

The Water Smart Homes Woman Plumber Program

*Roadmap to woman economic empowerment in new commercial activities
in Zarqa Governorate – Jordan.*



Field Note





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Zarqa, August 2016

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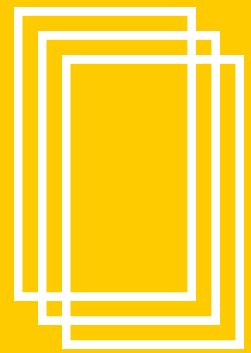
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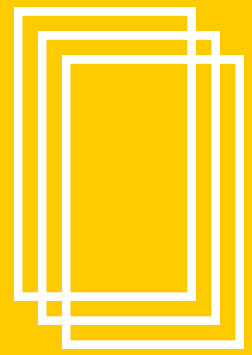


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ACRONYMS AND ABBREVIATIONS

COWATER	Cowater International Incorporated
CSR	Corporate Social Responsibility
DAI	Development Alternatives Incorporated
DOS	Department of Statistics
DTD	Door-to-door
GIZ	Gesellschaft für Internationale Zusammenarbeit
ICA	International Cooperative Alliance
IHWM	In-home Water Management
LENS	Local Enterprise Support (USAID)
JOHUD	Jordanian Hashemite Fund for Human Development
MCA-J	Millennium Challenge Account – Jordan
MCC	Millennium Challenge Corporation
MFW	Micro Fund for Women
NAF	National Aid Fund
NEEM	Near East Electro Mechanics
NEF	Near East Foundation
NGOs	Non-Governmental Organizations
PR	Public Relations
TGZ	Thematic Groups of Zarqa
USAID	United States Agency for International Development
VTC	Vocational Training Centre
WAJ	Water Authority of Jordan
WSHs-A	Water Smart Homes Activity
WSHs-ISW	Water Smart Homes-Infrastructure Works
WSHs-SOES	Water Smart Homes-Social, Outreach and Engineering Services
WUSP	Water and Sanitation for the Urban Poor
WWW	Water Wise Women
WRAP	Water Security for Low Income

INTRODUCTION



This field note presents the lessons learnt from the design and implementation of the Women Plumber Program of MCA-Jordan's Water Smart Homes Activity, funded by a Millennium Challenge Corporation Compact.

The Millennium Challenge Account – Jordan (MCA-Jordan) is a limited liability company owned by the Government of Jordan established in June 2010 to manage and implement a grant of 275.1 million dollars from the US Government funded by the Millennium Challenge Corporation (MCC).

The Compact consists of several water and wastewater projects in Zarqa Governorate that were identified by the Government of Jordan as priority projects eligible to effectively contribute to poverty alleviation in Jordan. The program started on December 13, 2011 with a time span of 5 years.

The overall objective of the Water Smart Homes Activity is to improve the condition of home water systems and decrease costs that households, particularly poor households, in Zarqa Governorate

incur to satisfy their subsistence water needs.

The objectives would be accomplished through a two part initiative: an outreach campaign on in-house water management of water quality and quantity conservation; and an infrastructure component to help poor people by repairing their plumbing systems.

To design and implement the project MCA-Jordan signed a Social, Outreach and Engineering Services (SOES) agreement with the Canadian consultant firm Cowater International Inc., in partnership with DAI (consultant firm from US), WSUP (international NGO from U.K.) and NEEM (electromechanical firm from Jordan), hereinafter referred to as the Consultant.

According to the scope of work of the WSHs-SOES contract, the needs assessment should explore how the WSHs-A could assist women to use these opportunities of increased access to water or training in household repair and maintenance to improve household or individual income generation.



1. BACKGROUND

The objective of the Income Generating Activities for Women was to generate opportunities within the WSHs-A for women of Zarqa Governorate in general and NAF beneficiaries in particular, to start sustainable small home businesses or income generating activities to complement their family income, taking into account cultural, market and environmental constraints.

To this end the Consultant proposed to deploy promotional actions and relevant training towards a Women Plumbers Program (WPP), building on previous initiatives in Jordan and taking advantage of the opportunity that the WSHs-Infrastructure Works provided for practical training.

At the time of the design of the WPP there were no post evaluations of previous initiatives on women plumbing, so the Consultant designed its own intervention strategy using, as much as possible, existing training materials to build plumbing skills. The two initiatives used as reference were GIZ's Water Wise Women (WWW) and Water Security for Low Income (WRAP) projects.

1.1 Water Wise Women (WWW) initiative

This initiative was launched in 2007; it aims to raise awareness of women in matters relating to water use. The initiative is establishing a community based pool of knowledge on efficient and protective water management and plumbing works at the household and community level.

The Initiative targets women as agents of change and knowledge, providing concrete, appropriate and workable advice on efficient water management, plumbing works, water saving and water related household and community hygiene matters to fellow women and other concerned members of their communities.

The Jordanian Hashemite Fund for Human Development (JOHUD) designed the training and collab-

orated with the Vocational Training Center (VTC) to conduct the professional training. This training covered the following 8 modules and training topics:

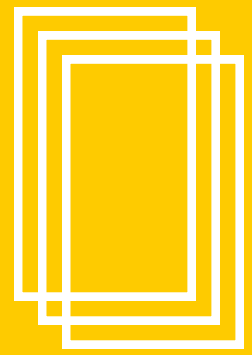
1. Household hygiene and health
2. Water saving and efficient use at the household level
3. Relations of water users with governmental, non-governmental and private sector providers
4. Grey-water re-use and rain water harvesting
5. Water for house-gardening and agriculture
6. Water protection
7. Plumbing and water storage
8. Marketing and communication

GIZ in collaboration with JOGHUD established the Water Wise Women Association for water and environment protection in August, 2014 under the umbrella of the Ministry of Environment. The Water Authority of Jordan (WAJ) mandate and bylaws does not allow the establishment of such an Association under their umbrella.

