CGIAR SCALING FOR IMPACT

IWMI International Water Management Institute

TECHNICAL REPORT

Intersecting Barriers, Uneven Gains: Analysis of Ethiopia's Enterprise Environment for Women and Youth

Likimyelesh Nigussie, Ojongetakah Enokenwa Baa, and Karen Nortje

August 2026

Acknowledgments

This work was undertaken as part of the CGIAR Scaling for Impact (S4I) Program. We would like to thank all funders for supporting this research through through their contributions to the CGIAR Trust Fund (www.cgiar.org/funders).

We extend our sincere appreciation to our partners, stakeholders, and collaborators whose expertise, insights, and commitment have contributed significantly to shaping this work. Their contributions have been instrumental in advancing CGIAR's ambition to scale proven innovations across food, land, and water systems, fostering impact that is inclusive, sustainable, and transformative.

We also recognize the continued support and collaboration of national and regional partners, whose engagement ensures that the solutions developed are responsive to local needs, strengthen innovation systems, and contribute to building more resilient agrifood systems.

About CGIAR Scaling for Impact (S4I) Program

Scaling for Impact (S4I) is a CGIAR program (2025–2030) that tests, refines, and scales innovations in food, land, and water systems. It works to align those innovations with stakeholder needs to achieve transformative impact.

Website: https://www.cgiar.org/cgiar-research-porfolio-2025-2030/scaling-for-impact/

About CGIAR

CGIAR is a global research partnership for a food secure future.
Visit https://www.cgiar.org/research/cgiar-portfolio to learn more about the initiatives in the CGIAR research portfolio.

© 2026 International Water Management Institute. This publication is licensed for use under a Creative Commons Attribution 4.0 International License (CC BY 4.0). To view this license, visit: https://creativecommons.org/licenses/by/4.0.

-

Authors

Likimyelesh Nigussie, Research Management Coordinator – Gender Equality and Social Inclusion, International Water Management Institute (IWMI), Addis Ababa, Ethiopia

Ojongetakah Enokenwa Baa, Researcher – Gender, Social Inclusion and Youth, IWMI, Pretoria, South Africa

Karen Nortje, Research Group Leader – Gender Equality and Social Inclusion (GESI), IWMI, Pretoria, South Africa

CRediT Contributorship Statement

Conceptualization: Likimyelesh Nigussie and Ojongetakah Enokenwa Baa; Methodology and Evidence Synthesis: Likimyelesh Nigussie. Writing – original draft: Likimyelesh Nigussie. Writing – review & editing: Ojongetakah Enokenwa Baa and Karen Nortje. All authors reviewed and approved the final technical report.

Citation

Nigussie, Likimyelesh, Ojongetakah Enokenwa Baa, and Karen Nortje. 2026. *Intersecting Barriers, Uneven Gains: Analysis of Ethiopia's Enterprise Environment for Women and Youth.* International Water Management Institute (IWMI).

Front cover photo: Women participating in a tech hackathon in Ethiopia. The hackathon was organized by Iceaddis, Studio Why, and TRAIDE, with supporting partners including CARE Ethiopia, UN Women, the International Trade Center, and the Netherlands Ministry of Foreign Affairs. (*photo:* Likimyelesh Nigussie)

Back cover photo: A solar powered irrigation panel in the field. (*photo*: Likimyelesh Nigussie)

Contents

Acronyms	5
Summary	6
1. Introduction	7
2. Conceptual and Theoretical Framing	8
3. Methodology	11
3.1 Review Design	11
3.2 Search Strategy	11
4.Review Analysis	12
5. Results	12
5.1 Interaction and Compounding Effects Across Barrier Domains	12
5.2 Evidence Strength and Gaps	13
6. Discussion and Situation Analysis	15
6.1 Current Policy Environment	15
6.2 Existing Reforms Supporting Women and Youth Entrepreneurs	15
6.3 Opportunities for Responsible Scaling Interventions	16
7. Research Gaps	18
8. Conclusion	18
9. Recommendations	19
10. References	20

Acronyms

AoW2 – Area of Work 2
BDS – Business Development Services
GESI – Gender Equality and Social Inclusion
MSME – Micro, Small, and Medium Enterprise
SPIS – Solar-Powered Irrigation Systems
S4I – Scaling for Impact

Summary

This review examines Ethiopia's enabling environment conditions for enterprise inclusion for women and youth and interprets its implications for responsible scaling across three Scaling for Impact (S4I) Area of Work 2 (AoW2) solution-track delivery systems. In this report, enterprise environment refers to the enabling conditions shaping enterprise entry, operation, growth, and resilience. It examines barriers across policy, finance, market coordination, institutional capacity, GESI, and climate-finance. It then links these barriers to Solar-Powered Irrigation Systems (SPIS), agro-advisory, and forage-feed pathways.

The review uses a scoping approach with systematic elements and an Ethiopia-only analytical scope. It applies Gender Equality and Social Inclusion (GESI), intersectionality, feminist political economy, and enterprise lifecycle lenses to examine not only which barriers exist, but how they operate, whom they affect, and how they shape enterprise entry, survival, formalization, growth, and resilience.

The central finding is that barriers to enterprise development in Ethiopia are interconnected and mutually reinforcing rather than discrete. These barriers include regulatory requirements, collateral constraints, weak institutional support, fragmented market coordination, GESI-related constraints, and limited climate-finance access across enterprise trajectories. These interactions are especially consequential for differently positioned women and youth whose access to assets, information, mobility, time, institutional support, and decision-making power is uneven.

For S4I, these barriers matter because scaling may expand reach while reproducing unequal access, labour burdens, and benefit control. In SPIS, these barriers shape access to finance, technology, water, suppliers, services, and irrigation markets. In agro-advisory scaling, they affect whether content, channels, language, timing, feedback, and service linkages become actionable. In forage-feed innovations, they shape access to livestock assets, training, labour arrangements, cooperative support, markets, and control over benefits. Evidence is strongest for regulation, finance, institutional capacity, and GESI, but weaker for climate-finance and long-term reform outcomes.

1. Introduction

Ethiopia's policy agenda prioritizes private-sector transformation and inclusive enterprise growth, but practical access remains uneven for women and youth. This review examines Ethiopia's enabling environment for women's and youth's enterprise inclusion through three Scaling for Impact (S4I) Area of Work 2 (AoW2) solution-track delivery systems. Scaling for Impact (S4I) is the programme frame within which this review is situated, and AoW2 refers to the area of work concerned with solution-track pathways. In this report, solution-track delivery systems refer to the arrangements through which innovations, services, finance, information, institutions, markets, and support mechanisms reach intended users. The report therefore assesses not only whether innovations can be scaled, but whether the systems through which they are delivered are usable, inclusive, and benefit-oriented for differently positioned women and youth. Delivery-system usability refers to whether differently positioned users can realistically access, understand, afford, trust, act on, and sustain engagement with the services, technologies, finance, information, markets, and institutional support attached to each solution track. In this report, usability is assessed through the practical conditions that shape whether delivery systems translate reach into sustained use, agency, continuity, and benefit, rather than treating access or visibility alone as evidence of inclusion.

The review focuses on policy, finance, markets, institutional capacity, GESI, and climate finance. It asks how these domains shape enterprise access, adaptation, continuity, and benefit. This focus is relevant to the CGIAR S4I Programme because Ethiopian evidence shows that innovation adoption depends on access to credit, training, extension, assets, infrastructure, and distance-related conditions (Sisay 2025; Degefa et al. 2024; Alemu Kebede and Getasew Daru 2024; Jebessa et al. 2023; Keba et al. 2025).

In Ethiopia, the report analyzes the question of how enabling-environment barriers shape women's and youth's enterprise access, adaptation, continuity, and benefit through three S4I AoW2 solution-track pathways: i) private-sector-led solar-powered irrigation systems, ii) climate-smart agro-advisories through the Shamba Shape Up platform, and iii) forage-based livestock feed innovations. These three pathways are used because they are the Ethiopia S4I/AoW2 solution-track pathways defined for this review. The review uses these solution tracks as analytical pathways through which enabling-environment barriers affect delivery systems, GESI mechanisms, and outcomes for women and youth. This means the report does not treat solution tracks as separate case studies. Instead, it uses them to assess whether reforms reduce exclusion and improve access, agency, continuity, and benefit within concrete innovation pathways. These pathways are used as design-testing areas for assessing inclusion risks. The report's contribution to S4I/AoW2 responsible-scaling decision-making is to explain how inclusion or exclusion may be produced through solution-track delivery systems before expansion decisions are made. The report presents objectives, conceptual framing, methods, findings, policy interpretation, research gaps, conclusions, and responsible-scaling recommendations.

Objectives and research questions

The objective of this review is to identify the enabling-environment barriers that shape women's and youth's enterprise trajectories in Ethiopia and to analyze how these barriers operate through the three S4I solution-track pathways. The review asks how policy and regulation, finance, market coordination, institutional capacity, GESI, and climate-finance affect delivery, adoption, adaptation, continuity, and benefit across SPIS, agro-advisory, and forage-feed innovations. Table 1 serves as the report's research-question map: it identifies the section where each question is addressed, the type of evidence used, and the relevance of each question for S4I/AoW2 solution-track decisions.

