



Gender in Soil Matters: Comparative Insights from Multi-Country Gender Analyses

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List of abbreviations

AFTURD	<i>Association des Femmes Tunisiennes pour la Recherche sur le Développement,</i> Tunisian Association of Women for Research on Development
ASMP	Agricultural Soil Management Policy
ASTGS	Agricultural Sector Transformation and Growth Strategy
ATFD	<i>Association Tunisienne des Femmes Démocrates,</i> Tunisian Association of Democratic Women
BMZ	<i>Bundesministerium für wirtschaftliche Zusammenarbeit und Entwicklung,</i> Germany's Ministry for Economic Cooperation and Development
BoA	Bureau of Agriculture
CMRCs	Community Managed Resource Centres
CNFCE	<i>Chambre Nationale des Femmes Chefs d'Entreprises,</i> National Chamber of Women Business Leaders
CSA	Climate-Smart Agriculture
FIAVOTA	Fonds d'Intervention pour le Développement – Programme Fiavota
FPOs	Farmer Producer Organizations
GIZ	<i>Deutsche Gesellschaft für Internationale Zusammenarbeit und Entwicklung,</i> German organisation for international cooperation and development
JIVA	agroecology-based natural farming initiative
KEPSA	Kenya Private Sector Alliance
MAHRF	<i>Ministère de l'Agriculture, des Ressources Hydrauliques et de la Pêche,</i> Ministry of Agriculture, Hydraulic Resources and Fisheries
MAVIM	Mahila Arthik Vikas Mahamandal, State Women's Development Corporation of the Government of Maharashtra
MFFES	<i>Ministère de la Famille, de la Femme, de l'Enfance et des Seniors,</i> Ministry of Family, Women, Children and the Elderly
MINAE	<i>Ministère de l'Agriculture et de l'élevage</i>
MoA	Ministry of Agriculture
MoAFW	Ministry of Agriculture and Farmers' Welfare
MoALD	Ministry of Agriculture and Livestock Development
MoWSA	Ministry of Women and Social Affairs

MPPSPF	<i>Ministère de la Population, de la Protection Sociale et de la Promotion de la Femme,</i> Ministry of Population, Social Protection and Promotion of Women
MSMEs	Micro, Small, and Medium Enterprises
PoSoil	global programme “Soil Protection and Rehabilitation for Food Security
SAMS	<i>Sécurité Alimentaire et Moyens de Subsistance,</i> Food Security and Livelihoods
SI AGER	Special Initiative “Transformation of Agricultural and Food Systems
SMSAs	Self-Managed Savings Associations

Introduction: Why Gender Matters in Soil Health and Agroecology

“Soil Matters – Innovations for Soil Health and Agroecology” is a global programme committed to promoting innovations in soil health and agroecology as part of the German government’s Special Initiative “Transformation of Agricultural and Food Systems” (SI AGER). It is implemented by Deutsche Gesellschaft für Internationale Zusammenarbeit und Entwicklung (GIZ) GmbH on behalf of Germany’s Ministry for Economic Cooperation and Development (BMZ) and co-funded by the European Union and the Gates Foundation. Based on the experiences of the global programme “Soil Protection and Rehabilitation for Food Security (ProSoil) launched in 2014, Soil Matters is being implemented in India, Kenya, Ethiopia, Madagascar, Tunisia, and Cameroon¹, each with distinct agroecological, institutional, and gendered landscapes.

Across these contexts, soil degradation and climate change are pressing challenges. Yet solutions to these challenges must not only be technically effective; they must also be socially inclusive. Integrating gender into soil health and agroecology is not just a matter of equity; it is a strategic imperative. Women constitute a significant share of the agricultural labour force across the Soil Matters target countries. They are central to food production, agroecological knowledge systems, and the adoption of sustainable land management practices. However, they often face unequal access to resources, including land, extension services, financial capital, and knowledge and decision-making platforms.

