

WOMEN AS A CATALYST FOR INNOVATION IN YEMEN



Young Woman Creates Yemen's First Autism-related Application

For Hamas Abouhatem, aged 27, being a woman in Yemen's male-dominated tech field did not discourage her.

In 2020, the computer science graduate from Sana'a University developed a mobile Android application called "Taif". Through her app, Hamas is working to empower mothers with knowledge and equip them with the information to successfully address their children with Autism Spectrum Disorder (ASD).

Presented at the sixth Youth Leadership Programme (YLP6) organized by the United Nations Development Programme (UNDP) in Yemen, "Taif" helps facilitate the early diagnosis of children with ASD. Designed in consultancy with doctors and ASD health professionals, a series of surveys and exercises undertaken in the first few months of the child's life can help parents identify whether their child may potentially have ASD and how far on the autism spectrum they may register.

In Yemen, autism is not fully understood or widely known, and there is a lack of reliable data about children with ASD.

"ASD among children is an unknown issue in Yemen, and mothers are almost always the ones who notice it first in their children," says Hamas. Despite these challenges, she was even more determined to create the application.

Hamas was assisted in her creative journey by participating in the YLP6 programme, where she received invaluable training in writing project proposals, strategic planning, and networking with experts and partners. "I am very proud to have pioneered the ASD application and am not surprised that it was a woman who created it. We are more aware of the needs of our children and are also more understanding of the struggles we all face with them."



Breaking the Glass Ceiling: Yemeni Women Farmers Innovate to Mitigate Food Insecurity

Yemen suffers simultaneously from increasing food insecurity and a deficiency of women's participation in the labor force. According to the World Bank, "in Yemen, the labor force participation rate among females is 6.2% and among males is 70.4% for 2022."

Since 2019, Awraq al-Shajarah, an agricultural engineer, has been a living example of the significance of linking women's participation in the labor force and food security. In 2019, Awraq established a local group consisting of women farmers, creating greenhouses in Yemen's capital city of Sana'a to produce vegetables. The group, called Athar Agricultural Association, faced financial obstacles that limited its work, until it won a grant in 2022 from the Small and Micro Enterprise Promotion Services (SMEPS) funded by the World Bank, in partnership with UNDP Yemen under the Emergency Social Protection Enhancement and COVID-19 Response (ESPECRP). That opportunity allowed the association to flourish. In addition to greenhouses, the association today provides agriculture training for women in Yemen. Starting with only 37 women members, the association today consists of 64 women farmers, producing tomatoes, cucumbers and peppers.

Athar Agricultural Association is solving two major issues at the same time; on one hand, it's creating jobs for women, and on the other hand, it is mitigating food insecurity in the country. Awraq says, "through this project, my target is women farmers. My goal is to create more and more jobs for women and at the same time benefit our community with essential food."

"We faced many problems as we started the association. When we looked for land, some landowners didn't accept renting the land because we were women. Awraq overcame those obstacles with the assistance of her elder brothers, who intervened with landowners. Awraq has also received support from some male agricultural engineers at no cost. One of them is agricultural engineer Abdullah al-Wasabi, who supervised the association's work. "The association has been a success so far, especially with under the dire economic and security situation in the country," says Abdullah. "The obstacles were countless, such as logistic problems, issues with renting land, and stereotypes about women agricultural engineers. But the women were determined, patient and persistent."