1.2 Improvement of Water Security for Low Income (WRAP)

WRAP initiative was built based on the lessons learned of Water Wise Women initiative to empower plumber trained licensed women to go beyond training and to create job opportunities for women plumbers to enable them to generate income to support themselves and their families.

JOHUD changed the design of the program and shifted the program to target women plumbers as well as households. The approach was to create trained and licensed women plumbers by investing in a customized training program for women with tailored material. The trained women plumbers would provide plumbing services for households in their communities included in the WRAP project



and would get paid for the repairs they made. The women plumbers would receive technical support from male plumber supervisors contracted by WRAP.

The training had three stages:

1. Basic plumbing training (VTC)
2. In-Job training (JOHUD)
3. Professional training (VTC)

WRAP initiative trained 60 women from Irbid, Balqa and Madaba (20 from each Governorate). The basic entry requirement was that the women to know how to read and write.

To achieve the sustainability of this initiative GIZ promoted the creation of the Plumber Women Cooperative under the umbrella of the Jordanian Cooperative Corporation (JCC) in July, 2014.

The cooperative was created with 20 of the 32 women that passed the professional training and received accreditation as semi-skilled plumbers from VTC. The cooperative has two bodies: (i) Administrative Committee of 5 members, and (ii) General Assembly of 20 members. At the time GIZ had no structured program to further support the cooperative, but would train the administrative committee in business management and proposal writing.



2. PROGRAM DESIGN

Given that there was no available information about the success of the previous initiatives regarding the income generating successes of the women providing plumbing services, we could not use their experience to scale up the initiative in Zarqa Governorate. As a result, the WPP was developed as a pilot program with its own strategy, using the experience of the local engineers of the Consultant in its design.

2.1 How plumbers are made

The first thing to understand was “how plumbers are made” in Jordan. We were not concerned about the plumbers that work with Construction firms and are unemployed between construction jobs. We needed to know about the plumber that provides independent plumbing services. The key research question was: What path did the plumber I call to do repairs in my house take?

In the developed world the answer is:

1. Go to college or technical/vocational institute and obtain a diploma on construction with major in plumbing systems
2. Enter the workforce with a plumbing sub-contractor to get to know the business
3. Obtain a license to perform as a plumber
4. Purchase a vehicle and tools
5. Promote your services starting with referrals
6. Start working independently

In the developed world hiring the services of a licensed plumber is relevant because it could affect the house insurance and the sale price of the house.

In Jordan, as in many developing countries, the path is different and the majority of male independent plumbers have followed this path:

1. Enter to work on a construction site as non-

skilled laborer.

2. If the site engineer sees that the man has potential he will promote him to assistant plumber to work with the plumbers on the construction site.
3. After two or three years of working as an assistant plumber on different construction sites another site engineer will try him as a plumber. The timespan would depend greatly on the willingness of the plumbers to teach them the craft.
4. During this apprenticeship and when working as a plumber he will gradually purchase the key tools for his craft.
5. Between construction works the plumber will use his free time to work within his social network and obtain referrals as plumber.

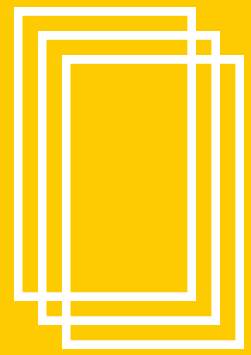
When the plumber has sufficient clients through his social network and referrals he will stop seeking to work with construction firms and start being a fulltime independent plumber.

At this point, the plumber will start promoting his services through other promotion channels such as hardware and construction material stores. By this time the plumber will have a car to travel with his tools or access to a vehicle by different means.

If his work is of quality and he has networked adequately when working with Contractors, he may become a plumbing sub-contractor.

As it can be seen, the individual plumbers don't need a lot of money to start their own business, but the path requires time. This path is somewhat similar in different construction related activities (i.e. electrician).

Though this path is gradually changing in Jordan, as several bilateral and multilateral donors are working with the Government on skill developing and licensing, the WPP could not afford to wait



until everything was put in place, promoted and developed; so the program was developed to resemble the traditional path of plumbers, finding shortcuts to reach results within the timeframe of the project.

2.2 The program stages

During the timeframe of the program the women participating in the programs should be able to:

1. Develop plumbing skills until they were market ready
2. Acquire the fundamentals of the plumbing business
3. Develop marketing skills to promote their services
4. Start working outside their family and social network

To do so, a four stage program was designed:

1st stage: In-class development of plumbing skills, where the participants would acquire theoretical and practical knowledge of the trade, including construction codes, unit conversions, materials, tools and equipment.

2nd stage: Practical training in real life situations, where the participants would: learn how to deal with repair works, including removal of appliances and accessories and installation of new parts in less than ideal conditions; learn the estimated time demanded for each different type of repair; become accustomed to working in collaboration with male plumbers and assistants; learn to work in a dwelling with family occupancy; and learn their limitations (to be able to know when to hire an assistant).

3rd stage: Business planning, marketing and fundamentals of the plumbing business, where the

participants would learn the basics of marketing, accountancy and planning in a general workshop. In this stage the participants would be expected to start working within their family and social networks, to which purpose a toolbox and smartphone was provided to each woman.

4th stage: Mentoring during the kick-start of their formal activities, where the participants would be trained in small groups on sales and promotion channels, the particularities of the trade (i.e. how to negotiate discounts with a hardware store) and to design/promote/update their Facebook Pages. In this stage the program would design and produce their group and individual promotion printed material; they would receive individual mentoring as needed in marketing, business and technical issues; and have general exposure to the public through PR actions. In this stage the participants would be expected to work outside their social networks.

