



UNITED NATIONS
INDUSTRIAL DEVELOPMENT ORGANIZATION
Progress by innovation



ADVANCING GENDER EQUALITY, EMPOWERING WOMEN

UNIDO SUCCESS STORIES AND GOOD PRACTICES



UNITED NATIONS
INDUSTRIAL DEVELOPMENT ORGANIZATION

DISCLAIMER

2025 United Nations Industrial Development Organization.

This document has been produced without formal United Nations editing. The designations employed and the presentation of the material in this document do not imply the expression of any opinion whatsoever on the part of the Secretariat of the United Nations Industrial Development Organization (UNIDO) concerning the legal status of any country, territory, city or area or of its authorities, or concerning the delimitation of its frontiers or boundaries, or its economic system or degree of development. Designations such as “developed”, “industrialized” or “developing” are intended for statistical convenience and do not necessarily express a judgement about the stage reached by a particular country or area in the development process. Mention of firm names or commercial products does not constitute an endorsement by UNIDO.

Although great care has been taken to maintain the accuracy of the information presented, neither UNIDO nor its member states assume any responsibility for consequences, which may arise from the use of the material. This document may be freely quoted or reprinted, but acknowledgment is requested. For reference and citation please use: United Nations Industrial Development Organization. 2025. Advancing Gender Equality, Empowering Women – UNIDO Success Stories and Good Practices. Vienna, Austria. This document has been printed on recycled paper in limited number to minimize its environmental impact.

Advancing Gender Equality, Empowering Women

UNIDO SUCCESS STORIES AND GOOD PRACTICES

Vienna, Austria
March 2025



UNITED NATIONS
INDUSTRIAL DEVELOPMENT ORGANIZATION

ACKNOWLEDGEMENTS

This publication is prepared by the United Nations Industrial Development Organization (UNIDO) Division for Gender Equality and Empowerment of Women, under the overall guidance of Cecilia Ugaz Estrada, Deputy to the UNIDO Director General and Managing Director of the Directorate of Strategic Planning, Programming and Policy, and Aurelia Patrizia Calabro, Director of Division for Gender Equality and Empowerment of Women. Nine case studies were selected representing work across all regions and in different sectors.

The publication has been prepared under the overall leadership of Thuy Thu Le, Gender Coordinator, with support from Emmi Ylinen, Junior Professional Officer and Charlotte Ehlers, Gender Intern.

Special thanks and gratitude goes to project management teams for their substantive contributions and provision of case studies, examples and data. The efforts are led by: Seetharama Shetty Thombathu, Samruol Im, Juan Pablo Diaz-Castillo, Ángela María Bermúdez, Hideki Murakami, Azusa Matsumoto, Carmela Centeno, Leah Texon, Daria Shumilova, Manasa Suresh, Tomoyoshi Koume, Rekha Jain, Mattias Larsen, Karin Monaco, Callie Suzanne Patten, Gabor Molnar, Ilias Aguenou, Fabio Russo and Nuria Ackermann.

The case studies were written by Jamie Guth of Global Health Connections, and graphic design and layout were by Nora Aoun.

We are particularly thankful to the Ministry for Foreign Affairs of Norway for their financial support in producing this publication.

Comments regarding the case studies should be addressed to gender-coordinator@unido.org.

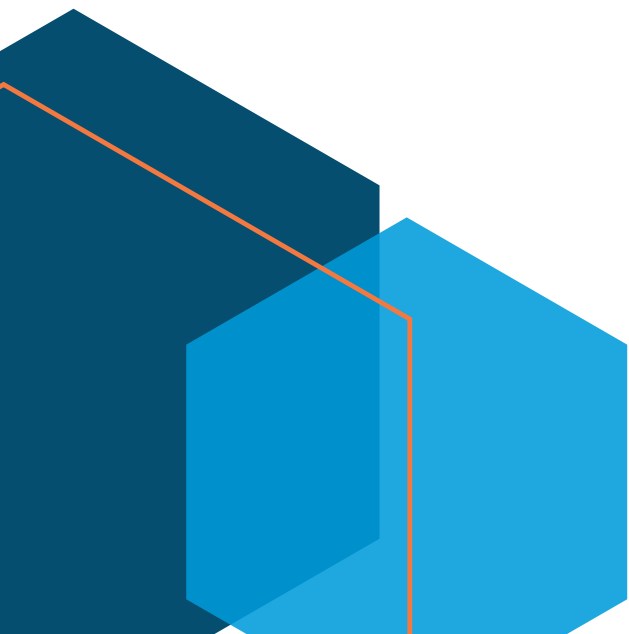
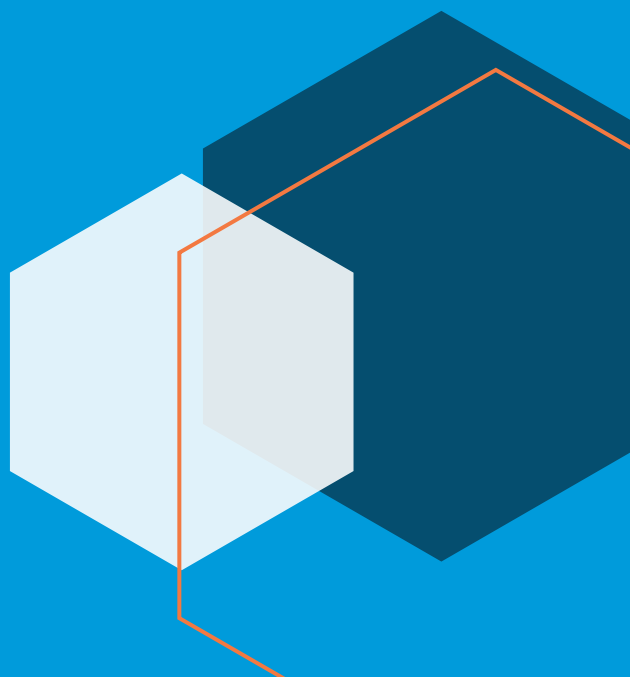


TABLE OF CONTENTS

FOREWORD	iii
CAMBODIA: Empowering women transforms fisheries industry	10
COLOMBIA: Breaking gender barriers in aquaculture increases businesses and markets	14
GLOBAL: Advancing gender equality in clean technology	18
GLOBAL: Vocational training empowers women and girls in male-dominated industries	22
INDIA: Women's participation in car industry improves productivity and innovation	26
INTER-REGIONAL: Making innovative menstrual products empowers women	30
PAKISTAN: Women driving change in apple and livestock industries	34
PHILIPPINES: Women's participation and leadership in e-waste management reduce pollution	38
TUNISIA: From "Fruit of the Poor" to global cosmetics: Women transform the cactus industry	42



FOREWORD



Gerd Müller
Director General
of UNIDO

At UNIDO, we envision a world where women and men equally lead, participate in, and benefit from inclusive and sustainable industrial development. Gender equality and the empowerment of women are at the core of our mandate, and they directly contributing to the 2030 Agenda for Sustainable Development and the Sustainable Development Goals.

Advancing gender equality is not just a matter of human rights; it is also smart economics. It is a catalyst for sustainable growth. When we empower women and advance gender equality, economies grow, poverty falls, and overall human well-being improves. According to the International Monetary Fund closing the gender gap could boost GDP in emerging markets and developing economies by almost 25%.

Our work is guided by the 2019 *Policy on Gender Equality and the Empowerment of Women*, and now the 2024-2027 *Operational Strategy for Gender Equality and the Empowerment of Women*.

This collection of success stories and good practices showcases how UNIDO is tackling gender disparities and challenging discrimination against women and girls, while improving their participation and leadership across the world. They demonstrate the power of governments, the United Nations system, the private sector, associations, and academic institutions working together to affect real change. Transformed policies and practices mean women and girls having more equal access to education and employment, a voice in driving these changes, and having decent jobs and careers to support themselves, their families, and their communities.

The impact is profound – the following pages illustrate progress in UNIDO’s key priorities:

- **Women are advancing access to clean energy** by testing innovative clean technology solutions, developing business models, and commercializing their technologies.
- **Women are contributing to ending hunger** by establishing and expanding agri-businesses. They add value through processing, creating new food products rooted in local cultures, and making food safer and of higher quality.
- **Women are building sustainable supply chains** by delivering training, developing new standards, setting up manufacturing facilities and processes, and accessing capital to grow their businesses, developing new products, and exporting internationally.

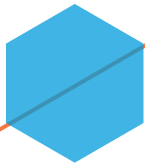
Our message is clear: regardless of country, region, or sector, UNIDO is dedicated to creating a world where both men and women can thrive, become leaders, and act as agents of change.

FOREWORD



Cecilia Ugaz Estrada

*Deputy to the UNIDO
Director General
Managing Director
Strategic Planning,
Programming and Policy
Directorate*



I am immensely proud to support this inspiring new publication. It not only highlights UNIDO’s unwavering commitment to advancing gender equality but also serves as a powerful resource for organizations worldwide, demonstrating how mainstreaming gender considerations into projects leads to greater impact and transformative change.

In 2024, nearly 70 percent of UNIDO new projects actively promoted gender equality and women’s empowerment—an impressive milestone that reflects our dedication to creating a more equitable world. We also provided specialized training to over 200 UNIDO personnel, equipping them with the tools to incorporate gender considerations into their work through strategic partnerships with UN Women, the Global Environment Facility, and the European Union.

As I lead the newly-established Directorate of Strategic Planning, Programming, and Policy, our focus is on strengthening coordinated frameworks and policy advice across UNIDO, including gender. The success stories and good practices in this publication are invaluable, offering evidence-based insights that will help us accelerate gender equality progress at both institutional and programmatic levels. By gathering both quantitative and qualitative data, we ensure that our gender mainstreaming strategies are effective, adaptable, and continuously improving.

The impact of success stories and good practices extends far beyond our own initiatives. This publication will be a vital tool in engaging global partners within the United Nations Development System, the private sector, multilateral organizations and forums, and civil societies to showcase the power of gender-inclusive industrial policies to drive innovation, sustainability, and economic growth.

At UNIDO, we believe that gender equality is not just an ethical imperative; it is essential for building resilient, inclusive, and sustainable industries. The lessons in these case studies prove that when gender equality is embedded in policy and practice, it catalyzes positive change at every level—local, national, regional, and global.

We invite you to join us on this journey, leveraging these insights to create a world where every woman and girl has the opportunity to thrive.