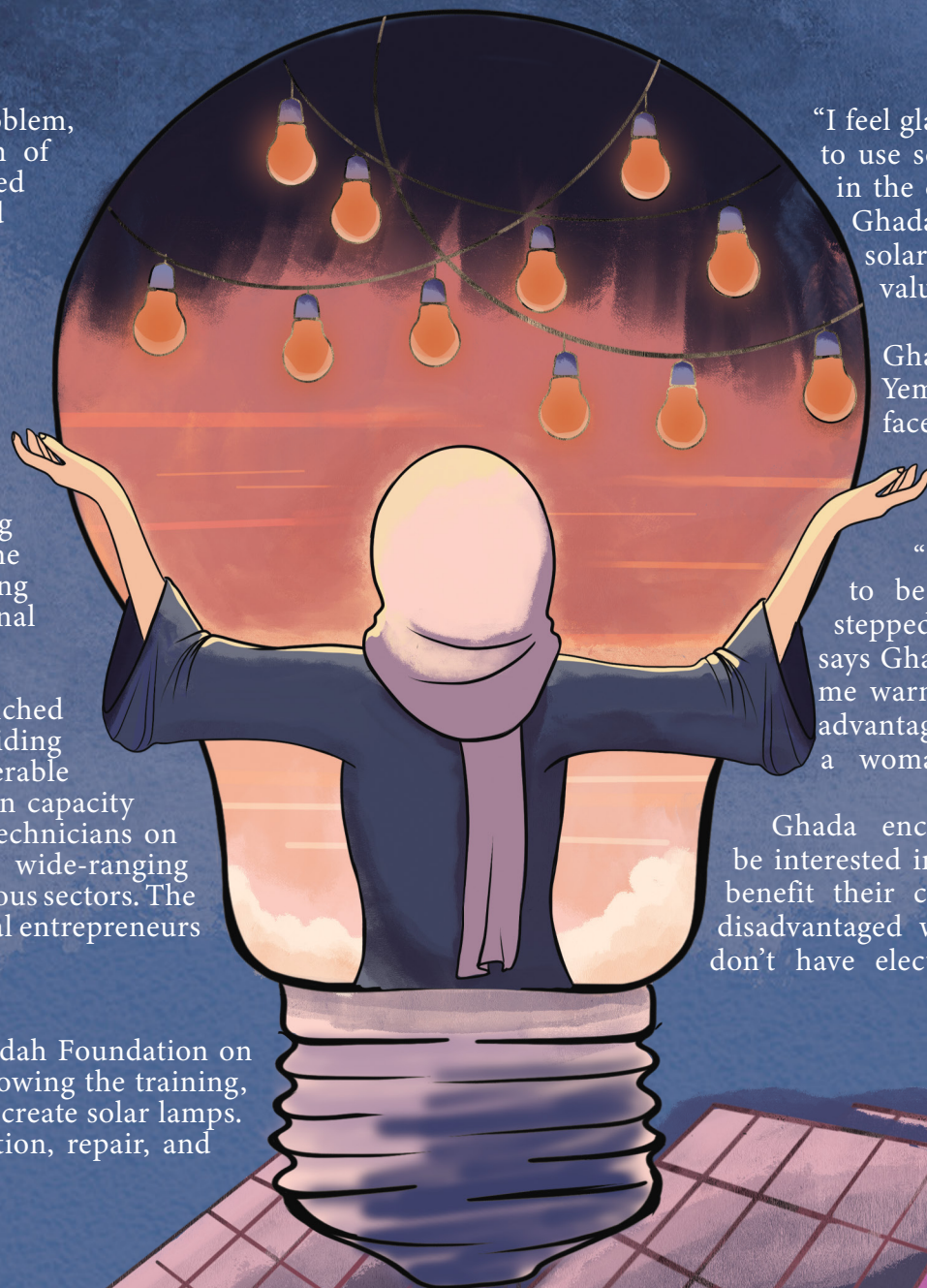
Creating Solar Lamps: A Yemeni Woman's Mission

Electricity blackouts in Yemen are a persistent problem, exacerbated during conflict due to the destruction of electric stations and fuel shortages. UNDP reported in 2021 that, “only 10 percent of Yemen is connected to the public electricity grid, a large majority of the population is deprived of reliable access to electricity.” This has gravely impacted the economy and development efforts in the country.

Like many affected by power outages, Ghada Haddad, a network engineering, has turned her focus to solar energy as part of Supporting Resilient Livelihoods and Food Security in Yemen Joint Programme (ERRY JP) and its work to address the continuing electricity crisis. Ghada was introduced to the “Yemeni Lighting Initiative,” in 2021 thanks to funding from the European Union and Swedish International Development Cooperation Agency.

UNDP and local partner Musandah Foundation, launched the “Yemeni Lighting Initiative” project, providing sustainable economic opportunities for forty vulnerable young men and women. The project assessed gaps in capacity building with a training program for solar energy technicians on installation, repair and maintenance work, and a wide-ranging awareness campaign on the uses of solar energy in various sectors. The project also trained microfinance institutions and local entrepreneurs in the areas of selling energy systems.

Ghada received training for six months from Musandah Foundation on the use of solar energy and solar lamp creation. Following the training, she became a trainer herself, teaching people how to create solar lamps. Ghadah has trained thirty other women on installation, repair, and maintenance work for solar lamps.



“I feel glad to see women finally able to use solar lamps instead of being in the dark or using candles,” says Ghada. “Women starting to use solar lamps demonstrates the value of my effort.”