2.3 The profile of the candidates

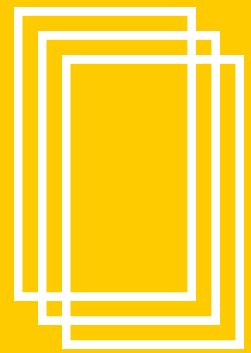
The determination of the profile of potential candidates required a multidisciplinary discussion of all the Consultant staff to have technical, marketing, social and gender points of view. It was established that the candidates should have the following profile.

Age between 25 and 40. The lower limit was established because a younger candidate might not be able to manage harassment properly. The higher limit due to the need to do physical work.

Security and health clearance. This was considered because the program would have a responsibility with the candidates' wellbeing and also with the security of the potential clients of the women plumbers.

Minimum level of education of 9th grade. This was

3. PROGRAM IMPLEMENTATION



The program implementation was designed for 21 months in which the selection process and the 4 stages of work with the candidates would take place.

3.1 The selection process

It was determined in the design of the program that it would have 30 participants, considered to be an adequate number of participants to pilot the program with.

The selection process had four steps:

1. Dissemination of the program information
2. Screening of the applications
3. Interviews
4. Meeting with candidates' families

The selection process was made with the collaboration of four partners: Micro Fund for Women (MFW), Near East Foundation (NEF), Khawla Bent Al Azwar NGO and Labor Woman Association. The last two are the largest women's NGOs of Zarqa and Russeifeh respectively.

The selection committee was composed of the social and gender specialist and the field engineer of the Consultant; the social and gender specialist of MCA-Jordan and representatives of the four partner organizations.

To disseminate the information of the program four informative sessions took place (2 in Zarqa and 2 in Russeifeh) in the premises of the partner NGOs. During the sessions the objective, purpose, timeline and selection criteria were presented to the potential candidates. Over 70 applications were received and after the screening process, to determine the fulfilment of the selection criteria, a list of 42 potential candidates was made to pass to the interview step. There were some potential candidates that passed the age limit but the committee decided to include them in the interview stage.

During the interview the outline of the program was explained to the potential candidates. This included the physicality of some plumbing activities, the need for family acceptance and the importance of commitment. In turn, the potential candidates were asked to explain their motivation to participate in the program.

Of the 30 candidates that were selected 21 had completed high school education, 7 had diplomas and 2 had bachelor's degrees; 7 were between 40 and 50 years of age; and the majority had no previous work experience besides occasional volunteering.

The meeting with the candidates' families was positive. The attendees were informed about the program in detail, their concerns were addressed and they granted their acceptance and support to the candidates. Not all the candidates' families attended, because some of the candidates had families out of Zarqa and even out of Jordan.

The selection process took place from December 2014 to February 2015.

3.2 Developing plumbing skills

To develop the plumbing skills of the candidates an agreement was reached with the Vocational Training Corporation (VTC) to provide 120 hours of tailored training (theoretical and practical) that would qualify the candidates as semi-skilled plumbers.

The contents of the training was developed by the engineering team of the Consultant, using as reference the existing program and educational material of the previous initiatives, which also used the services of VTC. The training at VTC took place from March to April 2015. The trainees were given a transportation and food subsidy each day.

Taking into account cultural norms, the main concern was that the selected women would not remain committed to attending the entire training

course, would withdraw from practical study, or would not attend the theoretical and practical exams.

Due to the professionalism of the staff of VTC, the trainees quickly understood the importance of the training. This led to a notable success of the program - the women showed high commitment and enthusiasm for the training. There were no absentees, no withdrawals, and the trainees came early before the classes started, and they prepared the training hall and the morning refreshment for their colleagues.

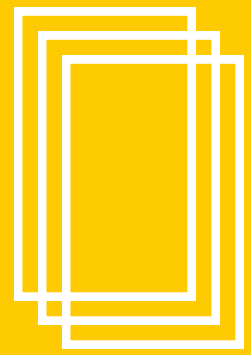
At the end of the training, all the women trainees passed the theoretical and practical exams. Their success was a shared accomplishment of the highly committed trainers, facilitators and execu-

tives of VTC and the dedication of the women trainees.

During the graduation ceremony at VTC, Mariam (one of the trainees) said: "At the beginning I was doubtful and hesitating...returning to a classroom to try to do a man's job scared me. But as the days went by I felt the value of the training. I would have regretted all my life if I had not joined this training. I gained new knowledge and skills to start my small plumbing business to help my family. I have new friends, and got the highest score, of 93 points, in the exams."

At the end of the training at VTC there was an issue regarding the certification of the women as semi-skilled plumbers. Regulations now required that a semi-skilled person should have 200 hours





of training. The issue was solved by giving VTC the assurance that the certifications would only be given to the trainees that successfully received the practical training during the second stage of the program. The certificates were given to the 30 trainees, as they all completed satisfactory the practical training.

3.3 From theory to practice

For the practical training it was agreed with the Contractors of the WSH-ISW that they would assign plumbers to provide practical training to the trainees on specific types of repair. The program gave an economic incentive to the plumbers that would conduct the practical training. The women plumbers would act as assistant plumbers under the guidance of the plumbers. The engineering team of the Consultant would perform supervision activities on the process.

Each trainee received 12 practical training sessions of a minimum of 4 hours each. The practical training sessions covered the following tasks:

1. Reposition of water storage tanks and valves
2. Reposition of external and internal leaking pipes
3. Reposition of kitchen appliances and accessories
4. Reposition of bathroom appliances and accessories

By targeting the repair works on reposition activities it included dismantling and disposal of the existing items, and the installation of new units. This would provide the trainees market ready skills on the most likely works that they would be requested to do.

The practical training took place from August 2015 to February 2016, due to the timing of the works execution. The trainees were given a transporta-



tion and food subsidy for each session.