Table 1. Mapping of research questions, evidence sections, and S4I solution-track decision relevance

Research Question	Main section(s) addressing it	Type of evidence used	Relevance for S4I/AoW2 solution-track decisions
What core AoW2 enabling-environment barriers affect women's and youth's enterprise trajectories in Ethiopia?	Sections 5.1, 5.2	Policy sources and empirical literature	Identifies enabling conditions affecting delivery and uptake across Ethiopia's solution tracks.
How do enabling-environment barriers affect enterprise entry, survival, formalization, growth, and resilience?	Sections 5.1, 5.2, and 6.1	Synthesis across domains	Links enterprise constraints to access, adoption, continuity, and benefit.
How do policy and regulatory barriers affect women's and youth's enterprise entry, formalization, and growth across the three solution tracks?	Sections 5.1, 5.2, 6.1, and 6.3	Policy sources and empirical literature	Assesses whether formal systems are usable for innovation-linked enterprise pathways.
How do financial-market barriers affect access to finance, technology acquisition, enterprise growth, resilience, and benefit control?	Sections 5.1, 5.2, 6.1, 6.2, and 6.3	Policy sources and empirical literature	Assesses whether finance enables uptake, growth, and resilience.
How do market coordination failures affect commercialization, buyer–seller linkages, standards, logistics, and enterprise benefit?	Sections 5.1, 5.2, 6.2, and 6.3	Mainly empirical literature and selected policy sources	Assesses whether linkages, standards, and information systems support commercialization.
How do institutional capacity gaps affect access to regulatory support, business development services (BDS), extension, coordination, and delivery-system usability?	Sections 5.1, 5.2, 6.1, 6.2, 6.3	Policy sources and empirical literature	Assesses whether extension, BDS, and delivery systems reach women and youth.
How do GESI-related barriers shape access, agency, safety, care burdens, voice, and control over enterprise benefits?	Sections 5.1, 5.2, 6.1, 6.2	Policy sources and empirical literature	Assesses whether access, agency, labour, voice, and benefit are equitably distributed.
How do climate-finance barriers affect eligibility, transaction costs, institutional support, resilience, and long-term enterprise outcomes?	Sections 5.1, 5.2, 6.1, 6.2, 6.3	Limited empirical evidence and policy strategy documents	Assesses whether resilience finance reaches women's and youth's enterprises.

Table 1 provides a traceability map linking research questions, evidence sections, evidence types, and S4I/AoW2 decision relevance. The conceptual operationalization of inclusion test questions across the three solution tracks is presented separately in Table 2.

2. Conceptual and Theoretical Framing

The conceptual framework links six enabling-environment domains—policy and regulation, financial-market access, market coordination, institutional capacity, GESI, and climate-finance—to the delivery-system conditions through which SPIS, agro-advisory, and forage-feed innovations reach users, and then examines how these conditions shape inclusion mechanisms and enterprise outcomes for differently positioned women and youth.

This review defines enabling-environment barriers as the formal and informal conditions that shape enterprise entry, formalization, operation, market participation, and resilience. Formal barriers include laws, regulations, procedures, eligibility rules, documentation requirements, and enforcement arrangements. Informal barriers include norms, discriminatory practices, unequal bargaining power, and socially differentiated access to institutional support. Responsible scaling refers to the governance process of anticipating, testing, and managing inclusion risks, trade-offs, and unintended consequences before expansion. Inclusive scaling refers to the equity outcome being tested: equitable access, agency, sustained participation, and control over benefits. In this review, responsible scaling is the decision-making approach, while inclusive scaling is the outcome that delivery systems must demonstrate. This distinction is significant because a scaling pathway can expand reach without becoming inclusive. Responsible scaling asks what must be anticipated, tested, adapted, or paused before expansion. Inclusive scaling asks whether the pathway actually improves equitable access, sustained participation, agency, manageable labour and risk burdens, voice, and control over benefits. The distinction therefore prevents the report from treating adoption, visibility, or programme reach as sufficient evidence of inclusion. Grounded within the S4I GESI-Responsive Scaling Framework, this report applies four inclusion test questions: who enters, who sustains participation, who bears costs, and who controls benefits.

For analytical consistency, the report uses a standardized enterprise lifecycle sequence comprising enterprise entry, formalization, operation, adaptation, growth, resilience, and benefit control. This sequence is used throughout the report to examine where inclusion barriers and opportunities emerge across the development of enterprises.

The core conceptual model of the report follows a four-step causal-operational logic, followed by a responsible-scaling decision-use output. The four analytical steps are: first, identifying enabling-environment barriers across six AoW2 domains; second, examining how these barriers affect the delivery-system conditions through which SPIS, agro-advisory, and forage-feed innovations reach users; third, assessing how delivery conditions shape GESI inclusion mechanisms, including access, agency, labour burden, risk exposure, voice, and benefit control; and fourth, interpreting how these mechanisms influence enterprise entry, continuity, adaptation, growth, resilience, and benefit for differently positioned women and youth. The final box in Figure 1 is not an additional analytical step; it represents the responsible-scaling decision that follows from the analysis, namely whether to scale, adapt, test further, or pause before expansion.

The framework combines GESI, intersectionality, feminist political economy, and an enterprise lifecycle lens and directs attention to differentiated access, agency, voice, risk, and benefit control. GESI explains whether solution-track delivery systems support access, agency, voice, manageable labour and risk burdens, sustained participation, and benefit control. Intersectionality explains why women and youth do not experience enterprise barriers uniformly, especially where gender and age intersect with class, disability, location, displacement, literacy, marital status, or resource position. In considering feminist political economy, the study examines how formal and informal systems distribute costs, opportunities, institutional support, market access, and control over enterprise benefits. The enterprise lifecycle lens is used to examine how inclusion opportunities and constraints emerge across the progression from enterprise entry and formalization to operation, adaptation, growth, resilience, and benefit control across the three solution-track pathways. Building on this integrated theoretical framework, Figure 1 presents the four-step analytical model linking enabling-environment domains, delivery-system conditions, GESI inclusion mechanisms, and enterprise lifecycle outcomes.

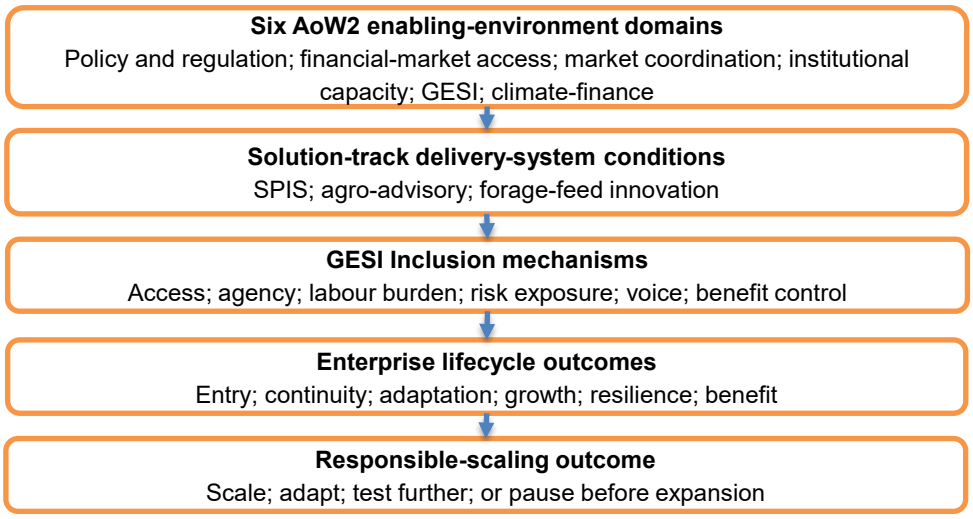

Figure 1. Four-step analytical model linking enabling-environment domains to inclusive-scaling outcomes, with responsible-scaling decision options.

Building on this four-step conceptual model illustrated in Figure 1, Figure 2 presents the four inclusion test questions used to screen whether a solution-track pathway is ready for inclusive expansion. It shows how responsible scaling requires asking who enters, who sustains participation, who bears costs, and who controls benefits before treating a pathway as ready for inclusive expansion. The four analytical steps in Figure 1 and the four inclusion test questions in Figure 2 were used as the coding and synthesis logic for organizing evidence across domains, interpreting evidence strength, and formulating responsible-scaling recommendations.

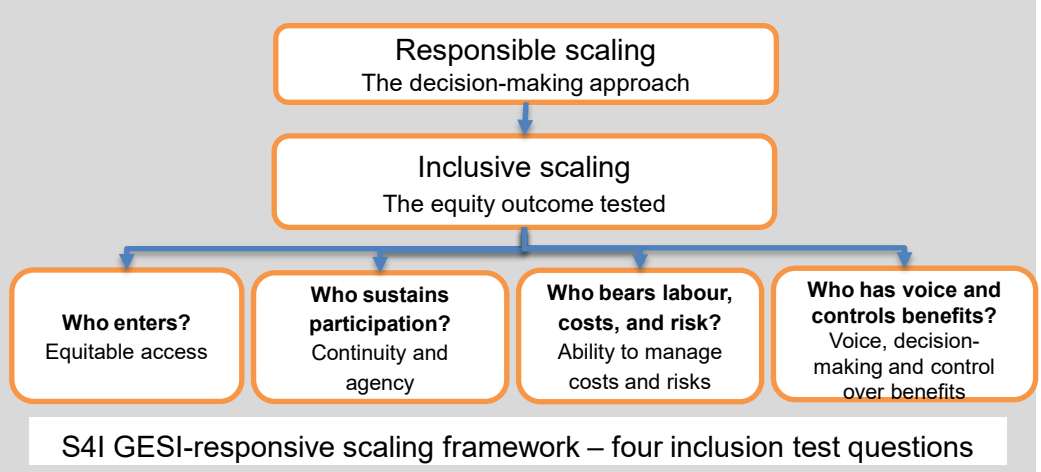

Figure 2. Responsible and inclusive scaling tests for S4I solution-track delivery systems.