Ghada recalls one time the Yemeni Lighting Initiative faced an obstacle in conducting training in Abs district, one of Yemen’s most impoverished Districts. “The women in Abs refused to be trained by a man, so I stepped in and did the training,” says Ghada. “Abs’ women welcomed me warmly and then I realized the advantage I have just because I am a woman.

Ghada encourages other women to be interested in solar energy and use it to benefit their communities, especially for disadvantaged women in rural areas who don’t have electricity.

Shafia's Story: Joining the Public Service in Marib

In the heart of Marib, Yemen, 25-year-old Shafia Ali Hussein Al-Rimal has emerged as a symbol of empowerment, taking on the role of both breadwinner and mother after the loss of her father and her brother's wife. Shafia's journey, marked by resilience and determination, took an innovative turn when she became part of a groundbreaking fellowship programme that is transforming women's lives in Yemen's Marib governorate.

The fellowship programme, organized by UNDP Yemen's Strengthening Institutional And Economic Resilience In Yemen (SIERY) project funded by European Union, focuses on empowering women in various fields. The project enabled 70 women in Marib to engage in the state's public service through an intensive training programme that covers leadership, communication, report writing, professional skills, and computer literacy.

To prepare for her fellowship, Shafia says that she delved into technical subjects like local government structures, youth and women's roles in development, budgeting, tender management, and project planning and management.



The fellowship introduced a novel concept to Marib, offering the governorate an opportunity to leverage technology as a tool for progress. Shafia eagerly embraced computer skills and technology to streamline her daily tasks, making her work more efficient and effective. "I learned the skills of archiving, documenting, photographing, time management, arranging tasks, communication skills with colleagues, ways of communicating with managers, the skill of drafting official memos, photoshop, and computer skills."

Today, Shafia stands proud of her achievements. "It warms my heart that my family and friends look up to me with admiration," says Shafia, "which makes me advise all the women in my circle to seize opportunities like this fellowship programme, as it offers invaluable experiences and skills that can shape women's professional lives."

Haifa Ali: Empowering Rural Women for Food Security in Yemen

Haifa Ali, a 43 year-old mother of four, from Al-Shavahiah village in Al Marawiah, Hodeidah Governorate, has been working in her community to tackle hunger.

After her family was internally displaced, they struggled to survive on her husband's income and their living conditions deteriorated. Haifa began volunteering to help other women and later took part in a training opportunity on the milk value chain with the Small and Micro Enterprise Promotion Service (SMEPS), which is implementing the Emergency Social Protection Enhancement and COVID-19 Response Project (ESPECRP), in partnership with UNDP in Yemen.

The project, funded and supported by the World Bank's International Development Association (IDA), is dedicated to improving livelihoods, fostering food security, and building resilience for the future. Through training, asset provision, and the establishment of collection points and cooperatives, ESPECRP empowers women to meet the basic needs of their families while playing a vital role in strengthening food security in their communities.



Following the training on the milk value chain, Haifa was appointed as the Head of the Milk Production and Collection Centre. This center plays a crucial role in collecting milk from women livestock breeders and delivering it to intermediaries who supply factories. Initially met with skepticism due to her status as an internally displaced woman, Haifa's transformative impact on the lives of women in her community earned her respect and acceptance.

Today, Haifa's work has not only become a source of income for her family but also a means to send her children to school and afford medical treatment for her daughter, who suffers from a chronic illness.

