TracTrac

Inclusive Agricultural Mechanisation Strategy

A Practical Framework for Gender and Social Inclusion in Mechanisation Service Markets

Lessons from the ISSAM Project Implementation.



EXECUTIVE SUMMARY

Agricultural mechanisation remains one of the most critical enablers of agricultural productivity, labour efficiency, and rural economic transformation across Africa. However, access to mechanisation services remains uneven, particularly for women, youth, persons with disabilities (PWDs), and displaced populations.

Experiences from the TracTrac ISSAM project demonstrate that inclusion in mechanisation markets requires deliberate design choices across recruitment/mobilization, capacity building and training systems, market access, and enabling environments.
Evidence from TracTrac field implementation shows that traditional information channels often fail to reach women effectively. TracTrac mobilization strategy is built on shared learnings in communities where it continues to operate and implement its initiatives. Women, PWDs, and IDPs are targeted deliberately using sensitive IEC materials, vulnerable group network and community gatekeepers.

Focus Group Discussions (FGD) conducted during implementation revealed that only 25% of participants believed mobilization efforts adequately reached women, while 87.5% reported that information circulated primarily through male-dominated networks such as farmer groups and community leadership structures.

However, within the agricultural mechanization sector, significant barriers to access persists particularly in relation to machinery, technical knowledge, as well as technology and specialized skills. These barriers disproportionately affect young women and Persons with Disabilities, limiting their participation in and benefits from mechanized agriculture.
TracTrac is actively bridging this gap by advancing an inclusive approach that empowers women, youth, and PWDs through facilitating improved access to knowledge, practical skills, and appropriate mechanization technologies. By integrating inclusive onboarding processes and targeted capacity-building initiatives, TracTrac is positioning itself as a catalyst for equitable participation and economic empowerment within Nigeria's agricultural mechanization ecosystem.



INCLUSION STRATEGY

These findings highlight the need for intentional strategies that address both structural and operational barriers to participation.

This strategy provides a practical framework for organizations seeking to expand inclusive participation in mechanisation ecosystems. It outlines tested approaches across four strategic areas:

1. Inclusive mobilization and recruitment
2. Inclusive test screening and onboarding processes
3. Capacity development and enterprise support
4. Enabling environments and safeguarding

The framework draws lessons from the ISSAM project and offers a replicable model for organizations implementing mechanisation programs across emerging agricultural markets.

STRATEGIC CONTEXT

1.1 The Mechanisation Inclusion Gap

Mechanisation markets are often shaped by structural inequalities that limit participation from women and other vulnerable populations. Barriers include:

- Limited access to mechanisation technologies
- Lack of technical training opportunities
- Cultural perceptions about machinery operation
- Limited access to finance and productive assets
- Digital literacy gaps
- Caregiving responsibilities

Together, these barriers constrain the participation of women and vulnerable populations both as service providers and enterprise operators within mechanisation ecosystems.

1.2 The Economic Opportunity of Inclusive Mechanisation

Inclusive mechanisation represents a significant economic opportunity. Women account for a large share of agricultural labour across Nigeria but remain significantly underrepresented in mechanisation enterprises. Expanding access to mechanisation entrepreneurship can:

- Increase service coverage for smallholder farmers
- Improve agricultural productivity
- Expand rural employment opportunities
- Strengthen local agricultural markets

Inclusive mechanisation therefore represents both a development objective and a commercial opportunity.

STRATEGIC OBJECTIVES

Organizations implementing this strategy should pursue four core objectives:

1. Expand participation of women, youth, and vulnerable populations in mechanisation enterprises.
2. Reduce structural barriers that prevent access to mechanisation training and technologies.
3. Promote inclusive enterprise models that allow diverse participation in mechanisation markets.
4. Strengthen institutional systems that support safe and equitable participation.



STRATEGIC OBJECTIVES



STRATEGIC PILLARS FOR INCLUSIVE MECHANIZATION

PILLAR 1: INCLUSIVE MOBILIZATION AND RECRUITMENT

Evidence from implementation suggests that conventional mobilization approaches disproportionately reach men through existing farmer networks. FGD findings showed that male-dominated farmer meetings and networks were the primary channels through which information circulated, limiting women's access to program opportunities.