This synthesis report examines how gender is implicated in soil health interventions across diverse country contexts, and how Soil Matters as a global programme can respond with both gender-responsive and gender-transformative approaches. It draws on national gender analyses conducted between 2024–2025, offering cross-country insights, strategic recommendations, and key entry points to ensure that gender equality is not only acknowledged but actively pursued within the programme’s design, delivery, and scaling pathways.

Methodology and Scope

The synthesis draws upon five country-level gender analyses conducted for Soil Matters in India, Kenya, Ethiopia, Tunisia, and Madagascar. Each analysis examined the gendered dimensions of soil health and agroecology within its national context, using a structured framework that spanned four levels of inquiry:

- (1) Meta-level – Norms, beliefs, and cultural practices;
- (2) Macro-level – Legal, policy, and strategic frameworks;
- (3) Meso-level – Institutional arrangements and organisational capacities; and
- (4) Micro-level – Gendered roles, relations, and capacities among target groups.

The objectives of the analyses were to:

- Identify gender-specific challenges and opportunities in soil health programming;
- Assess how a strengthened focus in Soil Matters on private sector, circular economy, and innovation systems would impact gender inclusion;
- Recommend feasible measures for integrating gender-responsive and gender-transformative approaches across all programme components.

Methodologically, the gender analyses relied on a combination of:

- Desk reviews of national policies, strategies, and past GIZ studies

- Literature reviews of research and programme documents from international organisations, civil society, and UN agencies
- Consultations with implementing partners and national stakeholders, where applicable

These inputs were then synthesised to identify patterns and divergences across countries, with particular attention to opportunities for replication, adaptation, or context-specific innovation. This synthesis report distills those findings into a concise, action-oriented format to inform strategic decision-making for Soil Matters and its partners.

Cross-Country Gender Analysis: Key Findings by Level

Meta-Level: Gender Norms, Beliefs, and Cultural Practices

Across all countries, gender norms continue to shape women's roles in agriculture and constrain their participation in soil health and agroecology initiatives. Women are often viewed as "helpers" rather than farmers in their own right, limiting their access to services, land, and decision-making platforms. In Ethiopia and Madagascar, gender roles are reinforced by traditional norms and customary systems, with male-dominated household decision-making prevalent across all five countries. In India and Kenya, the feminisation of agriculture due to male outmigration increases women's workload without any corresponding recognition or compensation.

Notably, while women provide the majority of agricultural labour in countries like Madagascar (up to 90% in processing) and India (significant roles despite lack of land titles), they continue to face labour-intensive drudgery, lack of formal recognition as farmers, and limited participation in leadership roles. In Tunisia, even when women work in organized cooperatives, their agency remains restricted by structural wage discrimination and land inheritance norms.

Despite variation in gender parity scores, no country fully escapes the persistence of social norms that devalue women's agricultural contributions or limit their economic empowerment in soil-related sectors.

Macro-Level: Legal, Policy, and Strategic Frameworks

All countries have ratified key international gender equality agreements and developed national gender strategies. However, the disconnect between policy commitments and on-the-ground implementation is a common thread. In Kenya and Tunisia, there are strong gender policies in agriculture and soil management (such as Kenya's Agricultural Sector Transformation and Growth Strategy and Tunisia's National Strategy for the Economic Empowerment of Rural Women) but cultural barriers and enforcement mechanisms remain a challenge.

India's policy frameworks emphasise women's participation in Farmer Producer Organizations (FPOs) and joint land titling, yet women's recognition as farmers remains low due to informal landholding patterns. Madagascar has made notable commitments to gender equality in national planning documents. However, the effectiveness of these policies is hindered by the lack of coordinated institutional action and the absence of gender in key climate and Climate-Smart Agriculture (CSA) strategies.

Ethiopia stands out for embedding gender within its 10-Year Development Plan, yet the soil-specific strategies still lack gender mainstreaming, revealing persistent "siloing" between gender and technical sectors.

Meso-Level: Organisational and Institutional Capacities and Constraints

Institutional gender capacity remains uneven across countries and levels. Ministries of Women (or equivalent) exist in each country but face chronic underfunding, lack of coordination authority, and limited influence over sectoral ministries. Gender focal points are often present but under-resourced and viewed as donor compliance mechanisms rather than drivers of change.