Where Table 1 maps the research questions to evidence sections, Table 2 translates the conceptual framework into solution-track-specific inclusion test questions. Table 2 therefore operationalizes the conceptual framework by showing how the four inclusion test questions apply differently to SPIS, agro-advisory, and forage-feed delivery systems. Applied to the three solution tracks, the framework asks whether delivery systems are usable, inclusive, and benefit-oriented.

For SPIS, the focus is access to finance, irrigation technologies, water, suppliers, services, and markets. For agro-advisory scaling, the focus is whether content, channels, language, timing, feedback, and service linkages make advice actionable. For forage-feed innovations, the focus is whether training, livestock assets, labour arrangements, cooperative support, markets, and benefit control support equitable and sustained enterprise gain. Within this framework, delivery-system usability is the practical bridge between formal scaling arrangements and inclusive outcomes. It asks whether the finance, information, services, technologies, markets, feedback channels, and institutional support linked to each solution track are accessible, understandable, affordable, trusted, actionable, continuous, and connected to enterprise benefit. This makes usability an analytical test of delivery performance, not simply a descriptive label for whether services exist.

Analytically, the framework guided the review in three ways. First, it informed coding of evidence on barrier mechanisms, affected groups, and enterprise effects across the six AoW2 domains. Second, it supported interpretation of gaps between formal inclusion commitments and substantive inclusion outcomes. Third, it helped identify cross-domain interactions, including how regulatory, financial, institutional, market, social, and climate-finance barriers combine to shape unequal enterprise trajectories for differently positioned women and youth.

Table 2. Operationalization of the conceptual framework across Ethiopia's S4I solution-track delivery systems

S4I SOLUTION TRACKS: GESI & INCLUSION FRAMEWORK TESTS

S4I SOLUTION TRACK	KEY DELIVERY-SYSTEM CONDITIONS	MAIN GESI AND INCLUSION QUESTIONS	WHAT THE FRAMEWORK TESTS
Private-sector-led SPIS	• Finance, irrigation technology, water access, suppliers, technical advice, after-sales service, market access	• Can women and youth access finance, own or control technology, receive technical support, manage water access, and benefit from irrigated production?	• Whether SPIS scaling reduces or reproduces exclusion through finance, technology access, water governance, service quality, and market opportunity
Climate-smart agro-advisories through Shamba Shape Up	• Advisory content, communication channels, language, timing, feedback systems, extension linkages, input and service access	• Can women, youth, low-literacy farmers, and poorer groups receive, understand, trust, and act on advisory information?	• Whether advisory scaling moves beyond information reach to actionable, inclusive, and benefit-oriented support
Forage-based livestock feed innovations	• Training, livestock assets, feed production, labour allocation, livestock services, cooperative or market linkages, infrastructure	• Do women and youth have the assets, time, training, decision-making power, and market access needed to benefit from forage-feed innovations?	• Whether forage-feed scaling improves resilience and enterprise benefit without increasing women's labour burden or weakening their control over benefits

This evidence-strength distinction informs responsible-scaling decisions by indicating whether a solution-track pathway is ready for design adaptation, further testing, or cautious expansion, rather than assuming that all identified opportunities justify immediate scaling. In summary, the framework treats inclusive scaling as an equity outcome that must be tested through delivery-system conditions. Delivery-system usability is therefore treated as a mechanism leading toward inclusive scaling, not as evidence that inclusive scaling has already been achieved. It clarifies where delivery-system conditions may generate or reduce exclusion, burden, risk, or weak benefit control across the three solution tracks. It links enabling-environment domains to delivery-system conditions, then links those delivery conditions to solution track-pathways, GESI mechanisms and enterprise outcomes. This allows the review to assess whether the three solution tracks are supported by conditions that can plausibly reduce exclusion, or whether scaling may reproduce unequal access, labour burdens, risk exposure, weak agency, or limited control over benefits.

3. Methodology

3.1 Review Design

This study uses a scoping review with systematic elements to identify and synthesize evidence on enabling-environment barriers affecting women- and youth-owned enterprises in Ethiopia. Systematic elements strengthened transparency in search, screening, coding, and evidence classification. A scoping design was appropriate because the evidence spans policy, finance, markets, institutions, GESI, and climate-finance. Sources were organized around the six AoW2 domains and reviewed for how each domain affected solution-track delivery systems, GESI mechanisms, affected groups, enterprise consequences, and institutional responses. Intersectional coding recorded whether sources specified affected groups beyond broad categories of women or youth, including age, marital status, literacy, disability, displacement, wealth, region, rural/peri-urban location, and livelihood position where the evidence allowed. Evidence was treated as stronger when sources specified context, affected group, mechanism, and enterprise outcome. The final analytical scope is Ethiopia only. Screening applied the predefined criteria to assess thematic fit, population relevance, geography, and evidence type.

3.2 Search Strategy

The review was conducted in April and May 2026 and drew on multiple evidence streams to capture both scholarly analysis and the broader policy-institutional context shaping women- and youth-owned enterprises in Ethiopia across the six AoW2 domains. As outlined in Figure 3, the formal search strategy was applied to academic literature only, using Scopus and Web of Science to identify peer-reviewed studies relevant to enabling-environment barriers and enterprise outcomes. Search terms were structured thematically around the review's analytical concerns, including women's and youth enterprise development, regulatory and governance barriers, financial access, market coordination, institutional capacity, gender and intersectionality, and climate-finance. A geographic filter ensured that the final analytic scope remained explicitly Ethiopia-focused. The database search yielded 100 records in total (40 from Web of Science and 60 from Scopus).

After removal of 25 duplicates, 75 non-duplicate records were screened. Of these, 44 records were excluded on the basis of predefined criteria, including thematic irrelevance (n = 29), population mismatch (n = 10), geographic irrelevance (n = 1), thematic mismatch (n = 3), and type of evidence combined with thematic mismatch (n = 1). This screening process resulted in 31 studies being retained for inclusion in the review. Policy, strategy, roadmap, and grey-literature documents were reviewed separately. These sources were not part of the Boolean database search; they were used to situate empirical findings within Ethiopia's policy and institutional context. In addition, they were used to assess how formal commitments relate to implementation conditions, enterprise inclusion, and S4I-relevant delivery systems. Policy documents were included when they directly addressed Ethiopia's policy, finance, market, institutional, GESI, or climate-finance context in Ethiopia. Figure 3 presents the full search strings, eligibility criteria, exclusion criteria, and screening decisions.

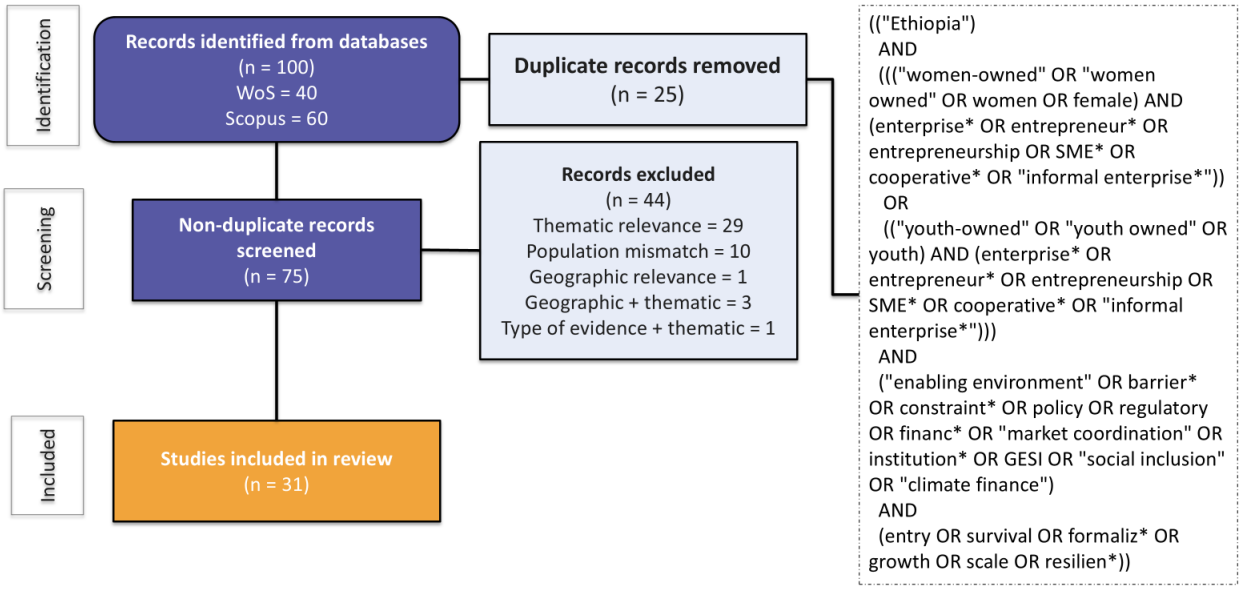

Figure 3. Methodology search criteria approach and screening process for the Ethiopia enabling-environment review.

4. Review Analysis

This section explains how retained sources were coded, classified, and synthesized. For each included source, the review extracted information on the type of barrier described, the groups affected, the reported enterprise consequences, and any identified institutional or policy response. Evidence was then mapped to one or more of the six AoW2 coding themes according to its primary substantive focus. Where a source described linked effects across domains—for example, where regulatory burdens affected financial access, or where GESI inequalities shaped market participation—these interactions were recorded as cross-domain patterns and incorporated into the synthesis. This approach enabled the review to organize findings by domain while also identifying how barriers overlap and reinforce one another across enterprise trajectories.