FOREWORD



Susan Eckey

Ambassador
Permanent Representative
of Norway to UNIDO

Gender equality remains a key concern, particularly in the context of sustainable industrial development and the work of UNIDO. Women and girls worldwide continue to face systemic barriers to equality. They are disproportionately affected by poverty, lack of property rights, and limited access to healthcare, education, food, and economic opportunities. Despite significant progress, women and girls are still more likely than men to experience gender-based violence, including intimate partner violence, trafficking, and sexual harassment. They are also more vulnerable to harmful practices such as child marriage, female genital mutilation, and gender-based discrimination.

In many parts of the world, women have limited access to decision-making processes, and their political and economic participation is constrained by cultural, social, and legal barriers. In addition, climate change disproportionately impacts women, particularly those in vulnerable regions, as they are often the primary caregivers and farmers, making them more vulnerable to environmental crises. These challenges highlight the urgent need for a comprehensive approach to achieving gender equality, where women can fully participate and thrive in all areas of society.

Respect for human rights is at the heart of our Government's international commitment to women's rights and gender equality. *A Just World is a Gender Equal World – Action Plan for Women's Rights and Gender Equality in Norway's Foreign and Development Policy (2023-2030)* builds on key global frameworks, including the 1995 Beijing Platform for Action, the 1994 Cairo International Conference on Population and Development, the UN Convention on the Elimination of All Forms of Discrimination against Women, and the UN Sustainable Development Goals—particularly Goal 5 on gender equality.

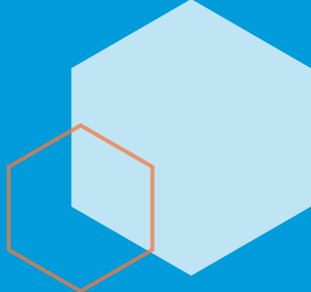
Our action plan has the following main objectives:

1. All individuals have the right to bodily autonomy.
2. All individuals have the right and opportunity to lead their lives free from violence and harmful practices.
3. All individuals have equal economic rights and opportunities to participate in the labour market.
4. All individuals have equal political rights and opportunities to participate in public life.
5. All individuals have the right and opportunity to contribute to and participate in work for climate, energy and food security.

Our objectives are strongly reflected in the work of UNIDO as highlighted in this publication. Through comprehensive policies tackling gender-based violence, women are being protected in the workplace and their communities. They are given the tools and opportunities to break barriers—acquiring new skills, launching businesses, and emerging as leaders and agents of change at the national and global levels. Women are at the forefront of protecting our environment, ensuring food security, and advancing energy solutions through innovative practices and technical expertise. They are transforming industries as entrepreneurs, establishing new businesses, creating products, and reaching global markets.

I hope this publication will inform, inspire, and motivate. We encourage you to read it, learn from it, apply the insights gained to drive further progress. Together, we can ensure that gender equality remains at the heart of sustainable development.





CAMBODIA

Empowering women transforms fisheries industry



With funding by



CAPFISH Capture - Post-harvest Fisheries Development (ID 180039)



Cambodia



June 2019 – December 2025



\$17.6 million



European Union



We are reshaping the narrative and driving positive change, not just for our business, but for our community and industry as a whole.

Someng Dy, Owner of Sophorn Someng Fish Processing Enterprise



Someng Dy with her husband and employees (By Samruol IM/UNIDO/CAPFISH-Capture)

OVERVIEW

From informal work to industry transformation

In 2019, Cambodia's small- and micro-scale fisheries faced significant challenges. These businesses were largely informal, constrained by inadequate safety procedures, outdated production technologies, and limited infrastructure. Although women made up 70 per cent of the workforce in the post-harvest fisheries, they did most of the fish processing work concentrated at the bottom of the value and supply chain. Decision-makers and business owners were predominantly men, excluding women from critical decisions and business opportunities that could improve the industry.



*Woman entrepreneur revolutionising ready-to-eat fishery products/
Phnom Penh Post*

Traditional gender roles also restricted women's involvement in fisheries beyond processing tasks. Caretaking responsibilities often limited their mobility, while both men and women failed to recognize how these inequalities hindered the industry's economic potential.

To address these challenges, UNIDO implemented the CAPFISH-Capture: Post-harvest Fisheries Development Project in collaboration with Cambodia's Fisheries Administration, private sector stakeholders, universities, and support institutions. The project aimed at enhancing sustainable supply chains and promoting equitable practices to empower women and marginalized groups.

Government officials, business development advisors, researchers, and fish processors were brought together to address gender inequalities, learning how these barriers constrained industry growth. Social safeguards, including policies to prevent discrimination and create supportive, child-friendly work environments, were introduced. Adhering to these safeguards became mandatory for obtaining a new food safety certification. Both men and women received training in business development, laying the foundation for systemic change.

As the project approaches its 2025 conclusion, the results are transformative. Over 50 per cent of fisheries enterprises with quality certifications are now led by women, providing them access to premium markets and international opportunities. Women-led enterprises are not only creating innovative and new products but also exporting them to markets in New Zealand and Australia.

INTERVENTIONS

Empowering women through training, policy, and innovation

The CAPFISH-Capture project implemented a variety of interventions aimed at advancing gender equality and empowering women within the fisheries sector. Key initiatives included:

- **Gender analysis, strategy and action plan:** prior to the project implementation, comprehensive analysis was conducted to identify barriers for women to participate and thrive in the fisheries industry. A gender strategy and action plan were developed with interventions and a budget to tackle the identified causes of gender inequality.
- **Gender mainstreaming and metrics:** comprehensive guidelines were developed to ensure gender equality was embedded throughout the project. Indicators, such as the percentage of women leading certified companies and the number of innovations introduced, which were used to track progress and inform corrective actions.

- **Training and awareness campaigns:** tailored workshops tackled harmful cultural norms limiting women’s participation. Topics included gender equality concepts and child labour issues—engaging government authorities, fish processors and administrators, local business development counsellors and universities.
- **Inclusive policies:** advocacy efforts promoted policies and frameworks that encouraged women’s participation in decision-making processes, especially in the private sector.
- **Food safety certification:** a new voluntary food safety standard, the Cambodia Quality Seal (CQS), was developed to promote safe fish production. Training 27 auditors, including six women, ensured the certification process was inclusive.
- **Business development support:** twenty women-led businesses received targeted training and investment support, while producer groups received mentoring on business proposal development, market analysis, and food safety standards.
- **Research and innovation:** Research funding supported the creation of unique fish products, with 10 out of 23 research projects led by women scientists. Sixty women participated as interns, contributing to groundbreaking developments based on Cambodian food culture.
- **Visibility campaigns:** gender-responsive communication strategies raised awareness about women’s contributions to the industry and promoted their success stories nationally and internationally.
- **Gender mainstreaming throughout:** gender considerations were mainstreamed in all project actions, from policy and regulatory framework, through food safety, value chain development and research and development.

RESULTS

A thriving, inclusive fisheries sector

The CAPFISH-Capture project achieved remarkable results, transforming Cambodia’s fisheries industry while promoting gender equality. Some of the most notable outcomes include:

- **Women at the helm of enterprises:** over 50 per cent of enterprises certified under the CQS programme are now led by women, surpassing the original target of 40 per cent. This achievement has enabled Cambodia to export fish and fisheries products to the European Union for the first time, with additional recognition from China and agreements in progress with Indonesia, Korea and Thailand.
- **Product innovation and market expansion:** seven women-led enterprises developed unique fish products rooted in Cambodian culinary traditions, with two successfully penetrating international markets in New Zealand and Australia. Research also produced more efficient processes for drying fish, weight-grading, freezing and storage, and for reducing contamination and antimicrobial resistance.
- **Empowered producer groups:** five women-led producer groups, representing 141 members, registered as official entities to band together to secure financing, expand their markets, and scale their operations.
- **Job creation and industry growth:** over 11,000 jobs, including 5,100 for women, were created between 2019 and 2024—a 58 per cent increase since 2022. Fishery product output grew by 71 per cent, reaching over 8,000 tons, while sales rose by 20 per cent.
- **Gender and social safeguards at policy level:** integrating gender and social safeguards into the voluntary food Cambodia Quality Seal and the Cambodian Fisheries Administration’s strategy framework on gender equality and elimination of child labour provided a strong foundation for equality and sustainable business practices in the fisheries industry.

LESSONS LEARNED

A model for gender-responsive development

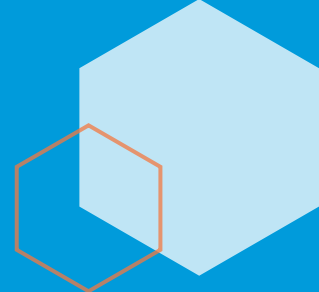
The CAPFISH-Capture project offers valuable insights into the benefits of integrating gender-responsive approaches into economic development initiatives. Its success highlights several key lessons that can be applied to similar projects:

- **Gender analysis and baseline data:** collecting extensive baseline data and conducting gender analysis before designing interventions ensured that the project's gender-responsive strategy was both relevant and impactful. This not only helps design targeted interventions to tackle roots cause of gender inequality but also ensures gender considerations are mainstreamed throughout the entire project cycle and activities, leading to concrete results on gender equality and women's empowerment.
- **Monitoring and evaluation:** ongoing tracking of gender-specific metrics helped maintain focus on gender equality goals, develop remedial actions and ensure accountability throughout the project.
- **Stakeholders' commitment:** strong commitment from the project team and government partners created an organizational culture that prioritized gender equality and inclusion.
- **Gender, social and environmental safeguards integration:** integrating gender considerations, social and environmental safeguards requirements in regulatory frameworks and institutional systems ensured that these principles became ingrained in food safety systems, policies and fisheries industry's practices.
- **Inclusive engagement:** training and awareness-raising initiatives targeted both men and women, fostering a shared understanding of the cultural and economic benefits of gender equality while engaging men in supporting women's empowerment.
- **Women as role models:** the success of women-led businesses and research initiatives created role models who challenged traditional gender norms and inspired further progress.
- **Sector-specific approaches:** tailoring interventions to address the unique challenges and opportunities of the fisheries sector ensured that women could participate and benefit meaningfully at every stage of the value chain.
- **Gender expertise and capacity of project team and stakeholders:** building the gender expertise of the project team and stakeholders not only strengthened their ability to initiate and implement gender equality initiatives, but also facilitated effective gender mainstreaming within the project, leading to more equitable results.