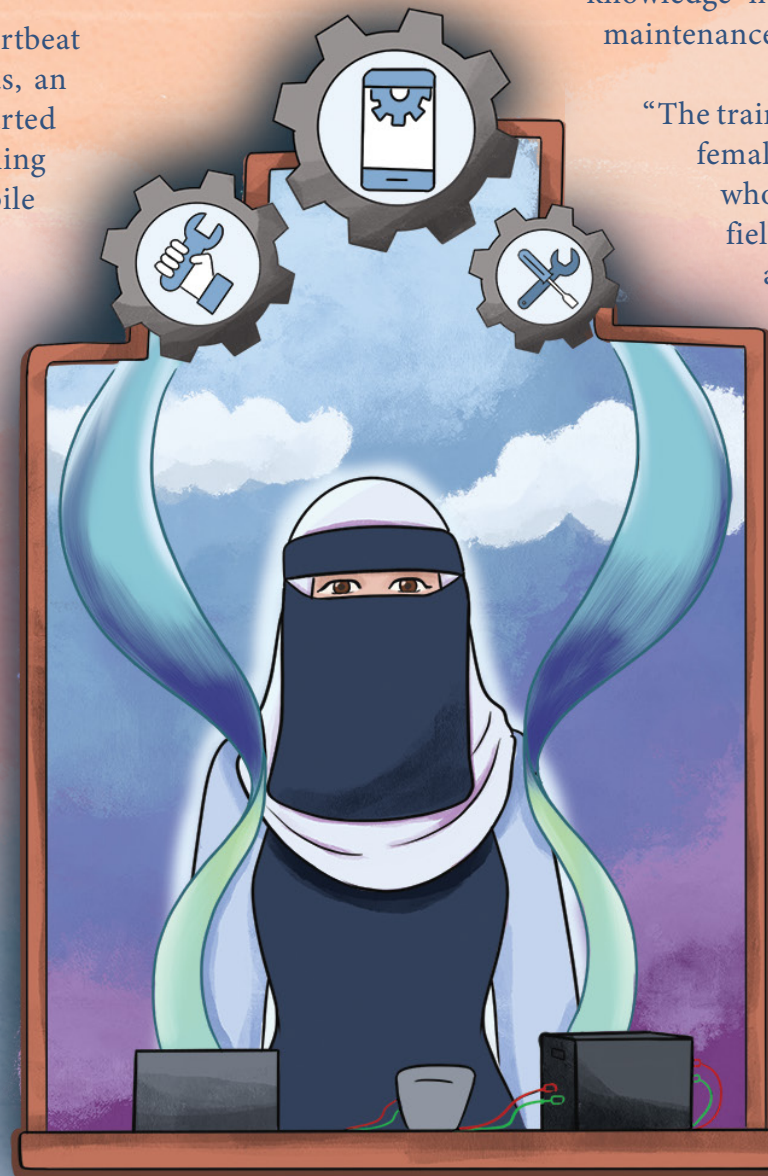
Haifa continues to support women in her community, offering guidance on proper livestock breeding and milk collection techniques.

A Woman Mastering Mobile Maintenance Fills A Void

In a world driven by technology, where the heartbeat of communication lies in the palms of our hands, an increasing number of women in Yemen have started mastering mobile maintenance. Women are learning about inspecting, repairing, and maintaining mobile devices to ensure their proper functioning - supporting women's contributions to the tech industry, and empowering them economically and professionally.

In Yemen, mobile maintenance stores are traditionally dominated by men. Building the capacity of women to enter technology-related fields is vital to their empowerment, while also supporting the local economy. Khadija Basa'adah in Say'oun is well-known in the governorate as a woman who repairs the mobile phones of other women, with a privacy guarantee. For her, mobile maintenance is more than a mere skill, it fills a void in her life and a gap in the industry.

In 2022, Khadija participated in a vocational training programme implemented by UNDP Yemen in partnership with SMEPs and funded by the King Salman Humanitarian Aid and Relief Center (KSrelief) on mobile maintenance and programming, and received a small financial grant along with equipment.



The vocational training programme included a focused educational course on mobile maintenance for a dozen women trainees, equipping them with practical skills and knowledge needed for mastering mobile maintenance.

“The training was a useful opportunity to connect with female technicians from different parts of Yemen who are passionate about filling the void in this field. These shared experiences have sparked a collective vision among us, envisioning a future where women play a significant role in reshaping the landscape of mobile maintenance across Yemen,” says Khadija. “We are all vocal about the need to start mobile repair and maintenance shops run by women.”

Siham is one of Khadija's customers in Say'oun. “I am scared of data theft. That's why I went to Khadija,” says Siham.

Siham has not only felt comfortable with a woman fixing her mobile, but she also suggested Khadija to other women relatives and friends.

Khadija's aspirations reach beyond her home-based work, as she dreams of opening her very own shop, echoing the sentiments of many women who, like Siham, are seeking the expertise and trustworthiness that Khadija represents in this male-dominated industry.

Woman-Led Solar Power: Lighting the Road to a Brighter Future for Yemen

Iman Hadi, a remarkable entrepreneur from Yemen's Hajjah Governorate, recognized the dire circumstances faced by her community, particularly the women, in remote villages where basic services, such as electricity, were scarce. Fuelled by a sense of responsibility, she decided to take action. Leading a group of ten women, Iman initiated a groundbreaking project to install a solar power plant in Abss, Hajjah Governorate, providing clean and affordable energy to 43 households.

Iman's work received international attention when she was named one of the "100 Most Influential Women" by the BBC.