Evidence was also classified as directly, indirectly, or contextually relevant to the three Ethiopia solution tracks. Direct evidence addressed the specific innovation area. Indirect evidence addressed related delivery, adoption, service, or enterprise mechanisms. Contextual evidence supported interpretation of broader enabling conditions. This classification allowed the review to connect AoW2 domains to solution-track delivery systems without overstating the strength of the evidence. It also prevented indirect evidence from being presented as direct evaluation of S4I solution tracks.

5. Results

Section 5 addresses the first two cross-cutting research questions, while Sections 6.1–6.3 interpret the domain-specific questions for policy readiness and responsible-scaling decisions. This section answers the first two research questions by identifying the core AoW2 enabling-environment barriers and explaining how they affect enterprise entry, survival, formalization, growth, resilience, and benefit across the three solution-track pathways. It shows that enterprise disadvantage results from interacting regulatory, financial, institutional, market, GESI, and climate-finance barriers. These barriers shape whether SPIS, agro-advisory, and forage-feed delivery systems generate access, continuity, agency, and benefit for differently positioned women and youth. The results are interpreted through the enterprise lifecycle sequence of enterprise entry, formalization, operation, adaptation, growth, resilience, and benefit control. This approach helps identify where gendered and social inclusion barriers arise, where support mechanisms are expected to intervene, and where risks of exclusion may persist.

5.1 Ethiopia: Interaction and Mutually Reinforcing Effects Across Barrier Domains

AoW2 barriers interact through delivery systems, producing unequal enterprise trajectories across the three solution tracks. The most important pattern is that regulatory, financial, institutional, market, GESI, and climate-finance constraints combine to affect who can enter, sustain participation, adapt, and benefit. The regulation–finance mechanism is especially consequential because documentation requirements, collateral rules, startup-capital constraints, and low literacy can combine to restrict access to usable finance. Policy diagnostics reinforce this mechanism by identifying documentation bottlenecks, fragmented initiatives, lack of specialized products, and high finance costs and risks (National Bank of Ethiopia 2025). This convergence suggests that financial exclusion reflects procedural and institutional design, not capital scarcity alone (Belwal, Tamiru, and Singh 2012; Abebe and Kegne 2023; National Bank of Ethiopia 2025).

This interaction is socially differentiated. Poorer women, young women, landless households, displaced women, and rural youth are more exposed to mutually reinforcing barriers because they often have weaker assets, less documentation, thinner institutional support, heavier care responsibilities, and weaker networks (Desta and Haug 2024; Ahmed and Kar 2019a; Wossen and Ayele 2018). GESI barriers shape who can navigate regulation, finance, markets, and institutions, and who can convert participation into enterprise benefit (Ahmed and Kar 2019b; Yami 2013; Korzenevica et al. 2022).

For S4I, these mechanisms matter because technical reach may expand without equitable agency or benefit control. Time poverty, gendered division of labour, restricted mobility, unequal access to assets, and weaker institutional networks shape whether women and youth can use finance, advisory services, technologies, and market opportunities. Young women may face compounded constraints when care responsibilities intersect with age-based exclusion from assets, credit, decision-making, and producer networks. Solution-track delivery systems can therefore reproduce unequal labour burdens, weak agency, or limited control over benefits unless these conditions are addressed directly.

Regulatory and financial constraints intensify when institutional support is weak, because poor coordination, weak support institutions, and weak information services limit equitable access in practice (Beriso 2021; Abraha and Haftom 2025; Sube et al. 2025). Policy monitoring systems indicate that implementation and reform efforts are expected to be tracked through formal performance systems (FDRE, Planning and Development Commission 2020). Yet the evidence shows that monitoring systems do not automatically translate into usable support (Berhe 2021; Abraha and Haftom 2025; Sube et al. 2025). The gap lies between tracking performance and resolving user-facing delivery constraints.

Market coordination failures deepen these institutional weaknesses, because finance alone does not secure growth where enterprises also face weak linkages, poor infrastructure, weak standardization, or unstable demand (Endris and Kassegn 2023; D'Haene and D'Haese 2020; Teferi et al. 2026). Policy commitments to pluralistic extension and cross-sector planning indicate formal recognition of coordination problems, but the reviewed evidence suggests that private-sector participation and service-delivery gaps remain important implementation concerns (FDRE, Ministry of Agriculture and Ethiopian Agricultural Transformation Institute 2023; FDRE, Ministry of Environment, Forest and Climate Change 2017). Consequently, enterprises may formalize or borrow without commercializing on viable terms (D'Haene and D'Haese 2020; Worku et al. 2014; Teferi et al. 2026). This is critical for solution tracks requiring markets and services.

Digital and agri-finance policy linkages reinforce this interpretation by showing that administrative recognition, financial inclusion, insurance, and climate resilience are increasingly treated as connected reform challenges (Nguse et al. 2022; Berhanu 2026; National Bank of Ethiopia 2025). Although climate-finance evidence is limited, available findings suggest a similar compounding pattern because early inclusion gains remain fragile when weak follow-up, business-capacity gaps, and social norms persist (Berhanu 2026). Policy linkages between climate resilience and economic transformation reinforce the need to read climate-finance as part of the wider enabling environment (FDRE, Planning and Development Commission 2020). Climate finance highlights continuity, not entry alone, as the unresolved condition for inclusive resilience (Berhanu 2026).

Overall, enterprise disadvantage is produced through interconnected exclusion, not single barriers (Desta and Haug 2024; Nguse et al. 2022; Berhanu 2026). The policy record largely converges with this diagnosis, but implementation gaps persist in support translation, institutional performance, and sustained inclusion outcomes (Sisay et al. 2025; Berhanu 2026; FDRE, Planning and Development Commission 2020). These interactions matter because each solution track depends on delivery conditions that can either reduce linked barriers or reproduce unequal benefit. Viewed through a feminist political economy lens, these patterns suggest that scaling may shift compliance burdens, labour demands, and financial exposure onto women and youth unless delivery systems also improve access to assets, services, decision-making power, institutional recognition, and control over enterprise benefits. This is particularly true unless delivery systems also redistribute assets, services, decision-making power, institutional recognition, and control over enterprise benefits. Across these interactions, the four inclusion test questions show that enabling-environment barriers shape who can enter solution-track enterprise pathways, who can sustain participation, who absorbs labour and financial risks, and who ultimately controls enterprise benefits.

5.2 Evidence Strength and Gaps

Evidence is treated as strongest when it specifies context, affected group, mechanism, and enterprise outcome.

Strongest evidence

The Ethiopia evidence base is strongest where both policy and empirical materials specify mechanisms, affected groups, and enterprise consequences, especially in policy and regulatory barriers, financial access, institutional capacity, and GESI (Desta and Haug 2024; Bedane 2016; Sube et al. 2025). Policy sources reinforce these stronger domains by documenting formal commitments, accountability expectations, and measurable targets, particularly for women's representation, youth credit access, and disaggregated monitoring (FDRE, Planning and Development Commission 2020; FDRE, Ministry of Environment, Forest and Climate Change 2017). Taken together, the material supports a distinction between policy presence, implementation readiness, and evidence availability, rather than a simple presence-or-absence reading of inclusion (FDRE, Ministry of Environment, Forest and Climate Change 2017; FDRE, Ministry of Agriculture and Ethiopian Agricultural Transformation Institute 2023). Evidence strength therefore varies by domain and by its proximity to each solution-track delivery system.

Within regulatory evidence, the literature is strongest on formalization burdens, taxation-related administration, licensing, land-related regulation, and the gap between formal policy and practical accessibility (Desta and Haug 2024; Ahmed and Kar 2019a; Negash et al. 2023). Policy diagnostics complement this by identifying legal registration, licensing, tax identification, and documentation bottlenecks as conditions shaping access to support and finance (FDRE, Ministry of Urban Development and Housing 2016; National Bank of Ethiopia 2025). Financial market evidence is similarly strong on credit rationing, collateral exclusion, startup-capital shortages, weak savings access, bureaucracy, high interest, limited outreach, and product mismatch (Bedane 2016; Belwal, Tamiru, and Singh 2012; Abebe and Kegne 2023). Policy evidence converges by treating high lending costs, fragmented initiatives, and lack of specialized products as structural impediments rather than isolated service failures (National Bank of Ethiopia 2025).

Institutional capacity also has relatively strong evidence on weak information systems, poor targeting, fragmented coordination, weak BDS access, and under-resourced innovation systems (Berhe 2021; Abraha and Haftom 2025; Sube et al. 2025). This domain contains some of the clearest intervention evidence, since BDS use, cooperative efficiency, and collective governance performance show measurable enterprise benefits in selected cases (Sisay et al. 2025; Duguma and Han 2021; Holden and Tilahun 2018). GESI evidence is strongest on women's network exclusion, governance exclusion, role conflict, weak support institutions, insecurity, and infrastructure-mediated loss of control (Ahmed and Kar 2019b; Hundera et al. 2020; Korzenevica et al. 2022). Policy frameworks add formal expectations for mainstreaming, participation, and disaggregated monitoring, indicating that differentiated accountability is institutionally recognized (FDRE, Ministry of Urban Development and Housing 2016; FDRE, Ministry of Environment, Forest and Climate Change 2017).