3.4 Marketing and finance

For the third stage of the program, a 4 day workshop was structured in collaboration with Micro Fund for Women (MFW). The workshop took place on March 2016 and covered the topics indicated below:

Day 1: Cowater

- Workshop objectives, mechanics and expected outcome
- The plumbing business
- Networking in my community
- My options - my choice

Day 2: MFW

- Principles of marketing

- Strengths – Weaknesses – Opportunities – Threats (SWOT) analysis
- Market segmentation

Day 3: MFW

- Customer service
- Business plan concepts
- Internal and external communication

Day 4: MFW and invited speakers

- Business model
- Bookkeeping
- LENS program
- NEF program
- MFW financial products

At the end of the workshop the 30 women decided on the following professional paths:

- 19 chose to work providing individual or partnered providing plumbing services.
- 5 chose to establish plumbing related businesses.
- 6 chose to seek NEF grants for food related business and do plumbing as a complementary activity.

The fourth stage would be carried on with 24 women plumbers, transferring the mentorship of the 6 remaining woman that wanted to do food related business to NEF.

3.5 Technical and marketing mentoring

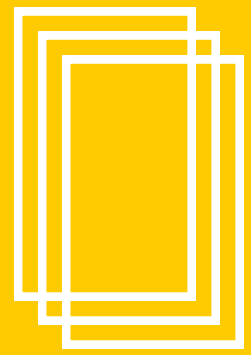
The mentoring stage was divided in two groups due to the particular needs of the women plumbers. The first group was to mentor the 19 women plumbers on their specific needs to work as self-employed plumbers, and the second group was to mentor the 5 women plumbers that wanted to do

plumbing related business.

1st group

During the five months of the mentoring stage the following activities were carried on with the women plumbers:

- Kick-off workshop to adjust the business model canvas developed during the third stage workshop, determining the promotion material that would be used by the women plumbers and creating a mentoring work plan.
- Training on plumbing cost analysis and negotiating with the suppliers, including for the latter practical negotiations with local hardware stores. This training was performed in small groups.
- Training on sales and promotion channels, developing the promotion material that they would need, both individualized and as a group of women plumbers.
- Production of promotional material, handing it to the women plumbers and monitoring their distribution through their individual promotion channels.
- Training on the design of their individual Facebook Pages and its management through their smartphones.
- Promotion of the women plumbers through the Facebook page of the project with a two week booster campaign aiming at 5,000 likes from the women of Zarqa Governorate.
- Press releases through Al-Wakeel news portal and Facebook Page that has over one million fans and followers, of which it is estimated that 100,000 are from Zarqa Governorate.
- Radio interviews on prime time on Radio Zarqa, owned by the municipality of Zarqa that has the highest audience in the Governorate.



- Individual technical assistance on marketing, plumbing and administration issues as requested.
- Support them with NEF to access complementary resources for working capital, stock of parts and others.

2nd group

During the five months of the mentoring stage the following activities were carried out with the women plumbers:

- Five consecutive weekly sessions that comprised the following topics: (i) business concept definition, marketing strategy and field research, (ii) market studies, (iii) value chain and process definition, (iv) economic and financial analysis, and (v) key elements of success.
- Production of promotional material, handing it to the women plumbers and monitoring their distribution through their business promotion channels.
- Training on the design of their individual Facebook Pages and its management through their smartphones.
- Individual technical assistance on marketing, technical, administration and financial issues as requested.
- Support them with LENS and NEF to access complementary resources for working capital, stock of parts and others.

At the end of the five week training and field research, the ladies of this group proposed to have the following business:

- 3 decided to create and run general plumbing services, hiring and/or subcontracting both male and female plumbers.

- 1 had a proposition of a general construction and maintenance services company that wanted to include in its offer of services “women plumbers” due to the opportunity perceived.
- 1 decided to have a supply and installation business, for which she had obtained a proposal from a hardware store to build an initial materials and parts stock with payment facilities.

The mentoring stage took place from April to August 2016.

3.6 Progress monitoring and experience sharing

During the practical training stage several of the women had been providing plumbing services (paid or free) within their family and social circles. The key sign of success of the women plumbers would be to start providing plumbing services outside their family and social network.

To monitor the progress of the activities of the women plumbers delivering plumbing services, monthly monitoring sessions were established. Prior to the monitoring sessions the women plumbers would report the number and nature of jobs performed, the price they charged for each job (or if it was done free for promotion purposes) and their total revenue during the month.

During the monitoring session each women plumber would describe their experience during the month, which would serve to schedule individual technical assistance if needed. The ladies with more jobs, the ones with more revenue and the ones that had the highest average price per job would share their experience and key factors for their success.

These monthly sessions took place from the months of May to August 2016.

4. PROMOTION OF THE WOMEN PLUMBERS

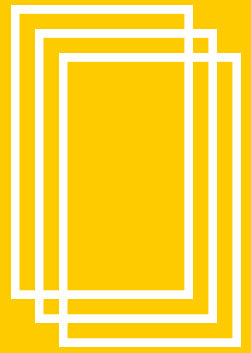
A niche market was found in places that required urgent plumbing repairs but normally would have had to wait for a male presence for them to be addressed for security and/or cultural reasons. Another opportunity was in businesses in which a male presence was not allowed during business hours. To exploit these opportunities it was necessary to promote the women to this segment of the market.

4.1 Promotion material

The printed material that was designed by the Consultant consisted of:

1. Posters promoting the women plumbers as a concept and its advantages for this niche in the market.
2. Individual flyers for each woman to distribute within their geographic target area.
3. Individual business cards for each woman to be distributed within their family and social networks and referrals.
4. Individual refrigerator magnets for each woman plumber to be distributed to their clients to act as prompts.
5. The electronic material that was designed by the Consultant consisted of:
6. Electronic banners to promote the women plumbers as a concept through the Facebook Page of the project.
7. Individual electronic banners for the Facebook Pages of each of the women plumbers.