By embedding gender-responsive strategies into regulations, training, and business development, the project has not only transformed Cambodia's fisheries sector but also positioned women as leaders and innovators within the industry.

The CAPFISH-Capture project demonstrates that empowering women and addressing gender inequalities can have far-reaching benefits, both economically and socially. By integrating women into decision-making processes and supporting their entrepreneurial ambitions, the project has strengthened Cambodia's fisheries industry, boosted exports, and created sustainable job opportunities.

Through its inclusive approach, the CAPFISH-Capture project has proven that empowering women is not only a matter of equity but also a powerful driver of economic growth and industry transformation.



COLOMBIA

Breaking gender barriers in aquaculture increases businesses and markets



Global Market Access Programme – (ID 200025)



Colombia



June 2021 – December 2026



€3.2 million



Norway



This approach is part of our preparation to face the challenges of international trade where, in addition to quality requirements, social and gender equity aspects are fundamental for the acceptance of our products.

Andrea Piza, National Technical Coordinator, FEDEACUA



Gender awareness building session

OVERVIEW

Charting a gender-equal future in aquaculture

Aquaculture is becoming a cornerstone of global food production, overtaking traditional fisheries in its contribution to nutrition, job creation, and economic growth. In Colombia, UNIDO is spearheading efforts to boost the sector's competitiveness through its Global Market Access Programme (GMAP). This initiative is designed to help producers and micro, small, and medium-sized enterprises meet quality and standards requirements, thereby unlocking access to lucrative regional and international markets.

Research consistently shows that economies grow faster when gender equality is prioritized. However, in 2022, a gap was identified in the aquaculture sector: little data existed on the integration of women within the industry, both in Colombia and globally.

INTERVENTIONS

Closing the gender gap in aquaculture

To address the lack of data on women's participation in the aquaculture, GMAP conducted surveys and interviews in two targeted locations in Colombia: Huila, focusing on the tilapia value chain, and in Tumaco, on the shrimp value chain. These investigations aimed to uncover barriers and opportunities for women, leading to strategies that would accelerate more equitable economic growth.

Five surveys targeted key players in the aquaculture value chain. More than 200 people (33 per cent women) from production units, processing plants, associations across Huila and Tumaco were interviewed.

The findings revealed stark regional differences. In Huila, women were more frequently found in roles requiring professional education, while in Tumaco, this was less common. Across both regions, women predominantly worked in processing—a segment offering the lowest wages. In Tumaco, only one woman occupied an administrative role compared to 25 per cent of men, while jobs demanding physical strength were typically reserved for men, despite many women expressing confidence in their ability to perform such tasks, particularly with the right technology.

Infrastructure gaps exacerbated these disparities. None of the shrimp productive units had separate facilities for women, such as bathrooms or breastfeeding rooms. Moreover, fewer than one-third of the organizations provided training on gender equality.

In response, GMAP developed a robust gender mainstreaming action plan:

- **Voluntary standards for gender equity:** incentivize organizations to adopt voluntary quality standards that includes gender and social inclusion aspect by demonstrating how this can increase access to broader markets.
- **Knowledge dissemination through associations and key institutions:** use associations to disseminate knowledge and information, and leverage partnerships and strong organizations' internal capacities to catalyse actions.
- **Private sector engagement:** engage the private sector, a key stakeholder, to design and implement gender-equality measures, complete with monitoring mechanisms.

One key outcome was the consolidation of the FEDEACUA's programme, Women in Aquaculture: A Path to Sustainable Development, Colombia's leading aquaculture association. This initiative sought to empower women, elevate their visibility, and enable them to take on leadership roles within the traditionally male-dominated sector.



Use of the gender markers is part of the institution's regular accountability processes – encouraging continuous improvement in the organization's programmes and projects while enhancing the institution's capacity to address and manage gender-related issues.

Nathalia Córdoba, Senior Professional,
Colombia Productiva



Gender markers—developed by Colombia Productiva, a public institution focused on improving productivity—were another crucial tool. These markers provided a systematic way to track and evaluate gender responsiveness across the project lifecycle. Once fully implemented, they would enable data disaggregation by sex and other variables, facilitating targeted interventions to address power imbalances.

In collaboration with the Ministry of Agriculture, a training session was rolled out to share institutional services focused on gender equity and equality, mainstream gender into the value chain and monitor progress. A gender-focused school with the Food and Agriculture Organization covered gender equality policies, basic knowledge of gender equality and equity, myths and realities of the gender approach, analysis of gender data and indicators, the anatomy of a gender-sensitive project, and differential approaches.

RESULTS

Gender equality and sustainable change

A standout achievement was the acknowledgment by participating organizations that gender equality is essential for meeting market standards. By integrating approaches that addressed the root causes into the project cycle, these organizations aligned themselves with broader industry expectations, promoting sustainability and growth.

Enhanced gender-related skills and knowledge among staff and institutions equip them with tools and strategies to understand and address gender-related concerns effectively.

Revised policies and new actions have been taken by aquaculture associations, public institutions, and private enterprises to recognize and address gender imbalances in their operations. Examples include:

- The COOPISHUILA cooperative has begun incorporating gender considerations into its organization and made efforts to include more women.
- The FEDEACUAPAC federation has a woman president for the first time.
- Piscícola New York has strengthened their gender-focused strategy and started to update job descriptions to help women fit better in positions such as laboratory or feeding processes positions.
- The Regional Aquaculture Committee of Huila, a key body that brings together stakeholders from the aquaculture value chain, incorporated gender issues into their workplan for the first time.
- Nine production units have obtained quality standards for the first time. These include requirements ensuring equal pay for women and men, as well as the provision of separate and private bathrooms and dormitories, significantly improving the well-being of women.



FEDEACUA's work in a tilapia farm

Crucially, the project demonstrated that addressing gender equality is not just a social imperative but also a strategic business decision. By linking gender mainstreaming with market requirements, it created a compelling case for inclusive practices, ensuring they remain integral to the sector's future.

The approach is highly replicable, offering a scalable model for other regions and industries. Gender markers, for instance, can be adapted to various contexts, ensuring their relevance to diverse communities and sectors.

LESSONS LEARNED

Building a roadmap for gender equality

This project offers a blueprint for fostering gender-responsive development in aquaculture and beyond. Key lessons include:

- **Stakeholder engagement:** collaborating with industry associations, public institutions, and community organizations amplifies impact and ensures buy-in.
- **Gender markers:** these tools systematically monitor and evaluate gender responsiveness, ensuring that gender equality considerations are integrated into every stage of programme development.
- **Dedicated focal points:** appointing a gender focal point ensures consistent implementation of strategies.
- **Context-specific adaptation:** tailoring training, resources and tools to regional, cultural and sectoral challenges enhances their effectiveness.
- **Strong partnerships:** collaborations with local governments, enterprises, and educational institutions provide the support needed for sustainable gender-responsive practices.
- **Ongoing training:** comprehensive and continuous training on gender equality and women's empowerment integrated into institutional development programmes can ensure long-term sustainability.
- **Inclusive monitoring and evaluation:** the evaluation of gender impacts should go beyond data collection and focus on the practical outcomes and shifts in power dynamics. This will provide more actionable insights to refine future interventions.

The GMAP project in Colombia serves as a powerful reminder of the transformative potential of gender equality. By recognizing the role of women in the tilapia and shrimp value chains and the challenges they face in accessing markets, the project not only addresses longstanding gender inequalities but also strengthens the aquaculture sector, unlocking new opportunities for growth and innovation. As these practices are replicated and scaled, they promise to reshape industries and communities, proving that inclusivity is the cornerstone of sustainable development.

GLOBAL

Advancing gender equality in clean technology



UNITED NATIONS
INDUSTRIAL DEVELOPMENT ORGANIZATION
Progress by innovation



global
environment
facility
INVESTING IN OUR PLANET



GREEN
CLIMATE
FUND



GCIP helped us improve our wastewater solution, produce the first prototype, develop a business plan and pitch deck to approach more incubators and accelerators in the cleantech area.

Salma Bougarrani, Founder, Green WATECH



Global Cleantech Innovation Programme (180258)



Global



January 2022 – December 2026
(phase 2)



€30 million



Global Environment Facility
Green Climate Fund



Salma Bougarrani and her colleagues at the construction site of Green WATECH wastewater treatment plant in the Igri village, High Atlas Mountains in Morocco

OVERVIEW

Empowering clean technology entrepreneurs to drive climate solutions

The UNIDO-led Global Cleantech Innovation Programme (GCIP) empowers micro-, small-, and medium-sized enterprises in emerging markets and developing economies to support the growth of homegrown clean technology solutions that help address climate and energy transition challenges. This includes reducing greenhouse gas (GHG) emissions, improving energy and resource efficiency, and enhancing access to clean energy.

GCIP helps entrepreneurs develop business models, commercialize their technologies, and access investment opportunities. In parallel, GCIP works with national governments to strengthen local innovation and entrepreneurship ecosystems, improve policy frameworks, and build institutional capacities.

INTERVENTIONS

Integrating gender into clean technology innovation

National gender analyses and action plans to drive inclusivity

Using the UNIDO Guide on Gender Mainstreaming for Energy and Climate Change Projects as a framework, GCIP develops gender analyses, national action plans, and monitoring tools. These ensure that women play a proactive role in the cleantech sector as entrepreneurs, opinion leaders, mentors, experts, and policymakers, as well as benefit from the adoption of innovative clean technology solutions.

GCIP integrates lessons from other countries to anticipate barriers to gender equality and design effective mitigation tools for new projects.

Capacity-building and training tailored for women entrepreneurs

Targeted and localized outreach campaigns aim to attract women to the programme. Gender sensitization workshops and training on gender mainstreaming are incorporated throughout the project life cycle. These sessions focus on identifying, implementing, communicating, and monitoring strategies to advance gender equality and women's empowerment. This includes the I Know Gender online courses by UN Women and Impact Gender Lens Investing Training Programme by UNIDO.

Gender-responsive capacity-building activities vary across GCIP countries, such as these 2024 examples:

- In the Republic of Moldova, gender discussions were integrated into banking and financing workshops, and the National Academy featured sessions on cleantech innovation for women entrepreneurs. The International Investor Connect Forum included a panel on social and environmental aspects of energy efficiency. The Pre-Accelerator, Accelerator, National Academy, and National Forum were set up to assure equal gender participation, as in other national projects.
- In Türkiye, the National Accelerator included specialized mentoring, masterclass workshops, and investor meetings designed to support women entrepreneurs.
- In all GCIP projects, recruiting female mentors is a key priority. GCIP actively seeks experienced women leaders and encourages female Accelerator graduates to return as mentors, fostering a more inclusive and supportive innovation ecosystem.