With support from UNDP Yemen, funded by the European Union and Swedish International Development Cooperation Agency as part of the ERRY Joint Programme, Iman's business has grown.



Iman's message to all Yemeni women is clear: "Strive with determination and confidence, and your dreams will come true."

Iman Hadi's journey is not just about changing her community; it's about changing the world's perception of what women can achieve, even in the most challenging circumstances. She is a true heroine, lighting the way towards a brighter future for Yemen.

A Woman-led Innovation for Renewable Energy in Yemen

When life gives you lemons, make lemonade. That was Nada Al-Mashdali's motto when she started thinking about her innovative initiative, converting food waste into organic fertilizer and cooking gas. Nada, 26, lives in Yemen's Aden Governorate, and like thousands of others, has suffered from fuel shortages and a widespread food waste crisis under ongoing conflict in the country. These crises inspired her journey in the field of renewable energy production.

Nada's inspiration was realized when she became a participant in UNDP's eighth Youth Leadership Programme (YLP8) in 2022. The YLP provided an opportunity for Nada to design, plan and test her innovative project focused on one of the UN Sustainable Development Goals, SDG 7, i.e. affordable and clean energy. Nada created an efficient and durable biogas and organic fertilizer generator that is easy to install and accessible to all. In the generator, compostable left-over food is decomposed and fermented. Then, the generator produces biogas through a tap. After the decomposition and gas production, the food in the generator is converted to organic fertilizer useful for farms and agriculture.



Nada was pained to see the long queues of women lining up to purchase cooking gas during frequent fuel shortages in Aden. "In our conservative society, cooking is the responsibility of women, which meant fuel shortage was a women's issue," said Nada. "The generator, my project, would make a huge difference in the lives of those women queuing for so many hours outdoor under the burning sun in Aden."

Hilal Abdullah, a trainer in climate education has followed Nada's journey and provided her with training and advice. "Nada is a strategic thinker with powerful determination," said Hilal. "In Yemen, we're in a desperate need for such projects that Nada has been leading - her generator project would contribute to solving both the food waste problem and fuel shortages."

Mobile Application in Yemen Protects Women with Access to Support Services

Over the course of the protracted conflict in Yemen, women and girls have been particularly vulnerable, and this has been exacerbated by the COVID-19 pandemic, and other natural disasters. Sabah, 38, the Executive Director of For All Foundation, decided to take action and designed an innovative digital tool, a new mobile application, to support survivors of abuse.

With support from UNDP and the Government of Japan under Building Resilient Livelihoods and Improving Protection Services for Conflict Affected Communities in Aden and Lahj Project, Sabah led the launch of a mobile application designed as an information service provider that includes providing legal guidance and aid services to abuse survivors across Yemen. One of its key functions is that it maps out available protection and aid services near any survivor while they are using the application. The application can be refined by geographical area and divides services into several categories including legal services, food, livelihoods, healthcare, education and psycho-social support.

As a graduate of psychology from Sana'a University, Sabah is familiar with the issue that victims face, and has faced a similar experience herself. "I learned that as a woman I have the right to live a life free of violence and abuse," says Sabah. "And I wish every victim knows that she has the right to live in peace, safety and dignity."

Sabah notes that digitalization ensures the privacy of survivors and provides information and knowledge about support available in the country, keeping victims away from social stigma. "UNDP's support has been crucial in our mission to empower women with basic knowledge about their rights," says Sabah. Future plans include conducting awareness sessions to promote the application services.

"Women in Yemen are the backbone of every family and community. If one negatively affects a woman emotionally, physically or psychologically, a whole family and community are destroyed," says Mohamed Murshed al-Thabwani, manager at For All Foundation and one of the team members who led the launch of the mobile application.



A Yemeni Woman's Innovation For Eco-Friendly Building and Plastic Waste Management

Amina Bin-Talib makes bricks using plastic waste, such as plastic bottles. At 28 years old, Amina used her education in business administration and marketing to serve her passion for environmental protection and sustainability.

In 2020, Amina participated in the sixth edition of the Youth Leadership Programme (YLP6), funded by UNDP Yemen and implemented by the Youth Leadership Development Foundation. During the programme, Amina learned about project planning and development, among other crucial skills, with a primary focus on the United Nations Sustainable Development Goals (SDGs). The YLP was a useful opportunity for Amina to develop her plastic bricks project. Her goal was to solve the plastic waste crisis in Yemen and contribute to eco-friendly building options, as the country's waste management sector has been devastated by years of conflict.