Evidence strength also differs by solution track. SPIS has the clearest direct evidence because the reviewed studies examine irrigation participation, water-lifting technologies, and small-scale irrigation outcomes (Sisay 2025; Degefa et al. 2024; Abadi et al. 2025). These studies support SPIS-relevant mechanisms but do not fully evaluate private-sector-led SPIS scaling. This variation means that the review can make stronger claims about some links in the analytical chain than others. For S4I, this evidence is most relevant when interpreted through the programme's private-sector-led model, where inclusive benefit depends on equitable access to finance, suppliers, after-sales services, advisory support, and commercial irrigation opportunities. SPIS should therefore be treated as a relatively stronger evidence-informed design-testing area, not as a fully validated inclusive-scaling model.

Agro-advisory relevance is indirect because accessible studies examine adoption determinants, training, extension, and cooperative access (Alemu Kebede and Getasew Daru 2024). Agro-advisory claims should therefore be treated as design implications, not direct platform evaluations. For the Shamba Shape Up pathway, the key GESI question is not only whether advisory information is available, but whether content, channels, language, timing, and feedback mechanisms enable women, youth, and low-literacy farmers to act on climate-smart advice.

Forage-feed relevance is indirect because accessible studies examine dairy technology, women's training, and infrastructure (Jebessa et al. 2023; Keba et al. 2025). For forage-based livestock feed innovations, the GESI relevance lies in whether improved feed systems translate into women's and youth's control over livestock benefits, reduced feed-related labour burdens, and more resilient livelihood options. These studies identify inclusion risks relevant to forage-feed scaling, rather than proving pathway effects. Forage-feed innovations should therefore be treated as a design-testing pathway requiring further evidence on labour effects, benefit control, and sustained enterprise outcomes.

This distinction between direct, indirect, and contextual evidence is important for interpreting the report's recommendations. SPIS-related claims are supported more directly by irrigation and water-lifting evidence, while agro-advisory and forage-feed implications should be read as evidence-informed inclusion risks and design considerations. These pathways should be treated as design-testing areas, not as already validated inclusive-scaling models. Section 9 therefore grades recommendations by evidence strength and design uncertainty.

Key evidence gaps

Important limitations remain across domains. In regulatory evidence, inspections, permit systems, enforcement discretion, digital registration, and documentation requirements remain explicitly under-evidenced, limiting stronger claims about the full administrative burden facing women and youth. Reform-evaluation evidence is also limited in finance, particularly for insurance, digital finance, guarantee schemes, and climate-risk finance (Belwal, Tamiru, and Singh 2012; Abebe and Kegne 2023). Market coordination failures are thinner and concentrated in dairy, agribusiness employment, dry-forest livelihoods, and traditional beverage commercialization, which narrows comparative breadth across sectors and places (D'Haene and D'Haese 2020; Worku et al. 2014; Teferi et al. 2026).

Climate-finance remains the weakest domain, because the evidence base is represented by a single qualitative evaluation of women-led rural enterprises (Berhanu 2026). Within that narrow base, the evidence is clear on early inclusion gains, business-capacity gaps, weak institutional follow-up, and social norms affecting sustainability (Berhanu 2026). However, policy commitments to climate resilience and sustainable financing do not yet correspond to a comparably strong evidence base on instruments, scale, or long-term enterprise outcomes (FDRE, Planning and Development Commission 2020; Berhanu 2026).

Intersectional coverage is also uneven. The extracts differentiate gender, age, literacy, marital status, displacement, wealth, and region, but remain inconsistent on disability and some youth-specific trajectories (Beriso 2021; Woldesenbet Beta 2025; Nguse et al. 2022). Evidence is therefore stronger on exclusion mechanisms than on the full range of outcomes for all marginalized groups, particularly persons with disabilities and some displaced populations (Woldesenbet Beta 2025). Longitudinal evidence also remains limited across domains, constraining assessment of durability, comparative effectiveness, and long-run enterprise trajectories (Sube et al. 2025; Sisay et al. 2025; Berhanu 2026).

Overall, the Ethiopia evidence base supports strong claims about exclusion mechanisms and differentiated enterprise effects, but weaker claims about reform durability, comparative performance, and inclusive transformation across all six domains (Desta and Haug 2024; Teferi et al. 2026; Berhanu 2026). The central analytical gap is therefore not policy attention alone, but the limited evidence on whether formal commitments are translated into sustained, inclusive enterprise outcomes across the enabling environment (FDRE, Ministry of Environment, Forest and Climate Change 2017; Sisay et al. 2025; Berhanu 2026). Future evidence should trace reform effects from enabling conditions to delivery, GESI mechanisms, and sustained outcomes. The uneven evidence base requires a cautious interpretation of policy readiness across the three solution tracks.

6. Discussion and Situation Analysis

Section 6 interprets what the evidence means for policy readiness and responsible scaling across the three S4I solution-track pathways. The evidence shifts the policy question from whether reforms exist to whether they create usable delivery conditions for women and youth. The central question is whether Ethiopia's policy, finance, market, institutional, GESI, and climate-finance systems make SPIS, agro-advisory, and forage-feed delivery systems usable, inclusive, and benefit-oriented.

6.1 Current Policy Environment

Ethiopia's policy environment is reform-oriented, but its readiness for inclusive enterprise development depends on practical usability (FDRE, Planning and Development Commission 2020; FDRE, Ministry of Environment, Forest and Climate Change 2017). National planning recognizes private-sector growth, institutional reform, green transformation, GESI, and sustainable financing as shared development priorities (FDRE, Planning and Development Commission 2020; Desta and Haug 2024; Sube et al. 2025). The key issue is not reform presence alone, but whether reforms reduce the costs and uncertainties women and youth face when navigating enterprise systems. Registration, licensing, taxation, land-related rules, information access, institutional support, and resource position therefore become tests of policy usability (FDRE, Ministry of Urban Development and Housing 2016; Abraha and Haftom 2025; Nguse et al. 2022).

For responsible scaling, this means policy readiness should be assessed through delivery conditions rather than formal commitments alone. Finance, extension, coordination, and digital inclusion matter only if they become accessible, reliable, and actionable for women's and youth's enterprises (National Bank of Ethiopia 2025; FDRE, Ministry of Agriculture and Ethiopian Agricultural Transformation Institute 2023; FDRE 2025). The policy test is therefore whether reforms improve support translation, market intermediation, and sustained access to enterprise-relevant services (Berhe 2021; Abraha and Haftom 2025; Sube et al. 2025).

GESI provides a further test of policy readiness because formal commitments matter only when they improve agency, voice, safety, and benefit control. Policy frameworks require participation of gender, youth, and women's organizations and identify inclusion as a guiding principle, but the findings show that formal recognition still coexists with network exclusion, governance exclusion, role conflict, insecurity, and infrastructure-mediated loss of control (FDRE, Ministry of Urban Development and Housing 2016; FDRE, Ministry of Agriculture and Pastoral and Environmental Network in the Horn of Africa 2022; Hundera et al. 2020). The policy significance of this divergence is that provisions should be interpreted cautiously and should not be assumed to demonstrate substantive inclusion unless there is evidence that they improve control, decision-making power, and benefit realization for differently positioned groups, including young women, divorced and widowed women and women in informal urban economies (Beriso 2021; Ayalu et al. 2022).

Climate-related policy priorities further reinforce this interpretation. Current planning frameworks link enterprise, resilience, and green transition, but the operational evidence base remains thinner than in other domains, and the findings suggest that flexible inclusion and localized capacity building are insufficient where continuity, business-capacity support, and institutional follow-up remain weak (FDRE, Planning and Development Commission 2020; FDRE, Ministry of Environment, Forest and Climate Change 2017; Berhanu 2026). Across domains, the reviewed evidence indicates an active reform environment, while also showing uneven implementation readiness and unequal practical access for women- and youth-owned enterprises (Sisay et al. 2025; Berhanu 2026; FDRE, Planning and Development Commission 2020).

For S4I, policy readiness must be tested through each solution-track delivery system. SPIS readiness depends on finance, water, suppliers, advice, services, and markets (Sisay 2025; Degefa et al. 2024; Abadi et al. 2025). Agro-advisory readiness depends on actionable information, trusted channels, feedback, and service links (Alemu Kebede and Getasew Daru 2024). Forage-feed readiness depends on assets, labour arrangements, training, services, markets, and benefit control (Jebessa et al. 2023; Keba et al. 2025). These readiness conditions define where scaling should pause, adapt, or invest before expansion.

6.2 Existing Reforms Supporting Women and Youth Entrepreneurs

This section assesses reforms by asking whether they reduce operational barriers and improve delivery conditions for women's and youth's enterprises. Across domains, reform presence is clearer than demonstrated inclusive effect, so the analysis distinguishes policy design, implementation readiness, and evidence of outcome change.

Legal and administrative reforms are better documented as needs and design priorities than as demonstrated inclusion outcomes (Desta and Haug 2024; Yami 2013; Wossen and Ayele 2018). Formalization, land access, and administrative procedures remain important because they shape whether women and youth can enter, operate, and grow enterprises (Desta and Haug 2024; Yami 2013; Wossen and Ayele 2018). The key implication for S4I is that compliance requirements should be paired with accessible information, support, and visible benefits; otherwise, formalization may reproduce exclusion rather than reduce it.

Financial inclusion reforms are more clearly articulated in policy design than in the available evidence on sustained and inclusive enterprise outcomes (National Bank of Ethiopia 2025). Empirical evidence shows that microfinance, savings access, and cooperative finance can support women's entrepreneurship, but low outreach, product mismatch, collateral constraints, and continuing financial pressure limit durable gains (Abebe and Kegne 2023; Belwal, Tamiru, and Singh 2012; Duguma and Han 2021; Nguse et al. 2022). For S4I, finance should be assessed by whether it enables technology acquisition, input access, maintenance, commercialization, and resilience, not by nominal access alone.