4.2 Promotion channels

The promotion channels that were used by the women plumbers were:

1. Local hardware stores, beauty parlors, ladies gyms, girls' schools, minimarkets, women NGOs and other female exclusive businesses within their geographic target area.
2. Family and social networks.
3. Facebook Pages.

4.3 Promotion support

The project gave exposure to the women plumber concept through:

1. PR releases
2. Radio interviews
3. Project Facebook Page

إذا كنت من منتفعي صندوق المعونة الوطنية، بادر بالاتصال الآن على الأرقام التالية وتحديد موعد للاستفادة من مشروع إدارة المياه المنزلية...

تدعو شركة سمدي الأحياء-الأردن وشركة كووتر إنترناشيونال الأشخاص المنتفعين من صندوق المعونة الوطنية الذين يرغبون بالاستفادة من خدمات المشروع المبادرة بالاتصال على الأرقام المبينة أدناه من أجل تحديد موعد الزيارة الميدانية لعمل مسح اجتماعي اقتصادي وتهيئة منازلهم لإجراء أعمال صيانة وتوصيلات لشبكة المياه الداخلية.

1. أن يكون منزل المنتفع من صندوق المعونة الوطنية بحاجة لإجراء أعمال صيانة وتوصيلات لشبكة المياه الداخلية وخزانات المياه.

2. أن لا يكون قد تمت زيارة منزل المنتفع من قبل شركة كووتر إنترناشيونال لعمل الدراسة الاجتماعية الاقتصادية والفنية خلال الفترة ما بين 1/1 إلى 1/1 2014.

3. أن يكون اسم المستفيد ضمن القوائم المزودة من قبل صندوق المعونة الوطنية إلى شركة كووتر إنترناشيونال.

4. بإمكان المنتفعين الجدد الذين اشتركوا في صندوق المعونة الوطنية خلال سنة 2014 التقدم بطلبات الاستفادة من خدمات هذا المشروع.



5. RESULTS OF THE PROGRAM

5.1 Candidates that fulfilled the design assumption

To judge the results of the program, which was intended for women to be able to deliver direct plumbing services to clients, the measured results should be consistent with the design assumption.

Of the 30 woman that participated in the program:

- 19 chose to deliver directly plumbing services (63%)
- 5 chose to start plumbing related business (17%)
- 6 chose to dedicate to deliver directly plumbing services marginally (20%)

As mentioned, there were five women that chose to start plumbing related business. Three were providing plumbing services by hiring both male and female plumbers, one partnered with a general services contracting company to offer “women plumber services” in Amman, and one was supplying construction material and installation. These women will not be considered in the evaluation of the results of the program.

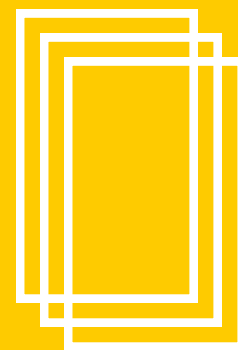
The other six women that chose to start food related business, due to the opportunity they saw in the grants of NEF, will also not be considered in the evaluation of the program, as they will provide plumbing services only marginally and not as a permanent subsistence income. One example of this group is Nehaya, who during June and July reported performing 15 jobs with a total income of 15 JOD. She is currently receiving cooking lessons with NEF.

It has to be noted that of the 19 ladies that chose direct plumbing services 14 had finished high school, 5 had diplomas and none had a bachelor's degree. Of the 5 ladies that chose plumbing related business, 1 had a high school education, 2 had diplomas and 2 had bachelor's degrees. Of the other group of six ladies, all had only a high school education.

5.2 Monitoring results

These monitoring results correspond to the activities of the 19 women plumbers from May to July 2016, to show trends of the performance of the women plumbers, even though June and July





were not typical months due to Ramadan and Eid al-Fitr holidays.

To be considered a woman plumber, the woman had to be providing consistent plumbing services outside her family and social network AND must be charging a price within the market price.

The women plumbers can be divided in three groups:

Group 1: women that can be considered women plumbers at the moment because they are working outside their family and social networks AND charging a price within the market price.

Group 2: women that still are developing their

market because they are working outside their family and social network BUT are not charging a price within the market price.

Group 3: women that have not gone outside their family and social networks and have not started providing direct plumbing services.

In the following table it can be seen the **average** jobs, price and income of the members of the three groups, as well as the number of women plumbers in each group. The average price is in JOD/job and the average income is in JOD/month. Exchange rate at the moment of the publication is of 1 JOD = 0.708 USD.

GROUP	#	MAY 2016			JUNE 2016			JULY 2016		
		GROUP AVERAGE			GROUP AVERAGE			GROUP AVERAGE		
		JOBS	PRICE	INCOME	JOBS	PRICE	INCOME	JOBS	PRICE	INCOME
1	6	5.3	20.09	107.17	4.0	15.25	61.00	8.2	15.55	127.00
2	11	3.7	6.03	24.75	1.8	6.00	10.50	5.3	2.81	15.00
3	2	0.0	0.00	0.00	0.0	0.00	0.00	0	0.00	0.00

GROUP 1:

As can be seen, the average income and the number of jobs per month in group 1 quickly recovered after June, even though Eid al-Fitr holidays were in July. The trend is consistent and we consider that this group of 6 women plumbers are in good condition to have a permanent and sustainable income generating activity in the plumbing services.

GROUP 2:

As can be seen, the level of activity of this group increased after Ramadan but they are still building trust in their market on their skills, as they reduced the average price per repair, though some of the

ladies in this group indicated that during Ramadan it was more helping the people that needed their help to do repairs.

It has to be noted that during June seven (7) of these ladies didn't work because of cultural concerns, and in July five of the ladies didn't work because of different reasons: moving from one house to another, having a baby, traveling to visit family abroad, working as volunteer in women's NGO, and working as assistant of one of the women plumbers of group 1. These five women have indicated that they will reassume their plumbing activities as soon as feasible.