The production process was not easy. When Amina tried to contact factories that collect suitable plastic bottles for the bricks, she was received with suspicion and reluctance.

"The construction field in Yemen is dominated by men," says Amina, "So, I had to be diligent in convincing the factories to cooperate with a woman with an eco-friendly plastic bricks project." Finally, by the end of the Youth Leadership Programme, she managed to convince them and made the first plastic bricks, with the assistance of her team.



Soon after the end of the YLP, UNDP under the project, Emergency Social Protection Enhancement and COVID19- Response (ESPECRP) Project funded and supported by the World Bank's IDA, contracted Amina to make hundreds of plastic bricks for the construction of public toilets at Al-Sabeen Park in the heart of Yemen's capital, Sana'a. Amina collaborated with PWP, and the construction of the toilets is now complete.

Abdulrahman Thabit, an engineer and environmental and social safeguard specialist at the Public Works Project (PWP) worked closely with Amina. Commenting on Amina's success, Thabit said, "Amina's plastic bricks project is one step in the right direction in environmental protection and climate action because the project will reduce slow decomposing plastic pollutants."

"I think women should never underestimate what they are capable of doing," says Amina, encouraging other women to be change makers. Besides continuing to produce plastic bricks, Amina is focused on starting the production of plastic tiles for pavement.

Woman-led Digital Tool for Recycling Contributes to Saving the Environment in Yemen

Combining technology and environmental considerations is the key to a sustainable future. With this in mind, computer and control engineer and web developer, Tahany Alswoidy, 26, created “Rescrap,” an online platform that enables users in Yemen to post, exchange, sell, or donate recyclable used goods and materials.

“Rescrap” aims to connect people who are searching for recyclable items with sellers, while also creating business opportunities for women who are working in waste management, and women who are interested in creating handicrafts with used materials.

Tahany developed her project during the mentorship she received through UNDP’s Women Innovators Programme (WIP) in 2021. Tahany believes she was a perfect fit for the WIP, as it supports women who use technological solutions to advance the Sustainable Development Goals (SDGs) in the Arab region. Tahany praises the WIP, pointing out, “before participating in WIP and receiving the mentorship and training, me and my team had little knowledge about designing and running a project.” Strategic thinking, business planning and marketing campaigns are some of the things that Tahany learned through the mentorship programme.

Tahany admits that it’s been challenging. During her field trips to waste accumulation sites in Yemen’s capital, Sanaa, Tahany faced disbelief in her ability and leadership role. “It was difficult to be not taken seriously by men in those sites, questioning my work and my skills,” says Tahany. “But I had a strong belief in the cause and I worked hard in convincing others that project will benefit society and the country.”

Tahany says that women in Yemen want to protect the environment and leave a better world for future generations. “Increasing waste is endangering the climate in Yemen and it affects everyone, especially women and girls who are vulnerable to environmental, economic and social shocks,” says Tahany. “So, environmental issues are women’s issues.”

“Rescrap” has helped Ahmed Al-Eryani, an electronic engineer in finding used electronic items that he was struggling to locate in the mainstream market in Sanaa. “Rescrap is an important opportunity for those of us who are interested in finding used materials,” says Ahmed. “Rescrap allows its users to contribute to waste reduction and sustainability for the environment.”

