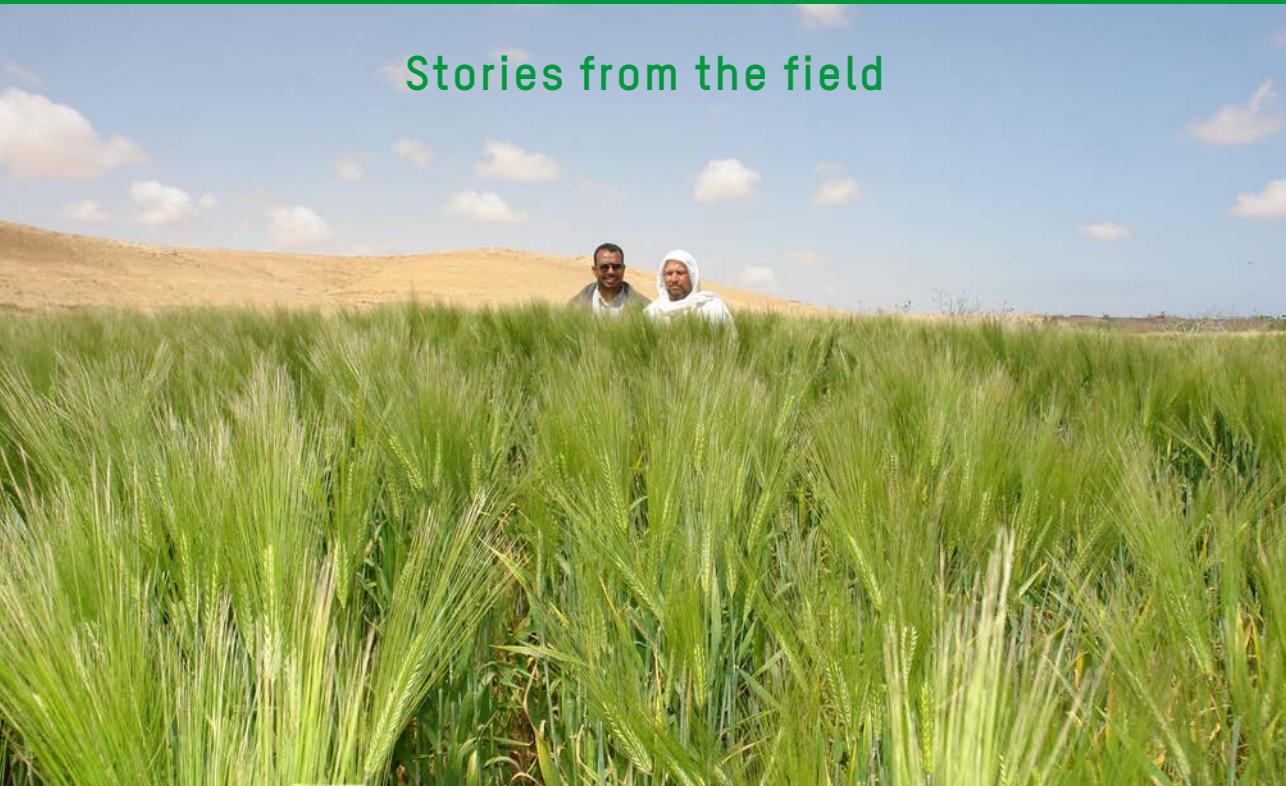


GROWING HOPE

IN JORDAN, THE OCCUPIED PALESTINIAN TERRITORY AND EGYPT

Stories from the field



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PREFACE

This booklet was created as part of long term collaboration between Oxfam and ILEIA (Centre for Learning on Sustainable Agriculture). Since 2013 the two organizations have been cooperating to implement the project “Food Security Governance of Bedouin Pastoralist Groups in the Mashreq” funded by the European Union. The project involved many international and local partners including the Palestinian Livestock Development Center (PLDC), the Palestinian Agricultural Cooperatives Union (PACU) and the Union of Agricultural Work Committees (UAWC). The main partner in Jordan is the International Union for Conservation of Nature–Regional Office for West Asia (IUCN–ROWA and WISP), while in Egypt the project has been supported and implemented with the support of Oxfam Novib.

The key objective of this regional project is to improve the participation of Bedouin pastoralists and other small ruminant breeder groups to be recognized as stakeholders in policy and decision making processes that affect their livelihoods, food security and nutrition. The beneficiaries are not only herders and Bedouins living in the Occupied Palestinian Territory (the West Bank, including East Jerusalem, and the Gaza Strip) but also in Egypt (Marsa Matrouh Governorate) and Jordan (Ma'an and Mafraq Governorate).

During the inception phase it became clear through the context analysis that Bedouin communities, in particularly Bedouin pastoralist families, belong to the most disadvantaged groups in society. They are deprived of rights and access to socio-economic services. While being highly marginalized in terms of access to government decision-makers and from the socio-economic perspective, these communities are also affected by scarce access and representation in policy-influencing bodies within civil society. Bedouin communities also experience internal fragmentation, with limited or no access to critical resources for their food security (land, markets, veterinary care, water), making their livelihoods highly vulnerable.

The economic situation of the livestock sector is further aggravated by a particularly weak institutional environment in terms of capacity, policy and legislation, both at the local and national level, which is far from conducive to improve the livelihoods of Bedouin communities and herders’ families. Nevertheless the price of inputs (especially fodder) have been increasing and this has badly affected the viability and long-term sustainability of these production systems. A major consequence is that the food security of the overall population in the area is at risk, especially in the Occupied Palestinian Territory (OPT). It

is critical to convince governments to change current policies which keep prices low for local animal products, while livestock holders are forced to buy many production inputs at actual market prices.

The project aims to create a feasible solution through consolidating platforms of Bedouin communities at the Governorate and national level in Jordan and Egypt. The OPT is characterized by a completely different context, with low levels of social and political cohesion. Therefore the creation of national platforms of Bedouin and herders' communities was considered premature. The first step was to establish the basis for the creation of national platforms. Concurrently, projects partners participated in both regional and international events with practitioners and platform representatives from Jordan and Egypt in order to establish linkages with international networks.

These organizations represent the beneficiaries' communities and, in order to efficiently advocate for their rights and strengthen their voice, underwent a comprehensive capacity building process that included policy influencing, networking, documentation and communication for advocacy.

ILEIA actively collaborated with Oxfam in the "Documenting technological innovation and policy processes". In January and February 2015 partner organization staff began the documentation activity. Based on the direct experience gained through the project (exchanges with partners and target groups, personal observations and analysis), as well as through wider professional exposure to the pastoralist context, they identified stories and topics for articles related to food security and the livelihood challenges beneficiaries face in their daily life.

The articles in this booklet are the result of these trainings and will raise awareness and foster a better understanding of the situation of Bedouin and herder communities at both national and international level.

This projects component, through the involvement of communities, was also able to integrate sustainability principles and can be an effective way to ensure long term impact. In fact, now they are skilled in writing and documentation, the beneficiaries will be able to make their voices heard even after the project's end.

Tommaso Portogalli—Project Manager, Oxfam Italy, Jerusalem

PRODUCING ORGANIC FIG JAM

Abdel Mu'ti Abdel Samee Senousi

Figs are the main agricultural product in Egypt's Matrouh governorate. But abundant supplies and the fragile nature of the fruit make marketing a challenge. In the face of this, people in the village of Sidi Hneish were able to work together and take full advantage of their high quality figs.

Matrouh governorate lies in the northwest of the Arab Republic of Egypt, bordering the Mediterranean Sea and enjoying a moderate level of rainfall—for a desert area. It is also Egypt's largest producer of figs. Marsa Matrouh produces around 136 tonnes of figs annually, representing up to 82% of national production, with 43% of the arable land area planted with fig trees.

Sidi Hneish village lies to the east of Marsa Matrouh, about 50 kilometers from Alexandria, in a desert area where annual rainfall ranges between 50 to 150 millimeters on the coast. Most of the land is arable,

even though it lacks permanent water sources, and this is where most of the figs in Matrouh Governorate are produced. This village and those surrounding it are famous for growing 'royal figs' in an area from east of Ras El Hikmah city to the west of Marsa Matrouh. The royal fig is one of the finest kinds in terms of its nutritional value, which is why local and international bodies recommend its production—and consumption. In Sidi Hneish, figs are grown in an entirely organic way, free of any chemical fertilizers or pesticides, or irrigation. Farms that use organic methods are certified organic by the IMC institute in Italy.



Plenty of figs, but no markets

Egypt is the second largest of producer of figs worldwide, and produces 15% of the world's total production. Yet its exports of fresh and dried figs constitute less than 1% of world exports. In Sidi Hneish, marketing was also difficult, despite high yields and the distinctive quality. Figs are a sensitive fruit which suffer during storage and transport. Furthermore, famers

were forced to lower their prices due to the abundant supply in the market. The only way to overcome these obstacles was to think of a way to add value to this product to improve its marketing potential.

Initially, the Matrouh Governorate invited representatives from different villages to discuss the idea of setting up a production unit for making fig jam, in an attempt to create working opportunities for Bedouin women. One of the women from Sidi Hneish submitted an application to the Village Development Administration in the governorate to establish such a unit. The Governor sent a committee to issue licenses and facilitate the needed procedures. The governorate then provided an interest-free loan which allowed the people of Sidi Hneish to purchase the necessary equipment to make fig jam. The Village Development Administration also collaborated with professors of the Desert Agriculture and Environment College in Fuka, as well as the Association of Industry Modernization in Alexandria, to train the women in jam-making techniques.

Then in 2007, the moment came and the fig jam unit opened. And in only the first year, 2000 jars of jam were produced, each weighing 450 grams. After witnessing this success, we decided to establish a union of farmers to broaden the benefits while managing the unit together, and we considered the possibility and advantages of creating an agricultural cooperative association to



produce fig jam. The community thought this a great idea, and in 2008 the association was officially registered. After the establishment of the association, production increased to 7000 jars of jam in 2014.

There was a real need for this project, because the abundance of the finest kinds of figs could not be exploited properly. The processed figs became a viable product that keeps a long time, increasing the period for trading from three to eight months. Better marketing prospects and increased working opportunities—especially for youth and women—helped the people of Sidi Hneish increase their incomes.



An association with a strategy

The association ensured that the processing unit was managed in a participatory way, with collective and not only individual benefits. Association members, farmer representatives and other concerned parties met and agreed on a strategy that supported the development of a fig manufacturing structure, where scientific standards and a clear vision were central.

This association and its capacity for long-term planning is an example for the whole governorate. The association's long-term strategies aim to use agriculture and small industries to develop local communities to manufacture distinct products from the area. This fig jam is a most important source of income for many farmers. Following this initial success, the association continues

to focus on the need to empower women and involve them in development activities.

The association has achieved what it aspired to and planned for. In addition to helping to develop the community, it also plays an important role in bringing together different people from Sidi Hneish and supporting institutions. For instance, university professors specialized in industry modernization trained and employed staff from the local community.

Seven thousand jars of jam

The manufacturing unit produces 7000 jars of jam every year, on average. The continued operation of the unit has helped reduce unemployment, employing 12 women and five men, who now contribute to their family income. All those involved are pleased with

the project, as it serves small local communities. Many newspapers have published stories that highlight the results achieved through the project. Our next plan is to establish a unit to dry figs, to expand and diversify the association's activities and products.

As the jam is produced with only natural ingredients, the demand for Sidi Hneish's fig jam is high. Organic certification was rewarded, for instance, by a contract to supply 10,000 jars of jam to a buyer in Cairo, as well as with another contract to supply a citizen from the United Arab Emirates with 3000 jars.

There are some challenges that the association is working to overcome, with the help of different government bodies. One difficulty is the lack of funding, and that affects

the provision of equipment and tools used for manufacturing. Another is the problem farmers face when trying to obtain official documents, like an industrial record, which is needed for marketing the product on both local and international levels. Such records demonstrate that all the concerned parties have fulfilled the quality standards of a 100% natural product.

The success of the association has led to growing exchange of expertise and information. Representatives visited other specialized bodies at all levels, which helped develop the project further and roll out the experience; especially within the governorate. In this way, the association's experience has contributed to addressing the most important problems experienced by farmers. Furthermore, these exchanges have opened up new ways to promote and market our figs.

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COLLECTING AND PRESERVING PASTORAL PLANT SEEDS

Mustafa Musa Rsheid

When pastures deteriorate because of drought and overgrazing, seeds can be the solution. The El Rames Association implemented a project that collected and conserved pastoral plant seeds in two villages in Egypt's Matrouh governorate, restoring the vitality of pastoral areas.

Egypt's north western coastal zone, stretching from Bourj Al Arab in the east to El Salloum in the west, is one of the most important natural pastoral areas in the country. The average annual rainfall of only 100–150 millimetres still supports a wide diversity of around one thousand species of pastoral plants. In the past there was no stable grazing systems, which led to a loss in many important pastoral plants. This can be clearly seen in the area's current landscape, where many fodder shrubs and highly palatable and nutritious pastoral plant species have disappeared. For years, efforts to improve the area were scattered and limited, implemented without carefully studying the situation. For example, some seeds were sown without giving annual plants a chance to complete their life cycle.

Collecting seeds from annual and perennial plants is one of the greatest challenges to developing grazing land. Access to these seeds is an important issue that must be overcome when starting to develop pastoral areas. Therefore, the El Rames

Community Development Association for Developing the Local Community, Pastures and Environment started collecting and storing seeds. This article shows the association's success, which may help others who work in the same field.

The need for seed

The objective of the El Rames association is to improve pastures in the north western coastal zone. It helps to develop the capacities of breeders and herders, and builds awareness among women and children. It encourages people to use pastures sustainably, by teaching them about stable grazing systems and reducing overgrazing. The association monitors the use of perennial and annual plants, either for direct grazing or for harvesting and storing of hay and silage for use during periods of drought.

After determining the problems that the area suffered from, a proposal was prepared to implement development projects to improve pastures. A proposal for the



collection and storage of seeds of rare pastoral plants was approved by the Global Environment Facility. The project ran from 2012 to 2014.

The project aimed at preserving trees and bushes in addition to replanting some highly nutritious fodder shrubs. The intention was to collect seeds of annual plants that were close to local extinction, and several locations were chosen for reseeding. Seeds of highly palatable and perennial pasture plant species were collected, sown in nurseries, with seedlings transplanted in selected pastoral areas.