Promoting women innovators through competitions and visibility campaigns

GCIP national business acceleration activities for cleantech start-ups and MSMEs are designed to encourage active and equal participation of women innovators and experts as accelerator applicants, mentors and competition judges. Initiatives include:

- Hackathon and ideathon competitions for women innovators.
- Outreach campaigns encouraging active participation of women in GCIP activities and highlighting success stories of women cleantech innovators.
- Special prizes and recognitions for start-ups with a significant impact on gender equality.

For example, the women-led Microhobist team, a GCIP Türkiye alumni start-up of the 2023 GCIP Accelerator cohort and national and global GCIP competition winner, was invited to share their experiences at the 2024 GCIP Türkiye National Academy event. Their participation boosted their visibility and reputation as a leading innovator in Türkiye's cleantech sector.

Women entrepreneurs who complete the GCIP acceleration curriculum are featured in a dedicated alumni section on the GCIP website, helping them reach broader audiences and increase their credibility.



GCIP Türkiye Accelerator National Academy 2024

Policy development to strengthen gender inclusion in cleantech entrepreneurship

By engaging national institutions, government entities, research organizations, and industry associations in collaborative policy discussions, GCIP fosters an environment where gender-equal policies become a shared objective. This sets a precedent for ongoing policy improvements and greater inclusivity in the cleantech industry. For example, in the Republic of Moldova, GCIP supported the identification of gaps in gender policies relevant to cleantech innovation and entrepreneurship. Recommendations included in the National Policy Localization report provided evidence for policy revisions that better support women and youth in the cleantech sector. These included:

- Allocating dedicated funding streams for women- and youth-led cleantech ventures.
- Promoting science, technology, engineering, and mathematics (STEM) education and skills development with a focus on increasing female participation.
- Integrating entrepreneurship training into school and university curricula.
- Enabling flexible working arrangements to encourage women's participation in the cleantech workforce.
- Improving childcare support to cover personnel costs of parental leave and childcare.
- Showcasing success stories to inspire broader participation.

RESULTS

Increasing women's participation in the clean technology sector

Significant growth in women-led enterprises within GCIP accelerators

Participation of women-led cleantech enterprises in GCIP national accelerators increased from 26 per cent in 2022 to 35 per cent in 2023. Global data for 2024 were still being finalized at the time of writing, but early reports indicate strong progress:

- In Türkiye, applications from female-led and male-led enterprises had an almost equal ratio, with 64 per cent of eligible applicants being female-led companies.
- In Cambodia, GCIP conducted two introductory mentor training sessions in 2023 with an equal female-to-male ratio.
- In Morocco, the GCIP team recruited 30 per cent of women mentors in 2023.

A growing network of women mentors fostering the next generation of cleantech leaders

GCIP's encouragement of alumni to mentor new trainees is building a strong network of competent women entrepreneurs. For example, Burcu Arıkan, founder of MYCONOM and national winner of the 2023 GCIP Türkiye Accelerator, as well as Charnte Martinus, founder of Smartview and national winner of the GCIP South Africa Accelerator, mentored two teams in the 2024 Türkiye and South Africa Accelerators.

LESSONS LEARNED

Strengthening gender mainstreaming for long-term impact

Expanded monitoring to include qualitative impact assessments

Country-specific gender analyses, detailed gender action plans, and gender-specific indicators ensured that gender mainstreaming was not overlooked during project implementation. However, the programme's current results framework primarily tracks quantitative metrics, such as the number of training participants and alumni companies.

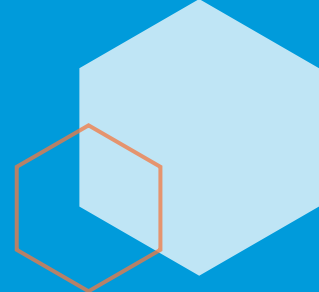
A more comprehensive understanding of GCIP's gender transformative effects requires qualitative monitoring and evaluation, such as:

- Standardized interviews with different stakeholder groups.
- Collection of beneficiary stories to illustrate long-term impact.
- Tracking the career progression of alumni post-GCIP.

Key recommendations for future gender-inclusive cleantech initiatives

1. **Foster long-term sustainability by collaborating with national stakeholders** – including governments, industry, the private sector, and civil society.
2. **Engage women and youth early in programme design** – allowing them to shape specific activities that address their needs and challenges.
3. **Increase outreach and awareness efforts** – to attract a balanced group of partners and showcase success stories.
4. **Allocate dedicated funding streams** – for additional post-acceleration support activities aimed at women- and youth-led cleantech ventures.

The increasing representation of women among cleantech enterprises supported through GCIP demonstrates that targeted gender mainstreaming initiatives can yield measurable progress. Including gender indicators in national results frameworks ensures that gender equality remains an integral consideration across all programme activities.



GLOBAL

Vocational training empowers women and girls in male-dominated industries



Learning and Knowledge Development Facility (LKDF) (ID 200005)



I challenged people's attitudes, since it's strange to see a female mechanic. I got jobs in many places. I'm employed now and have a good income, which makes me self-reliant. As a trainer, I'm encouraging other women to be like me.

Hana Nigussie, HDECoVA graduate and trainer



Global



August 2012 – December 2025 (2 phases)



\$3.4 million



Swedish International Development Cooperation Agency (Sida)



Audrey Chibwe, class trainer for ZAMITA's "All Female Student Initiative", teaching modern heavy equipment maintenance

OVERVIEW

Barriers to women and girls in technical and industrial professions

Low- and middle-income countries are working to increase industrial production to improve services and raise incomes. Industries such as construction and transportation, traditionally dominated by men, face skill shortages due to a lack of trained professionals to manage and operate sophisticated equipment. To meet labour market demands and provide equal opportunities for women and girls, vocational training programmes must adapt.

Women and girls encounter numerous obstacles in pursuing technical careers. Limited role models and societal expectations often push them toward non-technical fields. Community norms, family attitudes, and gender-biased educational materials further discourage women and girls from entering these professions.

Training facilities often fail to accommodate women's needs, such as providing separate restroom facilities or secure transportation in unsafe areas. A lack of data on women's participation in technical fields reflects an overall neglect of their potential contributions, hindering inclusive industrial development and equitable economic growth that could benefit families, communities, and national industries.

To increase opportunities for women and meet the labour market's demand for skilled employees, the UNIDO Learning and Knowledge Development Facility (LKDF) has applied different approaches to attract women and girls to technical and industrial professions in male-dominated sectors.



The all-female class environment allows me to be flexible and learn in a way that suits me. It's been a journey of overcoming fears, building lifelong friendships, and discovering a stronger, more confident version of myself.

Taonga Kadochi, ZAMITA student



INTERVENTIONS

Gender-inclusive vocational training to address workforce demands

- **Designing gender-neutral training programmes.** LKDF partnered with vocational training centres to create inclusive training programmes that accommodate the needs of both female and male students and for those with lower educational levels.
- **Assessing needs and tracking outcomes.** Skills gaps and barriers to women's participation were identified and strategies developed to attract and retain female trainees. Metrics like enrolment and graduation rates, employment outcomes and income changes for women trainees were monitored to assess the validity of the approach.
- **Training staff and removing stereotypes.** Management, teachers, and career guidance professionals received training to eliminate harmful gender stereotypes from instructional materials and create a supportive learning environment.
- **Improving training facilities and logistics.** Training facilities were upgraded with separate restrooms and secure transportation options. Training schedules were made flexible to accommodate household responsibilities.
- **Highlighting role models and career opportunities.** Early research showed that personal interest and job prospects were the primary drivers for selecting the courses to take, so the project showcased role models and career opportunities rather than addressing gender biases alone. Successful professional women were selected and taught how to inspire and mentor other women and girls in their communities. They shared their experiences and offered practical advice to trainees, while promotional materials and social media posts featured female trainees and success stories.
- **Community engagement and advocacy.** Targeted outreach materials and discussions engaged schools, families, and communities to raise awareness of gender equality in technical fields. They included the barriers women and girls face when entering certain industries, clear information on the safety and security of the training facilities and earnings opportunities, which helped attract female students and alleviate family concerns.
- **Collaborating with private sector partners.** Companies provided internships, job placements, and industry-standard equipment to support hands-on learning.

Highlights from national initiatives

- **Ethiopia:** Volvo and Sida partnered with UNIDO to establish the first vocational training school – the MISALE Training Academy – for the training of trainers and commercial vehicle drivers. This mandatory training was designed to reduce overall driving fatality rates from 65 to 32 in five years and establishes standards for the teachers and students’ certification. The Academy conducted community outreach programmes, including school visits and events where female professionals shared their success stories, motivating women to enrol and learn how to become a commercial vehicle driver. The Heavy Duty Equipment and Commercial Vehicles Academy (HDECoVA) linked this training with theoretical classroom instruction.



Agatha Sakala (L) and Rebecca Chola, students in ZAMITA’s “All Female Student Initiative” learning vehicle maintenance and repair

- **Morocco:** The H2O Maghreb project delivered training to women and young professionals to improve water resource management. This was managed by a public private development partnership between the Government of the Kingdom of Morocco, USAID, the National Office for Water and Electricity (Office National de l’Eau et de l’Electricité – ONEE), Festo Didactic, Eon Reality and UNIDO.
- **Zambia:** In collaboration with the Governments of Zambia and Sweden, Volvo Group and Volvo Trucks, the ZAMITA Academy taught students at the Northern Technical College to become heavy-duty machinery operators. An “All Female Class” provided a supportive atmosphere for women.

RESULTS

Increased participation and economic empowerment of women

Ethiopia

- The MISALE Training Academy trained 358 female bus drivers, increasing their incomes by 50 per cent.
- The HDECoVA programme achieved over 17 per cent female enrolment, exceeding Sweden’s rate of 14 per cent.

Morocco

- Graduates of the H2O Maghreb project were 75 per cent female, with nearly half of them reporting increased earnings.

Zambia

- Female participation in heavy-duty machinery training rose by 13 per cent, supported by initiatives like the “All Female Class.”