In general terms the trend is good as well as the

motivation of the women of this group, having all of them ratified their commitment to have sustainable incomes from the plumbing activity, making us believe that this group of 11 women plumbers will be in good condition to have permanent and sustainable income generating activities in the plumbing services in the near future.

GROUP 3:

This is a special group of two women that have had no activity during these three months besides their family and social networks, with zero income generated, but that can be considered women plumbers because of the strategies that they are using to penetrate the market.

In one case the woman plumber was busy with her visiting children that normally live in United Arab Emirates (for their school vacations). She is very actively promoting her business through her Facebook Page and distributing promotional material through other promotion channels in preparation for September, when her children will return to school in UAE.

In the other case the woman plumber is organizing a training program for women on plumbing, part-

nered with a woman's NGO.

Due to the level of activity shown by the two women, they can be considered woman plumbers having in progress a permanent and sustainable future in plumbing services.

CONCLUSION

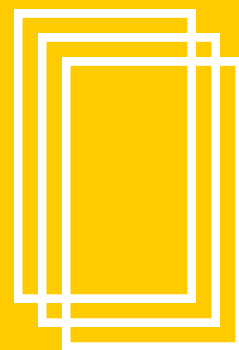
The program can be considered a success, in that **63%** of the candidates are currently working providing plumbing services and/or building a market for their activity outside their family and social networks, having all performed plumbing services beyond the practical training stage.

5.3 Further support for the women plumbers

It is our belief that the 19 women plumbers now have the skills and motivation to create permanent and sustainable income generating activities providing plumbing services; nevertheless, in the short term they will need additional technical and marketing assistance that the project could not provide. In the medium term they will need financial support to expand their level of activity.

In the short term, monitoring and experience sharing is also a key factor for continued success, as





the women plumbers must keep learning from the best practices of their peers, and the increase in income of some of them further motivates the others.

To cover this need, the social and gender specialist of the Consultant and MCA-Jordan are in conversations with LENS program exploring the possibility of creating a support program for the women plumbers of the WSHs-A. If the social and gender specialists succeed in their task, it is possible that the women plumbers could have:

- Additional technical and marketing advisory
- Monitoring and best practices sharing event(s)
- Financial resources to expand their activities
- Eventually have support services (i.e. stock of parts or transportation)
- Eventually have social services (i.e. health insurance or nursery)

This further support should be also extended to the group of 5 women that are starting their plumbing related businesses.

In the case of the group of six women that are aiming to start food related business, they already have the support and mentorship of NEF.

The concept of a services cooperative would be an interesting alternative, but the reality is that with only 19 or 24 members, a service cooperative would have a heavy economic burden to maintain it. Maybe in the future, with a bigger number of women plumbers it would be possible.

Another alternative would be to promote the creation of a “women’s service cooperative” amongst a larger range of women’s economic activities, so that the cost-benefit of being a cooperative would be adequate for any woman in any trade. This could be included in a LENS (Local Enterprise Support) program, because it would need experts in cooperatives for a proper design, promotion, implementation and linkage to the international cooperative system through ICA (International Cooperative Alliance) or other cooperative federations or unions that could provide them continuous support.

6. LESSONS LEARNT

The 21 months of implementation of the pilot Woman Plumber Program provided many lessons to scale up of the program in Zarqa Governorate or to replicate the experience in other Governorates of Jordan and the Middle East. In general, the lessons learnt can be applicable to any women's economic empowerment initiative in new commercial activities traditionally performed by men.

6.1 Embrace local market and reality

Unless an initiative is aiming for a structural change in the way things are undertaken in a trade, it is important to know how things work in the local environment, as they have an economic logic. Trying to replicate experiences from other economic environments will not work in the timeframe of one project.

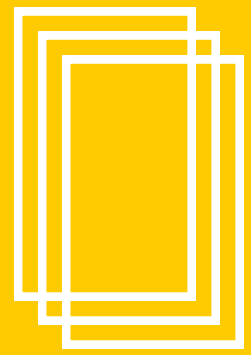
For example, in the developed world hiring a licensed plumber has an economic logic because it

could affect house insurance and the sale price of the house. In the case of the developing world these economic elements don't exist, so it is not an element to consider when hiring a plumber.

Another key factor to consider is the investment needed to start in a business. In the developing world businesses such as plumbing require little investment in tools and stocking of parts, in the developed world the demand is higher as the cost per hour of a plumber is higher, so it is expected a plumber does the work as quickly as possible. One full day of an average plumber in Jordan will cost 15 JOD, while in Canada it will cost 100 JOD.

Due to this perceived situation the emphasis of the relationship with VTC was not on their certification as semi-skilled plumbers, but on the areas in which the future women plumbers should acquire the needed skills to be market ready after the practical training.





6.2 Finding a niche in the market

To find a niche in the market a simple question was asked: Why would I hire a female plumber instead of a male plumber?

A multidisciplinary brainstorming session was held by the Consultant team, gathering both senior and junior staff and the following answers emerged that summarize the discussion:

If a wife calls her husband, who is at work, to say there is a big leakage in the kitchen and the house is flooding, they can call a female plumber to solve the problem, or the husband can lose a day's work trying to solve the problem while a male plumber is in the house. The key word is security.

If in a ladies gym there is a leakage that can flood the business, they can stop the activities at the gym and call a male plumber to solve the problem, or they can hire a female plumber and continue regular business during the day. The key word is money.

The concepts of "family security" and "saving money" were openly discussed with our stakeholders and there was consensus that the rationale was logical and that a niche in the market existed.

6.3 Profile of the candidates

There were four conditions to determine the profile of the candidates:

Age between 25 and 40

The minimum age of 25 proved to be a good choice, because the women managed well with some minor episodes of harassment (basically disrespect) while doing their practical training in the houses of the NAF beneficiaries. Due to this we would recommend to maintain the lower age limit to 25 for candidates of a future program.