The association had previous experience in protecting natural pastures with a project supported by the Matrouh Resource Center and funded by an international bank. This established a 25,000 acres (10,000 hectares) natural pasture reserve, and

succeeded in revitalizing the pasture, increasing vegetation cover and harvesting large amounts of needed seed. In addition, the association carried out awareness-raising activities to inform people about the dangers of cutting trees, as well as the best ways to prevent degradation.

In 2012, the El Rames association started to work in Abu Mazhoud and Alfakhiri villages in the west of Matrouh governorate, 25 kilometres from the Mediterranean coast. The total population is about 5000, 70% of whom work in animal husbandry. In Matrouh Governorate, the livestock population is around 650,000 sheep, 22,000 goats and 10,000 camels. But natural pastures have become degraded because of persistent droughts over the past 10 years, forcing people to rely on expensive manufactured or imported fodder.



The beginning

The project started by selecting sites and identifying the main tasks and responsibilities to be divided between the El Rames Association and the Sustainable Development of Matrouh Resource Center. The center was responsible for the technical parts of the project, including the provision of greenhouses and managing available financial resources. The association also signed an agreement with the Alexandria University's College of Agriculture and the Environment in Fuka, to provide perennial fodder shrubs for planting as a living collection in the college grounds.

First, pastoral plants that were close to local extinction and the best locations for seed collection were identified. Ten farmers volunteered to look for land where the project could be implemented. The El Rames association and its partners carried out awareness-raising activities showing the necessary process for collecting seeds. Later, the collected seeds were sown in the selected areas. During the project,

agronomists specialized in pasture production provided technical support to the community.

The association made an effort to approach project implementation in a participatory way, and included all stakeholders during all activities. It advocated a culture of preserving pastures and pastoral plants among community members. The association also highlighted the importance of involving women in pastoral activities and focused on developing the skills of all participants.

A systematic approach

The El Rames Association started with a steady, systematic approach with planned steps. Initially, it informed people about the importance of collecting seeds of endangered species, especially those having high nutritive values and high palatability, preferred by sheep, goats and camels. The El Rames association held awareness-raising meetings in technical support centers. It monitored the different steps followed by the community for seed collection. It carried out seed germination tests and packaged them in suitable containers labelled with their scientific and local names, collection site and date, and stored them in a suitable place prepared for this purpose.

The El Rames association then moved to the next phase of producing seedlings in the greenhouse. As soon as they were large

enough and depending on the availability of water, seedlings were given to farmers to plant.

Finally, the association entered the phase of multiplying seeds. The ten volunteer farmers had identified 5 acres (2 hectares) which were sown with 100 kilograms of barley seed and 50 kilograms of chrysanthemum. Each sowed the seeds in dry soil which was ploughed before the rainy season. When the barley had been harvested, animals were allowed to graze on the barley and chrysanthemum stubble. In such a way, the seeds of this pastoral plant remain in the soil, ready for the next season.

Restoring vitality

The El Rames association had to overcome some obstacles, such as the short duration

of the project. This problem was solved by intensifying the daily work. Another problem was the lack of water, which was solved by choosing nursery sites near available water sources. Also, the lack of sufficient funds was tackled by identifying the core activities that the association was responsible for.

The El Rames association achieved the project's targets by working together with 100 farmers in Brani and Alnjeileh and showing them how to preserve pastures and vegetation. At the end, 90 acres (36 hectares) were reseeded, 100 acres (40 hectares) were planted with fodder bushes, and 55 acres (22 hectares) of degraded pasture were rehabilitated. In addition, the El Rames association stored pastoral seeds and seedlings at the Sustainable Development of Matrouh Resource Center.

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REHABILITATING WADI SAKHER

Ramadan Snusi Abu Shnaf

The sand and soil-based dams built by the Bedouin population of Wadi Sakher helped retain water—but it was not enough. With the support of several institutions, the people of this valley were able to improve the work they had done, conserving the fertile soil and providing a harvesting system that increases water availability.

The northwest coast of the Arab Republic of Egypt is rich in natural resources. The area is flat to slightly undulating, with limited availability of underground water and low annual rainfall of less than 150 millimeters falling only during winter months. Nevertheless, researchers, scientists and those working in the field of agriculture and water resources believe that this area will become Egypt's food basket in the future. The fertile soil allows abundant yields of figs, olives, wheat, and barley, in addition to other crops such as pistachio, almonds, grapes and watermelon.

This situation attracted investments by the Egyptian government—especially the Ministry of Agriculture and the Ministry of Water Resources—as well as international organizations such as FAO, the Arab Center for the Studies of Arid Zones and Dry Zones (ACSAD), and the European Union. One of the reasons behind the focus on this area was the desire to redraw the demographical map of Egypt and reduce the concentration of population in the Nile Delta and a

narrow strip in the Nile valley. Exploiting the resources of the northwest coast offered an opportunity to do so. Thus, it was important to devise a development strategy that would be able to achieve an optimal use of available and potential resources.

Harvesting rainwater, harvesting new crops

Wadi Sakher (the Sakher valley) is located around 35 kilometers to the east of Marsa Matrouh in Matrouh governorate, in the El-Kasaba-Pagosh basin. Wadi Sakher relies solely on rainwater for irrigating crops. The availability of water resources is one of the area's most critical challenges, as is the case in several valleys on the northwest coast, and climate change is intensifying the problem. Months without any rain alternate with heavy rain storms that cause severe floods and the erosion of the fertile silty soil. The floods also damage buildings and tourist resorts found on the Matrouh coast.



In response, the local Bedouin population had built sand dams to slow down the rapid flows, allowing the soil to retain more water and keeping the fertile soil in place. The Bedouin farmers slightly expanded the width of watercourses, and settled and divided them into blocks according to the steepness of the valley's descent. This was achieved using simple, traditional methods, with dams made out of local rocks and soil. Using the water conserved behind the dams, farmers started growing watermelons at the end of the rainy season in March, harvesting them in August. The crop grows solely thanks to the water stored in the soil, with no irrigation, and farmers do not use any fertilizers or pesticides.

For three years since the start of these activities, growing watermelons has

provided an important source of income to farmers in this area. Farmers then started growing other crops, intercropping them among the watermelon, including figs, olives, almonds and pistachios. Farmers planted these at the bottom of the valley and on the northern valley sides where soil can still be up to 150 centimeters deep. Farmers also grew crops such as wheat and barley on the valley terraces where the soil in most cases is not deeper than 50 centimeters.

Improving water storage

Nevertheless, these traditional dams, even though they slow water flows and reduce erosion of fertile soil, were far from perfect. Earthen dams do not have the capacity to retain much floodwater, and tend to be



fragile, collapsing during severe floods. Rehabilitating the dams after storms became expensive, and taking more fertile soil each time reduces the productivity of the cropland. All in all, this method of building dams was becoming a strain on family incomes in Wadi Sakher.

These problems attracted the attention of researchers interested in water harvesting and storing floodwater. They started to look for alternative methods for dam construction that could tolerate severe floods, and found that concrete dams would be the most cost-effective solution.

Local people submitted an application to the North Coast Development Authority affiliated to the Ministry of Housing, who

approved the construction of concrete dams for water harvesting. Thirteen dams were built, along with underground caverns for storing drinking water for the Bedouins and their animals. The Ministry of Agriculture through the Desert Research Center and alongside the abovementioned international institutions, constructed rainwater storage wells with capacities of 150 to 300 cubic meters. Such rainwater harvesting structures are not new in the area, as some from Roman times can still be found, even larger than the modern wells, with capacities up to 1000 cubic meters.

In addition to the new dams and wells, several institutions collaborated in developing the area's agriculture, including the Institute of Desert Research affiliated

to the Ministry of Agriculture, the Center for Sustainable Development of Matrouh Resources, the Ministry of Irrigation, and international organizations including the World Bank, FAO and the Arab Center for the Studies of Arid Zones and Dry Zones (ACSAD). At different times, they provided technical advice, as well as many of the necessary inputs.

Fertile soil, higher yields

One of the tangible results of constructing dams has been the increased capacity to store water and an improvement in soil quality. The deep soil mixed with sediments and rocks acts as an underground reservoir. There was no more need to use the fertile soil for building earth dams. With the fertile soil and the extra water available from the new dams, farmers could expand the area on which they grow figs, almonds, olives and other crops.

Farmers ploughed the land to reduce water loss due to evaporation, to then expand the area on which they grow wheat and barley, on the plateau on the south side of the valley, by constructing low sand dams. Such low dams increase water storage in the soil, helping the wheat to sprout, establish and yield a good crop. The farmers also intercrop it with highly nutritious barley to feed their goats, sheep and camels.

Agricultural development in Matrouh is not easy, given the many constraints to production. Attempts at water harvesting have been unsuccessful in the past, but the successes reported here have formed a starting point from which others have learned and built upon. And these lessons have contributed to other good results seen in recent years.

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BEDOUIN WOMEN AT THE HEART OF THE MATTER

Amani Abu Riziq

Bedouin communities in Mashraq suffer from poverty and socio-economic marginalization. The Food Security Governance project aims to support local livelihoods and improve living standards of pastoral communities in the target areas. Its approach is to engage pastoral clusters and Bedouins in decision making processes that impact on their livelihoods and food security. Women are at the heart of all its activities.

Women play a crucial role in production processes in rural areas of the Occupied Palestinian Territory. When the project was launched, a field survey showed this important role, and the burdens that women shoulder, particularly when taking care of sheep and processing milk into cheese and yogurt. It was clear from the beginning that supporting women will help to support the whole community.

A focus on women was important especially because many women in pastoral communities are responsible for their households. The Palestinian Statistics Bureau pointed out that 80% of the work related to the family herd is carried out by women. The role of men is often limited to marketing, talking to traders, and purchasing fodder, whereas women do the cleaning, feeding, milking, looking after animal health, and making dairy products. Women play an important role in society and are primarily responsible for raising the children.

Yet most of these activities are seen as work without payment, and therefore not considered in many development projects. Usually, women do not benefit from these projects: the difficulties they face are not acknowledged, and their role is not recognized or appreciated.

Since the involvement of women in project activities is vital to achieve the objectives, we were keen from the beginning to integrate, rehabilitate and train women, helping them develop the skills needed to participate effectively, and together with men, to improve livelihoods in pastoral communities.

Engaging women

The project started in September 2013 in more than 50 pastoral and Bedouin clusters, by trying to engage pastoral people in decision making processes, and helping to give them a voice. Focal points were

selected to represent their clusters and voice their aspirations, ambitions, needs and problems, and to discuss their basic rights and be able to defend them during the different meetings.

Since women are an integral element in pastoral and Bedouin life, and particularly in the production, it was essential to engage them in the development process of their communities. Based on this principle, in November 2014 we decided to target women and see that they represent their communities.

But this was not easy. Many traditions prevent women from joining activities such as

workshops where community focal points were selected. These were the first step before starting training and rehabilitation. This enabled them to represent the communities' interests, discuss the problems they face, create a vision, look at the means to address these problems, and present possible solutions to the local authorities.

To ensure the participation of all women, we engaged in a direct dialogue with local communities and their leaders, where the importance of women and their role in rural development was made clear. We emphasized how involving women would reflect positively on these communities, after training them and equipping them with





new skills. We used the support of allies within the community to advocate for the inclusion of women in all the steps—with positive results.

In addition, we joined forces with the Ministry of Agriculture's Rural Development Section: a governmental body established in 1995 with the same objectives. Their work started with ten women agronomists in an office which later became a separate directorate (the Rural Development Directorate), which works to make the general population aware of the important role that women play. Involving these partners helped us to get women to join in with project activities.

The result

The project targeted women's groups in the villages of Sirees, Atoof Nisif Jbeil, Jiftlik, Alkasarat and Handaah.

In the end, at least 30% of cluster representatives were women. Women were involved in all the training and rehabilitation activities. They helped define the problems in their communities, setting visions for the clusters and developing strategies to form a representative body that would promote the interests of these clusters. Women were active participants in all the training courses.

The four long-term training courses finished in April 2016. In these, women were shown to be more committed than men. The participatory approach and the focus on teamwork were especially beneficial for the women. The active participation of women led the group in the Jerusalem governorate and the Bedouin groups to use the financial resources available to develop their craft skills. In addition, because of their work, women are now much more widely regarded as a key part of the community, and as potential recipients of development funds. And this change of perception was in part due to the active participation of women in all the phases of this project.

The active role of women

The project succeeded in actively engaging women and integrating them in all project activities and training, but it was the active participation of the women involved that was most important. Their attitude made

the difference between the temporary participation within the life cycle of the project, and a lasting participation in the future beyond the project.

The women also established a group unifying those from different clusters in East Jerusalem governorate, supported by the Section of Rural Development. And the Agriculture Directorate has kindly promised to continue supporting these women after the end of the Food Security Governance project.

Women were successfully integrated and involved in the project, and the pastoral cluster leaders were convinced about the need to empower women economically, psychologically and socially. We recommend investing in similar projects that target breeders in general and women in particular, and to advocate for women's empowerment and their potential to contribute economically.

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ALTERNATIVE MILK FOR NEWBORN SHEEP

Elham Fahmi

Sheep and goats are the most widely kept livestock in the Occupied Palestinian Territory (OPT). Yet breeders face difficulties in maintaining their young animals in good health. The benefits of using powdered milk for feeding newborn animals is contested, but the example of Beit Foreek in the Nablus governorate shows that it can be a good solution to a common problem.

Small ruminants make up half of the livestock sector in the OPT, contributing substantially to the local and national economy. In the OPT, sheep and goat breeders are classified into two types, those who rely on communal pastoral areas for raising their herds despite the scarcity, and those who raise their herds in enclosed or semi-enclosed spaces. The latter depend on feed concentrates, fodder and straw for feeding their animals. Some also use

modern technologies on their farms that benefit from the necessary infrastructure (electricity and water pipes).

Challenges for breeders

Sheep and goat breeders face many problems, especially the cost of the production inputs like fodder. Several studies by the Ministry of Agriculture supported by the opinions of many breeders and specialists in this domain, show that purchasing fodder represents up to 85% of the breeder's operational costs.

Low rainfall and little land planted with fodder crops have helped lead to high feed prices. In addition, the high costs involved in growing fodder has made breeders lose interest in planting them. The high price of fodder, few local fodder crops and the reliance on imported fodder has negatively impacted production. This is all leading to a considerable decrease in the number of



sheep and goat breeders in the Nablus governorate and in the West Bank in general.