In Kenya and Ethiopia, there are efforts to integrate gender within agricultural extension systems through gender units, directorates, or gender-sensitive budgeting, but implementation varies dramatically between national and subnational levels. Madagascar and Tunisia show strong civil society engagement and donor-supported women's empowerment initiatives, but government agricultural institutions may not yet have the skills and tools to translate gender policies into action.

Tunisia and India have vibrant networks of women's agricultural groups – such as Self-Managed Savings Associations (SMSAs), Self-Help Groups (SHGs), and FPOs - which could serve as strategic platforms for scale, but their transformative potential is often hindered by traditional leadership hierarchies and limited access to resources.

Micro-Level: Gendered Roles, Relations, and Capacities Among Target Groups

Soil Matters engages farmers, Micro, Small, and Medium Enterprises (MSMEs), cooperatives, and local institutions, yet gender disparities persist in each group. Women often lack secure land tenure (e.g. only 3.1% of Kenyan women own land exclusively) and struggle to access inputs, credit, and mechanized tools. In Ethiopia and India, women's access to financial services is especially constrained due to collateral requirements and legal ambiguity over land rights.

Capacity development efforts for agroecology frequently miss women due to literacy barriers, mobility limitations, and inflexible training schedules. In India and Kenya, digital tools risk exacerbating inequality unless digital literacy and infrastructure are deliberately addressed. Women's participation in soil health innovations is most effective when co-designed with them, yet in practice, women's involvement is still often passive or symbolic. Where women do participate actively, such as in SHGs, village-based cooperatives, or lead farmer networks, their influence over programme design or market linkage remains limited.

Assessing Institutional Readiness for Gender Integration

The success of gender integration in Soil Matters will depend heavily on the capacity and commitment of national and subnational implementing partners. While all five countries have gender policies and coordination mechanisms on paper, the degree of institutional readiness varies widely (see Table 1).

Kenya and Ethiopia stand out for their structured gender integration at the ministry level. Kenya's Agricultural Sector Transformation Strategy and National Soil Management Policy explicitly reference gender, and many counties have appointed gender officers. Ethiopia has institutionalised gender focal points in all line ministries and established a dedicated Gender Directorate within the Ministry of Agriculture. However, significant challenges are being faced by both countries in terms of subnational execution and the establishment of effective connections between policy and its practical implementation in daily services.

Madagascar and Tunisia offer contrasting profiles: Madagascar's agriculture ministries are weaker on gender, but civil society organisations and social protection programmes like FIAVOTA fill critical gaps. In Tunisia, legal frameworks and women's empowerment

programmes are relatively advanced, but elite capture and social resistance remain challenges, particularly around land and decision-making.

India benefits from robust women's collective action platforms, such as SHGs and women-led FPOs, which provide scalable entry points. Yet the capacity of these platforms to deliver agroecology and soil restoration goals is uneven and often under-monitored. A promising subnational example is the Mahila Arthik Vikas Mahamandal (MAVIM), the State Women's Development Corporation of the Government of Maharashtra. Designated as a nodal agency for women's empowerment programmes, MAVIM strengthens SHG networks through capacity building, financial literacy, and bank linkages — including via Community Managed Resource Centres (CMRCs) — offering a potentially replicable model for integrated agroecological programming.

These findings suggest that Soil Matters must tailor its technical assistance, coordination strategies, and resource allocation to the institutional realities of each country. In contexts with strong gender frameworks but weak delivery (e.g. Ethiopia, Madagascar), capacity-building and monitoring systems will be key. In countries with vibrant civil society and women's networks (e.g. India, Tunisia), the focus should be on supporting bottom-up innovation, while also safeguarding inclusion and accountability.