There was no problem with the candidates that exceeded the age of 40 with regards to the physical requirements of the trade; nevertheless, they were less familiar with Facebook (some didn't have a Facebook account), which made them less likely to use this promotion channel, despite its popularity in Jordan. Due to this fact we would recommend to maintain the upper age group to 40 years of age.

Security and health clearance

During the implementation of the program there were no security or health incidents involving the candidates, so it is advisable that these clearances are maintained.

Minimum level of education of 9th grade

All the candidates had finished high school, with nine having post-secondary education. None of them had problems assimilating the theoretical training provided by VTC and they all passed the exam. The pilot program can only assure that any high school graduated can successfully accomplish the program, having no experience with women who had less than a high school education.

Nevertheless, it would be advisable to establish an upper limit. Of the group of 19 women plumbers 14 had completed high school and 5 had a diploma. None had a bachelor's degree. Of the top 6 women plumbers that are currently providing full plumbing services 5 have high school and 1 has a diploma. Due to this experience it would be advisable to establish as upper limit to have completed high school studies, and do an exception for women with diploma based on their motivation.

Family acceptance

The family acceptance was important, because the fathers, husbands, brothers and even teenage

sons defended their participation in the women plumber program, and helped in minding younger children when the candidates had activities.

It has to be mentioned that some of the women with small children made a great effort to comply with the activities of the program. In future programs it would be relevant to consider a nursery for the pre-school children of the participants.

6.4 Motivation of the candidates to enter the WPP

The motivation of the candidates to enter the program allowed them to complete the three first stages of the program; nevertheless, six women chose to switch to food industries when they had the opportunity of an economic activity that would allow them to attend to their small children at home (all with only high school education), and five women chose to do plumbing related business (2 with bachelor's degree and 2 with diploma) once they knew the trade.

The 19 women that committed to be women plumbers have a solid motivation that can be grouped in the following categories:

- Their family income is low and they need to supplement it for the wellbeing of their families.
- Women that want to support their younger brothers or sons to study a career.
- Women that have their husbands working abroad to support their families.
- Single women that have limited family support and want to be independent.

To seek women with these types of drivers is important for the success of a program of this nature, so the selection committee must pay a lot of attention to it during the interviews.

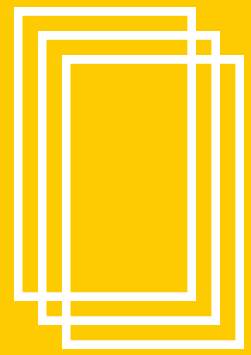
6.5 Empowering women to break barriers

For a woman to perform as a woman plumber, she must first break family, social and cultural barriers.

In a traditional society the barriers that prevent women from working can be summarized in the following way:

1. Women have multiple roles, responsibilities and obligations towards their families and lack of adequate time management to balance them.
2. Lack of confidence and trust by the society in women's skills to perform in male activities.
3. Negative social norms, traditions and customs regarding women work.
4. Restricted female freedom and movement by the society and culture.
5. Social stigma that working women are always careless about their families and house responsibilities.
6. Lack of confidence among women which decreases their ambition and competitive spirit.
7. Guilt feelings among women for leaving families and children responsibilities to work away from home.
8. Male guardianship over female members of the family.
9. Lack of family and tribal support.

Though the last two barriers were dealt with by the project explaining to families the outline of the stages, and the care the project would take to guarantee the safety of the candidates, the other barriers would have to be broken by the candidates themselves. These include internal barriers and those within their family and social circles.



Jordan is a progressive country, and Amman, due to its multiculturalism, has a respectful and tolerant society. Zarqa and Russeifeh are conservative and traditional societies, though Zarqa is more conservative than Russeifeh. The range of age of the candidates represented multigenerational interaction of different generational lifestyles.

Balancing responsibilities

To help the trainees balance their family and program responsibilities, the trainings of the first three stages were scheduled in order to allow the trainees to have enough time fulfil their family responsibilities. This helped them with time management and balancing both responsibilities, which made them confident that they were capable of managing both.

Developing confidence in their skills

At the beginning of the program several women doubted if they would be able to acquire the need-

ed technical skills to perform well in a trade traditionally for men. The breaking point for the trainees to trust in their acquired technical skills was passing both the theoretical and practical exams at VTC. During the practical training in real repairs they consolidated this confidence to an extend in which they would do small repairs within their family and social circles, being market ready when the fourth stage started.

Support Interaction with plumbers, clients and suppliers

The program had a zero tolerance policy regarding the respect that should be shown to the trainees, even in the use of language. Soon the trainees saw that both the trainers at VTC and of the Contractors -during the practical training- was patient and respectful, generating in them a positive feeling with regards to their capabilities to communicate with strangers. They understood that they were fulfilling a market need, so they interacted



with this belief with the clients. When dealing with suppliers they learnt that they were simply establishing a commercial relationship that would benefit them both.

Building on these three pillars they were soon capable of defending their own position within their family and social circles, showing that they were fulfilling an important role in the society within their market niche.

6.6 Market readiness

Market readiness is the state of preparedness of a person to meet a situation and carry out a planned sequence of actions demanded by the market.