It is also important to say that breeders often lack information and support when dealing with animal diseases that appear on their farms. The Ministry of Agriculture does not provide much guidance. Infrastructure is weak, and there is a shortage of adequate veterinary services. Most breeders are unable to prevent diseases or treat their sheep and goats, leading to high mortality rates especially of mothers and newborns. In many cases, poor health causes more miscarriages and lower reproduction and productivity.

An alternative to mother's milk

Some breeders use modern techniques and rely on concentrated fodder, straw and dried milk. In 1990, some breeders started using powdered milk for newborn sheep and goats in the village of Beit Foreek. One of the major causes of death among newborn sheep is the transmission of germs when they feed directly from an infected udder. The alternative method, using sterilized bottles, protects newborns from the intestinal diseases causing diarrhoea and death.

Powdered milk was invented by the Russian pharmacist Mi Drafosh. It is easy to prepare by steaming the milk. Powdered milk is produced by extracting water and fats from fresh pasteurized milk, and it retains a



high nutritional value as it still contains all the amino acids, proteins, vitamins, and soluble minerals. According to a study conducted by the US Agency for Nutrition, powdered milk contains a lot of nutritive elements in one can: 52% of carbohydrates (mainly lactose), 1.3% calcium, 36% proteins, 1.8% potassium, as well as vitamin A. This all makes it a suitable replacement for mother's milk.

Tawfik Abu Jeish is one of the breeders in Beit Foreek who adopted the idea of using powdered milk more than 25 years ago. He



separates the newborns three days after birth, by which time they have already received the mother's colostrum. He then starts feeding them with an artificial bottle. When he started seeing the benefits of this new practice, he was convinced of its added value. "The benefit of processing and using this milk has financial advantages for the breeder because each new birth needs 10 kg of dried milk until weaning. This means that the cost of each sheep until the weaning phase does not exceed one third of what the mother produces from fresh milk," said agronomist Atef Beni Odeh, who specializes in small ruminant nutrition.

Learning about powdered milk

Jihad Hamdan is a sheep breeder from Nisif Jbeil village near Nablus. He owns 50 sheep and goats, and started using powdered milk for newborns in November 2013 after he witnessed the benefits of powdered milk. Jihad participated in workshop conducted by Agriculture Relief in May and June 2013, which taught him how to use powdered milk.

The training showed that breeders using powdered milk can save up to two-thirds of the costs involved when compared to feeding newborns with mothers' milk. Moreover, experiments showed that after weaning, the number of newborns fed with powdered milk who survive the transfer from milk to fodder is 10% higher compared to those fed only with mothers' milk.

According to the Ministry of Agriculture, the mortality rate of sheep and goats ranges from 10–20% annually. In order to reduce this and increase breeders' profits, specialists have pointed out that one of the main reasons is poor hygiene in barns. This is why the use of powdered milk was successful in reducing the mortality rate. Additionally, newborns were protected from contagions by putting them in a separate place and using sterilized milking tools. Jihad Hamdan, for example, saw the mortality rate among his newborn sheep decrease to less than 5% after he started this alternative approach.

The second objective of using powdered milk is the breeders' possibility to exploit the mothers' milk yields which are highest between three and 60 days after giving birth. This milk is used to make cheese and yogurt, and which is sold at high prices in local markets. One kilogram of the best quality powdered milk costs US\$4, helping

to save seven liters of mother's milk. These seven liters are sold for more than US\$10 in the Palestinian market. Therefore, feeding one sheep with powdered milk can help a breeder save up to US\$60 per animal. And if the production takes place at the beginning or end of the season, this gives the breeder especially good financial returns. Normally, sheep do not produce enough milk for the sale of dairy products, but the alternative method helps rural families ensure a higher income.

The cream from the milk?

The main difficulties that breeders face when using powdered milk, is the high price of the milk—in addition to the high costs of the bottles, and sterilization and hygiene tools. Yet this does not negate the immense economic benefits of using this system of powdered milk.

Both breeders, Jihad Hamdan and Tawfiq Abu Jeish, stated that by using powdered milk, they rarely saw their newborns die. And seeing them use the modern technologies helped to raise awareness among breeders. It convinced them to develop their skills in exploiting their resources to sustain and improve the productivity and yields of their animals. Eventually, this has reduced the number of breeders who turn away from livestock rearing due to the high input costs.

The use of powdered milk is one method that breeders can use to increase their incomes. They can increase their productivity, and if the milk is used in the right way this will reflect positively on all aspects of their livelihoods, socially in terms of family health, and economically in terms of family income.

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WOMEN WEAVING HISTORY IN TUBAS

Marie Shawhneh

In a house in Tamoun, a village in the northern West Bank, a group of 15 women weave a carpet just like those that they used to make 50 years ago. This was part of a training initiative to bring back traditional products made from sheep's wool, and help to preserve Palestinian heritage and identity. It also empowers women economically, and at a time when local wool processing had lost most of its economical value.

The livestock sector has seen many new challenges arise in the past few decades, including changes in living conditions and approaches to animal husbandry, and injustices imposed by the Israeli occupation. According to Palestinian Ministry of Agriculture statistics, 85% of pastoral areas are occupied or classified as closed military areas. Furthermore, importing fodder through the Israeli ports is almost impossible for breeders, who have no alternatives when fodder is lacking. Limitations on imports of veterinary medicines and essential vaccines have led to a deterioration in animal health, reducing productivity. In addition, the possibility of exporting livestock and livestock products from the Occupied Palestinian Territory (OPT) and accessing international markets is close to zero.

Despite these unstable circumstances and the political, social, cultural and economic challenges, breeders in the OPT want to hold on to their land: the land where they were born and lived with their children,

the land of their ancestors, the land that is confiscated for settlements. It is a conflict over land and identity, where the occupying forces have been trying to blur the Palestinian identity with all its cultural, social and artistic aspects.

Reviving wool

Within this context, several local and international institutions have implemented projects to strengthen the livelihoods of breeders, improve agricultural production techniques, and provide veterinary services. They increase and diversify inputs and the assets of the breeders' families, enhance the sustainable utilization of natural resources, and build the capacities of local communities for promoting their products.

The Palestinian Livestock Development Center (PLDC) and Oxfam were pioneers in launching an intervention program focused on breeders. This offered veterinary services and artificial insemination;



supported women producing yogurt, and knitted and woven goods; and lobbied for Bedouin communities. One initiative focused on increasing the economic, social and cultural resilience of women in Bedouin communities by reviving the traditional processes of weaving wool and making textiles. Training took place within the 'Food Security Governance of Bedouin Pastoralist Groups in the Mashreq' program, funded by the European Union and implemented by the PLDC, the Palestinian Agricultural Cooperatives Union in the West Bank, and the Union of Agricultural Work Committees in Gaza.

In the beginning of 2009, the recurring question was why breeders throw their sheep's wool in the valleys after being sheared. Wool once had an economic, social and cultural value to Bedouins. Why then, is wool nowadays considered an environmental pollutant that hosts fleas and insects detrimental to nature and the breeders themselves? Why had wool lost the economic value that it enjoyed in the past?

The answer was simple: because nobody uses it.

This led to further questions. What possible ways are there to start benefitting from wool, and what prevents people from doing so? Answering these helped to shape the study that was conducted before the launch of the program. It showed many gaps that needed to be bridged first.

The first carpet

First, agronomist Hanin Tum from the PLDC and agronomist Hadeel Sawalha of the Ministry of Agriculture conducted a series of workshops on the modern use of wool. Many women, young and old, participated in these workshops. Afterwards, many women expressed their enthusiasm for participating in the upcoming project activities.

Next, women from the older generation were sought who still owned traditional tools and knew how to use them. To the south of Hebron lies the village of Samou, which is famous for spinning sheep's wool. Here, sets of tools that were more than 50 years old were collected. Two women from Samou who were still weaving wool traditionally were invited to teach these old ways to younger women further north. Their wooden tools were copied and replicas were produced in sufficient quantities so all trainees could use a set, and large amounts of suitable wool were gathered.

PLDC and Oxfam formed a team of three women per shift who would start making the first sheep's wool carpet of its kind in

the northern West Bank. The women first cleaned the wool, weaved and spanned it, prepared the yarns and dyed them. The traditional tools which require physical effort are used to spread the colored woollen threads which are then woven into a carpet. Those who had been doing this more than 40 years ago started working closely with the younger women in the weaving team.

All of them expressed their satisfaction with the work. The woman who led the carpet weaving was 75 year-old Najeeba Qasem Abu Hasan, from Tamoun. She used traditional colors as well as dyes that the team had learned to produce. Training focused on teaching women new methods of dyeing, but that still suited modern tastes and culture for consumers. The result was a purely Palestinian carpet with a contemporary touch, and Najeeba and her team were weaving history.

More than one carpet

The idea behind reviving these traditions centered on two notions; to restore the value of wool products by re-introducing old weaving and dyeing processes; and to raise the economic value and promote Palestinian wool products worldwide. This led not only to profits and direct economic benefits for these women, but it also showcased the culture of the Palestinian people.

The first training courses were held in a home in Old Tamoun village, led by the older

women. Further training was conducted in the PLDC headquarters. At the same time, project staff conducted a needs assessment to ensure the development of products that matches market needs. This suggested that trainees should be sent on advanced training courses run by institutions specialized in designing, dyeing and weaving wool. This took place in the Beni Hmeida Women cluster in Maadaba, Jordan, with the support of the Noor Alhussain Institute and the Jordan River Institute. The 15 trainees who travelled to Jordan then shared their new knowledge with other women when they returned to the OPT.

Work was also undertaken on improving the traditional tools and developing more sophisticated ones, such as a metal loom brought from Jordan. Tools like these helped the women work in their own homes, something which is not possible with wooden looms.

Many women acquired these traditional skills, helping them produce fine handmade textiles that respond to the demands of the market. They are now able to transform the designs drawn on paper into textiles with a high degree of proficiency and professionalism. Before, women only used four colors, but women in Tamoun learned how to produce and use colors to match current tastes. During the training more than 60 colors were used, while retaining the same scientific recipe in producing color tones.



Overcoming obstacles

This transformation was not easily implemented. There was insufficient financial support, especially for participating in advanced training outside the OPT. As a result, only a limited number of women were able to benefit. But it was possible to reduce expenditure on accommodation and by only disbursing money for essential needs.

Also, social stereotypes did not welcome the idea of women traveling abroad for training. Even training within the OPT proved difficult, requiring women to commit to long working hours and to the huge physical efforts which were necessary. Nevertheless, results were more than satisfactory because of the flexibility and

accommodating training times. In addition, the importance of the topics tackled attracted all trainees, and all women were enthusiastic to learn and acquire the needed skills.

In general, dominant social stereotypes on the traditional roles of women can prevent them from engaging in project activities. But this is not always the case, as we saw with this program. The awareness of the local communities played an important part in highlighting the role of women, especially when seeing the influential and productive role that women play in helping their families and communities economically. By helping everyone reach this conclusion, the involvement of women became easier. Social stereotypes were defeated by directly communicating with people and gaining support from governmental bodies like the Ministry of Agriculture. Sending a group of women to participate in a two-week training abroad suddenly became possible.

To be a pioneer is to start a business while facing difficulties. A pioneer thus paves the road ahead for others to follow. There is no doubt that the preparation and initial work in any business is harder than the efforts of those who come afterwards. At the start of the project many difficulties were faced, but they were overcome with support from the faith in those involved. Take the example of the farmer Om Ali Beni Odeh. “In the beginning, I complained about the long

time I needed to make a two-meter carpet. It took me two weeks! But after a lot of effort and work, I only need half the time to finish the next carpet.”

Replicating, developing and sustaining the project

The natural resources needed are widely available and at minimal cost. What helped the success of this project was the women’s interest and their continuous search to acquire new skills. They wanted to be involved in productive activities that would help them to support their families. Also, the nature of the work fits with the traditional roles of women, where they stay in their homes for long hours. This suggests that this profession is likely to continue in the future.

Furthermore, an important contribution was the local and official appreciation for project activities. The Ministry of Agriculture delegated two agronomists to participate and monitor this program, as they saw it as one of the most promising activities of the Rural Development Department in the ministry. In addition, the Minister of Culture offered a symbolic gift to one of the participating ladies, Amneh Mohammad Beni Odeh from Atouf in the governorate of Tubas. She received a sum of money in appreciation of the quality of the products she made. Her products were displayed in an exhibition by the Ministry of Culture in 2016.



Many people requested the PLDC to facilitate similar training courses for women's groups in other areas—an indication of the interest of local communities in this profession.

Marketing is crucial

Yet even though wool weaving has added value culturally, artistically and socially, revenues are not consistent with the long working hours needed to manufacture the products. The process goes through many steps: cleaning, spinning and dyeing, among others, many of which are physically

tiring and time consuming. Simple tools could help reduce costs and efforts, and increase revenues, while at the same time retaining the traditional touch of these products.

More importantly, finding suitable marketing solutions, locally and even internationally, is crucial to the development and success of this traditional industry in the future. This will help in motivating women in other communities to take up similar activities, helping turn this into a profession that enjoys social and economic recognition.

Marketing is one of the important prerequisites needed to succeed when producing any commodity, but this is even more important for traditional and handmade products. As a result, greater efforts must be exerted in terms of planning and setting strategies to reach the most suitable markets for traditional products with cultural and artistic value. To do so, the tastes of clients must be considered—as well as the public institutions, hotels, banks and ministries that encourage the production of these traditional products. Wealthy people and corporations have already shown an interest in products that reflect the cultural and artistic aspects of the country.

The range of products available to consumers could be expanded, by searching for possibilities for reducing production costs and offering traditional products that can be used every day by any Palestinian family.

These further developments will enhance the impact of this collaboration between Palestinian women of different generations. This program has been a first step in empowering women economically and socially, simultaneously helping to preserve Palestinian cultural and heritage.

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GROWING STRAWBERRIES IN GAZA

Soheir Shaat

Farmers in the Gaza Strip have cultivated strawberries for years, but the increased pressure on the land and water resources was making production more difficult. But now, an innovative method for growing strawberries has helped farmers in Gaza produce high quality fruits with less land and less water.

Not only are strawberries very tasty, and can be a very profitable crop, they are also very nutritious, rich in calcium, phosphorus, potassium, iron, vitamins A, B and C, and niacin. Growing strawberries in the Gaza Strip started in the early 1970s when one innovative farmer began by planting one dunum (0.1 hectare) with a few hundred plants in the Beit Lahia area in the north of the Gaza Strip. He expanded year after year until in 2005 he was cultivating some 2500 dunums (250 hectares) of the fruit.