Table 1: Institutional Gender Responsiveness of Soil Matters Partner Organisations

Country	Key Implementing Partners	Gender Mainstreaming Status	Strengths	Gaps/Considerations
Kenya	MoALD, County Agricultural Departments, KEPSA	Gender units at national and county levels; gender in ASTGS and ASMP	Strong public-private collaboration; county gender officers active	Uneven implementation across counties; financing mechanisms underdeveloped
Ethiopia	MoA, BoA, MoWSA, Regional Agricultural Bureaus	Gender Directorate in MoA; gender focal points in all line ministries	Institutionalized at federal level; aligned national plans	Weak implementation at woreda level; low subnational capacity
Madagascar	MINAE, MPPSPF, CSOs (e.g. FIAVOTA, SAMS cluster)	Gender focal points in ministries, but underfunded and underused	Strong CSO involvement; existing platforms for social protection	Agricultural ministries lack awareness of gender roles and mandates; coordination weak
India	MoAFW, NABARD, SHGs, FPOs	Gender strategies exist; MoAFW promotes joint titling and women's FPOs	Large-scale SHG networks; NABARD's JIVA programme has agroecology linkages has agroecology linkages	Disconnect between national policies and local implementation; limited monitoring of SHG impacts
Tunisia	MAHRF, MFFES, ATFD, AFTURD, CNFCE	Progressive legal and institutional frameworks; active gender advocacy groups	Strong women's rights organisations; pilot projects on rural women's economic inclusion	Land inheritance issues persist; risk of elite capture in local organisations

Comparative Opportunities and Gaps Across Country Contexts

The five country-level gender analyses reveal both shared and divergent patterns that influence the potential for gender-responsive and gender-transformative programming within Soil Matters. While all countries face entrenched social norms that constrain women's access to key resources such as inputs, extension and information services, finance, land access, decision-making, and recognition as farmers, the institutional environments in which Soil Matters operates vary significantly. A snapshot of gender norms, structural barriers, and institutional readiness across countries is presented in Table 2.

Cross-Country Insights

- **Common Barriers:** In all countries, women play critical roles in agriculture yet lack formal land ownership - ranging from 3% in Kenya to under 10% in India and Madagascar. Norms frequently cast women as helpers or caretakers, limiting their decision-making power and visibility in soil-related innovations. These gendered constraints intersect with other vulnerabilities, including caste (India), mobility restrictions (Tunisia, Madagascar), and unpaid labour burdens (Ethiopia).
- **Diverse Institutional Landscapes:** Kenya and Ethiopia have made notable efforts to embed gender within agricultural ministries, with gender units and national strategies in place. However, weak subnational execution remains a bottleneck. India and Tunisia benefit from strong women's networks (e.g. SHGs, Agricultural Development Groups), while Madagascar leans heavily on CSOs to fill capacity gaps left by underfunded government institutions. These differences shape where gender actions can be led by government, supported through grassroots structures, or require donor facilitation.
- **Strategic Entry Points:** In India and Kenya, scalable platforms exist for gender-smart MSME development, knowledge exchange, and co-designed soil innovations. Tunisia and Ethiopia offer potential for policy engagement on land rights and agricultural budgeting. Madagascar, despite some institutional fragility, demonstrates community interest in agroecological practices and women-led farming initiatives which creates an opening for foundational capacity building.

Table 2. Comparative Snapshot: Gender Norms, Barriers, and Institutional Readiness for Soil Matters

Country	Women in Agriculture (% labour force)	Land Ownership (%)	Key Norm Constraints	Institutional Gender Capacity (Summary)
India	>33% (underrecognized)	~8% sole ownership	Women seen as "helpers"; caste & class intersect	National gender policies in agriculture; strong SHG and FPO platforms; mixed local implementation
Kenya	42–65%	3.1% exclusive	High gender-based violence rates; feminization of agriculture	Gender units in MoALD and counties; progressive agriculture policies; uneven subnational delivery
Ethiopia	47%	12%	High unpaid care burden; low land rights	Gender Directorate in MoA; national focal points strong; woreda-level capacity weak
Tunisia	58% (rural women)	6–14%	Inheritance norms; unsafe field transport	Advanced legal frameworks; strong women's CSOs; risk of elite capture in cooperatives

Country	Women in Agriculture (% labour force)	Land Ownership (%)	Key Norm Constraints	Institutional Gender Capacity (Summary)
Madagascar	>50% (farming), 90% (processing)	9.4%	Taboos (fady), male decision dominance	Weak ministry-level gender capacity; CSO engagement critical; focal points lack resources

Strategic Recommendations for Gender-Responsive and Gender-Transformative Project Design

The following recommendations synthesize country-level findings into a cohesive set of actions aligned with the three core outputs of Soil Matters. They are designed to be adaptable across contexts while advancing gender equity through both foundational (Gender-Responsive) and structural (Gender-Transformative) changes.