The FGD report highlighted four key findings:

1. **Mobilization Gaps:** Information reached men adequately and women less adequately, primarily due to cultural/religious restrictions and male dominated networks.
2. **Enablers and Benefits:** Training and cooperative enterprise model boosted confidence and income (e.g. equipment rental earnings cited in **63%** of FGDs) while post-training word of mouth testimonies increased women's awareness and participation.
3. Only **25%** of discussants felt mobilization reached women adequately, citing poor dissemination by community heads, "some community heads did not disseminate the information to women."
4. **87.5%** of discussants confirmed effective information reach the men due to farmer networks and male-centric meetings, "community leaders only hold meetings with men.", "Information spreads quickly among men through farmer networks and groups." Etc.

In response, TracTrac adopted a multi-channel, community-context-specific mobilisation approach. This included targeted advocacy to community gatekeepers, engagement of community leads, self-registration options, gender-targeted IEC materials, test clinics for applicants without access to digital devices, and sensitisation meetings scheduled at times convenient for women and other vulnerable groups.

RECOMMENDED ACTIONS

To address this gap, organizations should implement multi-channel mobilization and recruitment strategies.
Other approaches include:

- Direct and continuous advocacy/engagement with community gatekeepers
- Collaboration with women's associations and vulnerable group networks
- Use of targeted Information, Education and Communication (IEC) materials
- Gender-sensitive sensitization messaging
- Flexible registration scheduling and options including assisted registration e.g test clinics.

Programs should set explicit participation targets, such as aiming for **50-60%** female participation where feasible.

STRATEGIC PILLARS FOR INCLUSIVE MECHANIZATION



STRATEGIC PILLARS FOR INCLUSIVE MECHANIZATION

PILLAR 2: INCLUSIVE TESTING AND ONBOARDING SYSTEMS

Selection systems can unintentionally exclude women and other vulnerable groups when they rely heavily on digital platforms or written assessments, given existing gap in technology access.

During ISSAM implementation, some women reported difficulties completing online tests due to limited literacy or lack of access to digital devices.

Following targeted adjustments, women and PWDs performed significantly better than in the previous year with some LGAs recording excellent performance. Overall test participation reached **61.1%** with an average score of **72.54%**. The data below summarises performance by LGA and illustrates the range of participation and outcomes achieved:

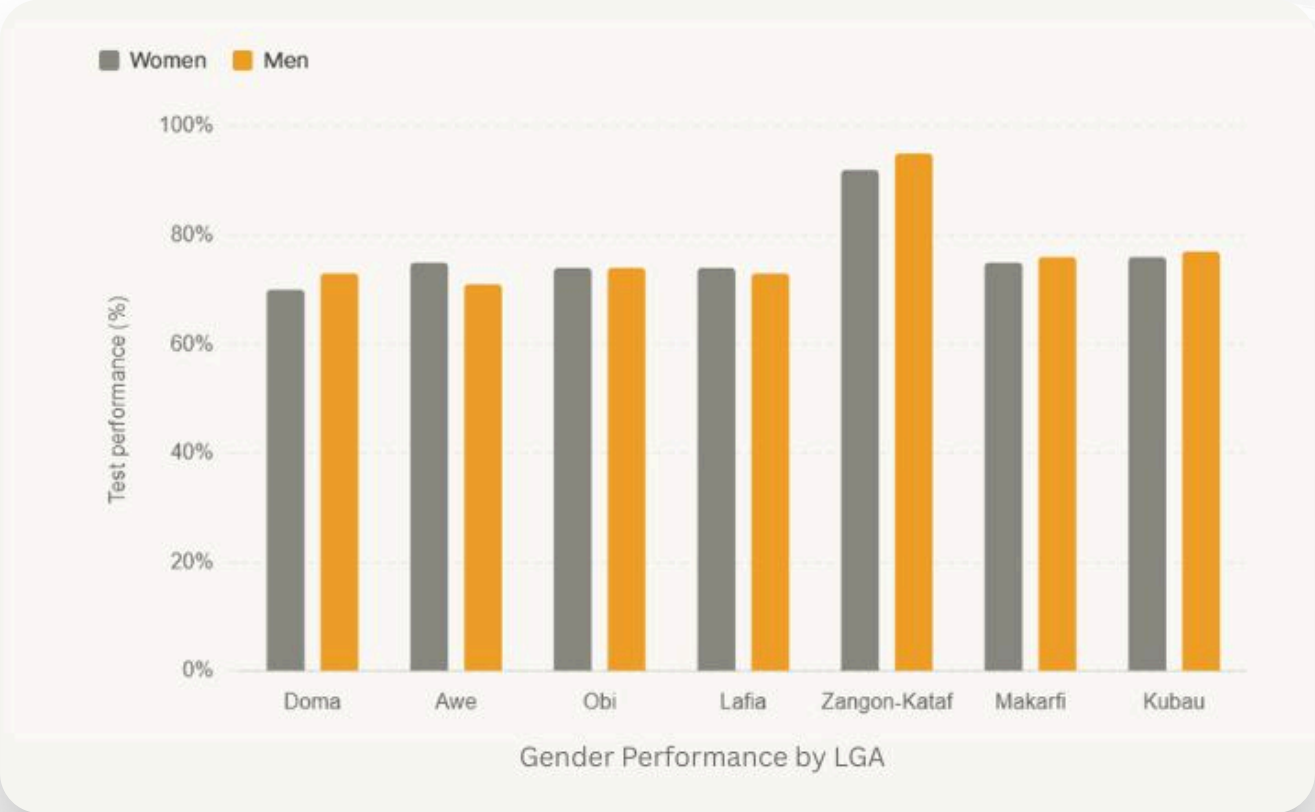
- Doma LGA recorded the most gender-balanced result, with women making up **53.3%** of mobilised participants but men marginally outperform women (**72.79% vs 69.82%)**.
- Awe LGA recorded the lowest female participation at **27.9%**, highlighting a gender gap in mobilisation however, women slightly outperform men (**74.98% vs 71.09%**).
- Female representation was moderately recorded in Obi LGA at **37.4%** and a balanced performance with both genders scoring around **74%**.
- Lafia LGA recorded **37.6%** women representation and led the test performance with **74.22% vs 72.74%** and Keana LGA recorded a **33.5%** women representation.
- Zangon-Kataf LGA recorded a female test performance rate of **92.5%**, with male participants slightly outperforming them at **95.6%**.
- Makarfi LGA recorded an almost balanced performance with Women scoring **75.0%** and men **75.6%**.
- Kubau LGA also recorded an almost balanced performance with women scoring **76.4%** and men **77.7%**.

In response to the identified gaps, testing clinics were introduced where applicants could access smart devices and receive guidance in completing assessments. These adjustments significantly improved participation and performance outcomes.

RECOMMENDED ACTIONS

- Assisted digital testing centres
- Flexible testing schedules including weekends
- Simplified application processes
- Support for applicants with literacy limitations

STRATEGIC PILLARS FOR INCLUSIVE MECHANIZATION



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PILLAR 3: CAPACITY DEVELOPMENT AND ENTERPRISE SUPPORT

Technical and business capacity development plays a critical role in enabling inclusive participation in mechanisation markets, a key pillar of this model is women's empowerment.

By intentionally providing women with the same training, technological resources, and leadership opportunities as their male counterparts, TracTrac works to close long-standing information and technology gaps through its enterprise support and capacity building model.

Women are not only participants but active decision makers within their enterprises, with equal responsibilities and shared purpose. This inclusive approach enhances productivity, promotes financial independence, and fosters greater equity within cooperative structures.
The cooperative enterprise model has proven particularly effective in addressing structural inequalities. Under this model:

- Members share access to digital platforms
- Business information flows transparently across members
- Women participate in leadership and decision-making
- Technical training is delivered equally to all participant

This approach helps close long-standing information and technology gaps that often disadvantage women in agricultural enterprises.

RECOMMENDED ACTIONS

- Enhance Market and Enterprise Development Support
- Promote Transparent Information Sharing within Cooperatives
- Institutionalize Gender-Responsive Training Approaches
- Promote Equal Access to Digital Platforms such as Commcare and others.
- Strengthen Women enterprises and Leadership Skills

STRATEGIC PILLARS FOR INCLUSIVE MECHANIZATION



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PILLAR 4: ENABLING ENVIRONMENT

True inclusion requires addressing practical barriers that limit participation. Implementation experience shows that caregiving responsibilities, disability access constraints, and safety concerns can significantly affect participation rates.

