIAR System. Report to the Executive Council. Washington, DC., chaired by Elizabeth McAllister, November.
- CGIAR Research Program on Fish Agri-Food Systems. 2017. "CGIAR Research Program on Fish Agri-Food Systems (FISH): Gender Strategy." Penang: CGIAR Research Program on Fish Agri-Food Systems.
- . 2020. *FISH Gender Integration Guidelines*. Penang: CGIAR Research Program on Fish Agri-Food Systems.
- CGIAR Science Council 2007. *Report of the First External Review of the Systemwide Program on Participatory Research and Gender Analysis (PRGA)*. Rome: Science Council Secretariat.

- . 2009. *Stripe Review of Social Sciences in the CGIAR*. Rome: Science Council Secretariat.
- Chant, S., and C. Sweetman. 2012. "Fixing Women or Fixing the World? 'Smart Economics', Efficiency Approaches, and Gender Equality in Development." *Gender & Development* 20 (3): 517–529.
- Chater, S., and V. Carangal. 1996. *On Farmers' Fields: Portrait of a Network*. Los Baños: International Rice Research Institute (IRRI).
- Cole, S.M., P. Kantor, S. Sarapura, and S. Rajaratnam. 2014. "Gender-Transformative Approaches to Address Inequalities in Food, Nutrition and Economic Outcomes in Aquatic Agricultural Systems." Working Paper AAS-2014-42, CGIAR Research Program on Fish Agri-Food Systems, Penang.
- Cole, S.M., R. Puskur, S. Rajaratnam, and F. Zulu. 2015. "Exploring the Intricate Relationship between Poverty, Gender Inequality, and Rural Masculinity: A Case Study from an Aquatic Agricultural System in Zambia." *Culture, Society and Masculinities* 7 (2): 154–170.
- Colfer, C.J.P., B. Basnett, and M. Ihalainen. 2018. "Making Sense of 'Intersectionality': A Manual for Lovers of People and Forests." Occasional Paper 184. Bogor: Center for International Forestry Research.
- Conway, G., A. Adesina, J. Lynam, and J. Moock. 2002. "The Rockefeller Foundation and Social Research in Agriculture." In *Researching the Culture in Agriculture: Social Research for International Development*, edited by M. Cernea and A. Kassam, 373–381. Wallingford: CABI.
- Cornwall, A. 2018. "Beyond 'Empowerment Lite': Women's Empowerment, Neoliberal Development and Global Justice." *cadernos pagu* 52: e185202.
- Cornwall, A., and A.M. Rivas. 2015. "From 'Gender Equality' and 'Women's Empowerment' to Global Justice: Reclaiming a Transformative Agenda for Gender and Development." *Third World Quarterly* 36 (2): 396–415.
- Cornwall, A., and J. Edwards. 2014. *Feminisms, Empowerment and Development: Changing Women's Lives*. London: Zed Books.
- Cornwall, A., E. Harrison, and A. Whitehead. 2007a. *Feminisms in Development: Contradictions, Contestations and Challenges*. London/New York: Zed Books.
- . 2007b. "Gender Myths and Feminist Fables: The Struggle for Interpretive Power in Gender and Development." *Development and Change* 38 (1): 1–20.
- Danielsen, K., F. Wong, D. McLachlin, and S. Sarapura. 2018. *Typologies of Change: Gender Integration in Agriculture and Food Security Research*. Amsterdam: KIT.