Since 2005, however, the total area cultivated with strawberries declined to less than 1000 dunums (100 hectares). Some of the main causes of this have been urban expansion, the loss of agricultural land due to buffer zones established by Israel, and the difficulties farmers have in accessing their land. The shortage of water for irrigation, both in terms of quantity and quality has limited strawberry cultivation. In addition, blockades and the closure of crossings to the Gaza Strip means it is more and more

difficult for farmers to secure the needed inputs for production.

Hanging strawberries

This situation led the Union of Agriculture Workers Committees to try and help farmers to carry on farming their land and to defend their rights. The specialists in the union addressed the farmers' problems by carefully examining them, and following the progresses they had made in agriculture. Benefiting from the experiences of other farmers and agronomists, they introduced





the concept of hanging strawberry farms. This method had been used elsewhere, but was adapted and improved in response to the prevailing environmental conditions and the availability of the necessary production inputs.

The idea of a hanging strawberry farm had not been seen before in the Gaza Strip. The pilot was first implemented on 2 dunums (0.2 hectares) of land in two different sites. These were part of a group of projects funded by the Representative Office of the Netherlands and implemented by the Union of Agriculture Workers Committees alongside the FAO, which target the more profitable sectors in the West Bank and Gaza Strip.

After only a few months, it could be seen that growing hanging strawberries has many advantages. The most remarkable was the significant saving in water, with hanging strawberries needing only 40% of the irrigation water required when growing

in planted fields. This method increased water-use efficiency, and allowed for the water saved to be used for irrigating other crops and maintaining the groundwater reservoir. Growing hanging crops is a good example of ‘vertical expansion’ in agriculture. It saves space for the cultivation of other crops, and allows the exploitation of non-arable land. In addition, growing strawberries in this way led to significantly increased yields. On average, farmers can harvest 3 to 3.5 tonnes of strawberries per dunum, but when growing hanging crops, one dunum can yield 9–10 tonnes—a tripling in production per unit area.

Marketing opportunities

Strawberries are one of the most important crops grown in the Gaza Strip, and are exported to the West Bank and internationally. In 2015, 61 tonnes were exported to European and Russian markets, with 105.5 tonnes exported to the West Bank. Strawberries grown in the Occupied Palestinian Territory are known as some of the finest in the world. The strawberries are grown according to international standards, which require the product to be monitored from the growing phase until they reach customers, and maintaining the high product quality is imperative.

An additional benefit is that the method of growing hanging strawberries allows for the production of early crops, where they can fetch higher prices in international markets.

It increases farmers' profits, and national pride. Sales of this clearly marked product of the Occupied Palestinian Territory in the local, Arabic and international markets are important economically, but also to the status of Palestinian agriculture. This also fits well within the framework of the Union of Agricultural Work Committees' strategy in defending the rights of the farmers and strengthening the relationship with the land.

An inspiring pilot

Growing hanging crops plays an important role in preserving soil and water. Environmentally friendly materials can be used to control crop diseases and chemicals normally used for sterilizing the soil are no longer needed. As a result, local biodiversity can be conserved, and at the same time the amounts of solid residues that are common in many agricultural processes can be reduced.

Through these novel approaches in agriculture, the Union of Agricultural Work Committees seeks to develop the productive and marketing capacities of farmers. As such, it can help in achieving the transition needed from relying on relief projects to building entrepreneurial development projects.

The Union aspires to roll out this successful experience of introducing innovative methods of modern agriculture to all farmers and agronomists who are concerned with producing and growing new kinds of crops. Furthermore, this allows for the further exploitation of the empty spaces that are not suitable for agriculture, such as rooftops of homes and public and private institutional buildings. It is hoped that expansion of this success will receive more support, given the significant results that have been seen in conserving the environment and utilizing Palestinian resources and potential.

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MARKETING FARMERS' MILK, TOGETHER

Wisam Abu Zahra

The Bedouin village of Yatta is found near Hebron. Here, sheep herders started pooling the milk from their herds, enabling them to expand and diversify the dairy products on offer in the market. Soon, their milk gained a reputation for its high quality.

Yatta village is distinguished by its nearby hills and Bedouin population who live in and around its ancient ruins, called *khirbit*. Their main source of income is from animal husbandry, which also fulfills their daily basic needs of dairy products and meat. Many people in and around Hebron rely on livestock to support their families, and some 30,000 breeders together own 100,000 sheep according to statistics from the Directorate of Agriculture. The area around Yatta has an abundant and diverse vegetation, which is reflected in the quality of the animals' milk and meat.

Making *jameed*

People still use traditional methods of processing milk, where the woman in every household is the one who milks the animals. *Jameed*, hardened goat's milk yoghurt, is prepared by dehydrating the milk. The women pour goat's milk into a small butter churn or a large canning jar with a tight-fitting lid. *Jameed* is traditionally made with a goatskin bag called *shakwa*, but they have become hard to find.

Women turn the handle on the churn or shake the canning jar until the butterfat begins to separate from the goat's milk. The butterfat is then skimmed off with a serving spoon and used to make clarified butter. The remaining milk is then strained through a cheesecloth to further concentrate the protein, which is done two or three times to obtain a rich texture. The goat's milk solids, called *makheed*, are then salted to taste and this also helps the dehydration process. The last step is to roll the *jameed* into balls about the size of a walnut, and let them dry for two or three days in a dry place. *Jameed* is traditionally dried in the sun. After this, *jameed* is either consumed at home or sold in the local market.

This process of making *jameed* takes time and effort, especially for the women. At first, the farmers in Yatta were not willing to diversify their production techniques. Yet there was an urgent need to do so, and at the same time reduce the time the women had to invest in the preparation of dairy products. Trying to find a solution to these problems, the farmers of the area established a cooperative organization.



The Alminthar Cooperative

The original idea behind the Alminthar Cooperative Organization was to develop livestock production. The organization was established and officially registered in 2003, with 48 livestock breeders as members. Since then, its main objective has been to solve farmers' problems with respect to marketing, by adding value to raw milk and creating healthy, organic products that can compete in the market.

The problem around the sale of homemade dairy products was a fear among consumers. Several years ago, brucellosis spread widely, infecting 300 sheep, and outbreaks like these made people afraid of buying dairy products directly from farmers. To reduce consumer fears, we established a center for pooling milk that belongs to the organization. After conducting a series of awareness trainings about safe methods

for milking sheep, we encouraged farmers to start bringing their milk to the pooling center. The center's staff collect the milk and test the acidity level and milk contents. In this way, they ensure that the milk is not contaminated and that it is free of any antibiotics. The staff then weigh the milk and give a receipt to the farmer and put the milk in the cooling tank.

The organization uses the milk to produce a diverse range of dairy products including yoghurt, pasteurized cheese, buttermilk, ghee and boiled cheese. These are sold in the markets of Yatta and nearby villages. The organization also participated in international exhibitions, trying to open doors to overseas markets.

The number and amount of different products being offered has gradually increased. Yoghurt for example, is sold in containers of 4.5 liters, 4 liters, 3 liters, 1.5 liters, 1 liter,



500 grams and 150 grams. Soft *labneh* is sold in 900 gram, 450 gram and 200 gram packages. Pasteurized cheese is produced and marketed in packages of 4 kilograms, 1 kilogram, 600 grams and 250 grams. Buttermilk is sold in containers of 1 liter and 330 milliliters.

We also formed committees to act as links between the organization and different pastoral clusters. These committees oversee and guide the breeders with regards to vaccinating their herds and following healthy and hygienic methods of milking, storing and transporting.

Finally, women were specifically targeted in awareness-raising workshops that introduced the safest and healthiest milking methods, and about the best ways to keep the udders clean after milking. These workshops helped in mitigating the significant problems that livestock breeders suffer from, especially udder infection which cause very large losses and which have immediate impacts on the breeders' incomes.

Marketing opportunities

By developing this process of pooling milk, the organization gained the trust of both farmers and consumers in the area and has enjoyed a remarkable increase in their reputation. Consumers trust the organization's products due to their high quality, now knowing that they have none of the preservatives that factories commonly use when producing dairy products. They know that these products are also safer for consumption as they are free from contagious diseases like brucellosis.

The diversification of the products on sale has also increased the marketing capacity of the organization. It has helped them to supply many more markets and shopping areas, meeting the dairy needs of an increasing number of consumers. Furthermore, processing and selling milk in different forms has increased the absorbing capacity of the organization. It has been gradually able to receive and process more milk, thus increasing the number of breeders who can benefit from pooling their products. This has allowed breeders to

increase the number of animals they own, significantly improving their incomes.

The diversification of dairy products and the improvement of the packaging process has seen the organization participating in international exhibitions, where consumers and traders were satisfied with the quality of the products. These exhibitions also offered the organization a platform to network with traders in order to start exporting their products.

The reputation of the organization has grown, and now many institutions such as the Ministry of Agriculture, the General Directorate of Cooperation, and civil society organizations working in the area, are interested in it. At the same time, many farmers and institutions from other regions have also shown interest in the process and in the products. This positive experience has encouraged civil society organizations to try replicating it in other regions.

Sound management

Studies by the Palestinian Livestock Development Center and the Union of Cooperative Farmers point out the major difficulties that cooperative organizations face in terms of marketing. A general lack of planning and sound management have been barriers for properly benefitting from the processing and sales of dairy products. In addition, the location makes a difference. Many processing and marketing projects that were implemented in Nablus, Ramallah and Jenin have failed because the livestock sector in the Occupied Palestinian Territory is centered in Hebron Governorate.

The organization has greatly helped farmers in utilizing their potential to improve the benefits from their available resources. Collectively processing and selling dairy products has had a very positive impact in terms of food security among pastoral clusters and farmers in the area.

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JOINING FORCES FOR THE ALHALABAT RESERVES

Amer Meadat

The archeological site around the Alhalabat Palace is also a place where herders graze their animals. By involving pastoralists in the management of natural resources, this helps to create a healthy environment and revives the pastoral heritage of the area.

The Badia is an area that covers around 90% of the territory of Jordan, providing Bedouins who rear animals the space to feed them. But traditional grazing systems are slowly disappearing, due to industrial development and urbanization. However, these traditional practices can reduce degradation of pastoral lands, and even restore their biodiversity and vitality.

Securing rights and land reclamation project

In order to rehabilitate and manage the pastures of the Alzargaa River basin in a sustainable way, the project 'Securing rights and land reclamation for improving livelihoods' was launched. Funded by the European Commission, it was designed to alleviate poverty and strengthen traditional grazing methods. Core components were to secure land tenure rights; improve natural resource governance; and to improve incomes.

The project was implemented by the International Union for Conservation of Nature (IUCN) through its Regional Office

for Asia, in collaboration with the Jordanian Ministry of Agriculture and the Arab Women's Organization. The project targeted four Jordanian villages within the Jordan River basin: Aldaleel, Alhashimeya, Beni Hashim and Ahalabat.

The methodology of the project was based on two main pillars: dialogue among the concerned parties, and integrated management. The first pillar focused on discussions and mutual activities among those involved, mainly local land users and service providers from governmental and non-governmental institutions. Secondly, natural resource management decision making was a joint activity. The project used a pioneering model never before used at the national or regional level, that stressed the ability of the communities that live in and around protected areas to manage the local resources in a sustainable manner.

The Alhalabat initiative

This project targeted the archeological site of Qasre Alhalbat, or the 'Alhalbat Palace', north-east of Amman. It has been protected by the Jordanian Antiquities law



since 1988, and lies within the administrative powers of the Ministry of Tourism and Antiquities. The area around Alhalabat Palace includes a palace, a mosque and a pond on an area of approximately 10 dunum (1 hectare). Alhalabat Palace lies within the Badia, which is suitable for herders to raise their animals because of the rich vegetation, and most people of Alhalabat rely on sheep herding to secure an income for their families.

The project is based on the idea that people who access natural resources share the benefits with others, an approach inspired by the Nagoya Protocol on Access to Genetic Resources and the Fair and Equitable

Sharing of Benefits. This means allowing people to herd their animals and access natural resources, under the condition that they agree not to destroy the archeological site. They take care not to disturb its cultural landscape and natural features, like the vegetation that grows naturally, and the natural formations of land. In this way, they protect the historical site and strengthen their sense of belonging to it.

Importantly, the project specifically targeted smallholder farmers (those who own a few numbers of animals) and women who raise animals. Different committees were established, whose role was to implement and roll out the project. These included

The West Alhalabat Organization

The West Alhalabat Organization was established in 1997 as a charitable body registered under the Ministry of Social Development. Its purpose was to fund programs and projects that serve the community, alleviate poverty, and reduce high unemployment levels. The organization implemented several projects that increased productivity and empowered youth, livestock breeders and women, focusing on the importance of collective work.

The Committee of Administrating Drylands and Natural Resources was established in 2010 under the auspices of the West Alhalabat Organization. It also included representatives from the Alhalabat municipality, the Aldaleel Agricultural Center, and the Arab Women's Organization.

It was established to enhance participation of local communities in managing natural resources. Committee members participated in an intensive training process to enhance their skills in designing strategies and action plans. Most already had experience in project management and as a result, the organization was awarded several loans to implement projects, such as establishing a computer lab with funds from the Ministry of Planning. Other projects included the provision of wedding supplies and accessories funded by the Hashemite Fund for Development of Jordan Badia, and a project providing revolving loans that enable families to implement productive projects, supported by the Trust Funds of the Ministry of Development.

The organization conducted training and awareness courses targeting women, on topics such as sewing, flower decoration, milk processing, intensive literacy programs, computer training for youth, and helping students with their studies. The organization also conducted self defense courses for men, in addition to holding conferences and symposiums.

The organization's work is distributed among several committees: one for administering dry lands, a social committee for needy families, orphans and handicapped people, a public relations committee, and one for revolving loans. A director and a petty cash custodian were recruited as full time employees in addition to some part-timers and permanent volunteers.

The current administration is conducting a study to assess the performance of the organization and how it can better address the challenges and improve performance. This assessment will lead to an annual action plan built on the organization's strategic objectives, and that will in turn help to achieve self-reliance, increase productivity and secure investments. It will focus on reducing dependency on emergency aid through implementing productive projects. Seeking funds through partnerships with local and international institutions is key for achieving financial stability and guaranteeing the organization's future.

representatives from different groups of the community, including women. First, project teams identified the demographical and geographical context of the area. Then, the capacities of the local committees were improved so that they could better manage local resources that mitigate the effects of desertification.