To be prepared for the market in the plumbing trade meant that the women plumbers should know:

1. Their niche in the market and its needs (i.e. ladies businesses)
2. How to do the plumbing repairs that the market could demand from them (i.e. types of repairs)

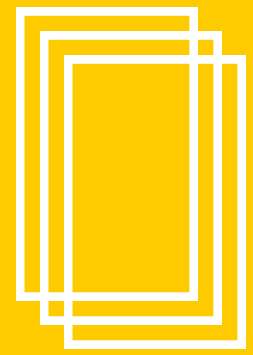
3. Limitations and when to hire assistants or a partner (i.e. heating systems)
4. How to cost the works (i.e. cover all your costs and expected profit)
5. How to deal with suppliers (i.e. the hardware store)
6. How to keep customers and get referrals (i.e. customer relations)
7. How to promote their services (i.e. promotion channels and material)
8. How to keep track of the demand (i.e. most frequent jobs performed)
9. How to keep their finances in order (i.e. don't overspend)

The program was designed to cover both in theory and practice all the elements listed above to make the women plumbers market ready, through the four stages of the program. The cohesive group that the trainees formed since the beginning of the program, allowed them to easily share their experiences and best practices to make them more confident in their readiness. The gradual small jobs that they did within their family and social circles at an early stage -encouraged by the program-, gave them the needed confidence in their readiness to go beyond their circles.

6.7 Business skills

Any knowledge about business is good; nevertheless, a self-employed plumber must know basic elements of the trade and how to deal with them, including the characteristics of their target market, how to penetrate the market and basic bookkeeping. An introduction to these topics was delivered during the third stage training, which enabled a more specific guidance at the beginning of the mentoring stage.

After an initial group training during the kick-off workshop of the mentoring stage, where the 19



women plumbers were focused on their niche in the market and how they should determine their own geographic market (to avoid initial competition between them instead of a healthy collaboration), the group was split into smaller groups. Each received guidance on the plumbing business trade, cost structure, suppliers' policies and negotiation, sales and promotion channels, growth strategies, promotion material, trust building and getting referrals.

When a broad income generating activity program is designed, this is not often an easy task; nevertheless, when structuring a focused program this is a must.

6.8 Understanding sales channels

There was a wrongly perceived idea that to deliver plumbing services the women plumbers would need a shop. This wrong perception was gradually changed when the trainees interacted with the male plumbers during the practical training and they learnt about fixed and variable costs.

The women plumbers understood that their primary sales channel was the smartphone provided to them, so they should keep the phone number to avoid the potential clients not being able to reach them.

They were also taught about other sales channels (i.e. hardware stores) that could be effective within their defined geographic market provided that a commission policy was put in place, otherwise it would only be a promotion channel. The women plumbers learnt to differentiate between a promotion and a sales channel.

They learnt that in an ideal business world all the costs are variable.

6.9 Understanding promotion channels

There was a misconception by the women plumb-

ers on how the promotion should be undertaken for a plumbing service, as they tended to think they would need massive instead of targeted promotion.

They were informed that the project would promote the concept of female plumbers and their ability to attend the specific needs of the market through PR releases, radio interviews and Facebook; but they should establish their own promotion channels within their target geographic market.

The women plumbers quickly assimilated the concept of targeted promotion, understanding that they should manage the expectations of their potential clients to avoid having calls from outside their operations area (i.e. Azraq).

To target potential customers they would initially use three promotion channels, which they could expand in the future according to their expected increase in level of activities.

- Family and social networks
- Business networks within their marketplace
- Facebook page

6.10 Partnering with key suppliers

Key partners in any business are the suppliers, both of goods and services. In the particular trade of the women plumbers their key partners would be their transportation service providers (until they had their own vehicle) and the neighborhood hardware store (until their level of activity allowed them to go for the big suppliers' prices).

With regards to the neighborhood hardware store they learnt to negotiate with the owner so that they could receive a discount over the price list, thus improving their competitiveness. They would also need to set up a system to accept jobs when the payment could not be immediate (i.e. husband is

working and the repair is urgent), and have a credit line to have available a stock of parts that would prevent them losing time going to the hardware store in some cases.

6.11 Building trust with clients and the community

The decision to hire the services of a plumber is based on trust. Trust that the plumber has the necessary skills to do the work, trust that he/she will use the right material, trust that he/she will advise about the quality vs cost of the material, trust that he/she will come to do the work when he/she says, trust that the repair will take the time indicated, and trust that he/she will be available if there is something wrong with the work.

This trust is gained in both male and female plumbers in the same way. A new-comer to the trade in the neighborhood will have to gain trust. Nevertheless, a female plumber will have to overcome the bias that plumbing is a man's activity and that she might not have the needed skills to do the work.

To overcome this bias, the trust should be gained through referrals of their work. The strategy to do so was to go from family and social networks that knew them and could take the risk, towards the neighborhood, and from there further to all their target geographic market using the social media to promote their work.

In some cases, the male plumbers that were in charge of the practical training saw the advantage of having women plumbers, and after witnessing their market readiness, used them as assistants or partners for their private works.

At the time of this publication, there is a group of six women plumbers that are working within the market price and eleven that are working under the market price generating trust in their skills.

In parallel, the project has given them exposure

through press releases, radio interviews and social media; emphasizing the process they passed to acquire market readiness.

6.12 Promoting Sustainability

Sustainability is the ability to continue a defined behavior indefinitely; in the case of the program, the continuation of the women to perform in the plumbing trade in the future, having it as their primary source of income.

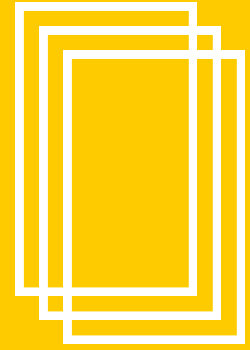
Is the WPP sustainable? At this time the answer can only be that the trend is good with the 19 women plumbers; nevertheless, this will only be categorically affirmed when the women of the program reach a monthly income due to their plumbing activities of over 200 JOD, aiming to reach 400 JOD that is the average income of a plumber in Zarqa Governorate.

To guarantee this outcome further support for the women plumbers indicated in sub-section 5.3 should be put in place.

For future programs it is advisable to have a mentoring stage of 12 months, during which the successful candidates should have acquired an average income similar to the male income for the trade.







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