Output 1: Strengthening Technical and Organisational Capacities

→ Gender-Responsive Recommendations

- Ensure gender-balanced participation in training by tailoring timing, location, and materials to women's needs, including childcare support and visual aids for low-literacy participants.
- Promote labour-saving soil health technologies (e.g. biochar, composting, small-scale mechanization) to reduce women's workload.
- Recruit and train more female extension officers to increase outreach and role modeling for women farmers.
- Integrate gender modules into technical training for cooperatives, MSMEs, and farmer organisations.
- Develop digital tools and advisory services that are inclusive of women and youth, with support for digital literacy.

→ Gender-Transformative Recommendations

- Institutionalize joint household decision-making modules in farmer trainings to shift intra-household power dynamics.
- Support women-led farmer research networks to embed women's voices in innovation processes.
- Develop and scale inclusive business models for agroecology that prioritise women- and youth-led MSMEs.
- Promote women's leadership in cooperatives and producer organisations, not just as members but as strategic decision-makers.

Output 2: Improving Framework Conditions for Soil Health and Agroecology

→ Gender-Responsive Recommendations

- Integrate gender considerations into national and subnational soil health and agroecology policies (e.g. access to finance, land tenure, representation in governance).
- Engage women's organisations, agricultural cooperatives, and gender ministries in policy consultation processes.
- Ensure public agricultural budgets allocate resources for gender-responsive interventions.
- Collect and use gender- and age-disaggregated data to inform programme design, monitoring, and scaling strategies.

→ **Gender-Transformative Recommendations**

- Collaborate with policymakers and customary leaders to address systemic barriers to women's land rights and representation.
- Embed gender equality as a cross-cutting commitment in agroecological and climate adaptation strategies (not as an add-on).
- Design intersectional policy approaches that account for class, caste, age, ethnicity, and marital status.
- Create legal and fiscal incentives for private-sector investment in women-led agroecological businesses.

Output 3: Scaling and Policy Engagement through Knowledge Alliances

→ **Gender-Responsive Recommendations**

- Ensure women's inclusion in South-South and North-South knowledge exchange activities and learning networks.
- Generate and disseminate case studies on women's leadership in agroecology and soil restoration.
- Incorporate gender-sensitive indicators in regional and global monitoring systems.
- Develop inclusive communication strategies that reflect the lived realities of women, men, and marginalised groups.

→ **Gender-Transformative Recommendations**

- Reposition women as knowledge producers, facilitating their leadership in peer exchanges, technical forums, and agroecology campaigns.
- Promote women-led storytelling and traditional ecological knowledge in formal platforms.
- Strengthen gender-transformative leadership training, particularly for young women and community-based practitioners.
- Embed gender in the design and governance of multi-actor learning alliances to ensure institutional accountability.

Measures to Prevent and Mitigate Potential Negative Gender Impacts

While Soil Matters offers important opportunities to advance gender equity, it must also anticipate and address potential risks. If not carefully managed, well-intentioned interventions may unintentionally reinforce harmful norms, increase women's workloads, or deepen exclusion. The following strategies are designed to ensure a "do-no-harm" approach and promote inclusive, resilient implementation.

1. Clarify Intent and Communicate Gender Goals Transparently

- Clarify misconceptions: Frame gender work as advancing equity and collective resilience (not favoring women over men). Proactively communicate that gender strategies benefit households, communities, and agricultural systems as a whole.
- Engage men and traditional leaders: Involve male champions and respected community figures to prevent backlash and promote shared ownership of gender objectives.