From degradation to revived land and heritage

Pastoral spaces around Alhalabat offer a good source of fodder for livestock. However, several factors have contributed to the disappearance of some highly nutritious pastoral plants, impacting breeders'

incomes and employment. A socio-economic crisis increased the suffering of the women who rely on livestock and livestock products to provide a living for their families—particularly the 35% of the female population who are widowed.

The absence of a national strategy to protect the grazing land exacerbated the problems, as well as a lack of scientific research and documentation. But the main problem was not involving local communities in managing the land. In response, this program was prepared to ensure the continuation and sustainability of the project.



The project has boosted the growth of natural plants in the protected area, providing improved pasture for livestock, supporting female smallholders in improving their livelihoods, and minimizing the cost of fodder.

The project directly targeted smallholder livestock breeders, widowed women and the local community in general. Many others have also benefited, even if indirectly, such as those visiting the palace or the poetry and heritage festival, as well as shopkeepers in the area.

The program also boosted a relationship between herders and the historical site. Pastoralists and their communities better understand the value of the site and the responsibility they have in preserving it. People living in the area around

the Alhalabat Palace have agreed to use land near the West Alhalabat Organization center to grow pastoral plants. In this way, they can help to regulate grazing and naturally revive the land.

The collaboration brought financial benefits to the community, but it also helped them understand the importance of this site. It reinforced their sense of belonging, ownership, responsibility and pride for their heritage. This approach to managing historical sites is new in Jordan, but it appears to be a promising strategy, helping to support national heritage as part of the community's responsibilities towards the country.

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FIGHTING DRUG ABUSE TOGETHER

Deena Alkhalidi and Hussein Ali Algeith

Poverty and unemployment in the border regions of North Badia district have helped to fuel and increase in drug abuse and trafficking. Two initiatives emerged in response, and both have had a profound impact on the communities concerned. The youth organizations Sama Albadya Beneficiary Organization and the Young Northern Badia Gathering of Thought and Culture, both set out to raise awareness on the causes and consequences of drug abuse in the area.

In North Badia districts in northern Jordan, the number of drug smugglers and addicts has increased significantly in the recent years. The area borders Syria, Iraq and Saudi Arabia, countries which have witnessed turmoil. Civil wars have forced many refugees to migrate to Jordan and the area receives many Syrians as a border area with

many kinship ties among families and clans. This had a strong impact on job opportunities for Jordanians, and put pressure on infrastructure and the economy. It led to a decline in the living standards of many families. The vast flat desert aids the mobility of drug smugglers, and quick profits tempt people to continue the trade.



Studies showed that the majority of drug users and addicts are young men, and that addiction increases during adolescence and until the age of 35. The drug dealers are between 35 and 50 years old. There is high unemployment and lot of youth in the area have no meaningful daytime activities. There is not enough information about drugs and the effects they have, especially lacking among young school students. Some addicted children sold family livestock in order to buy narcotic and hallucinogenic substances. The animals were sold one by one, until they were all gone. In some cases, unemployed youth steal herds or go into farms to get money to buy drugs.



The Sama Albadya Beneficiary Organization

The Sama Albadya Beneficiary Organization, a Jordanian youth group established in 2014, recognized the problems in their community and decided to take action. Our organization is made up of a team of 25 people, men and women, coming from communities in all areas of North Badiya district and Mafraq city. It focuses on economic empowerment and health education through, for example, training courses, youth and community initiatives, and also runs 'fun' activities. The national Drug Enforcement Agency trained the Sama Albadya team on mechanisms to fight drugs in the three-day training course 'Agents for fighting drugs'. In addition to providing general information about drugs, the course looked at the best way to deal with addicts and dealers, and showed how to report cases of drug trade and use.

After the team was trained and the training materials were prepared, we started to coordinate with local groups, schools, institutions and youth centers in the planning and conducting of awareness and education sessions on the dangers and harmful effects of drugs. All segments of the community were targeted, including adolescents, fathers and mothers, and also religious men and leaders of the community. During these sessions, several methods were used to illustrate the concepts, such as pictures, short films, brochures, banners, photos, and theoretical sessions.



Implementing this was not always easy. Some local institutions did not welcome this initiative, and some community members did not attend the sessions. Drug abuse is still spreading a lot in these areas. We tried hard to overcome these general difficulties and still conduct a minimum number of sessions to cover all communities. In total, more than 25 awareness-raising sessions were held, including about 600 people in total. After this first phase, a team of trainers put an exhibition up, with photos, drawings and models related to the topic. What distinguished this exhibition was the use of environmental waste, including paper, wood and fabrics, which were all recycled and used in different ways.

One of the main reasons behind the success of this initiative was having a qualified and enthusiastic team. They used educational and awareness-raising mechanisms

which were interesting and easy to follow by the participants. As a result, we received requests from other governorates to carry out similar sessions in other areas.

By the end of the first phase, this initiative was selected by the Public Security Directorate and Anti-Narcotics department in Amman as the best project implemented in 2015. The team was invited to join national events marking the International Day Against Drug Abuse and Illicit Trafficking. The included many activities such as theatrical displays, pictures, and success stories of drugs control that achieved in 2015. During the celebration, the organization's team was honored with certificates of appreciation for their role in the greatest number of awareness and education sessions in a period of three months, benefitting the largest number of people. Furthermore, the team received

an honorary shield from the Anti-Narcotics Directorate for leaving a new and clear mark in the community.

Since then, Sama Albadia has been selected as a strategic partner by the Anti-Narcotics Directorate in the north of Jordan. A Memorandum of Understanding was signed where the organization agreed to become responsible for all drug-awareness campaigns in the region. In October 2016, the second phase of the initiative will start, working with schools and other education facilities.

The initiative has left a positive impact in the community, who are now aware of the effects of substance abuse. It has stopped the spread of this scourge that was becoming a reality in homes throughout the region.

The Young Northern Badia Gathering of Thought and Culture

The Young Northern Badia Gathering of Thought and Culture was established in Mafraq Governorate to promote and enhance cultural awareness and knowledge among the young people of North Badiya district, and to empower the local community. The gathering has a managing Board of Directors; a general commission, and a working space where many local men and women volunteer. It created opportunities for young people in the district, such as beauty care training for young women, a workshop on solar energy, cultural contests and discussions for school students , and taking part in the North Badiya festival that helps to preserve the popular heritage of the area.



'Drugs kill us' was a three-day campaign in 2014 that helped students in the district see the gravity of drug use and how it affects health and a family's economic situation, as well as the social and legal aspects. It helped parents and teaching staff in the targeted areas of Alsalihiya, Om Aljamal, Sabha, Aldefyaneh, and Mkaifeh, to mitigate the effects of this menace. The project was implemented in cooperation with the Hashemite Fund for Development of Jordan Badia, the Ministry of Youth, the district chief, the Directorate of Education, Directorate of Waqf, the Bureau of Combating Drugs in Mmafrqa governorate, and other official institutions in the district.

At the beginning we asked people about the project. Many welcomed it, but others were afraid to join the campaigns because of a previous bad experience or because some of their relatives had been caught using drugs. The campaign started with networking and communicating with all the related parties. We produced a special brochure to inform the community about drugs and its hazards. We also invited and communicated with people through social media.

The target groups on the first day were the local community and male school students, while on the second and third days the target groups included female students between 12–17 years old. The anti-drug unit provided medical lectures that demonstrated the dangers of drugs.



A mobile anti-drug exhibition was set up which was viewed by about 500 people. On the last day, female students attended activities in a specially prepared hall. Zain Bint Naser, a member of the royal family, and actress Juliet Awad, joined the group of 400 participants.

The attendance was excellent and higher than expected on the first day of the campaign. Six hundred people attended a show presented by boys in the community, mimicking drug problems. There were lectures that explained the dangers of drugs. One father told the story of his addicted child—and his story had a profound impact on the audience.

The campaign highlighted the dangers of this scourge that destroys people and the environment. By presenting the real story of an addict and other activities, the campaign showed the need to combat and prevent drug abuse. Afterwards, the Ministry of Youth used the title of the campaign as a core theme in the programs of

the Alhussaim camps that target youth in Jordan. Also, the security forces carried out more raids than before, demonstrating that the campaign drew the attention and participation of the local community.

Why do we fight drug abuse? How do we mitigate its effects? Who promotes it? Why is youth attracted to drug use? These questions were asked by participants during the campaign. But who is authorized to answer these questions? Individuals, the state, the local institutions or the international organizations? All parties are responsible, and this campaign tried to answer these questions. We must fight drug abuse because it is a deadly problem, ruining the minds of the youth. Nevertheless, we can mitigate its effects by knowledge, faith and by eliminating poverty, because poverty is seen by many as the main reason why

many people become addicted to drugs. Due to many social, political and financial reasons people promote drugs, while the young become addicted because they lack a clear vision for their future as a result of the conditions surrounding them.

Fighting drugs is a national ethical duty. Addicts are not able to build a home, plant a tree or participate in the process of developing the country. Growing drugs destroys the soil, and addiction destroys people. We combat drug abuse to build the country, improve human life and develop the capacities of a sound and healthy person. Drug abuse is a disease that destroys the individual, as well the community, unless it is fought by all possible means.



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A TREASURE ON THE HORIZON

Eman Al-basheer

In Sama Alsarhan village, people looked to the sky to find solutions to their problems. The Abaq Alsahra organization supported the installation of solar panels, greatly reducing electricity costs for low-income families, and a sustainable, safe and environmentally-friendly solution with great potential.

The Alsarhan district is located in the Mafrag Governorate, northern Jordan. This is approximately 100 kilometers from the capital, Amman, bordering Syria. It is known for its large empty spaces, with only 12 villages and a total population of 33,000 Jordanians and around 12,000 Syrian refugees. Its climate is moderate, although it is becoming more and more dry. Its people work in the public sector, agriculture, and raising livestock, but there are a lot of poor families with low incomes.

The Abaq Alsahra organization

The Abaq Alsahra organization is a multi-purpose cooperative, established in Sama Alsarhan in 2012. Its members include 31 representatives of the local community, all of whom are experts in different fields. Half of them are women. Their main objective is to reach vulnerable and marginalized groups, and implement development projects that help raise the living standards within the community. They fill an important role because the national and international

development institutions do not reach these places.

Abaq Alsahra offers services and runs pilot projects that benefit from the area's natural resources. For example, they used the abundant residues from olive oil presses to produce a nutrient-rich fodder supplement given to livestock, and grew animal fodder by using sewage water for irrigation. Both projects were self-financed by the organization. With funds from the Jordan River Foundation, the organization has also set up a revolving loans project. Abaq Alsahra also helped communities to dig wells to harvest rainwater, which could later be used for agriculture and to provide animals with water during droughts.

A need for affordable electricity

The high cost of electricity affects low-income families especially. Electricity is used not only for lighting, heating water and running general appliances, but also for sewing machines that some women use



in their houses to support their families. Since electricity is indispensable, it was necessary to look for an alternative source of energy or find a way to reduce electricity bills. Saving money on electricity would then allow people to cover other daily expenses.

Looking at the specific features of the area such as the geography and climate helped find a suitable solution.

The organization conducted a survey in Alsarhan district, and based on this, one of the 12 villages was chosen for a pilot project. Sama Alsarhan was selected because of its high population (9300 locals and 1500 Syrian refugees), and large number of farmers and livestock breeders. Most of them are low income families. Equally important was the presence of civil society institutions (including Abaq Alsahra), that could assist in field surveys and data collection.

Abaq Alsahra looked at the number of local people and low income families, electricity use, the money paid to the electricity company, and the rate of the electricity consumed by small enterprises. Use was also made of a series of studies conducted a few years ago by the Ministry of Energy and the electricity company. It was found that significant sums of money are paid to the electricity company for appliances used in small home-based businesses. Farmers and livestock breeders also pay a high electricity bill for running water pumps they use to irrigate crops and provide water to their animals.

Solar energy

Examples from different parts of the world show that households can use solar energy for their daily needs, saving electricity costs, and can also sell the surplus to the electricity company. In this way, they can

help reduce the environmental damage caused by the use of fossil fuels.

The organization started installing solar panels on the roofs of houses in September 2015. These panels include pipes that absorb the sun rays, heating the water that passes through the pipes. People can enjoy warm water for long periods, and since the water does not need to be heated by electricity, their electricity costs are reduced. One disadvantage of this system is that the demand for hot water increases in winter when water cannot be heated because of cloudy weather.

The project provided solar panels and tanks for low-income families for a small fee that was to be paid back in monthly installments. This system is seen as a long-term solution because there is no need to change them once they are installed. It requires a once-in-a-lifetime investment with regular maintenance checks.

A specialized technical team from the company executing the project installed the systems, putting metal rods to carry the water tank beside the main tank that most houses already have on the roof. The tank linked to the solar system is placed higher than the main tank to feed the house. The solar panels are placed in an oblique way to absorb the largest amount of sun rays. This method is the best one for exploiting the sun's rays, because it

relies on heat exchange between the pipes exposed to sun and the water that passes through these pipes.

The project lasted between September 2015 and September 2016. After the agreement was signed between all those involved, Abaq Alsahra managed the project and the Hanania company installed and maintained the systems. During these 10 months, 15 systems were installed in 15 houses, at a cost of 515 dinar (around €650) each.

People started showing their enthusiasm after only two months. Their electricity bills decreased significantly. The organization was able to provide this system for lower prices than in the local market, and with a better repayment plan. Mrs Jamila Hussain





Om Mohamad said, "the project helped me save money. But the greatest advantage has been that we don't have to pay back the cost of the system immediately."

Needless to say, there were a few problems during the implementation of the project, for instance when operating or installing the systems. The project's financial approach requires having a specialized administrative staff, but the organization did not have

the resources to recruit them. In addition, the executing company's headquarters far away from Alserhan—around 100 kilometers—required additional time and costs to run the maintenance checks.

Expanding the framework

Because of the tangible results of this project, the organization has been looking for ways to solve the problem entirely—and not only mitigate its impacts. The existing solar panels heat water, but do not generate electrical power. This is the next step: to generate electricity with solar panels in gardens, on roofs, in open spaces and on farms.

Families who generate electricity from solar energy could then use all the different appliances in their houses, and could consider starting a home business without the fear of high electricity costs.

Local people became more aware of exploiting the sun's energy, which will make it easy to move forward with this second phase of the project. Generating domestic electrical power from solar energy will also allow people to save the surplus of electricity and to sell it back to the electric company. This could help reduce the use of fuel used in generating electricity, as well as conserving the environment.