Market coordination reforms appear mainly as structured opportunities rather than fully evaluated transformations (D'Haene and D'Haese 2020; Worku et al. 2014; Teferi et al. 2026). Policy and empirical sources point to the need for stronger standards, cooperative engagement, extension linkages, stakeholder platforms, and commercialization support (FDRE, Ministry of Agriculture and Ethiopian Agricultural Transformation Institute 2023; D'Haene and D'Haese 2020; Worku et al. 2014; Teferi et al. 2026). For S4I, the relevant test is whether market coordination enables women and youth to convert uptake into viable enterprise benefit through buyers, transport, standards, services, and bargaining power.

Institutional strengthening has the clearest reform evidence because business development services, cooperative support, and collective governance improvements show measurable enterprise benefits in selected cases (FDRE, Ministry of Agriculture and Ethiopian Agricultural Transformation Institute 2023; Sisay et al. 2025; Duguma and Han 2021). Business development services show the strongest demonstrated enterprise effects, improving women-owned micro, small, and medium enterprise (MSME) capital, annual income, and employment where women can access and use services (Sisay et al. 2025). Cooperative strengthening and stronger compliance with collective design principles also improve efficiency, trust, and stability, while innovation-system reforms remain more propositional than empirically confirmed (Duguma and Han 2021; Holden and Tilahun 2018; Sube et al. 2025). However, these gains depend on access, targeting, continuity, and responsiveness. For S4I, training, business development services (BDS), extension, and cooperative support should be judged by whether they enable sustained use and benefit within SPIS, agro-advisory, and forage-feed pathways.

GESI-focused reforms are visible in policy intent, including targeted financing, training, women-led enterprise support, reserved representation, and incentives for women and youth service providers (FDRE, Ministry of Water and Energy 2025; FDRE, Ministry of Agriculture and Ethiopian Agricultural Transformation Institute 2023). The evidence base, however, is stronger on recommended directions than on robust outcome effects (Ahmed and Kar 2019a; Beriso 2021; Woldesenbet Beta 2025). Reform credibility should therefore be assessed through delivery-system usability, continuity, agency, representation, and benefit control (Woldesenbet Beta 2025).

Climate related reforms provide the narrowest evidence base but highlight an important inclusion logic: resilience-oriented enterprise support requires continuity beyond initial participation (FDRE, Ministry of Water and Energy 2025; Berhanu 2026). The available evidence suggests that flexible inclusion and localized capacity building can generate early gains, but weak follow-up, business-capacity gaps, and social norms limit durability (Berhanu 2026). Climate-oriented scaling should therefore be treated as a design area requiring testing, especially on eligibility, transaction costs, continuity, and enterprise outcomes (Berhanu 2026; Sisay et al. 2025; Belwal, Tamiru, and Singh 2012).

Overall, the reviewed evidence indicates substantial reform activity, alongside continuing evidence gaps and implementation constraints relevant to women's and youth's enterprise outcomes. Financial inclusion, institutional strengthening, and selected GESI-linked support are more developed than legal-administrative reform and climate-finance. For S4I, the inclusion relevance of these reforms should therefore be assessed through delivery-system usability, continuity, agency, representation, and benefit control.

6.3 Opportunities for Responsible Scaling Interventions

Responsible scaling opportunities should target barriers that create exclusion across multiple delivery-chain points. Responsible scaling also requires trade-off analysis. Each intervention should identify who gains, who bears costs, and who controls benefits. Expansion may increase reach while also increasing unpaid labour, financial risk, dependence, or exclusion from benefits. The three solution tracks should therefore be approached as design-testing areas rather than as already validated inclusive-scaling models. Table 3 translates this responsible-scaling logic into screening criteria for SPIS, agro-advisory, and forage-feed pathways.

Responsible scaling should reduce exclusionary formalization by simplifying business information, improving support for compliance, and addressing land allocation and transfer constraints affecting disadvantaged women, rural youth, and landless households (Desta and Haug 2024; Molla, Alemu Abtew, and Tebkew 2020; Wossen and Ayele 2018). This matters because scaling can expand regulatory expectations faster than support systems, making formalization burdensome unless procedures become more navigable and linked to tangible enterprise benefits (Abraha and Haftom 2025; Sube et al. 2025; Desta and Haug 2024).

For financial inclusion, the evidence supports testing and adapting microfinance, savings access, cooperative finance, refinancing, risk-sharing, digital access systems, and financial literacy where service design improves usability for women and weaker enterprise groups (Belwal, Tamiru, and Singh 2012; Abebe and Kegne 2023; Duguma and Han 2021). Policy-backed interventions reinforce this direction by embedding credit access, risk-sharing, financial literacy, digital inclusion, and bundled insurance within women- and youth-targeted reform design (National Bank of Ethiopia 2025). Yet the literature shows that low outreach, product mismatch, and collateral-linked exclusion can persist even where financial products exist, limiting durable enterprise transformation (Bedane 2016; Belwal, Tamiru, and Singh 2012; Nguse et al. 2022). Financial scaling is more likely to support inclusive enterprise outcomes when finance is usable, growth-oriented, and inclusion-sensitive (Abebe and Kegne 2023; Bedane 2016; Endris and Kassegn 2023).

For market coordination and commercialization, the reviewed evidence points to opportunities involving stronger standardization, cooperative engagement, extension support, and market integration in sectors where women and youth remain weakly connected to viable channels (Teferi et al. 2026; Worku et al. 2014; D'Haene and D'Haese 2020). Proposed options, including standardized starter cultures, packaging innovation, and women-led cooperatives, target coordination failures that prevent product potential from becoming enterprise gain (Teferi et al. 2026; Worku et al. 2014; D'Haene and D'Haese 2020). These examples illustrate coordination mechanisms; their relevance to each solution track requires context-specific testing. They should therefore be treated as design options requiring validation within each solution-track delivery system. Policy reform on stakeholder linkage platforms, pluralistic delivery, and incentives for women and youth providers supports this orientation by recognizing commercialization as an institutional coordination problem (FDRE, Ministry of Agriculture and Ethiopian Agricultural Transformation Institute 2023). Responsible scaling should treat market coordination as an inclusion-risk agenda, not proven transformation (D'Haene and D'Haese 2020; Wossen and Ayele 2018; Teferi et al. 2026).

For institutional capacity and GESI-focused scaling, the strongest empirical basis lies in expanding women's access to business development services, training, cooperative strengthening, inclusive governance, and longer-duration support while improving targeting, coordination, and continuity (Sisay et al. 2025; Duguma and Han 2021; Woldehanna, Wolday, and Manex 2018). Business development services have the clearest demonstrated effects, improving women-owned MSME capital, annual income, and employment, while stronger collective design improves efficiency, trust, and stability in group-based systems (Sisay et al. 2025; Duguma and Han 2021; Holden and Tilahun 2018). Policy evidence extends these opportunities through reserved representation for women, incentives for women and youth private providers, and targeted financing and training for women-led enterprises (FDRE, Ministry of Agriculture and Ethiopian Agricultural Transformation Institute 2023; FDRE, Ministry of Water and Energy 2025). The analytical implication is that service expansion without equitable access can reproduce rather than reduce inequality (Beriso 2021; Sisay et al. 2025; Tesfaye et al. 2026).

For climate finance and resilience-oriented support, the evidence supports testing flexible inclusion, localized capacity building, adaptive monitoring, evaluation, and learning systems as well as financing routes that link restoration, resilience, and enterprise support, but only on a narrow empirical base (Berhanu 2026; FDRE, Ministry of Agriculture and Pastoral and Environmental Network in the Horn of Africa 2022; FDRE, Ministry of Water and Energy 2025).

Policy documents on drylands restoration and the blue economy identify domestic resource mobilization, international climate finance, blended finance, green bonds, concessional finance, and impact investment as potential financing mechanisms. Within the evidence reviewed for this report, however, these mechanisms should be treated as policy options rather than demonstrated pathways to inclusive enterprise outcomes for women and youth (FDRE, Ministry of Agriculture and Pastoral and Environmental Network in the Horn of Africa 2022; FDRE, Ministry of Transport and Logistics 2023). These mechanisms are policy-identified options, not evidence of inclusive enterprise outcomes. From a feminist political economy perspective, these policy-identified options should therefore be assessed by whether they shift resources, services, bargaining power, and benefit control toward women and youth. Alternatively, they should be assessed by whether they mainly expand participation while leaving compliance costs, unpaid labour, financial risk, and weak decision-making power with the same groups. Yet the literature shows that early gains remain fragile when weak follow-up, business-capacity gaps, and social norms persist, so climate-oriented scaling must prioritize continuity and support quality over entry alone (Berhanu 2026). Table 3 translates the analysis into screening criteria for responsible-scaling decisions. These screening criteria should be used before expansion decisions because they identify whether each delivery system has credible conditions for inclusive access, sustained use, manageable labour and risk, agency, and benefit control. The questions support decision-making; they do not validate the tracks as proven inclusive models.