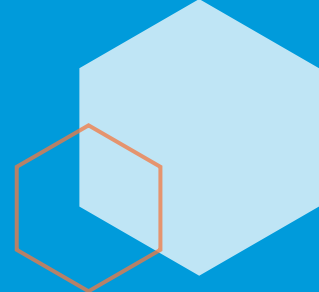
LESSONS LEARNED

Strategies for sustainable and inclusive training programmes

- **Setting measurable metrics** at the beginning of the project provides a strong evidence base and advocates replication. Define and track enrolment, graduation, and employment outcomes to demonstrate the value of gender-inclusive programmes.
- **Leveraging partnerships** to collaborate with private companies, educational institutions, and community organizations increases awareness and pools resources and expertise.
- **Using role models** showcases women in technical roles and workplace. Targeted outreach provides the opportunity to inspire trainees and raise awareness among schools, families, and communities.
- **Adapted facilities** such as separate restrooms, secure transportation, and flexible training schedules that accommodate women's needs make it easier for women to participate in training.
- **Visiting schools** multiple times and before the year's final exams when students are beginning to think about the next year increases awareness and interest in technical fields. Include those not planning for mechanical or technical studies – many have never considered these areas, but make sure to have promotional materials with role models.
- **Promoting gender equality through media** and using social media, brochures, and videos can challenge stereotypes and highlight the benefits of women's participation in technical fields. Utilize a photo or illustration of a woman doing technical work combined with at least one of the following messages:
 - How women are equally able to perform quality manual work
 - The power of passion versus obstacles
 - Training institution's readiness and willingness to welcome female trainees
 - Related news articles on women and business, or women-empowerment initiatives in the country.

Incentivized participation such as scholarships, mentorship programmes, and guaranteed job placements encourage women to enrol.

The vocational training programmes in Ethiopia, Morocco, and Zambia demonstrate how gender-inclusive initiatives can address workforce demands while empowering women. By adapting facilities, showcasing role models, and engaging communities, these projects broke down barriers for women in traditionally male-dominated industries. With measurable success and partnerships across sectors, this model offers a replicable approach to fostering gender equality and sustainable economic growth worldwide.



INDIA

Women’s participation in car industry improves productivity and innovation



UNITED NATIONS
INDUSTRIAL DEVELOPMENT ORGANIZATION
Progress by innovation



भारी उद्योग मंत्रालय
MINISTRY OF
HEAVY INDUSTRIES



UDAY-PRIDE programme - Supporting small and medium-sized manufacturers in the automotive component industry in India (170091)



India



January 2018 – February 2024



\$3.9 million

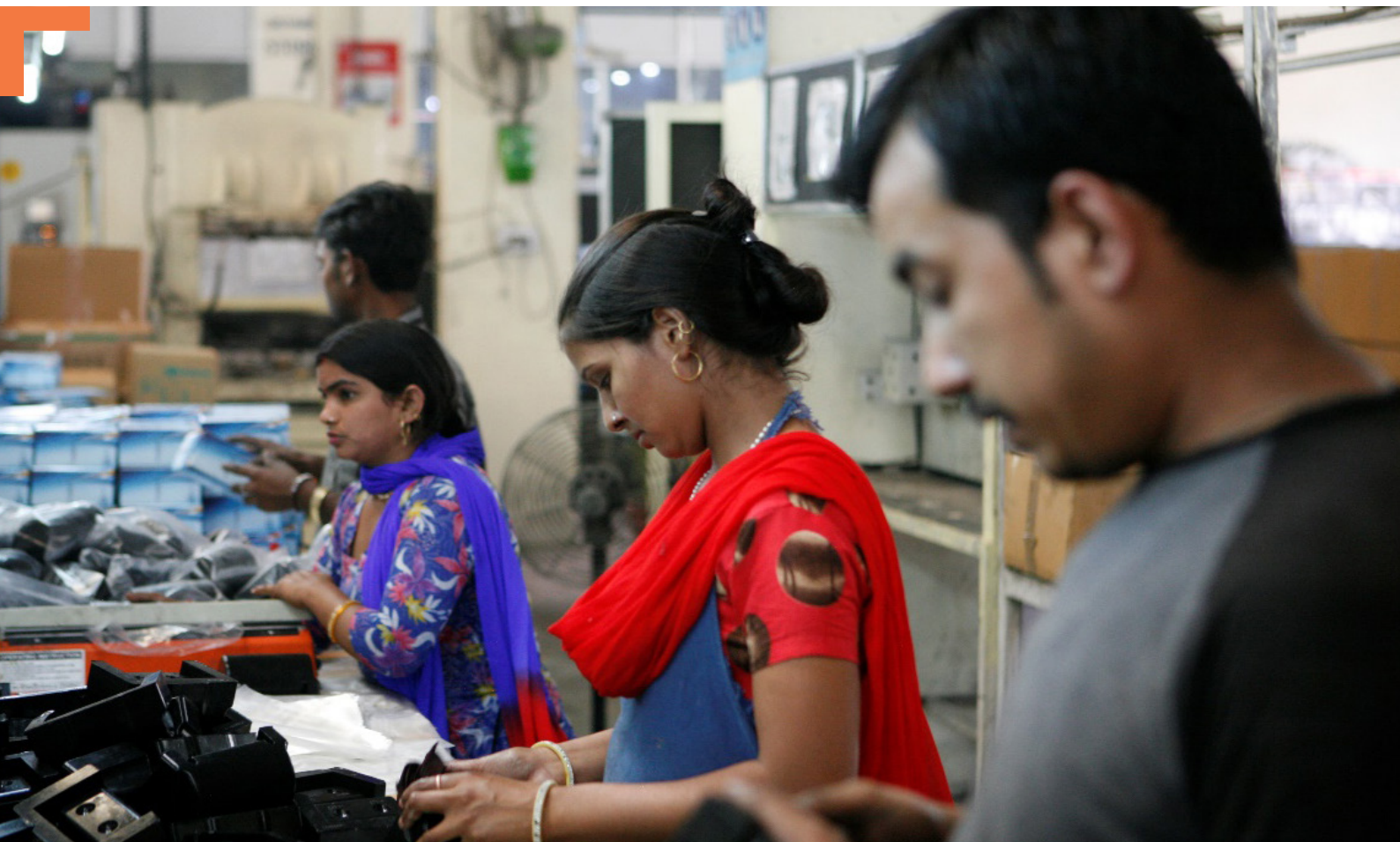


India



We strongly believe that what’s good for women is good for society and what’s good for society is good for business.

Tom Flack, Tata Motors Company



M/s. Jai Hind Autotech employees in Pantnagar, which specializes in manufacturing automotive components such as engine parts, injection moulding, rubber moulding and exterior and interior part

OVERVIEW

Bridging gender gaps in India's automotive sector

India, the fifth-largest car market globally, has become a key hub for sourcing automotive components for regions like Europe, Japan, Korea, and Southeast Asia. However, cultural norms and gender biases have traditionally discouraged women from pursuing roles in manufacturing. Women often face resistance from their families and communities, while employers sometimes hesitate to hire them for technical and higher-paid positions.

The UDAY-PRIDE programme was created to help small and medium-sized enterprises in India become more efficient suppliers in domestic and global automotive supply chains. With the support of the Indian Ministry of Heavy Industries and in collaboration with the Auto Component Manufacturers Association of India (ACMA), UNIDO spearheaded UDAY-PRIDE (UNIDO–DHI–ACMA Yojana – Professionalism, Responsibility & Innovation in Driving Excellence).



The company has provided me the best culture for work and safety for women.

Rama Mahar, Line Leader in Assembly and Pre-Delivery Inspection Department, Jai Hind Auto Tech Industries



It engaged company leaders and employees to communicate the economic and social value of women's participation in manufacturing. Firms were encouraged to establish inclusive practices, including maternity benefits, flexible work arrangements, women-centric facilities, and decent working conditions. Training programmes opened up new opportunities for women to take on technical and leadership roles. Success stories and awards for women and companies helped inspire broader acceptance and change.

INTERVENTIONS

Transforming workplaces and shifting mindsets

Embedding gender mainstreaming

From the outset, UDAY-PRIDE consulted stakeholders—including women employees, industry leaders, and community members—to design a gender-responsive programme. Workshops tackled unconscious biases and promoted inclusive hiring and supportive policies, such as flexible work options and maternity leave. Firms were incentivised through awards recognising gender-neutral practices in collaboration with ACMA. The programme recently counselled 275 micro to medium-sized firms on improving productivity and innovation while providing online learning for another 103 firms.

Building technology and management skills

Many women entering manufacturing lacked experience with advanced technologies and digital tools. To bridge this skills gap, training focused on technical skills like machine operation, welding, and quality control, as well as Industry 4.0 practices and digital literacy.

Mentorship programmes paired women employees with senior mentors, helping them build confidence, leadership skills, and organisational influence. These initiatives fostered a gradual shift in workplace gender dynamics.

Improving workplace conditions

A lack of adequate workplace facilities has traditionally discouraged women from joining the manufacturing sector. UDAY-PRIDE worked with companies to upgrade infrastructure, providing separate restrooms, changing rooms, and secure locker facilities to ensure privacy and security.

Additional amenities, such as pick-up and drop-off transportation, flexible working hours, and childcare facilities, were introduced to reduce harassment risks and improve work-life balance. Duty-bearers, including managers and supervisors, received training to support women's needs, with regular monitoring to ensure accountability.

Promoting gender-responsive policies

The programme collaborated with ACMA and the Ministry of Heavy Industries to integrate gender considerations into industry policies and frameworks. Policies addressed unequal treatment, violence, and safety concerns while promoting anti-harassment guidelines, equal pay, and family-friendly benefits.

Workshops co-organized by UNIDO and UN Women showcased best practices for advancing women in the automotive sector. Discussion recommendations included advocating for women's access to credit, and ensuring women are consulted in relevant policies.



An engineering supervisor with her team at M/s. Jai Hind Autotech

RESULTS

Driving change through inclusion and innovation

The gender-sensitization workshops initiated a cultural shift in participating companies, with management increasingly open to hiring women for technical and leadership roles. The proportion of female employees rose from as low as five per cent to 50 per cent in some firms.

Several companies adopted women-friendly practices, such as secure transportation, work-from-home options, and financial support during emergencies. To combat discrimination and safety concerns, ACMA introduced a policy that includes targets for gender equality, flexibility and equal pay and reduces membership fee for companies with more women employees.