The sustainability of the project is an important pillar, and looking to expand means finding a financing partner to support it. Work will continue on monitoring and evaluation processes to enhance the advantages of the project and get rid of the barriers. Moreover, management of the project will be strengthened, to be able to expand its objectives.

The potential of solar panels

The project distinguishes itself because it can easily be transferred to any community that also enjoys an abundance of sun, like in Alsarhan district. The equipment used in the system are easy installed, solar energy is permanent and renewable, and is

relatively simple. Solar panels are installed once and do not need replacements, only maintenance. The solar panels installed here offer a sustainable, free, safe and environmentally friendly solution that does not need large infrastructure.

The project has been successful because it helps to solve a common problem. But if we are looking for a radical solution, we should install photoelectric solar panels over larger spaces, and link them to the national grid through an agreement with the electricity company. Then low income families could also earn an additional income.

We have to keep looking to the sky, because the sun provides a sustainable solution.

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THE MINARET OF THE DESERT

Fawaz Mlehan Alnawasra

The Jafar Cooperative Organization caters to that half of the population which is often bypassed in many communities—women. Three pilot initiatives, a kitchen, a beauty salon and a tailors' shop, have opened new horizons for women.

In Jafar district, in the Maan Governorate in southern Jordan, the Jafar Cooperative Organization was established by 40 founders in 2005. It is found 60 kilometers from the center of the governorate. Local traditions and customs that restricted the role of women in this rural area paved the way for this organization. The district had no cooperatives that supported women's issues. The organization, half of whom are women, aims to enhance public cooperative work for women specifically.

A kitchen, a beauty salon and a tailor shop

The organization started with small projects and initiatives inside the district, in partnership with the Ministry of Planning. In 2009 together with the Jordan River Institution, the Jafar Cooperative Organization launched several pilot projects in the Aljafar district, such as setting up a kitchen, a hairdressers and beauty salon, and a tailors' shop. The women of Jafar district were very happy with these projects, as they enjoyed purchasing sweets and popular food from the

productive kitchen, buying clothes from the tailor shop for their children, and treating themselves in the beauty salon.

The kitchen is managed by Om Ali who specializes in making sweets. Salma processes milk and other dairy products like cheese, dried yogurt, ghee and pickles. Om Ali said, "at the beginning of this project it was difficult to market the products. I had to distribute them for free when I could not sell them." But this problem did not last long. The chairman and other members of the organization made and distributed a set of brochures about everything that the organization was making. These described



the source of the milk, and that it is from Haj Abu Abdallah who lives near the district, and that the milk was clean and delicious. Soon afterwards, demand increased, providing permanent jobs for two widowed women. Om Ali said that she visited and convinced schools and public departments to buy her pastries. She also sold them in shops near the organization's center. The results showed in her monthly income.

At the organization's center is a fully equipped beauty salon with wedding dresses for loan. The idea came from a need to have one in the district, as before, people used to travel long distances for such services before important celebrations. In addition, a beauty salon was an opportunity for the employees and the organization to earn a good profit. Om Awwad, one of the beneficiaries said, "I am very proud of the organization because it meets people's needs. Especially the salon. We used to travel 100 kilometers to prepare the bride for her wedding, and this was very costly."

Mrs Rahmeh works in the tailor shop, where she measures customers' sizes. She helps women and widows especially by employing them and giving them a regular income. The organization also ran three-month training courses in 2013 where more than 30 girls were trained, each receiving 80 dinar. Maha was one of the trainees: "I thank the organization and center for opening new horizons of work for us, especially in professions that interest women. They also provided



training courses that unemployed women benefited from." Between 2011 and 2013, the organization also distributed more than 130 revolving loans, of 500 dinars to each family in the district.

Evolving the community

Still the organization opens new horizons for women. The organization employs 10 permanent staff, and has seen profits rise over the past five years from all three projects. The kitchen was the most profitable with a net profit of around 1000 dinar per month, followed by the salon with 800 dinar. The tailor shop makes only a minimal profit because most women continue to sew inside their houses.

Since 2014, with the support of the Ministry of Planning and the Hashemite Fund for Development of Jordan Badia, the organization created an integrated chain of small income-generating projects that provided different job opportunities. These projects were positively received by people in the district. They see the benefits growing day after day. The success defies the stereotypes that govern the Bedouin community regarding women's work.

Jamal Alnawasrah, a member of the organization, said that "the most important achievements in the last five years was opening the beauty salon, because it is the only salon in the district." At the end of May 2016, the organization also conducted a three-day training course for girls on 'how to run your own project'. Mrs Jamila Aljazii was one of them, and who also played an important role in the cooperative. The training helped participants identify new options, such as the possibility of opening

a factory for making crystals, and a supermarket for women members.

To be successful, the organization adopted a few entrepreneurial ideas, One example is that it takes up to 30% of the profits of these projects, with the rest being distributed equally among the employees. The organization also pays the rent of 1500 dinar per year for the building they use, as well as regular bills including cleaners' salaries and utility bills, amounting to some 450 dinar annually.

This is a wonderful example of the ambitions of Bedouin women, and how they aspire to serve and develop their community, and is an example for coming generations. Projects like this advocate cooperative work and maintain livelihood opportunities by raising awareness, building bridges of trust between people, and implementing projects of economic feasibility that serve the people.

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A NEW GENERATION ENTERS

Hamad Althiyabat

A cooperative association set up in the 1970s that aimed at supporting the cultivation of fodder crops, had lost its original goals. But a new generation of farmers and herders breathed new life into the cooperative, developing an inspiring example for the whole region.

The Tel Burma organization was established with 41 members in 1977 in southern Al Badiya. The idea of starting a local organization emerged from the Tel Burma agriculture project established by the Ministry of Agriculture in 1969. This supported the cultivation of fodder crops over an area of 1400 dunums (140 hectares), divided into plots of between 25 and 35 dunums (2.5–3.5 hectares) each. Farmers were able to use water from artesian wells to cultivate crops like alfalfa, wheat and barley.

The Ministry of Agriculture administered the project for the first eight years. Afterwards, the people wanted to administer the project themselves, and after several meetings it was agreed to set up a cooperative. Each family nominated a person who would represent them as a member of this new organization. The cooperative was registered and certified by the Jordanian Cooperative Organization, a governmental body that oversees the work of all cooperatives in the country. Parcels of land were distributed among members and they started to work in their lands and farms.

The cooperative members were happy with this government-initiated project, as it helped them raise animals with the newly available fodder. They continued to grow fodder for several years, but after 1985 they started leasing their plots to other farmers. Growing fodder was not profitable anymore, and almost all agricultural land was used to grow vegetables—by the cooperative members themselves or by people from the town and neighboring areas. The concrete irrigation pipes were neglected, and they deteriorated. Years passed, and the original features of the project had changed completely.





A second generation

The area deteriorated slowly over time. After 15 years it was clear that the tenants were not taking care of the local infrastructure. So in the year 2000, the members' sons decided to do something about it. They held a series of meetings and discussed the best way to return their farms to how they had been before. They all agreed not to renew contracts with the tenants, to look for funds to grow fodder, and to try to bring the project back on track. Fodder had become profitable again, as there was a growing demand from herders and breeders. Also, it was agreed that the fathers should withdraw from the organization and appoint their sons as new members. The heirs of those members who had deceased

were appointed with the help of the attorney who represented their fathers in the organization. The enrollment of all sons was made official.

A new board of directors was established, including enthusiastic sons who were eager to work. The new management sought out training courses in administration, accounting, proposal writing and communications, all of which were carried out with the help of the Jordan River Foundation and Mercy Corps International. The new board of directors started to look for funds which would help them maintain the irrigation canals, and at the same time purchase agricultural machines. They received funds from Care International to repair the irrigation canals, and later

they obtained another loan from the same institution, helping them clear their land of plastic and other waste material left by the former tenants. The new management of the organization also secured a grant from the Ministry of Planning and Development to purchase fodder sowing and harvesting machines.

The farmers rejoiced in their return to their lands and farms. "I will never lease my land again," Abu Hasan Alhamdallah promised. Farmers worked hard on their farms, and by purchasing machines, they were also able to employ other people in the area. The organization won a contest by submitting a proposal on purchasing agricultural machines for growing and pressing alfalfa. The management leased machines to the farmers, who paid modest fees to cover the maintenance and operating costs. The management had agreed with the farmers that the fee of harvesting and pressing alfalfa was 500 pennies per bundle, each of a fixed weight and length. The bundle must also be dry so it does not become mouldy, and can be sold to livestock breeders. By maintaining these standards, the product distinguished itself and demand increased.

Increasing yields

The management found that the concrete irrigation pipes allowed water losses through evaporation. Subsequently, the organization looked for funds by cooperating with the Ministry of Agriculture, who

conducted a study on what was needed and the organization received a modern irrigation network worth 100,000 Dinar (around €125,000). This solution saved a lot of water, and farmers improved their production of alfalfa. The production of dried alfalfa ranged from 800 to 1000 tonnes annually, which generates revenues of up to 300,000 dinars (about €375,000) every year.

Since alfalfa is a summer crop, members started growing barley in the winter. By doing this, incomes were secured throughout the year, making a profit from both crops. A new variety of barley was tested in a pilot field belonging to the organization's chairman, and which was carefully monitored and supervised. When the harvest season came, the yield was 500 kg from only one dunum (0.1 hectare). Next, barley was cultivated on a piece of land of 25 dunums (2.5 hectares). Drip irrigation was



used via a pit near the project which was part of a water harvesting project implemented by the Ministry of Agriculture. With diligent follow up from the chairman who monitored the growing phases of this new variety, the 25 dunums produced a total of 11,500 kg in 2016. Witnessing its success, this experience will be rolled out to farmers and to those who want to grow this new barley variety that is more tolerant of dry and saline soil. On seeing this success, farmers were ready to plant this and any other varieties that show such high yields.

An example for others

The organization's name became renowned in the community and public institutions. Officials from the government visited, such as the Minister of Agriculture, the Governor, and the Secretary Generals of the Ministry of Agriculture and the Ministry of Water. The chairman represented the organization in the National Cooperative Committee

and was nominated as vice-president of the Regional Cooperative Union of Maan Governorate. The organization became an example to other projects, and a reference to other organizations.

The agricultural project implemented by the organization beautified the area and made it a place for trips and having fun on the weekends. But the management made clear to the farmers, not to allow anyone to enter the area unless they were told about the need to keep it clean, and to not leave plastic bags behind. The local community enjoyed the beautiful landscape. Life returned to the area. Birds returned. Farmers were encouraged to carry on growing fodder crops, to continue working in their fields and to sustain this project for the sake of their children and grandchildren—hoping that in the end, everybody will be able to return to his or her land and hometown.

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THE QIREEN RESERVE

Hussain Abu Nwair

For the settled Bedouins in the Alsharah mountains, pressure on grazing lands became a serious problem. A protected reserve planted with *al qatif* (amaranthus) helped the families of the area to maintain their livelihoods.

Bedouin life

The word ‘Bedouin’ refers to people of the Badia and its inhabitants from nomadic Arab tribes. Bedouins constitute a great part of the Arab world population. The name ‘Bedouin’ is associated with the verb ‘to start’, meaning that a Bedouin is born in the Badia, has been there or lived there. The life of Bedouins, desert people, is distinguished by migrating from one place to another, looking for water and pasture for themselves and their herds. Camels are their main means of transportation. Raising animals and migration are both indispensable parts of Bedouin life. Their way of living is simple, unchanging, and is based on migration for survival. Bedouins stay in places only temporarily, and move when resources dwindle.

Everyone belongs to a nuclear family consisting of a father, mother and children. The nuclear family is part of an extended family including the grandparents, married and unmarried sons, and grandsons. Groups of extended families unite to make a tribe, and

each tribe is headed by a sheikh. The sheikh is distinguished by being wise, courageous and honest. He is responsible for protecting and defending the tribe and its members.

The resettlement of Bedouins began in the 1960s during the reign of the late King Hussain Bin Talal. The king encouraged the government to build concrete houses, located together in a community with access to services, schools, health centers and water resources. Moreover, agricultural projects were implemented in the hope to encourage a change from migration to sedentary lifestyles, and so Bedouin people could develop their communities. The objective was to put an end to suffering and achieve stability and comfort.

The Bedouins who did not own camels and sheep settled and turned to farming and other sources of income. Those who owned large numbers of camels and sheep continued their life as it was—migrating in the endless search for water and pasture.

One migration route starts in the Alsharah mountains in the west, to the Altabeek desert in the east, and lasts from October to April. This period is the peak of the grazing season, when camels and sheep feed on bushes of lavender, thyme, juniper, acacia and saxoul trees. The animals drink rainwater that collects in brooks. By the end of March, the temperature increases gradually and available water declines, forcing the Bedouin to go back to the west using camels as their means of transport. In the early 1970s, camels were replaced by trucks and breeders used water tanks for their sheep.

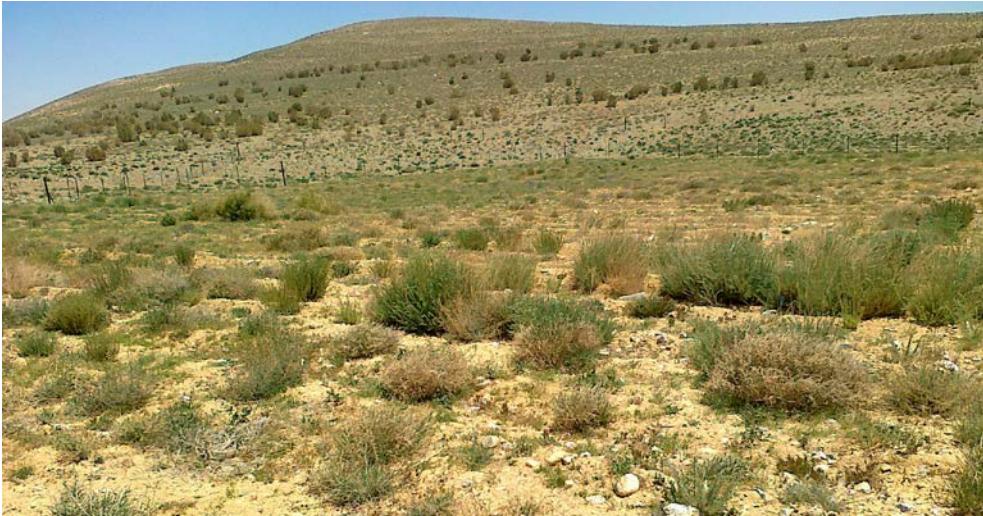
By the end of April, during the return journey to the west, the grass starts to grow again, and by June the harvest of barley begins—offering extra fodder for the herds. Barley and wheat stubble left in the fields is called ‘alqasil’, and serves as a good pasture. This harvest continues until the end of September, and the Bedouin returns by migrating to the east.