- Davids, T., and A. van Eerdewijk. 2016. "The Smothering of Feminist Knowledge: Gender Mainstreaming Articulated through Neoliberal Governmentalities." In *The Politics of Feminist Knowledge Transfer: Exploring Gender Training and Gender Expertise*, edited by M. Bustelo, L. Ferguson, and M. Forest, 80–95. New York: Palgrave MacMillan.
- Do Mar Pereira, M. 2012. "Feminist Knowledge Is Proper Knowledge, But?... The Status of Feminist Scholarship in the Academy." *Feminist Theory* 13 (3): 283–303.
- Doss, C., R. Meinzen-Dick, A. Quisumbing, and S. Thies. 2018. "Women in Agriculture: Four Myths." *Global Food Security* 16: 69–74.
- Doss, C., and C. Kieran. 2014. *Standards for Collecting Sex-disaggregated Data for Gender Analysis: A Guide for CGIAR Researchers*. January 1. <https://hdl.handle.net/10568/76974>.
- Edström, J., A. Hassink, T. Shahrokh, and E. Stern. 2015. *Engendering Men: A Collaborative Review of Evidence on Men and Boys in Social Change and Gender Equality*. Brighton, UK: EMERGE Evidence Review, Promundo-US, Sonke Gender Justice, and Institute of Development Studies.
- Elson, D. 1991. *Male Bias in the Development Process*. Manchester/New York: Manchester University Press.
- Escobar, A. 2018. "An Exchange on the Essay Feminism and Revolution: Looking Back, Looking Ahead." Contribution to GTI Roundtable on Feminism and Revolution, June.
- Eyben, R. 2010. "Subversively Accommodating: Feminist Bureaucrats and Gender Mainstreaming." *IDS Bulletin* 41 (2): 54–61.
- Eyben, R. 2013. "Uncovering the Politics of 'Evidence' and 'Results'. A Framing Paper for Development Practitioners." Politics of Evidence Conference, Brighton, April 23–24.
- FAO (Food and Agricultural Organization of the United Nations). 2011. *The State of Food and Agriculture 2010–2011: Women in Agriculture—Closing the Gender Gap for Development*. Rome.
- FAO, IFAD (International Fund for Agricultural Development), and ILO (International Labour Organization). 2010. *Gender Dimensions of Agricultural and Rural Employment: Differentiated Pathways Out of Poverty: Status, Trends and Gaps*. Rome.
- Farnworth, C.R., L. Badstue, and S.M. Cole. 2020. "Engaging Men in Gender-Equitable Practices in Maize Systems of Sub-Saharan Africa." GENNOVATE Resources for Scientists and Research Teams. Mexico City: CIMMYT.
- Feldstein, H.S. 1995. "Inventory of Gender-Related Research and Training in the International Agricultural Research Centers 1990–95." CGIAR Gender Program Working Paper 8, CGIAR.
- . 1998. "An Inventory of Gender-Related Research and Training in the Consultative Group on International Agricultural Research (CGIAR) Centers 1996–1998." Cali, Colombia: CGIAR.

- Feldstein, H. S., and J. Jiggins. 1994. *Tools for the Field: Methodologies Handbook for Gender Analysis in Agriculture*. London: Intermediate Technology Publications.
- Feldstein, H. S., and S. Poats. 1989a. *Working Together—Gender Analysis in Agriculture, Volume 1: Case Studies*. Bloomfield, CT: Kumarian Press.
- . 1989b. *Working Together—Gender Analysis in Agriculture, Volume 2: Teaching Notes*. Bloomfield, CT: Kumarian Press.
- Ferguson, J. 2009. “The Uses of Neoliberalism.” *Antipode* 41 (S1): 166–184.
- Firetail. 2014. “Gender, Agriculture, and Assets Project.” End of Project Evaluation, March 27.
- Gibbs, C. 2008. “Draft Meta-Analysis of the External Program and Management Reviews.” Input to the CGIAR Independent Panel Review.
- Gomez, J. 2009. “CGIAR Systemwide Program on Participatory Research and Gender Analysis.” Cali: Center for Tropical Agriculture.
- Goetz, A.-M. 1998. *Getting Institutions Right for Women in Development*. London: Zed Books.
- Harcourt, W. 2016. *Palgrave Handbook on Gender and Development: Critical Engagements in Feminist Theory and Practice*. New York: Palgrave MacMillan.
- Hillenbrand, E., N. Karim, P. Mohanraj, and D. Wu. 2015. *Measuring Gender-Transformative Change: A Review of Literature and Promising Practices*. Washington, DC: CARE USA.
- IGWG (Interagency Gender Working Group). 2017. *Gender Integration Continuum 2017*. Washington, DC: United States Agency for International Development.
- Jiggins, J. 1986. “Gender-Related Impacts and the Work of the International Agricultural Research Centers.” *CGIAR Study Paper* 17. Washington, DC: World Bank.
- Johnson, N., C. Kovarik, R. Meinzen-Dick, J. Njuki, and A.R. Quisumbing. 2016. “Gender, Assets, and Agricultural Development: Lessons from Eight Projects.” *World Development* 83: 295–311.
- Johnson N., M. Balagamwala, C. Pinkstaff, S. Theis, R. Meinzen-Dick, and A. Quisumbing. 2018. “How Do Agricultural Development Projects Empower Women? Linking Strategies with Expected Outcomes.” *Journal of Gender, Agriculture and Food Security* 3 (2): 1–19.
- Kabeer, N. 1994. *Reversed Realities: Gender Hierarchies in Development Thought*. London/New York: Verso.
- Kabeer, N. 1999. “Resources, Agency, Achievements: Reflections on the Measurement of Women’s Empowerment.” *Development and Change* 30 (3): 435–464.
- Kabeer, N. 2017. “Economic Pathways to Women’s Empowerment and Active Citizenship: What Does the Evidence from Bangladesh Tell Us?” *Journal of Development Studies* 53 (5): 649–663.