2. Ensure Equitable Access to Resources and Opportunities

- Prioritise marginalised groups: Use inclusive targeting criteria to ensure outreach to rural women, widows, youth, people with disabilities, and minority groups.
- Adapt financial models: Remove barriers like land-based collateral that prevent women from accessing credit or grants. Structure training for accessibility: Offer sessions at convenient times and locations, provide childcare, and use low-literacy materials.

Where relevant, women-only formats can create safe spaces for empowerment; complement with mixed-gender dialogues, male ally sessions, or household-level outreach to reduce risk of backlash.

3. Avoid Reinforcing Gender Norms or Increasing Labour Burdens

- Monitor women's workload: Agroecological practices can be labour-intensive. Use labour-saving technologies and avoid shifting burdens to women without support. Invest in research (e.g. cost-benefit studies) to quantify trade-offs and inform fair compensation or mitigation strategies.
- Design group activities carefully: Ensure women's groups are inclusive and empowering, not hierarchical or tokenistic. Avoid reinforcing stereotypes by limiting women's roles to "secretary" or "treasurer."
- Promote joint decision-making: Encourage intra-household collaboration in farm planning and technology adoption to reduce conflict and foster mutual understanding.

4. Strengthen Safeguards and Grievance Mechanisms

- Conduct a root cause analysis: Explore the underlying power dynamics and intersecting vulnerabilities (e.g. class, caste, marital status) to inform project design and community engagement.
- Establish feedback channels: Create safe, accessible mechanisms for community members (especially women) to report exclusion, discrimination, or abuse.
- Support legal and psychosocial services: Where needed, partner with local organisations to offer support for women facing domestic violence or community backlash related to project participation.

5. Build Institutional Accountability and Gender Capacity

- Train staff and partners: Ensure agricultural and gender personnel have practical skills to implement gender-transformative activities, not just awareness.
- Embed gender into M&E: Track participation and benefits by gender and age. Monitor for unintended consequences, such as increased gender-based violence, elite capture, or exclusion.
- Budget for gender actions: Allocate funds for training, women's leadership development, safe participation mechanisms, and community sensitisation.

Conclusion: Towards Inclusive Soil Health Solutions

Soil Matters presents a unique opportunity to embed gender equity at the heart of soil health and agroecological transformation. This synthesis of gender analyses from India, Kenya, Ethiopia, Tunisia, and Madagascar highlights both the urgency and the feasibility of doing so. Women are never just beneficiaries - they are critical agents in restoring soil fertility, building climate resilience, and leading community-level innovation. Yet structural constraints, from insecure land tenure to limited institutional gender capacity, continue to limit their participation and impact.

The cross-country findings reveal that while no "one-size-fits-all" model exists, there are consistent opportunities for action. Women's agricultural groups, gender-responsive extension services, inclusive financing, and co-created knowledge platforms are all promising entry points. Equally, risks related to increased labour burdens, tokenism, or backlash must be actively mitigated.

To realise the full potential of gender-transformative soil health programming, Soil Matters must:

- Invest in local systems and women's leadership, rather than just technical solutions.
- Mainstream gender from design to implementation, rather than treating it as an add-on.
- Center intersectionality and context-specific strategies, recognising that women's experiences are shaped by overlapping factors such as age, ethnicity, marital status, and livelihood.
- Foster cross-country learning by establishing regular exchange among gender focal points. A dedicated platform for dialogue and joint reflection can strengthen alignment, surface innovations, and build momentum for gender-transformative programming across Soil Matters countries.
- Measure what matters by using gender-sensitive and inclusive monitoring frameworks. Pair implementation of soil health practices with research and cost–benefit analysis to surface labour and time trade-offs and guide fair compensation or adaptive strategies.

By grounding agroecological innovation in inclusive processes and equitable access, Soil Matters can catalyze both environmental and social transformation. The path forward is not only about restoring soil; it is also about shifting power dynamics, strengthening resilience, and advancing justice across food and farming systems.

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