Need for organization

In the early 1980s the number of sheep in the Badia reached one million. But the number of camels decreased as they were replaced by motor vehicles, and because there was not enough grass and trees to feed the animals. Furthermore, caring for camels is expensive, so reliance on sheep was more acceptable and more economically feasible. But the Bedouins who settled in the Alsharah mountains in the west suffered from a lack of pastures and overgrazing due to the growing numbers of sheep coming from the east every spring. The Qireen Cooperative provided a solution.

The Qireen Cooperative was established in 1976, with the purpose of serving farmers and breeders. In response to the pressures put on herders in the Alsharah mountains, the cooperative granted loans to the farmers and herders who had settled. Around 30 members used these loans to purchase five to ten heads of sheep. The





organization purchased olive bushes and distributed them among farmers, as well as assisting farmers with the use of a tractor for harvesting.

The farmers in the organization wanted to establish a grazing reserve, as they had seen the benefits in neighboring areas such as Alfageeg, to the north of Alshobak region reserve. The idea was discussed with the Agricultural Directorate of Maan governorate, who agreed to talk to the representatives of the Food and Agriculture Organization (FAO) to support the idea financially and technically. It was agreed that both FAO and the team from the Ministry of Agriculture would run the necessary studies for establishing a reserve.

A protected area for grazing

Between 1990 and 1995, the Qireen Cooperative established a pasture reserve

covering an area of 2000 dunums (200 hectares) under the supervision of the Agricultural Directorate of Maan governorate. The land was provided by the farmers. Members of the organization requested the ministry to provide *al qatif* seedlings: a plant that provides fodder for their animals. They are considered a good source of food in the summer because of their highly saline leaves, and that when dried, become a good source of fodder for sheep. They also grow where rainfall is low, and tolerate both high and low temperatures.

FAO supported the 25 land owners and gave them food packages in exchange for their support to the project. The farmers agreed to plough and plant the land until the *al qatif* plants had become established. During the first year, farmers divided the land in lines and planted the seedlings in grooves. A fence was built around the planted area to protect them from browsing animals. This

fence gave good results, and by 1994, many of these plants could be seen growing in the field.

Life returns

In early 1995, during the spring from April to July, breeders started to graze their herds within the land. The number of sheep increased, and the number of families owning sheep went up from 30 to 80. The protected reserve maintained the natural vegetation for the sheep. This meant that the farmers did not have to purchase fodder throughout the year. Also, the quality of wild grasses planted in the reserve led to higher milk yields and better quality sheep products such as milk and meat. FAO also funded the establishment of yoghurt factories in 1998, with six young women being trained in yogurt making. The factories transformed traditional ways of manufacturing yoghurt, which helped to improve the incomes of the benefitting families.

In addition, the reserve contributed in strengthening social relationships and cooperation among farmers during and after planting the pastoral seedlings.

The ability to grow these plants despite the snowy weather is proof that they tolerate extreme weather conditions. This reserve has now become a good place for growing many different pastoral bushes and grass. It brings wildlife back to the area, including animals such as rabbits, foxes and birds.

The project was clearly a great success, as seen by its positive results. It was considered the second best project in the governorate and the first in Qireen village under the supervision of the local community. The experience of the reserve was rolled out in another neighboring area, where it was established on an area of 4000 dunums (400 hectares).

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WOMEN TAKE CHARGE AND BRING CHANGE

Jamila Merdi Dari Aljazi

The Aljawhara charitable organization builds on the strength and commitment shown by Bedouin women in implementing a wide variety of projects in the community. The organization's continuous growth and recognition is a testament to their success.

The Aljawhara charitable organization was established in 2009 in Aljarba, a village of 7000 people in Ithrih district in the south Badia region of the Maan Governorate. The idea of starting this organization emerged after women in rural areas wanted to improve their living conditions and overcome the lack of job opportunities in institutions and factories. The organization aimed to help improve women's income, empower them economically, socially and politically, and carry out projects that would help develop their village and the neighboring areas.

There already was a special organization for men. We asked them to provide use of a room in the large building they used, especially as their organization was not very active. But the request was not approved. We sat with the sheikh of the tribe and discussed the issue with him. He also refused, saying that women are incapable of implementing any projects. So together with the sheikh of the clan and a number of other men who supported us we decided to approach the governor, who formed a committee to review the general situation and

saw that the men's organization was inactive. The governor ordered it to shut down and gave use of the building to the women's organization, on the condition that we focus on projects that would benefit the whole community. This was the first step on the ladder to success. Our vision was clear, and we started to look for projects that would help raise women's living standards and contribute to developing the area.

Our organization

Our motto is 'do not feed me fish but teach me how to fish'. Many existing organizations provide the community with in-kind and financial assistance, but we wanted to change this and follow an approach that helps women become active community members. We wanted to work for ourselves and not to wait for assistance from others.

Today, the Aljawharah Organization is a registered, multipurpose group that works to raise awareness and educate and empower women. It also help orphans and families financially and spiritually, implements productive and income-generating projects,

takes care of the environment, and implements small projects by providing loans.

We started with 27 members, and now we have 37—all of whom pay the registration fees. Seven of them are members of the Board of Directors. Members have followed training courses on how to manage small projects, budgeting, project design, product packaging and marketing. In addition, they were trained in networking with relevant stakeholders, and on communication skills.

In the beginning, it was a challenge, especially being so far from Amman, where all funding agencies, ministries and other institutions are found. Going there and looking for funds was not easy, but it was necessary to set up the productive projects. We were initially rejected, but we persevered, knowing that we could be

successful. One immediate problem that we faced is that the law stipulates that a newly established organization needs to exist for one year in order to be eligible for funds.

But the situation changed when we showed that we could succeed. The organization received funds ranging from 1500 to 20,000 dinars (approximately €1900–25,000) from various institutions, including the Royal Court, the Jordan River Institution, the Prince Hussain Initiative and the Hashemite Jordanian Fund.

Revolving funds

The organization provides loans in a revolving scheme, with the women returning some of her profit to the organization as interest added to monthly repayments. This is then used to provide other loans. Projects are supervised by the organization. The idea was to train women, empowering



and encouraging them and their families to work together. In the first year, 20 women were granted loans to start their own projects. To help gain the support of the men who initially opposed the organization, the first loans were granted to their wives. They could see that everybody could benefit, and in this way we soon had the support of all parties. In addition, these first women inspired others to implement small income-generating projects.

One success story is that of Om Anad. She took out a loan of 500 dinars (€630) with which she bought milk during the spring season. Making and selling dried yogurt (*jameed*) allowed her to make a total net profit of 300 dinars (€380), after paying back the loan plus interest. Om Anad excelled because she used the loan to make a novel value-added product. Instead of making the *jameed* as big as oranges as is usually done, she made them hazelnut-sized and packed them in transparent bags to be sold in the markets. “I was surprised that my products had such a high demand in the community as well as in other areas,” Om Anad said. “The money I earned helped me to pay my daughters’ university fees and the marriage expenses of my son. I am grateful to the organization for providing me with the loan and supporting me with training,” she continued. Om Anad requested another loan to expand her project, which was duly accepted.



Om Bassam also received a loan, in her case for setting up a small knitting business. After a short training course, Om Bassam decided to knit smaller items instead of larger ones. The large pieces she used to make before were not in demand, but the small pieces were highly desired by dealers in tourist handicrafts. The organization helped Om Bassam by offering her the opportunity to go to festivals and exhibitions where she could promote her products.

A third successful entrepreneurial woman is Om Raed. She also took a loan of 500 dinars to buy fresh tomatoes for sun-drying, a decision she made after a training course. She sliced the tomatoes, sprinkled salt on them and put them in the sun. When dry, Om Raed put the sun-dried tomatoes in 1 kilogram bags to be sold in winter when the demand and prices are much higher.



As well as these three examples, there are many other success stories. Only twice were the women unable to repay their loans in the agreed time.

Other projects

Our organization was one of the six that received a loan from the Royal Court worth 10,000 dinars (€12,600). Where many other organizations failed, our organization distinguished itself by managing the project properly. The results are evident. Based on this success, our organization was granted support from the Prince Hussain Initiative, geared towards the empowerment of local communities through agricultural development projects, household rainwater harvesting, and installation of solar panels.

Together with the Jordan River Foundation—an institute chaired by Queen Rania—we held a meeting with local community

members, resulting in a list of possible projects which the Jordan River Foundation was willing to finance. One of the things requested was a car to take people to the medical centers in neighboring villages, which was provided. In other cases, villagers benefited by planting vegetables and cereals, digging wells, or from the electricity produced by solar panels.

The organization received 30 head of sheep and goats which it distributed among the very poor. After carefully identifying the most needy families, each was given three animals. The organization also ran training courses and distributed supplies and financial aid to orphans and other poor families, as well as distributing winter clothes to school children.

Our organization is so successful because it responds directly to the needs of the

community. One clear example of this is the kindergarten we set up. Years ago, my four-year-old daughter returned home by foot from the only available kindergarten at that time, 8 kilometers away, when the only means of transportation broke down. This accident urged us to establish a kindergarten in our own village, and also giving more women more time to spend on other activities.

Recognition

Today, we are happy to see that our organization is recognized for its high quality service. During the Black Iris Festival in Albatra city, for example, we were honored by Mr Akef Alzughbi, the Minister of Agriculture. Many organization members were invited

to participate in an entrepreneur program organized by Care International, to serve as an inspiration for other women in the wider community. We gave lectures in different regions, and I even received a medal from the United Nations and was named 'ambassador for volunteer work' in 2016.

Strong, committed women

The women in the Badia have a strong and smart personalities because they are directly in touch with nature. We like to show what we can do, both within and outside the community. The world has seen that these women are active and productive members of society. We are eager to work. We are successful. And we are very proud of that.

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GROWING AND PROCESSING WILD THYME

Mansour Khalaf Awad Khalaf Al-Fawaz

Mafraq governorate has seen a large influx of Syrian refugees. As a result, one association felt the need to develop projects that would improve social cohesion in the area, involving the refugees in income-generating activities alongside Jordanian citizens. One of these projects involved growing and processing wild thyme.



The East Mafraq Coalition Badia Association was established in 1999 in Sabha village but implements projects throughout the whole of Mafraq governorate. These have provided both temporary and permanent job opportunities, reduced the effects of pollution and protected the environment. One focused on growing fodder crops by using water for irrigation that had been treated in the Mafraq city treatment plant. Another involved the production of fodder using vegetable waste as a source of compost. Others have included domestic water management, and the establishment of a pastoral reserve, while some were more cultural, involving women and youth.

One particularly successful project entailed the growing and processing of wild thyme, implemented in collaboration with the International Labor Organization (ILO). It was agreed that it was important to preserve this herb, which is a traditional ingredient in many Middle Eastern communities. Thyme is often mixed with products like sesame, salt and other spices to produce a widely used spice mix called zaatar. Thyme is also used as a medicinal herb, one use being to boil it for treating severe coughs.



Wild thyme is endangered due to urbanization and the expansion of areas used for modern agriculture—both of which take up large parts of its natural habitat. This project aimed to grow and process thyme following nationally approved standards. The project was launched by Mr Guy Ryader, Director General of the International Labor Organization (ILO), and the Jordanian Labor Minister on 28 January 2016.

Growing thyme

Activities take place in Sabha village, in the Wasit neighborhood. The project site was chosen because the necessary water resources are available here. It started in January 2016 with the building of three greenhouses for growing thyme. In addition, a place for drying and processing was set up, and 15 Jordanian and Syrian women were trained.

The objective was to create job opportunities for both Jordanians and Syrian refugees in the growing and processing of cultivated thyme, while at the same time conserving wild thyme. Growing thyme in greenhouses would allow for the production of seeds, which could then be sown back in their natural locations.

Although all activities were carefully planned, the people involved in the project encountered a number of difficulties. One of these was the location of the greenhouses, being far from population centers, making it more difficult for workers to reach them. Fortunately, this was easy to solve with a cheap and reliable means of transportation. Another problem was the lack of electricity, which was solved later when electrical power was organized.

A valuable product

This project helped the people of Sabha produce a valuable food item and meet the local demand for this product. At the same time, it ensured financial benefits for the association, while also helping strengthen the social cohesion between citizens and refugees. The project helped produce seeds, which were then sown in other locations. Finally, it is also possible to say that because of the project, 15 women are now actively involved in the agriculture and food industry.

To ensure the sustainability of this project, the management team plans to rely on a high quality process and product. As the women use traditional methods, they produce a natural product, free of chemicals and pesticides. The project and its products are promoted widely, opening up possibilities for expanding the cultivation of thyme. It is thought that thyme cultivation

can start playing a larger role, especially in the medical industry.

Challenges for the future

Maintaining the quality of this product may mean considering several factors. It is necessary to take into account the aspirations of all those involved. Also, it is important to keep in mind the turmoil in Syria and near the Syrian border, and the interest of all refugees of returning home. Finally, there is a slight possibility that climate change will cause an increase in temperature, which will cause the appearance of new types of pests and diseases that may negatively affect thyme farming.

But in spite of these difficulties, the project hopes to achieve more profits, maintain new job opportunities, discover new markets, and contribute ever more to the local economy.

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SECURING A LOAF OF BREAD

Mazen Mseeb Selman Aldmani

In Almreegha district, the Livestock Breeders Organization was able to make a difference in the community by looking at the needs and priorities of the people. The establishment of a bakery provided job opportunities especially to youth—and a steady supply of bread.

The district of Almreegha in Maan Governorate is on the desert road that links the north of Jordan with the south. The majority of the population are Bedouins who settled here the 1960s. The district comprises of nine villages and a residential community, but the area still lacks access to services. According to 2016 statistics, it has a total of 17,000 inhabitants, most of whom work in agriculture, animal husbandry, security agencies and public jobs.

The area is mountainous, the eastern part is dry desert, and heavy snowfalls are common during the winter, while the weather is moderate in the summer.