- Kleiber, D., P. Cohen, C. Gomese, and C. McDougall. 2019. "Gender-Integrated Research for Development in Pacific Coastal Fisheries." Program Brief: FISH-2019-02. Penang: CGIAR Research Program on Fish Agri-Food Systems.
- Kauck, D., S. Paruzzolo and J. Schulte (2010). *CGIAR Gender Scoping Study*. Washington, DC: International Center for Research on Women (ICRW).
- Levtov, R., G. Barker, M. Contreras-Urbina, B. Heilman, and R. Verma. 2014. "Pathways to Gender-Equitable Men: Findings from the International Men and Gender Equality Survey in Eight Countries." *Men and Masculinities* 17 (5): 467-501.
- Lombardini, S., and K. McCollum. 2018. "Using Internal Evaluations to Measure Organisational Impact: A Meta-Analysis of Oxfam's Women's Empowerment Projects." *Journal of Development Effectiveness* 10 (1): 145-170.
- Lombardini S., K. Bowman, and R. Garwood. 2017. "A 'How To' Guide for Measuring Women's Empowerment: Sharing Experiences from Oxfam's Impact Evaluations." Methodological Paper. Oxford: Oxfam.
- Meinzen-Dick, R., C. Kovarik, and A.R. Quisumbing. 2014a. "Gender and Sustainability." *Annual Review of Environmental Resources* 39: 29-55.
- Meinzen-Dick, R., N. Johnson, A.R. Quisumbing, J. Njuki, J.A. Behrman, D. Rubin, A. Peterman, and E. Waithanji. 2014b. "The Gender Asset Gap and Its Implications for Agricultural and Rural Development." In *Gender in Agriculture: Closing the Knowledge Gap*, edited by A.R. Quisumbing, R. Meinzen-Dick, T.L. Raney, A. Croppenstedt, J.A. Behrman, and A. Peterman, 91-115. Amsterdam: Springer.
- Miller, C., and S. Razavi. 1995. "From WID to GAD: Conceptual Shifts in the Women and Development Discourse." Occasional Paper 1. Geneva: UNRISD.
- Morgan, M. 2014. "Measuring Gender Transformative Change." Program Brief. Penang: CGIAR Research Program on Aquatic Agricultural Systems.
- Moser, C. 1993. *Gender Planning and Development: Theory, Practice and Training*. New York/London: Routledge.
- Moser, C., and C. Levy. 1986. "A Theory and Method of Gender Planning - Meeting Women's Practical and Strategic Needs." DPU Gender and Planning Working Paper 11, Development Planning Unit, London.
- Moser C., and A. Moser. 2005. "Gender Mainstreaming since Beijing: A Review of Success and Limitations in International Institutions." *Gender and Development* 13 (2): 11-22.
- Mukhopadhyay, M. 2007. "Mainstreaming Gender or 'Streaming' Gender Away: Feminists Marooned in the Development Business." In *Feminisms in Development: Contradictions, Contestations and Challenges*, edited by A. Cornwall, E. Harrison, and A. Whitehead, 135-149. London: Zed Books.

- Mukhopadhyay, M. 2016. "Mainstreaming Gender or 'Streaming' Gender Away: Feminists Marooned in the Development Business." In *Palgrave Handbook on Gender and Development: Critical Engagements in Feminist Theory and Practice*, edited by W. Harcourt, 77–91. New York: Palgrave MacMillan.
- Newton, J., A. van Eerdewijk, and F. Wong. 2019. "What Do Participatory Approaches Have to Offer the Measurement of Empowerment of Women and Girls." Working Paper 2019-1, KIT, Amsterdam.
- Nazneen, S., A. Darkwah, and M. Sultan. 2014. "Researching Women's Empowerment: Reflections on Methodology by Southern Feminists." *Women's Studies International Forum* 45: 55–62.
- North, D. 1990. *Institutions, Institutional Change and Economic Performance*. Cambridge/New York: Cambridge University Press.
- Njuki, J., E. Waithanji, B. Sakwa, J. Kariuki, E. Mukewa, and J. Ngige. 2014. "A Qualitative Assessment of Gender and Irrigation Technology in Kenya and Tanzania." *Gender Technology and Development* 18 (3): 303–340.
- Okali, C. 2012. "Gender Analysis: Engaging with Rural Development and Agricultural Policy Processes." Working Paper 26. Future Agricultures Consortium, Brighton, UK.
- . 2017. "The Relevance and Contribution of CGIAR Gender Research (2011-16)." In *Evaluation of Gender in CGIAR*, by S. Baden, L. Brown, D. Merrill-Sands, R. Percy, and F. Coccia. Annex F Issue Paper. Rome: Independent Evaluation Arrangement of CGIAR.
- Paris, T.R. 1989. "Philippines: Women in Rice Farming Systems, Crop-Livestock Project, Sta. Barbara Pangasinan." In *Working Together – Gender Analysis in Agriculture, Volume 1: Case Studies*, edited by H. Sims Feldstein and S. Poats, Chapter 8. Bloomfield, CT: Kumarian Press.
- Petesich, P., L. Badstue, L. Camfield, S. Feldman, G. Prain, and P. Kantor. 2018. "Qualitative, Comparative and Collaborative Research at Large Scale: The GENNOVATE Field Methodology." *Journal of Gender, Agriculture and Food Security* 3 (1): 28–53.
- Prain, G., H. Hambly, M. Jones, W. Leppan, and L. Navarro. 2000. "CGIAR Program on Participatory Research and Gender Analysis." CGIAR Internally Commissioned External Review, December.
- Quisumbing, A.R., D. Rubin, C. Manfre, E. Waithanji, M. van den Bold, D. Olney, N. Johnson, et al. 2015. "Gender, Assets, and Market-Oriented Agriculture: Learning from High-Value Crop and Livestock Projects in Africa and Asia." *Agriculture and Human Values* 32: 705–725.
- Rao, A., and D. Kelleher. 2005. "Is There Life after Gender Mainstreaming?" *Gender & Development* 13 (2): 57–69.
- Rathgeber, E. 1990. "WID, WAD, GAD: Trends in Research and Practice." *Journal of Developing Areas* 24 (4): 489–502.