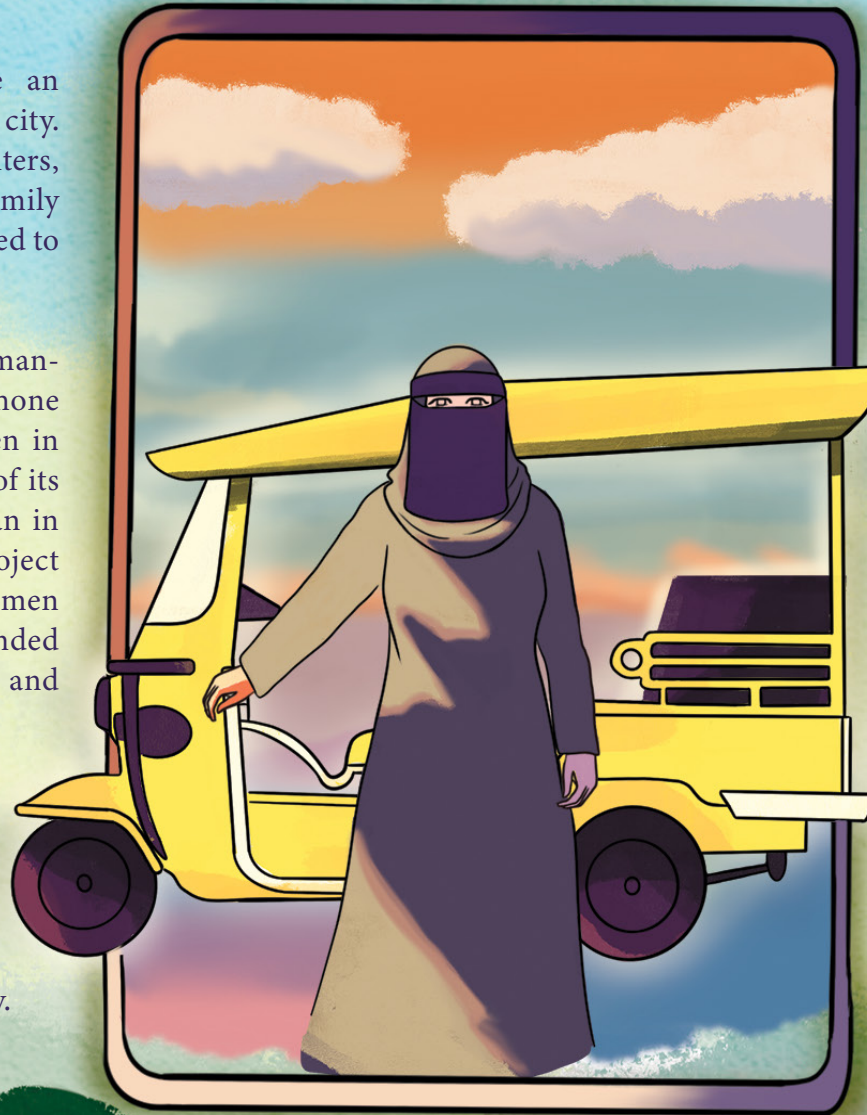


Rehab: A Beacon of Empowerment in Seiyon

Rehab Ali Karama, 30, has become an example of women empowerment in her city. The loving wife and mother of two daughters, she is the primary breadwinner for her family and founder of a project uniquely designed to cater to the women in her community.

Rehab's innovative initiative is a woman-owned business that delivers mobile phone accessories and internet cards to women in the community. The project is the first of its kind in Seiyon District, run by a woman in a market dominated by men. Rehab's project began by offering internet cards to women in her community but quickly expanded to include mobile phone supplies and accessories for women.

Rehab's journey began thanks in part to support from UNDP in Yemen in 2022 through the Rapid Financing Facility Project in partnership with local partner, SOUL for Development, and funded by the Government of Italy.



The project included training on small project management and participation in a mentorship programme. She learned valuable skills in managing small projects and gained expertise in designing economic feasibility studies, project proposals, and marketing plans. Rehab also received financial aid to launch her project. Along with 500 women and men, she participated in the training for eight hours per day for a week.