To date, over 1,600 women have benefited from UDAY-PRIDE through training and mentorship, reporting increased confidence and influence in the workplace. In five supplier companies in northern India supporting Tata Motors, up to 40 per cent of the workforce is now women, compared to the industry average of 12 per cent.

Increased female participation has also improved productivity and innovation, as companies report a five per cent rise in efficiency and enhanced workplace discipline.

The mentoring network and supportive environments have enabled women to assume leadership roles. In some areas, female-led enterprises have emerged, demonstrating a shift in ownership and decision-making structures.

LESSONS LEARNED

Building a blueprint for future success

Over the four years of this programme, key lessons emerged that can guide future development.

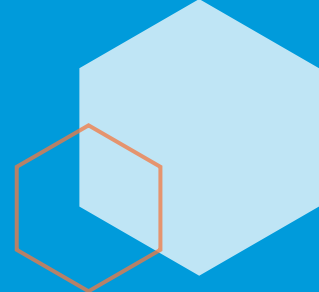
- **Short-duration workshops alone had limited impact.** Sustained behavioural change required periodic reinforcement through follow-up sessions and ongoing mentorship. Integrating gender-sensitization into broader industry training programmes and combining these sessions with employee feedback mechanisms can yield more lasting results. Embedding gender-responsive practices into company policies would help reinforce this training.
- **Women with minimal technical backgrounds need adaptive, beginner-friendly training methods and peer-led workshops.** Offering flexible, modular training programmes allow women to learn progressively without overwhelming their daily routines. Local training institutions can partner with government agencies to secure funding and resources, creating a sustainable training ecosystem.
- **Affordable, phased infrastructure improvements,** such as separate facilities for women, can be subsidized by government loans or grants to encourage adoption.
- **Financial incentives and recognition programmes motivated businesses** to adopt gender-inclusive practices and improve workplace conditions. Including financial incentives or recognition programmes can encourage more firms to adopt these changes, making the workplace safer and more inclusive on a larger scale.
- **Involving local communities and participants** ensure the programme remained relevant and addressed evolving needs.

The UDAY-PRIDE programme provides a replicable framework for fostering gender equality in manufacturing. Its success hinges on several key components: strong partnerships with industry stakeholders, targeted capacity-building initiatives, and a focus on creating gender-inclusive workplaces.

Key recommendations for scaling and replication:

- **Address regional and sector-specific gender challenges,** adapting facilities for safety and embedding gender policies.
- **Collaborate with local partners** to reach marginalized communities and increase women's access to training opportunities.
- **Promote the business case for gender equality** by showcasing its impact on productivity and performance.
- **Establish awards for workforce diversity** and gender-inclusive policies to drive competitive improvements.
- **Ensure men are equally responsible** for improving workplace conditions for women, fostering shared accountability.
- **Expand access to credit for women entrepreneurs** to enhance their participation in supply chains.
- **Develop training resources** enabling successful women to mentor others, creating a multiplier effect in communities.
- **Tailor mentorship** across different life stages, from youth to leadership transitions.
- **Use awards and public recognition** to promote women leaders and raise awareness of their achievements.

By aligning industry practices with gender-inclusive goals, UDAY-PRIDE has not only increased women's participation but also contributed to greater innovation and economic performance in India's automotive sector.



INTER-REGIONAL

Making innovative menstrual products empowers women



Industrial Vocational Training Programme in Africa and Asia through Technology Transfer from Japan (ID230055)



Inter-regional



May 2023 – March 2025



\$2.4 million, of which \$70,000 is for Ethiopia



Ministry of Economy, Trade, and Industry of Japan



Since the whole time was practical, we got good knowledge and we think we will work well after we leave this institution.

Alia Abdudin, Apprentice



One of the four training groups learning how to sew reusable sanitary shorts

OVERVIEW

Addressing menstrual hygiene challenges through awareness and skill-building

Managing menstruation hygienically and healthily remains a challenge in Ethiopia. Approximately 72 per cent of women and girls report difficulties in managing their menstruation with dignity. Ethiopia's landlocked location results in high transport costs, making disposable products expensive. Women from low-income groups especially face challenges in obtaining sanitary products due to financial constraints. Cheaper unhygienic alternatives can lead to dermatitis and bacterial infections.

Limited access to safe, sanitary products significantly affects women's work and reduces educational opportunities for girls. According to United Nations estimates, 10 per cent of girls in the sub-Saharan Africa region miss school during menstruation, with some reports indicating that this can reach up to 20 per cent of total school days.

A UNIDO-led programme, the *Industrial Vocational Training Programme in Africa and Asia through Technology Transfer from Japan*, is providing training to local engineers and technicians in Africa and Asia (Ethiopia, India, Ghana, Kenya, Madagascar, Morocco, South Africa, Tanzania, and Uganda) on technologies from Japanese companies that contribute to sustainable development and disseminate the newly acquired knowledge within their home countries.

In Ethiopia, a two-fold approach was designed to reduce stigma around menstruation while providing training for women on how to make safe, reusable sanitary products. These skills can then be used to work in sewing factories or to start their own businesses. Ultimately, the programme will help spread awareness about sanitary products and improve public health, as well as create new economic opportunities for women.

INTERVENTIONS

Training women in Ethiopia with expertise from Japan

Building expertise through international training-of-trainers

The training consisted of two phases: training-of-trainers in Japan and local training in Ethiopia. In the first phase, two trainers from a vocational training school in Selam Children's Village, Ethiopia, were invited to Japan to participate in a comprehensive training programme on sewing sanitary shorts provided by Be-A Japan, the company that invented the product, and ITOCHU Corporation, which handles manufacturing.

Over the course of 10 days, participants learned advanced sewing techniques for sanitary shorts that prevent leakage and are reusable, as well as how to select materials suitable for hygienic products, manage materials, and calculate manufacturing costs.

Scaling impact through local vocational training and business development

After completing their training in Japan, the trainers returned to Ethiopia to share the knowledge and expertise they gained. Providing compensation and training at the Textile Garments Section of the Selam Children's Village helped to recruit the 100 trainees, who were students at the school as well as local women. Working closely with local partners reduced logistical challenges and delays in procuring sewing machines and fabric.

Over 12 days of training, the students learned how to cut fabric, assemble the parts, and finish the sanitary shorts. The trainers provided guidance and conducted final inspections.

Expanding awareness and reducing stigma in communities

In 2025, lectures on women's health and menstruation are planned for the community, tapping into broader support networks and involving men to ensure both genders recognize the importance of reducing stigma and discrimination.

Collaborating with local oversight bodies is enhancing transparency and ensuring that the programme is aligned with Ethiopian human rights goals.

Policy advocacy for affordable menstrual products

To help ensure the product's marketability, the project is advocating for policies supporting affordable menstrual products, influencing local government and enterprise policies in Ethiopia to enhance product accessibility. The project may lead to legislation on women's health rights, creating an ecosystem in which women's issues in health and industry are prioritised.

RESULTS

Strengthening local expertise and creating economic opportunities for women

Empowering women with skills for workforce participation and entrepreneurship

The project's collaboration with Ethiopian institutions built local expertise in manufacturing, creating a sustainable economic shift by empowering women to become trainers and business owners within their communities.

The 100 local female students gained practical skills in sanitary product manufacturing, equipping them to enter the workforce or start small businesses, fostering self-reliance.

Driving innovation in sustainable menstrual products

The technology behind the reusable napkins was designed by a women-led Japanese start-up created by a female entrepreneur. Her company is called Be-A pulled from the phrase "Girls **Be** Ambitious". The company provided the pattern and training to the trainers, with the goal of empowering women in entrepreneurship and innovation. The sanitary products are environmentally friendly and reusable, supporting sustainable health practices while reducing waste.

Raising public awareness through media and advocacy

The project received significant media attention in Ethiopia, promoting awareness and public dialogue on gender equality in vocational training.

LESSONS LEARNED

Key takeaways for scaling gender-responsive vocational training

Training-of-trainers enhances long-term sustainability

The two-phase training model, with the *train-the-trainer* approach and local application, in partnership with local and international companies, can be replicated in other regions to support gender-sensitive vocational training. Training local trainers enables the teaching to continue after the project ends. Participants could envision Ethiopia as a base for exporting the hygienic shorts to Europe and Japan eventually.

Scalable vocational training curriculum adapts to local needs

The project's adaptable vocational training curriculum allows it to scale in response to demand, meeting the needs of growing beneficiary populations. Once the sewing technology is in place, the focus can move from local manufacturing to neighbouring countries. Integrating gender education supports scalability across different community groups by addressing the various social and economic contexts.

Key recommendations for future replication and expansion:

- **Prioritise engaging men into menstrual health education** to reduce stigma.
- **Create local partnerships to address logistical challenges**—working with trusted community organizations is critical.
- **Establish continuous feedback from participants** to refine the training approach. Flexibility is crucial in adapting vocational programmes to meet beneficiaries' needs.

By combining vocational training with gender education and policy advocacy, this initiative is creating lasting social and economic change. The model can be replicated to empower more women, improve menstrual health, and drive sustainable development in Ethiopia and beyond.



Ethiopians who were trained in Japan teach local women how to sew the sanitary shorts

PAKISTAN

Women driving change in apple and livestock industries



UNITED NATIONS
INDUSTRIAL DEVELOPMENT ORGANIZATION
Progress by innovation



From
the People of Japan

Agrifood Assistance for Improved Development in Pakistan (ID 180109)



Pakistan



January 2019 – December 2024



\$5.3 million



Japan International
Cooperation Agency



Women learned a lot. Most people didn't know that when we work with chemicals in the farms, we should use glasses, over our heads and face and regularly wash our hands for safety.

Abida Bibi, Apple farmer



Arifa and Abida Bibi in their apple orchard. They implemented drip irrigation to conserve water, improved soil management, and adopted safe pesticide practices

OVERVIEW

Breaking barriers in agriculture and livestock

The apple-farming and livestock sectors have long been essential to rural livelihoods in Pakistan. However, local producers and processors have faced challenges in meeting high food safety standards. Women and youth, in particular, were not equally benefitting from economic opportunities due to limited access to international best practices.

Through the Project for Agri-Food and Agro-Industry Development Assistance (PAFAID), UNIDO introduced modern meat processing practices in Khyber Pakhtunkhwa and improved apple value chain techniques in Balochistan. Thousands of people received training, with a strong focus on women and youth. By integrating gender considerations from the outset, the project provided women with access to knowledge, resources, and business opportunities, fostering both economic security and confidence.