Table 3. Responsible scaling screening criteria for S4I solution tracks

Option	Target domain	Mechanism tested	Delivery-system requirements	GESI inclusion risk	S4I decision use
SPIS readiness screening	Finance, institutional capacity, GESI, market coordination	Whether women and youth can access finance, technology, water, advice, suppliers, services, and markets	Usable finance, supplier networks, water arrangements, technical advice, maintenance, and market links	Awareness may expand while women and youth remain excluded from ownership, repair services, productive use, or profitable markets	Use before scaling SPIS to assess whether adoption can become sustained and equitable benefit
Agro-advisory inclusion screening	Institutional capacity, GESI, market coordination	Whether advisory information is accessible, understandable, trusted, actionable, and linked to services	Appropriate content, language, timing, channels, feedback, extension, and input/service links	Media reach may hide unequal ability to understand, act on, or benefit from advice	Use before expanding advisory content to assess whether information can produce inclusive action
Forage-based livestock-feed delivery screening	Institutional capacity, market coordination, GESI	Whether forage-feed innovations are supported by assets, training, labour-sensitive delivery, services, and markets	Training, livestock services, cooperatives, infrastructure, feed supply, and market access	Innovations may increase women's labour without increasing decision-making, income control, or resilience	Use before scaling forage-feed innovations to assess labour effects, benefit control, and commercial viability

The responsible-scaling implication is that each solution track should be assessed across the full chain: enabling conditions, delivery-system usability, GESI mechanisms, and women's and youth's outcomes. S4I should test entry, continuity, labour and risk, agency, and benefit control before scaling.

7. Research Gaps

The review identifies five priority evidence gaps for strengthening responsible and inclusive scaling decisions in Ethiopia:

- Administrative procedures: More evidence is needed on documentation, inspections, digital registration, enforcement discretion, and enterprise trajectories.
- Solution-track evidence: Evidence remains uneven across delivery systems, uptake, labour burdens, benefit distribution, and sustained outcomes.
- Climate-finance: Evidence remains weak on eligibility rules, transaction costs, risk products, and long-term enterprise outcomes.
- Intersectional coverage: Evidence remains limited for disability, displacement, youth pathways, informality, cooperatives, and rural-peri-urban differences. Although the review coded available intersectional detail where sources specified affected groups beyond broad categories of women or youth, the evidence base does not consistently allow comparison across all relevant social positions.
- Longitudinal reform evidence: More evidence is needed on whether inclusion gains persist beyond initial access or participation.

8. Conclusion

The review shows that inclusive scaling in Ethiopia depends on whether solution-track delivery systems are usable, continuous, and benefit-oriented for differently positioned women and youth. Across SPIS, agro-advisory, and forage-feed pathways, enabling-environment barriers shape who enters, sustains participation, bears costs, exercises agency, and controls benefits. Inclusion challenges emerge throughout the enterprise lifecycle—entry, formalization, operation, adaptation, growth, resilience, and benefit control—rather than in just one phase. Furthermore, the barriers are stage-specific: those affecting entry and formalization differ from those impacting adaptation, growth, resilience, and benefit control. This highlights the need for tailored strategies at each stage to effectively address inclusion constraints while considering entry, participation, cost-bearing, agency, and benefit control.

The research questions are answered by showing that Ethiopia's enterprise environment is shaped by six interacting domains: policy and regulation, financial-market access, market coordination, institutional capacity, GESI, and climate-finance. These domains affect enterprise entry, formalization, operation, adaptation, growth, resilience, and benefit control through mutually reinforcing delivery-system constraints. Regulatory and financial barriers restrict entry and usable finance; institutional and market coordination gaps affect sustained support and commercialization; GESI barriers shape agency, care burdens, safety, voice, and benefit control; and climate-finance barriers remain the weakest evidentiary domain, requiring cautious interpretation. This suggests that inclusive enterprise support should be designed as a sequence of complementary interventions that address barriers across the enterprise lifecycle rather than focusing on a single constraint or delivery mechanism.

The implications differ across the three solution tracks. SPIS is the relatively stronger evidence-informed design-testing area because the reviewed studies address irrigation participation, water-lifting technologies, and small-scale irrigation outcomes, although they do not fully evaluate private-sector-led SPIS scaling. Agro-advisory and forage-feed pathways are supported more indirectly through evidence on adoption, training, extension, infrastructure, livestock assets, labour arrangements, and benefit control. They should therefore be treated as design-testing pathways requiring further evidence rather than as validated inclusive-scaling models.

The central contribution of the review is therefore a delivery-system lens for responsible scaling. The review indicates that policy recognition is an important enabling condition, while inclusive outcomes also depend on whether finance, markets, institutions, GESI arrangements, and climate-related support translate into practical enterprise gains. For S4I, responsible scaling should proceed only where delivery systems show credible pathways toward inclusive access, sustained use, manageable labour and risk, agency, and benefit control, rather than relying on reach or adoption alone. The report's main conceptual contribution is to show that responsible scaling requires evidence that delivery systems can convert innovation reach into equitable access, sustained use, manageable labour and risk, agency, and benefit control.

9. Recommendations

These recommendations translate the review findings into decision criteria for responsible scaling across SPIS, agro-advisory, and forage-feed pathways. Because evidence strength varies across the three pathways, the recommendations should be interpreted according to whether the supporting evidence is direct, indirect, or contextual. These pathways should be treated as design-testing areas, not as already validated inclusive-scaling models. The recommendations should therefore be read as decision criteria for testing, adapting, pausing, or cautiously expanding solution-track delivery systems, not as claims that inclusive-scaling outcomes have already been demonstrated.

- **Policy and regulatory systems**: Assess whether compliance procedures enable or restrict entry, formalization, and growth within each solution-track pathway.
- **Financial market access**: Test whether finance supports acquisition, maintenance, productive use, commercialization, and resilience, especially for women and youth who face collateral, cost, and outreach constraints.
- **Market coordination**: Strengthen linkages that turn uptake into enterprise benefit, particularly for groups lacking networks, transport, buyers, standards, or bargaining power.
- **Institutional capacity**: Invest in services that make delivery systems usable, continuous, and responsive, including BDS, extension, technical support, cooperative strengthening, and feedback mechanisms.
- **GESI**: Assess voice, representation, assets, labour, mobility, safety, time poverty, and benefit control so that responsible scaling reduces risk and dependence rather than deepening them.
- **Climate finance**: Treat climate-finance interventions as design hypotheses requiring testing on eligibility, transaction costs, continuity, and enterprise outcomes.
- **Monitoring, learning, and evidence**: Track reach, uptake, adaptation, sustained use, labour effects, agency, benefit control, and resilience.

The central recommendation is that responsible-scaling decisions should be guided by evidence that delivery systems offer credible pathways toward inclusive access, sustained use, manageable labour and risk, agency, and benefit control.

10. References

Abadi, Asfaw, Tora Abebe, Mesfin Menza, and Yonas Syraji. 2025. "Impact of Small-Scale Irrigation on the Food Security Status of Rural Households in Ethiopia." *Journal of Agriculture and Food Research*: 102402. https://doi.org/10.1016/j.jafr.2025.102402

Abebe, Abraham and Meketaw Kegne. 2023."The Role of Microfinance on Women's Entrepreneurship Development in Western Ethiopia Evidence from a Structural Equation Modeling: Non-Financial Service Is the Way Forward." *Cogent Business & Management* 10 (3): 2256079. https://doi.org/10.1080/23311975.2023.2256079

Abraha, Tuem Gebre and Haftom, Teshale Gebre. 2025. "Assessment of Performance and Challenges of Small and Micro Enterprises: Fireweyni Town, Ethiopia." *PLOS ONE* 20 (4): e0320681. https://doi.org/10.1371/journal.pone.0320681

Ahmed, Yimer Ayalew and Brajaballav Kar. 2019a. "Gender Differences of Entrepreneurial Challenges in Ethiopia." *Academy of Entrepreneurship Journal* 25 (2): 1–6.

Ahmed, Yimer Ayalew and Brajaballav Kar. 2019b. "Influence of Demographic Factors on Business Performance in Ethiopia." *International Journal of Innovative Technology and Exploring Engineering* 8 (12). https://doi.org/10.35940/ijitee.L3034.1081219

Alemu Kebede, Sinkie, and Getasew Daru, Tariku. "Drivers of female farmers' adoption of improved bread wheat varieties in Emba Alaje district, Northern Ethiopia." *Cogent Food & Agriculture* 10, no. 1 (2024): 2308327. https://doi.org/10.1080/23311932.2024.2308327

Ayalu, Getachew, Aradom Gebrekidan, Abbay, and Hossein Azadi. 2022."The Role of Micro- and Small-Scale Enterprises in Enhancing Sustainable Community Livelihood: Tigray, Ethiopia." *Environment, Development and Sustainability*. https://doi.org/10.1007/s10668-022-02359-7

Bedane, Bizuayehu. 2016. "Determinants of Credit Rationing in Ethiopia: Firm-Level Evidence." *Economics Bulletin* 36 (4): 2161–2170.