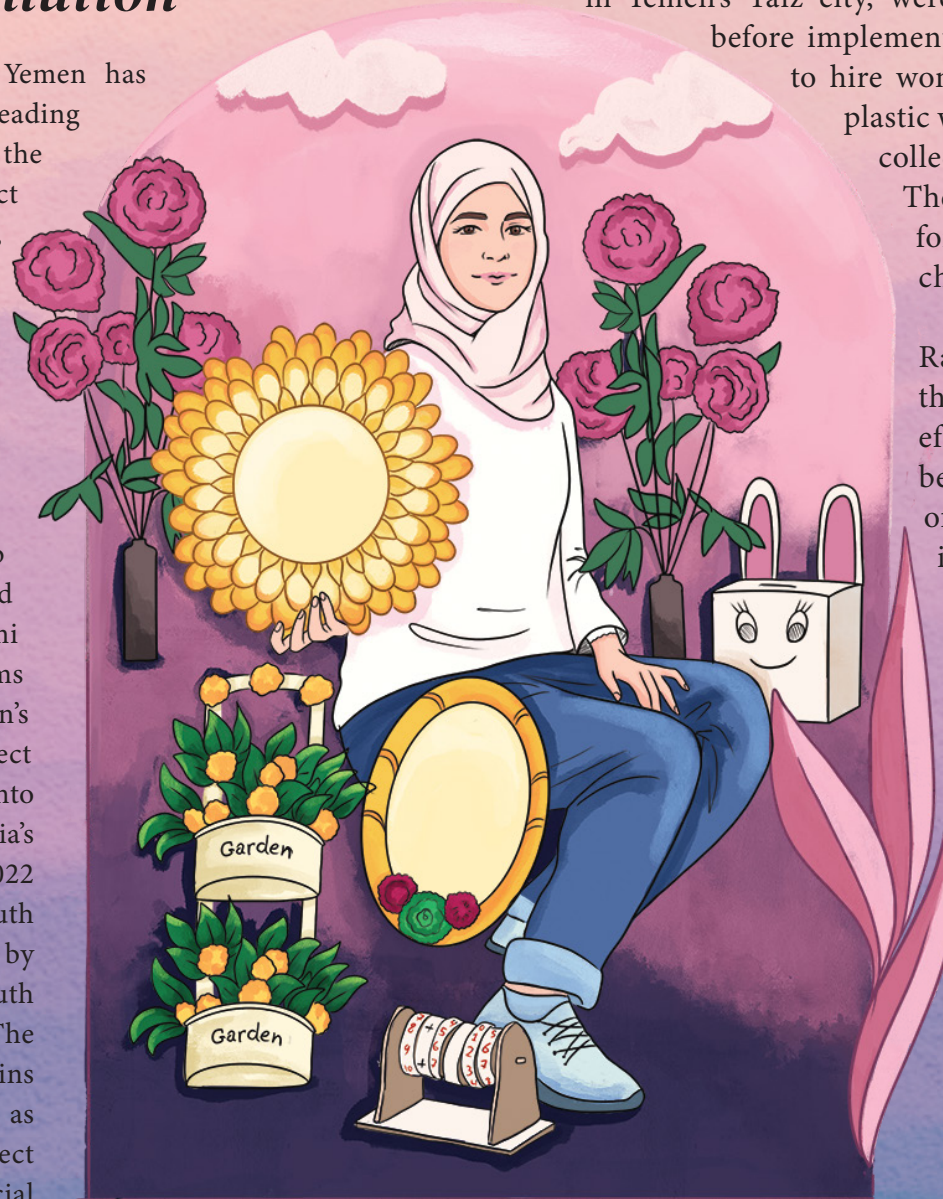
Rehab notes that this venture has not only been personally fulfilling but also financially rewarding. “The profits I generate contribute significantly to my family’s well-being, helping to meet the needs of my husband and children,” says Rehab.

Women benefit from her venture by gaining easy access to mobile phone necessities and supplies without the need to visit stores that predominantly serve men. This convenience enhances their safety, protection, and overall comfort. “My initiative also empowers women by providing flexible payment options and doorstep delivery,” explains Rehab.

One Yemeni Woman's Innovation to Reduce Plastic Pollution

The management of waste facilities in Yemen has suffered during over eight years of conflict, leading to the piling up of plastic waste across the country. While environmental threats affect all demographics, disadvantaged groups, including women, are affected the most. Given that Yemen is ranked 178 of the 189 countries on the Gender Inequality Index, the increasing climate crisis in the country exacerbates gender inequalities.

The dangers of plastic waste, coupled with gender inequalities in the job market, led social entrepreneur and environmental activist Thuria al-Hakimi to create an innovative project that aims to address plastic overstock and women's unemployment in Yemen. The project revolves around recycling plastic waste into usable and beneficial products. Thuria's innovative project was developed in 2022 during her participation in the eighth Youth Leadership Programme (YLP8), supported by UNDP Yemen and implemented by the Youth Leadership Development Foundation. "The UNDP training was very beneficial," explains Thuria. "I learned new things; such as project planning, designing budgets, project structuring, and methods of seeking financial support."



Thuria used the skills she learned in YLP to start her project. Several field research visits to Al-Dhabab, one of the largest waste landfills in Yemen's Taiz city, were some of the first activities Thuria did before implementing her project. Next, Thuria made sure to hire women waste collectors to collect recyclable plastic waste. She has trained tens of women waste collectors on recycling methods and processes. They have produced and sold bags, decor for homes, carpets and learning toys for children.

Rafa Hussein, trained by Thuria, admits that she didn't know about the negative effects of plastics on the environment before the training. "I'm more aware today of plastic waste sorting and how to recycle it into valuable products; especially after I created and sold outdoor carpets made of plastic," says Rafa, who was previously unemployed.

Although Thuria, 27, is busy studying in her final year of college and taking care of her two school-aged children, she is determined to continue the project. Thuria hopes that more people will become aware about the need for recycling and its importance to the environment.



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