To support participating mothers, TracTrac's training campuses provide crèche facilities that have supported over 200 children in the past year. This service enables mothers to fully concentrate, participate actively in learning sessions and other program activities without compromising their caregiving responsibilities. By integrating childcare support into program design, TracTrac affirms its commitment to gender responsive programming and equitable access to opportunities.

TracTrac is equally committed to the full inclusion of Persons with Disabilities (PWDs). The organization ensures equal opportunities for participation by proactively identifying and removing barriers that may hinder engagement. Professional sign language interpreters are engaged to support participants with hearing impairments, and assistive devices, including wheelchairs, are made available to persons with physical impairments. Physical spaces and program delivery approaches are also adapted, where necessary, to enhance accessibility and participation.

RECOMMENDED ACTIONS

Programs should include accessibility measures such as:

- Sign language interpreters
- Wheelchair accessibility
- Adaptive training delivery methods

Programs may reserve participation quotas for vulnerable populations. TracTrac reserves at least five percent (**5%**) of its project target participants for Internally Displaced Persons (IDPs) and Returnee Displaced Persons (RDPs) ensuring they receive the same comprehensive support systems available to all participants. This deliberate allocation reflects its commitment to equity, social protection, economic reintegration, and the inclusion of communities that often face heightened barriers to accessing education, skills development, and economic opportunities.

STRATEGIC PILLARS FOR INCLUSIVE MECHANIZATION

PILLAR 5: SAFEGUARDING AND WELLBEING

Inclusive programs must ensure the safety and dignity of all participants. Effective safeguarding systems include:

- Zero-tolerance policies on abuse or discrimination
- Confidential reporting systems
- Health screening protocols
- On-site healthcare services

TracTrac developed robust safeguarding measures to ensure the safety, dignity, and wellbeing of all participants throughout their engagement on and off the training campus. TracTrac as an organization maintains a zero-tolerance approach to any form of abuse, neglect, discrimination, or harm, and has established clear safeguarding policies, reporting mechanisms, and response procedures to address concerns promptly and confidentially.
To further promote a safe and healthy environment, participants undergo health screening for selected medical conditions. This proactive measure supports early identification of potential health risks and enables the team to put appropriate support systems in place before participants arrive on campus.

These preventive and responsive systems reflect TracTrac's commitment to creating a secure, inclusive, and supportive environment where all participants can engage confidently and focus fully on their personal and professional development.
By integrating round-the-clock medical support into the training structure, TracTrac demonstrates its commitment to safeguarding participants and creating a secure, supportive learning environment where individuals can fully engage without concerns about their health and safety.

RECOMMENDED ACTIONS

- Provide 24-Hour Medical Services
- Conduct Pre-Camp Health Screening
- Establish Emergency Medical Response Protocols
- Strengthen Safeguarding Policies and Reporting Mechanisms
- Train Staff on Safeguarding and Participant Protection

STRATEGIC PILLARS FOR INCLUSIVE MECHANIZATION

PILLAR 6: MONITORING AND PERFORMANCE INDICATORS

Organizations implementing this strategy should track progress through measurable indicators.
Recommended indicators include:

Indicator	Target
Female participation in mechanisation training	≥50%
PWD participation	≥5%
Women leadership roles in cooperatives	≥40%
Participant retention	≥90%
Participant satisfaction	≥90%

Regular monitoring allows programs to adjust strategies and address emerging barriers.



IMPLEMENATION CHALLENGES AND LESSONS

Programs implementing inclusive mechanisation strategies should anticipate several challenges:

- **Cultural and Gender Norms:**

Deeply rooted cultural perceptions in some communities may discourage or limit women's participation in mechanization activities, particularly in operating agricultural machinery, which is traditionally perceived as male dominated.

- **Low Awareness of Mechanization Opportunities:**

Limited understanding of mechanization service enterprises and their economic potential may initially reduce interest among community members, particularly among women and youth who may not immediately recognize the business opportunities within the sector.

- **Stakeholder Skepticism:**

Some stakeholders may express hesitation or skepticism due to past experiences with development programs that did not deliver sustained impact, requiring additional effort to build trust and demonstrate value.

- **Logistical and Accessibility Constraints:**

Transportation challenges, poor road infrastructure, or long travel distances to remote or underserved areas can hinder project reach and consistent participation in training programs and enterprise activities.