Belwal, Rakesh, Misrak Tamiru, and Gurmeet Singh. 2012. "Microfinance and Sustained Economic Improvement: Women Small-Scale Entrepreneurs in Ethiopia." *Journal of International Development* 24(S1): S84–S99. https://doi.org/10.1002/jid.1782

Berhanu, Elshaday Girma. 2026. "Strengthening Climate Resilience in Water, Sanitation and Hygiene: Evaluating Women-Led Enterprises in Rural Ethiopia." *African Evaluation Journal* 14 (2): a867. https://doi.org/10.4102/aej.v14i2.867

Berhe, Mesfin Welderufael. 2021. "Empirical Analysis of Urban Youth Unemployment in Ethiopia." *African Development Review* 33: 104–116. https://doi.org/10.1111/1467-8268.12514

Beriso, Beshir Shaku. 2021. "Determinants of Economic Achievement for Women Entrepreneurs in Ethiopia." *Journal of Innovation and Entrepreneurship* 10: 5. https://doi.org/10.1186/s13731-020-00141-5

D'Haene, Eline and Marijke, D'Haese. 2020."Milk in the City: Profiles and Development Paths for Urban Dairy Holders in Ethiopia." *Development Southern Africa* 37 (4): 644–660. https://doi.org/10.1080/0376835X.2019.1689099

Degefa, Hana, Anbes Tenaye, Fitsum Hagos, and Amare Haileslassie. "Technical and allocative efficiency of crop production using different storage and water-lifting technologies in Central Rift Valley, Ethiopia." *Irrigation and Drainage* 73, no. 3 (2024): 1192-1211. https://doi.org/10.1002/ird.2927

Desta, Girmanesh Abreha and Ruth Haug. 2024."Empowerment or Disempowerment through Formalization? The Case of Women Entrepreneurs in Food Processing in Northern Ethiopia." *Forum for Development Studies* 51 (2): 333–362. https://doi.org/10.1080/08039410.2024.2314280

Duguma, Girma Jirata and Jiqin Han. 2021."Effect of Deposit Mobilization on the Technical Efficiency of Rural Saving and Credit Cooperatives: Evidence from Ethiopia." *Annals of Public and Cooperative Economics* 92: 621–647. https://doi.org/10.1111/apce.12296

Endris, Ebrahim and Andualem Kassegn. 2023. "Analysis of Growth and Constraints of Agricultural Micro- and Small-Scale Enterprises in North Wollo Zone, Amhara Regional State, Ethiopia." *Cogent Social Sciences* 9 (1): 2197291. https://doi.org/10.1080/23311886.2023.2197291

Federal Democratic Republic of Ethiopia. 2020. *Digital Ethiopia 2025: A Digital Strategy for Ethiopia's Inclusive Prosperity*. Addis Ababa: Federal Democratic Republic of Ethiopia.

FDRE, Ministry of Agriculture. 2023. *National Livestock and Fisheries Extension Strategy and Roadmap: Ethiopia 2023–2033*. Addis Ababa: Ministry of Agriculture.

FDRE, Ministry of Agriculture, and Pastoral and Environmental Network in the Horn of Africa. 2022. *Ethiopian National Drylands Restoration Strategy*. Addis Ababa: Ministry of Agriculture and Pastoral and Environmental Network in the Horn of Africa.

FDRE, Ministry of Environment, Forest and Climate Change. 2017. *National Forest Sector Development Program, Volume II: Program Pillars, Action Areas and Targets*. Addis Ababa: Ministry of Environment, Forest and Climate Change.

FDRE, Ministry of Innovation and Technology. 2020. *Digital Ethiopia 2025: A Strategy for Ethiopia Inclusive Prosperity*. Addis Ababa: Ministry of Innovation and Technology.

FDRE, Ministry of Transport and Logistics. 2023. *National Blue Economy Strategy of Ethiopia 2023–2027*. Addis Ababa: Ministry of Transport and Logistics.

FDRE, Ministry of Urban Development and Housing. 2016. *Micro and Small Enterprise Development Policy & Strategy*. 2nd ed. March 2012, edited April 2016.Addis Ababa: Ministry of Urban Development and Housing.

FDRE, Ministry of Water and Energy. 2025. *National Clean Cooking Road Map*. Addis Ababa: Ministry of Water and Energy.
FDRE, Planning and Development Commission. 2020. *Ethiopia 2030: The Pathway to Prosperity: Ten Years Perspective Development Plan (2021–2030)*. Addis Ababa: Planning and Development Commission.
Holden, Stein T. and Mesfin Tilahun. 2018."The Importance of Ostrom's Design Principles: Youth Group Performance in Northern Ethiopia." *World Development* 104: 10–30. https://doi.org/10.1016/j.worlddev.2017.11.010
Hundera, Mulu Berhanu, Geert Duysters, Wim Naudé, and Josette Dijkhuizen. 2020. "How Do Role Conflict Intensity and Coping Strategies Affect the Success of Women Entrepreneurs in Africa? Evidence from Ethiopia." *Journal of Small Business Management*. https://doi.org/10.1080/00472778.2020.1756121
Jebessa, Geremew Motuma, Biruk Fikadu, Tamiru Chalchisa, Asafa Tadese, Amanuel Berhanu, Demelash Hailu, and Ahmed Seid. "Impacts of crossbreed dairy cow adoption on women dietary diversity in southwestern Ethiopia." *Journal of Agriculture and Food Research* 12 (2023): 100544. https://doi.org/10.1016/j.jafr.2023.100544
Keba, Abdi, Alganesh Tola, Kerry E. Kaylegian, Muluken Kebede, and Ashagrie Zewdu. "Impact of hygienic milk production training on knowledge, attitudes and practices of women farmers in the central highlands of Ethiopia." *Frontiers in Sustainable Food Systems* 8 (2025): 1539559. https://doi.org/10.3389/fsufs.2024.1539559
Korzenevica, Marina, Catherine Fallon Grasham, Zoé Johnson, Amleset Gebreegzabher, Samrawit Mebrahtu, Zenawi Zerihun, Sonia Ferdous Hoque, and Katrina Jane Charles. 2022. "Negotiating Spaces of Marginality and Independence: On Women Entrepreneurs within Ethiopian Urbanization and Water Precarity." *World Development* 158: 105966. https://doi.org/10.1016/j.worlddev.2022.105966
Molla, Mekdelawit, Asemamaw Alemu Abtew, and Mekuanent Tebkew. 2020. "Socioeconomic Contributions of Small-Scale Private Urban Tree Nurseries in Gondar and Bahirdar Cities." *Cogent Food & Agriculture* 6 (1):1785104. https://doi.org/10.1080/23311932.2020.1785104
National Bank of Ethiopia. 2025. *National Agricultural Finance Implementation Roadmap (NAFIR) 2025–30*. Addis Ababa: National Bank of Ethiopia.
Negash, Teklay, Haitu Etsay, Metkel Aregay, Gidey Kidu, and Zewli Machine. 2023."Livelihood Options of Landless Rural Households in Tigray Region, Northern Ethiopia: Evidence from Selected Districts." *Agriculture & Food Security* 12: 6. https://doi.org/10.1186/s40066-023-00413-9
Nguse, Tiblets, Goshu Desalegn, Betgilu Oshora, Anita Tangl, Robert Jeyakumar Nathan, and Maria Fekete-Farkasne. 2022. "Enhancing Women Economic Empowerment through Financial Inclusion: Evidence from SMEs in Ethiopia." *Polish Journal of Management Studies* 25(1): 270–290. https://doi.org/10.17512/pjms.2022.25.1.17
Sisay, Kindineh, Shita Molla, Lidiya Mekonnen, and Zerihun Gadisa. 2025. "Nexus between Business Development Service and Women Entrepreneurs' Performance: Implication for MSMEs Growth and Inclusive Economic Development in Ethiopia." *Journal of Open Innovation: Technology, Market, and Complexity* 11: 100514. https://doi.org/10.1016/j.joitmc.2025.100514
Sube, Kassahun, Tegegn Belay, Filimon Hando, and Ashenafi Bayinesagn. 2025. "Regional Innovation System (RIS) as a Means for Development: Policies, Opportunities and Challenges in Ethiopia." *F1000Research* 14: 34. Version 1. https://doi.org/10.12688/f1000research.159772.1.
Teferi, Desye Alemu, Messenbet Geremew Kassa, Mikru Tesfa Belachew, Neela Satheesh, Eshetie Gelagay Erku, Aynadis Molla Asemu, and Biresaw Demelash Abera. 2026. "Tella (Ethiopian Traditional Beer): Brewing, Microbiology, Nutrition, Health Implications, Byproducts, and Challenges." *Cogent Food & Agriculture* 12 (1): 2631822. https://doi.org/10.1080/23311932.2026.2631822.
Tesfaye, Tigist, Magdalena Markowska, Ethiopia L. Segaro, and Lucia Naldi. 2026. "Spiritual Bricolage among Women Entrepreneurs: Reframing Adversity." *Entrepreneurship & Regional Development* 38 (5–6): 576–603. https://doi.org/10.1080/08985626.2025.2598854
Woldehanna, Tasssew, Wolday Amha, and Manex B. Yonis. 2018. "Correlates of Business Survival: Empirical Evidence on Youth-Owned Micro and Small Enterprises in Urban Ethiopia." *IZA Journal of Development and Migration* 8: 14. https://doi.org/10.1186/s40176-018-0122-x
Woldesenbet Beta, Kassa. "Effectuation in crisis: How displaced women entrepreneurs adapt strategies for sustainable business in Ethiopia." *Sustainability* 17, no. 10 (2025): 4740. https://doi.org/10.3390/su17104740
Worku, Adefires, Jürgen Pretzsch, Habtemariam Kassa, and Eckhard Auch. 2014. "The Significance of Dry Forest Income for Livelihood Resilience: The Case of the Pastoralists and Agro-Pastoralists in the Drylands of Southeastern Ethiopia." *Forest Policy and Economics* 41: 51–59. https://doi.org/10.1016/j.forpol.2014.01.001
Yami, Mastewal. 2013. "Sustaining Participation in Irrigation Systems of Ethiopia: What Have We Learned about Water User Associations?" *Water Policy* 15 (6): 961–984. https://doi.org/10.2166/wp.2013.031

Disclaimer

This publication has been prepared under the CGIAR Scaling for Impact (S4I) Program and has not been peer reviewed. Responsibility for editing, proofreading, and layout, opinions expressed, and any possible errors lies with the authors and not the institutions involved.

Contact

Karen Nortje, Research Group Leader – Gender Equality and Social Inclusion (GESI), IWMI, Pretoria, South Africa (K.Nortje@cgiar.org)

CGIAR

CGIAR SCALING FOR IMPACT

IWMI International Water Management Institute