We learned about so many new aspects, especially around how to improve our business and value addition to our products. Through the trainings we learned how to minimize waste and increase our product line.

Nina Naeem, Meat processor and owner, Gull's Kitchen



UNIDO worked with provincial and national governments, local associations, and private firms to create an environment where women could succeed. Agricultural experts received training not only in technical skills but also in gender expertise, ensuring more inclusive participation. Policies and guidelines were reviewed to enhance food safety, reduce exposure to potential hazards, and promote environmentally responsible practices.

Women who participated in the programme benefited in multiple ways. They improved their business practices, enhanced food-safety measures, accessed new markets, increased their incomes and supported other women in starting businesses.

INTERVENTIONS

Creating inclusive opportunities in agriculture and livestock

The project began with an in-depth analysis of the apple and livestock value chains to identify gaps and opportunities, including those affecting women. This included their roles in post-harvest processing, livestock management and small-scale farming. Community stakeholders, cooperatives and government institutions collaborated to ensure the interventions met everyone's needs.

Training programmes were designed to be gender-responsive, addressing barriers. Engaging female international experts with female governmental officers allowed the transfer of international best practices. As a result, 41 per cent of trainees were women.

Helping women improve incomes in the meat industry

PAFAID established the first female meat cooperative in Khyber Pakhtunkhwa. Women were trained in sanitation practices, proper handling of different meat cuts for products like sausages and hamburgers, and storage methods to retain freshness and protein levels.

Participants also received equipment to improve product quality, safety, packaging and marketability. They were introduced to new buyers and received negotiation training, giving them confidence to expand their businesses and take on leadership roles.

The cooperative's formal registration provided institutional recognition for women's economic roles, encouraging systemic support for women-led enterprises. A membership fee model and collective marketing strategy were established to ensure financial sustainability. Additionally, a meat processing academy was constructed and equipped to provide ongoing training and connect sellers with buyers, where women can also be trained on meat processing practices.

Empowering women apple farmers in Balochistan

Farmers in Balochistan lacked knowledge and resources for effective farm management and faced extreme weather conditions. There was a huge flood in 2022. PAFaid trained provincial agricultural officers using a train-the-trainer model, equipping them to teach farmers about soil health management, water conservation, personal safety and hygiene, pest management, and post-harvest handling. Hands-on experience in tree pruning, apple harvesting, and pesticide usage helped them comply with modern standards, making their products competitive in the marketplace.

Three apple grading units were established, and one fruit processing facility was renovated and upgraded. Women were trained to operate the equipment, add value to their produce, and manage facility operations.



Shaista Sajjad, who learned meat processing, marketing strategies, and business management, and leads her family business, repairing a customer order for nuggets

Gender mainstreaming was central to this initiative, with women leading facility operations and management. A female expert oversaw the upgrading of a non-functioning pesticide quality control and research laboratory to ensure the safety, quality, and efficiency of agricultural pesticides. The project also upgraded the fruit processing lab of the local Women's Division of the Agricultural Extension Department to develop new value-added products. This facility will train other women on value adding techniques in the future.

Women regularly consulted agricultural officers, sharing challenges and exchanging solutions, fostering a strong farming community.

RESULTS

Transforming lives and industries

PAFAID's interventions led to significant improvements in agricultural and livestock production while breaking gender barriers. Some key achievements include:

- **Expanding women's roles in agriculture and livestock:** more than 2,200 people, including 906 women, received training in food-processing and farming techniques. Women's technical skills in livestock and agricultural management were strengthened, enabling them to take on greater responsibilities as resource managers.
- **Job creation and income growth:** over 1,000 jobs for women were either created or retained in apple farms and butcher shops. Women's earnings increased by up to 25 per cent, adding approximately \$1,000 per household in the first year.

- **Strengthening women’s leadership in the meat industry:** the Khyber Pakhtunkhwa Women Meat Processors Cooperative Society empowered women to take leadership roles, contributing to a shift in industry dynamics.
- **Market access and innovation:** training and new equipment helped women-led enterprises increase product quality and expand their customer base. Some successfully entered high-value supply chains with corporate buyers.

Training at a glance



906 women trained in entrepreneurial skills, hygiene, marketing, and value addition (461 under the age of 29).

• **22 women received advanced training** in food processing and quality control.

• **358 women trained in** good **agricultural** practices.

• **114 women trained in animal husbandry** and **production**.

• **26 female-led meat processing businesses** received training in value addition, food safety, new product development, and marketing.

LESSONS LEARNED

Sustaining progress and scaling impact

PAFAID’s success highlights several key lessons that can be applied to similar initiatives:

- **Scalability and adaptability:** the modular design, which moves from training to market linkages, can be replicated in other sectors such as aquaculture and forestry. Processing facilities can be used for other high-value crops. E-learning platforms can help expand training reach.
- **Community-wide adoption:** by involving entire communities in best practices, the project ensured long-term benefits.
- **Youth engagement for sustainability:** prioritizing younger women helps ensure continuity across generations.
- **Overcoming cultural barriers:** limited mobility, resistance to women in technical roles, and financial constraints remain challenges. Continued advocacy and institutional support are crucial.
- **Strengthening institutional partnerships:** collaborating with local governments, institutions, and market players builds long-term capacity and expands impact.
- **Providing financial support mechanisms:** long-term financial assistance and follow-up training help sustain women’s businesses.

PAFAID has demonstrated that gender-inclusive agricultural and livestock development can drive economic growth, improve food security, and empower communities. By continuing these efforts, women’s participation and benefits in Pakistan’s agricultural sector will only continue to grow.

PHILIPPINES

Women's participation and leadership in e-waste management reduce pollution



UNITED NATIONS
INDUSTRIAL DEVELOPMENT ORGANIZATION
Progress by innovation



gef
global environment
facility
INVESTING IN OUR PLANET



Now, four barangays are giving us waste that we can trade. Before, the barangay reprimanded us, but now they are happy that we trade the waste because they can avoid broken fragments, waste, and poison which children and pregnant women are exposed to.

Ms. Emelda Espinosa,
Capulong Merchants Association



Implementation of PCB Management Programs for Electric Cooperatives and Safe e-wastes Management (ID 150048)



Philippines



January 2017 – December 2024



\$6.2 million; and \$35.9 million co-financing



Global Environment Facility
Philippines Department of
Environment and Natural Resources



Ms. Joanna Amican, engaged by the project as an e-waste buster was counting the delivery of CRTs for the MRF/e waste facility in Dampalit, Malabon

OVERVIEW

Toxic e-waste and its impact on women and communities

In the Philippines, informal e-waste recycling exposed women in low-income communities to significant health risks while creating polluted reservoirs of toxins in the environment. Without safe disposal systems before 2016, women often dismantled e-waste such as electrical electronics equipment in homes or public spaces, further spreading contaminants and threatening the health of themselves and their families. Women were often apprehended by local officials to stop this illegal practice but would continue because it was one of the few sources of income to help them put food on the table for their families.



Women wearing personal protective equipment using pneumatic tools to dismantle electronic devices

Since the 1970s, polybromodiphenyl ethers (PBDEs) have been used as flame retardants in electronics and consumer products. As persistent organic pollutants (POPs), PBDEs remain in the environment for decades, accumulating in human and animal tissues from contaminated food and water. These toxins disproportionately affect women, impacting their fertility and children's development.

To address these challenges, UNIDO partnered with the Government of the Philippines to improve e-waste management practices, reduce environmental hazards, and create safer, sustainable livelihoods for women.

INTERVENTIONS

Safer e-waste practices and empowering women

Engaging women and communities through awareness campaigns. Ecowaste Coalition, a civil society organization that works with the informal waste sector like junkshops and e-waste dismantlers, and the private company Integrated Recycling Industries, Inc, helped raise awareness and knowledge on dismantling and recycling waste electrical and electronics equipment.

Safer facilities. A material recovery facility in Barangay Bagong Silang, Caloocan City was upgraded to a treatment, storage and disposal hub to better manage e-waste, with the country providing the regulatory framework to ensure technical compliance. Collected e-waste was brought to the facility for proper disposal instead of the usual practice of dumping it along creeks and nearby surroundings.

Providing tools and training. Hands-on training was conducted at four project sites to 22 men and eight women. For the first time, women learned how to properly inventory, sort and dismantle larger electronic devices and use technical equipment to determine levels of bromine that had to be separated for disposal or recycling. Manuals were produced using simplified language and images to ensure understanding and sustainability.

Scaling up with public-private partnerships. After systems were proven, the model was replicated in Barangay Dampalit, Malabong City, with with Globe Telecom, Inc. and again in Barangay Bakakeng, Baguio City with the PLDT, Inc. and its wireless arm, Smart Communications Inc. with the local government as partners.

Ensuring economic security for women dismantlers. Dismantlers were assured a regular income of at least \$300 a month when they met disposal targets of cathode ray tubes from old televisions, a particularly dangerous source of toxins.

Creating advocacy and leadership roles for women.

The trained women dismantlers became ‘e-waste busters’ – an advocacy role to share their experience with others, spreading awareness about the perils of improper disposal of e-waste and encouraging others to join the formal sector that offered better pay and safer work. Both this advocacy and the training helped everyone see that women could do these jobs, and because men were able to continue their work and not lose money, they were supportive of the opportunity provided to women. International Women’s Days were used to recognize women’s contributions, such as continuing to collect e-waste during the COVID-19 pandemic.



The project has helped raise our standards and identity in our communities. Our jobs can be decent, too. You just have to give us knowledge, you just have to support us.

Joanna De Amican, President, Association of Waste Pickers in Longos, Malabon



Fostering community-led organizations. Women formed associations like the Barangay Longos dismantlers’ group, gaining formal recognition and mentoring for improved practices.

RESULTS

Cleaner communities and empowered women

Economic and social gains

- Through training, upskilling activities and decision-making exercises, women were empowered to take on the role of dismantlers and serve as advocates for e-waste management. This helped them increase their earning capacity, reduce environmental toxins and health risks.
- By 2021, four years after the project began, equal numbers of men and women were dismantlers.
- The dismantlers established their own community-based organizations and formal leadership structures to better assess and regulate their industry. Female membership increased by 98 per cent, and they identified the issue of plastic casings contaminated with POPS and established new systems to properly dispose of them.
- Protections were put in place for children, so that by the end of the project no more children under the age of 12 dismantled e-waste, ensuring safer practices for families.