- **Language Barriers**

In multilingual communities, language differences may limit effective communication during training and program engagement, requiring translation services or adapted learning materials to ensure full participation.

- **Resource and Financial Limitations:**

Implementing gender-responsive and inclusive programming including accessible facilities, assistive devices, and additional support services may increase operational costs and place pressure on program budgets.

- **Stakeholder Buy-In and Engagement:**

Securing sustained commitment from local leaders, institutions, and community stakeholders often requires continuous advocacy, dialogue, and demonstration of program benefits.

- **Youth Mobility and Migration:**

The target youth demographic may frequently migrate in search of employment opportunities, which can affect continuity, training retention, and long-term enterprise sustainability.

- **Traditional and Social Expectations:**

Household responsibilities and societal expectations may limit women's availability to participate in training, leadership roles, or enterprise activities without supportive program design.

- **Digital Literacy and Technology Access Gaps:**

Limited access to smartphones, internet connectivity, or digital literacy skills may affect participants' ability to effectively use digital platforms associated with mechanization services.

IMPLEMENATION CHALLENGES AND LESSONS

- **Access to Finance:**

Participants, particularly women and youth, may face challenges accessing credit or startup capital needed to invest in mechanization enterprises or expand their business operations.

Addressing these challenges requires strong community engagement and flexible program design.



KEY LESSONS FOR REPLICATION

Several lessons emerged from the implementation of ISSAM implementation as it has worked to advance gender equality and social inclusion within mechanisation service delivery systems. One key lesson is that intentional design and deliberate actions are essential for achieving meaningful inclusion. There is an important learning in creating enabling support systems that allow women to fully engage in training and enterprise development.

Practical interventions such as providing childcare support, flexible training arrangements, and equal access to technology and equipment significantly improve women's ability to participate and benefit from capacity development initiatives like ISSAM. These measures demonstrate that when barriers are proactively addressed, women can contribute effectively and take on leadership roles within cooperative enterprises.

The implementation of ISSAM has also highlighted the value of inclusive cooperative structures. When business information is shared transparently, decision-making processes are participatory, and leadership opportunities are accessible to both men and women, enterprises tend to perform better and foster stronger collaboration among members. This inclusive model not only strengthens productivity but also promotes greater accountability and shared ownership within the enterprise.

Finally, the ISSAM experience has demonstrated that safeguarding, health support, and accessible learning environments are critical components of inclusive programming. Ensuring participant safety, well-being, and dignity through structured safeguarding policies, accessible facilities, and responsive support systems contributes significantly to building trust and sustained engagement.



CONCLUSION

Inclusive agricultural mechanisation is both a social priority and an economic opportunity. By removing structural barriers and expanding participation across underserved populations, mechanisation programs can strengthen rural economies while improving agricultural productivity.

TracTrac's Inclusion Strategy reflects a deliberate and practical commitment to equity, dignity, inclusive and meaningful participation for all its participants. The organization recognizes that inclusion goes beyond representation; it requires the intentional removal of structural, social, and environmental barriers that limit participation. By prioritizing women's engagement and providing a functional crèche facility that has supported over 200 children in the past year, TracTrac ensures that caregiving responsibilities do not prevent women particularly nursing mothers and access to interpreters and adaptable structures do not prevent persons with disabilities from fully participating in training campus and other project activities. This gender-responsive approach affirms the organization's commitment to creating equitable opportunities for leadership, learning, and growth.

The strategies outlined in this document demonstrate that inclusive participation is achievable when programs intentionally integrate gender and social inclusion across recruitment, training, enterprise development, and operational systems.

Organizations implementing mechanisation programs can adopt and adapt these approaches to build sustainable and inclusive mechanisation ecosystems that enable women, youth, and vulnerable populations to participate meaningfully in agricultural transformation



GLOSSARY

PWDs – Persons with Disabilities
IDPs – Internally Displaced Persons
RDPs – Returnee Displaced Persons
LGA – Local Government Area
MSPs – Mechanization Service Providers
FGD – Focus Group Discussions
IEC – Information, Education, Communication.
ISSAM – Improving Smallholder Farmers Access to Small Scale Agricultural Mechanization
Digital Inclusion – Ensuring individuals and communities have access to and the ability to use information and communication technologies.
Safeguarding – Policies and practices that protect individuals from harm, abuse, and exploitation.



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