- RF (The Rockefeller Foundation) and ISNAR (International Service for National Agricultural Research). 1985. "Report of a Seminar on Women and Agricultural Technology: Relevance for Research. Volume 1 – Analyses and Conclusions." Report from the CGIAR Inter-Center Seminar on Women and Agricultural Technology, Bellagio, March 25–29, 1985.
- Sachs, C.E. 1996. *Gendered Fields: Rural Women, Agriculture and Environment*. Rural Studies Series of the Rural Sociological Society. Boulder, CO: Westview Press.
- Sachs, C.E. 2019. *Gender, Agriculture and Agrarian Transformations: Changing Relations in Africa, Latin America and Asia*. New York: Routledge.
- Sen, A. 1990. "Gender and Cooperative Conflicts." In *Persistent Inequalities: Women and World Development*, edited by I. Tinker, 123–149. New York: Oxford University Press.
- Tamale, S. 2020. *Decolonization and Afro-feminism*. Ottawa: Daraja Press.
- Tangka, F.K., M.A. Jabbar, and B.I. Shapiro. 2000. "Gender Roles and Child Nutrition in Livestock Production Systems in Developing Countries: A Critical Review." Socioeconomics and Policy Research Working Paper 27. International Livestock Research Institute, Nairobi.
- Van der Burg, M. 2018. "Change in the Making: Building on the Past Gender Trends in CGIAR Agricultural Research." International Livestock Research Institute Conference, Addis Ababa, September 27.
- . 2019. "Change in the Making: 1970s and 1980s Building Stones to Gender Integration in CGIAR Agricultural Research." In *Gender, Agriculture and Agrarian Transformations: Changing Relations in Africa, Latin America and Asia*, edited by C.E. Sachs, 35–57. New York: Routledge.
- Van Eerdewijk, A. 2016. "Gender Mainstreaming: Views of a Post-Beijing Feminist." In *Palgrave Handbook on Gender and Development: Critical Engagements in Feminist Theory and Practice*, edited by W. Harcourt, 117–131. New York: Palgrave MacMillan.
- Van Eerdewijk, A., and T. Davids. 2014. "Escaping the Mythical Beast: Gender Mainstreaming Reconceptualised." *Journal of International Development* 26 (3): 303–316.
- Van Eerdewijk, A., F. Wong, C. Vaast, J. Newton, M. Tyszler, and A. Pennington. 2017. *White Paper: A Conceptual Model of Women and Girls' Empowerment*. Amsterdam: KIT.
- Wong, F., A. Vos, R. Pyburn, and J. Newton. 2019. "Implementing Gender Transformative Approaches in Agriculture." Discussion Paper for the European Commission. Amsterdam: CGIAR Collaborative Platform for Gender Research.
- World Bank. 2012. *World Development Report 2012: Gender Equality and Development*. Washington, DC.

- World Bank and IFPRI (International Food Policy Research Institute). 2010. *Gender and Governance in Rural Services: Insights from India, Ghana and Ethiopia*. Washington, DC: World Bank.
- World Bank, FAO, and IFAD (International Fund for Agricultural Development). 2009. *Gender in Agriculture: Sourcebook*. Washington, DC: World Bank.
- Yuval-Davis, N. 2006. "Intersectionality and Feminist Politics." *European Journal of Women's Studies* 13 (3): 193–209.