Environmental improvements

- The project properly disposed 1.15 tons of PBDE-contaminated plastic casings and 800 tons of Pb-laden cathode ray tubes.
- The first-ever e-waste ordinance was established, requiring small recycling centres known as “junk shops” to send their electronic waste to appropriate facilities.
- Five local governments have agreed to support e-waste management in the future, and the national government has committed to establishing e-waste facilities in each of the 16 regions in the country.

Sustainability through innovation and government collaboration

- The three Materials Recovery Facilities (MRF) are accredited by the Environmental Management Bureau of the DENR, as e-waste facilities. Globe Telecom and PLDT/Smart Communications supported the construction and operation of the e-waste facilities as part of their sustainability responsibility.
- The women in Barangay Longos, Malabon - one of the project sites - are now working with the e waste facility in Barangay Dampalit to lead the operations of that facility.
- The project enhanced the capability and competency of women working informally to collect e-waste. They created the Association of Dismantlers in Barangay Longos, and one of the women trained, Joanna Amican, now serves as its president and voice of e-waste recyclers both locally and internationally.
- The project, through EcoWaste Coalition, introduced an innovative way of engaging young people in ongoing e-waste collection. More than 15,000 people went to a concert that required bringing e-waste to the proper facility ahead of time as payment to attend. The event collected eight tons of e-waste, where normally it would take at least three collection events to gather this amount.

Impact between 2017-2024



- **3 materials recovery facilities** upgraded to e-wastes facilities
- **1.12 tons of PBDE disposed** and removed from the recycling stream
- **33.4 tons of e-wastes** collected
- Cooperation agreements signed with **5 local government** units to manage e-wastes, leading to the collection of **33.4 tons of e-waste**
- **1 city e-waste ordinance** adopted
- **Over 520 people trained** throughout the project life (2017-2024)

LESSONS LEARNED

Building a path to safer, inclusive e-waste management

- **Partner strategically.** The project partner, EcoWaste Coalition – a non-governmental organization, reached out to those informally collecting the e-waste, women, youth and even the most local levels of government. This engagement created a sound framework and strategies that involved everyone, especially women who were at risk of exposure to the toxins.
- **Involve women in the decision-making process.** Consultations and empowering activities drive more inclusive strategies and sustainability.
- **Offer economic alternatives.** Tangible interventions that improve the economic status of women and children provide options to help them transition out of their old practices.
- **Celebrate women's contributions.** Recognize and promote women's roles to increase participation and awareness.
- **Ensure long-term sustainability.** Build capacity through continuous training, financial literacy, and community-based organizations.

The Philippines' journey to address toxic e-waste demonstrates how empowering women and fostering collaboration between governments, private sectors, and communities can transform environmental and social challenges into sustainable solutions. By prioritizing women's health, economic security, and leadership, the initiative not only reduced dangerous pollutants but also created a replicable model for inclusive e-waste management.

TUNISIA

From “Fruit of the Poor” to global cosmetics: Women transform the cactus industry



Market Access Project for Agri-Food and Local Products (PAMPAT) (190175)



Our women’s agricultural development group joined forces with another local cooperative, which allowed us to double our turnover. With UNIDO support, we have also established commercial links with exporting companies in Kasserine. The group has allowed us to generate income and opened our eyes regarding all the possibilities that suddenly appear once we take matters into our own hands.

Ghofran Assidi, President, “Success value chains” women’s agricultural group in Kasserine



Tunisia



October 2013 – June 2026
(2 phases)



€7.9 million



State Secretariat of
Economic Affairs of the Swiss
Confederation (SECO)



Members of an agricultural development group from Kasserine harvesting prickly pears

OVERVIEW

Turning fruit into a high-value commodity

Although Tunisia ranked fifth globally in terms of cultivated cactus land, the sector generated minimal income as thousands of small farmers focused on selling low-value fresh produce for livestock feed or human consumption. By 2013, the potential of prickly pear seed oil as a high-value cosmetic product remained untapped.

At the time, only five small companies in Tunisia specialized in producing organic, certified anti-aging cactus seed oil. Most cactus plantations and businesses were owned by men, while women, who made up the majority of the agricultural workforce, were relegated to low-wage, labour-intensive tasks such as fruit picking. Women often earned below the official minimum wage as this labour was not considered value-added work.

Recognizing the opportunity to reposition cactus products in the high-value cosmetics niche, UNIDO launched the Market Access Project for Agri-Food and Local Products (PAMPAT) in collaboration with Tunisia's Ministry of Agriculture. The initiative aimed to develop a thriving cosmetic cactus industry while addressing systemic gender inequalities. By connecting women as producers with women as consumers and embedding gender mainstreaming as a core objective, the project sought to transform the sector and empower Tunisian women across the value chain.



I invested in the cactus sector in Kasserine in 2016 and my company was among the first to be set up in the value chain. UNIDO helped me to finalize the business plan, create my company and launch my first activities to access national and international markets.

Sonia Ferchichi, Owner, Biozelfen



INTERVENTIONS

Building capacity and creating opportunities for women

Empowering entrepreneurs through training and certification: the project implemented extensive training and coaching programs to support entrepreneurs in establishing cactus seed oil businesses. In collaboration with the Ministry of Agriculture, the initiative facilitated access to organic and ISO certifications, essential for entry into international markets. Targeted efforts identified and supported women interested in investing in this emerging sector.

Financial and marketing support for women-led businesses: women-owned companies received preferential financial and technical assistance to launch and grow their businesses. Support included developing branding and packaging, engaging in e-commerce and digital marketing, participating in international trade fairs, and conducting product testing and clinical trials. These measures enabled women entrepreneurs to position their products competitively in global markets.

Establishing networks and associations: the creation of ANADEC, Tunisia's national cactus development association, provided a platform for newly established enterprises to collaborate, share knowledge, and access mentorship opportunities. Forty percent of ANADEC's founding members were women, ensuring a strong female voice in shaping the industry's future.

Raising awareness through media campaigns: targeted media campaigns highlighted the economic potential of prickly pear seed oil and showcased the pivotal roles women played in its production, from harvesting to developing innovative cosmetics. This strategy attracted attention from buyers and female investors, further bolstering the industry's growth.

Training for skills development and value addition: the project delivered hands-on training to help women diversify cactus-based products, such as soaps, creams, vinegars, juices and jams. Agricultural best practices, including organic farming and pest management, were taught to women managing farms. Post-harvesting and artisanal processing techniques were also introduced, enabling women to command higher prices for their work.

Promoting women-run agricultural development groups: the project facilitated the formation of women-led agricultural development groups, legal entities requiring minimal initial capital. These groups provided women access to modern production technology, expanded market reach and greater economic independence. Members established flexible working arrangements compatible with family responsibilities while collectively securing organic certifications for their land.

RESULTS

Transforming Tunisia's cactus sector and empowering women

A thriving export industry

Targeted interventions along the value chain transformed organic prickly pear seed oil into Tunisia's flagship cosmetic ingredient. Between 2020 and 2023, exports surged by 160 per cent, with 52 companies now exporting the oil. Tunisia also became the first country to standardize the oil's characteristics, protecting its growing reputation on the global stage.

Women-led enterprises on the rise

The number of companies in the prickly pear sector grew to 72, with 39 owned by women—five times the national average for female business ownership. Among these women-led companies, 70 per cent export their products, and half have been in operation for over five years, demonstrating their resilience and success. More than 10 female entrepreneurs have earned awards for their innovative business models and products.

Job creation and economic empowerment

Since 2016, over 1,000 jobs for women have been created in the prickly pear industry. Among newly hired women, 24 per cent assumed team management roles, marking a significant step toward greater female representation in leadership positions. In Kasserine, nine women-led agricultural development groups were established, empowering nearly 600 women to move up the value chain from picking fruit to processing and sales. Organic certification allowed women to earn double the price for their produce.



Product diversification and innovation

Almost half of the companies in the sector have expanded their product lines beyond prickly pear seed oil, incorporating other Tunisian plants and cactus flowers and leaves. These innovations have further strengthened the industry's competitiveness and appeal to international markets.

Improved working conditions for female labourers

Female agricultural day labourers, often the most vulnerable link in the value chain, have seen significant improvements in their wages, which rose by 122 per cent during the project.

LESSONS LEARNED

Insights for future gender-responsive development

Leveraging existing roles while driving change: The project's success lays in its careful balance between building on women's traditional roles in agriculture and gradually disrupting harmful gender norms. Training women to improve their skills and productivity was widely accepted, even in conservative rural communities, while the rapid rise of women entrepreneurs challenged traditional gender patterns in Tunisia's business landscape.

Breaking new ground in emerging industries: The nascent nature of the cosmetic cactus industry provided a level playing field for men and women to innovate and take risks. Additionally, male-led companies quickly recognized the marketing advantages of highlighting women's contributions, further supporting gender inclusivity.

Key recommendations for replication

- **Inclusive participation:** prioritize women's involvement while engaging male stakeholders to foster shared ownership and support for gender equality.
- **Fair economic contribution:** focus on increasing women's roles in economic decision-making and ensuring their equitable share in value addition.
- **Tailored approaches:** design interventions specific to rural women, female employees, and women entrepreneurs to address their unique needs and challenges.
- **Market-driven strategies:** adopt a client-oriented approach along the value chain to ensure the sustainability and scalability of outcomes.

The PAMPAT project's achievements in Tunisia demonstrate how gender-transformative approaches can unlock the potential of underutilized industries. By empowering women at every stage of the value chain, the initiative not only transformed the prickly pear sector into a thriving export industry but also set a powerful example of inclusive economic growth, with significant contributions from women. Tunisia's journey from the "fruit of the poor" to a high-value cosmetic product serves as a blueprint for similar initiatives worldwide, showing that when women are given opportunities, they can drive innovation, business, economic growth and lasting change.

Impact since 2013 in Tunisia



Number of **companies increased by 12 fold**, from 5-72

- **Over half of the companies** women-owned
- **80 per cent of 1430** new processing jobs held by women





Vienna International Centre
Wagramerstr. 5, P.O. Box 300,
A-1400 Vienna, Austria



+43 1 26026-0



www.unido.org



unido@unido.org



UNITED NATIONS
INDUSTRIAL DEVELOPMENT ORGANIZATION