The Livestock Breeders Organization

The local community was established when Bedouins were encouraged to change their traditional migrating lifestyle, and so



services could be provided to them more easily. Responding to their need for basic services, a cooperative organization was established in 2004 under the name of the ‘Livestock Breeders Organization’ with 48 members from the community.

The organization was inactive until 2007 for several reasons. Firstly, a lack of funds from the government made the implementation of its planned activities difficult. Secondly, the location is far from the capital Amman, which is where institutions that finance and support projects are located. In 2007, the organization held meetings with the Jordan River Institute in collaboration with the Ministry of Planning. The Jordan River Institute is a national institute that receives funds from Her Majesty, Queen Rania Alabdullah. It implements development projects throughout Jordan.

In the first phase, the organization conducted training courses for two years to raise awareness in the community about the importance of implementing projects and to build capacity amongst community members who were interested in obtaining funding. Our objective was to support those who were ambitious to implement small projects, helping them meet their needs and the needs of the wider community. After completing the training period, the organization was granted funds to start various pilot projects.

With the support of the Jordan River Institution, the number of cooperative members increased to 448. The institution also paid their membership fees, increasing the capital of the organization and opening up new possibilities to implement more projects.

Early projects

The first project was to secure a steady supply of bottled gas to the community. Before, when people wanted to buy gas they had to travel to the gas agency in Maan, and had to wait a long time to be served. After the funding was secured, we established a team who went to the oil refinery and communicated with the gas agency to find out how they could organize supply and transport. This project reduced people’s burden and secured a steady supply of bottled gas for domestic use. This reduced the time and effort needed, and environmental damage caused by cutting trees for firewood. It also provided financial revenues for the organization, and five jobs were created for local people.

In coordination with the Jordan River Institute, another project involved going to the Transportation Regulatory Commission of the Ministry of Planning to obtain a bus for transporting students to the university. Before, they were forced to rent cars or find other expensive means of transportation. The cooperative arranged two buses that could carry 100 students a day. In

addition, two local people were employed as bus drivers. Omar, a university student, expressed his happiness. "Before the buses I was not able to arrive in time for my lectures, and in winter, most of my fellow students were absent because transportation was so difficult. This has all changed now."

The bakery

High prices of flour and fuel make baking bread too expensive for some families. The Livestock Breeders Organization worked to address these problems and found a solution to reduce the suffering of the families in Almreegha district. With funds from the Jordan River Institute, it was able to implement a bakery project in 2007–2009. It was based on the needs and priorities of the men and women in the communities, and on the social context of the district.

During the second year of collaboration, we saw the need for opening a semi-automatic bakery. This would provide job opportunities for unemployed youth who would be trained in different aspects of the business. The organization, in partnership with the Jordan River Institute and the Ministry of Planning, conducted a training course. In the third year, we built an oven, and the Directorate of Industry and Commerce of the Maan Governorate supplied the flour. Then, a trained local labor force of four young men started baking bread. The



families in the community were then able to buy locally-produced bread.

During project monitoring, we observed high rates of satisfaction among families and especially among the women. One of them, Hajeh Salma, showed her appreciation by saying that "I want to thank the organization for this project. The oven reduced my suffering in getting bread for my family." The project also helped reduce the cutting of firewood and thus helped to protect the environment.

Baking bread is no longer done in the traditional way. In the past, most women used to prepare the dough, wait for 15 minutes while it rose, cut the dough into pieces and then start baking. Women would work in high temperatures in summer, and the traditional way of making bread required a lot of time and effort. Moreover, the women were forced to breathe wood smoke from the traditional ovens that caused headaches and redness in the eyes. In winter the situation was even worse, because the wet wood takes time to light, especially in windy conditions. This traditional way of making bread burdened women a lot, at the expense of their health and time spent raising their children. Now, 70% of families purchase bread from the bakery.

This project mitigated the negative impacts of using firewood and the risks of using it inside the home. Now, there is continuous

monitoring of workers' health, as well as bread quality. The project has helped Bedouin women to confront some of the challenges they faced, increasing the time they are able to spend with their children.

A word of gratitude

I would like to express my gratitude to all those who participated in making these projects successful. The projects have served the district and met the needs of a significant segment of the community. I would like to encourage young people to contribute to the development of our district at all levels. It is also important that we support the active role of women, as we cannot deny them the role they have in developing the community. We must support their involvement in voluntary work because, in the end, we are all partners in this process.

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VEGETABLES AND SELF-RELIANCE

Mohamad Faleeh Dehaam Alsharafat

In Almanara village, a general lack of vegetables was having a negative impact on the health of the community. Working together with FAO, the Izz Alwatan Organization supported a group of women to grow nutritious vegetables themselves, making them self-reliant now and into the future.

The Izz Alwatan Organization, with its headquarters in the village of Almanara, was established in December 2013. Since then it has been implementing activities in the northeastern Badia in Jordan. Izz Alwatan has 42 members, of which 15 are men and 27 are women. The organization was established by a group of young, educated people interested in empowering women economically, raising awareness in the community, implementing income-generating projects, and offering loans and other assistance.

The organization had several projects, such as a revolving fund supported by the Hashemite Fund for Development of Jordan Badia. This project for empowering local councils was supported by the Jordan River Institute and funded by the Hashemite Court. Another provided an agriculture machine station supported by the Ministry of Planning and International Cooperation. The organization seeks to develop its own capacities for improving the livelihoods of Bedouin families in Jordan, and to encourage them to become productive.

A need for vegetables

Most families in the area work in the public sector and animal husbandry. Most women in this community do not work outside the home. The high prices of goods and the influx of Syrian refugees have put a high demand on vegetables. To solve this issue, Izz Alwatan collaborated with the FAO to conduct a survey that assessed the vegetable needs of the community. The survey included both Almanara and nearby villages and was conducted by voluntary teams from the organization alongside experts from FAO.

The survey showed severe food security problems due to the scarcity of fresh vegetables, and high prices make it impossible for families with low incomes to buy them. Moreover, there is a shortage of highly nutritious types of vegetable. The study also identified a lack of awareness about the importance of agriculture, as well as little of local knowledge on how to grow crops—particularly using modern methods. Finally, it showed that not many families



know how to cook healthy meals. There was a need to build awareness and knowledge, and training courses were recommended.

Home gardens and mutual gardens

After many discussions with FAO, the organization chose 50 women to join the project when it started in June 2015. It lasted for six months, ending in December 2015.

They started by establishing committees, made up of community members and a liaison officer from the municipality—who

was nominated to provide a link between the organization and FAO. The women were divided into two groups of 25. The first group consisted of women who have land surrounding their homes where they could grow crops. This land was called the 'home garden'. The second group consisted of women who do not have a garden, and the organization gave them a parcel of two dunums (0.2 hectares) where they could establish a greenhouse. This land was called the 'mutual garden'. The Agriculture Guidance Department was approached to help conduct training.

Each group was trained separately. The first was trained on how to prepare their land, how to deal with crop diseases and on healthy cooking. The training consisted of six sessions, one per week. On completion, women were given certificates, gifts and the needed equipment to begin cultivation. The second group started when FAO established a greenhouse on the land, seedlings and fertilizers were distributed, and agronomists trained the women how and when to apply them in the right amounts.

The women sowed cabbages, tomato, cucumber, lettuce, broccoli, spinach, onions and basil. These crops are highly nutritious, and they helped to improve family health. In coordination with the Agriculture Directorate, the organization monitored these families and assisted them in overcoming problems that they faced regarding their crops.

Challenges and achievements

Many difficulties were faced throughout the process. People were not immediately convinced that the project would show any benefits, as the ideas were new to the community. They found it hard to believe that it was possible to grow crops in the desert. And it was true, the scarcity of water posed a challenge. Moreover, the beneficiaries' houses are far away from the headquarters of the organization, making them difficult to reach. Mothers would bring their children to the training courses, distracting other trainees. Also, seedlings withered due to frost, and diseases and pest outbreaks spread and damaged the seedlings. But most of these problems were solved after consulting with related committees and other bodies such as the Agriculture Directorate and Agriculture Guidance.

The project achieved unexpected success in terms of providing the families with their daily vegetable needs. The gardens

produced highly nutritious crop and saved people money as they did not have to buy vegetables anymore. The gardens also showed the importance of agriculture. Women included in the project were keen to transfer their experience and encouraged other women to volunteer in similar activities, and to acquire new skills. Most of them were especially interested in learning how to preserve food and make jam. Finally, members of the organization gained new skills in conducting surveys, which helped them in identifying other needs within the community.

The participating women were issued certificates from international organizations that stated that 'the desert soil can be planted'. The beneficiaries are now aware of the concept of self-reliance, are willing to continue with what they learned during this project, and will look for other funding sources to continue this work and roll it out to include other families.

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MY HOMELAND IS GREEN

Walaa Ali Odeh Alshamalat

Responding to destructive practices surrounding firewood collection, the ‘My homeland is green’ initiative worked with women and school children to conserve the environment. Awareness-raising activities, together with the provision of alternatives to firewood has helped to restore the natural beauty of the area.

The village of Alhawalah in Maan Governorate in western Jordan is administratively affiliated to the city of Alshobak. The village lies at an altitude of 1800 meters above sea level, making it a wonderful summer resort where people can enjoy cool fresh air and a beautiful landscape. The 3000 inhabitants are Bedouins, and most work in animal husbandry and agriculture. Many of them have very low incomes, and there are very high unemployment rates, especially among women.

Due to high fuel prices, more and more people started using wood for heating and cooking. It was primarily school children under the age of 15 and women who collected firewood. But the detrimental effect this practice had on the environment led to the ‘My homeland is green’ initiative. We, the young men and women of Alhawalah, advocated the importance of this project, which started because we were keen to conserve the land around us. When we saw people cutting trees in a ruthless, heart-breaking way, destroying the vegetation of the area, we thought that we had to act to protect what was left.

The core of the initiative

‘My homeland is green’ aimed to increase the interest of the community in agriculture, expand green spaces in the area and reduce overgrazing. It helped to raise awareness among women and school children about the importance of agriculture, urging them not to cut any more trees. As women and children are mostly responsible for collecting firewood, the initiative targeted these groups specifically. Moreover, they were the most affected groups.

Schools were the core of our initiative and the focus of our work, as it is crucial to change the way in which children think about the importance of conservation and agriculture, being the future builders of this country. In this light, it was important to strengthen the role schools can play. We worked with three schools: the Alhawalah Basic Mixed School for Girls, the Alhawalah Basic Mixed School for Boys, and the Jafar Alsadek Military School.

The project started in February 2012 in Alhawalah and in the city of Alshobak,

alongside several community-based organizations including the Alhawalah Organization for Development which provided the necessary space and equipment for the workshops. The Alhawalah Women Charitable Organization formed two teams of women to support the initiative, while the head of the Alshobak Young Women Center established a team of 15 young women who helped change the way village girls think by communicating directly with them and with children of the village. Other partners included the municipality of Alshobak and its staff, the Center for Agricultural Research and Guidance, the Alshobak group of the All Jordan Youth Committee (AJYC), the Center for Enhancing Productivity in Alshobak, and Albalqaa Applied University.

A two-part approach

One part of our work involved growing tree seedlings and some crops. Women were provided with seedlings and six greenhouses by the Directorate of Agriculture, pesticides, seeds of zucchini, cucumber, ring pepper, parsley, arugula and fava beans. The project also started planting cypress trees along the sides of the road.

The project empowered women economically through the cultivation and sale of greenhouse crops. In addition, it supported them in the process of collecting plastic and waste paper, recycling them into



products that women could sell. The latter provided an income for five families.

The second part entailed two training courses to raise awareness among the community and especially school children. We did this with the assistance of agronomists from the Alshobak Agriculture Faculty of Albalqaa Applied University and the Center for Agricultural Research and Guidance, who carried out workshops and awareness lectures on the importance of trees and the advantages of not cutting them.

In addition, we helped set up different agricultural school committees, each made up of 17–20 students. These committees undertook vocational education classes twice a week. The students enjoyed these classes and participated fully, and committees of students stayed to work after



school time. This approach increased the number of student volunteers who monitored and took care of their school yards. Together with these volunteers, signboards were designed that communicated the importance of agriculture and of local trees, and which were distributed in the affected areas.

The project also looked at alternatives to using firewood, such as using tree prunings, offcuts from carpentry workshops, and the residues from olive presses. However, it was a challenge to get people to accept these alternatives, as some stated that carpenters and olive press owners charged too much.

Other difficulties prevented the achievement of the expected results. For instance,

random grazing damaged some of the newly planted seedlings. Also, there was no fixed location to conduct the workshops and symposiums, and the funds provided by the different agencies were not enough to cover the costs of all the different activities. Moreover, the nature of the area and strong winds made it hard to install the signboards.

But it is worth mentioning that the organization is new and did not receive any funds from public, local and international institutions to adopt its entrepreneurial ideas to protect the environment from desertification and extinction. Though the low cost of the initiative should make it easy to replicate in the future. We are now planning to communicate with different public institutions and international organizations to secure the funds needed for purchasing basic materials such as seeds and seedlings and to continue implementing activities on a larger scale.

Reviving lands and communities

The organization seeks to meet the needs of the community by implementing pilot projects that have had a positive impact. This initiative helped to revive our land. It has reduced the effects of pollution and of diseases, as well as making the summer heat more endurable. Tourists have returned to the area, and now enjoy the beautiful landscapes. As 12-year-old Mahmoud said as he was holding an olive branch in his hand,

"I wish to see trees once again in my area, the way my mother and father said it was in the past."

The seven families that participated in the women's component of the project attained self-reliance from the many different vegetables that they planted. But to further their progress, we hope to implement rainwater harvesting structures to store water.

At the end of 2013, a group of women established the multipurpose organization Asalit Albadia Organization for Women. It was the only organization in the area that adopted the ideas of the initiative. Om Ahmad, one of the active members of the organization, said "the 'My homeland is green' initiative made us seriously think of establishing a cooperative organization concerned with the land and citizen issues. We aspire to have a beautiful area that attracts tourists and locals where they can enjoy the beautiful scenery."

We realized through our work with women how high the illiteracy rates among them was. This situation urged us to establish literacy centers. We also opened centers to help students in their studies and reduce the burden on their parents. In addition, we continued holding workshops to inform people about the dangers of desertification and the detrimental effects of cutting firewood. In 2015 and 2016, the organization conducted several additional meetings and training courses in the area, focusing on micro-project management, selection of projects and parenting education.

The initiative gave us ambition, challenge and will. It broadened and opened our thinking to new horizons and allowed us to discover the best way of using our natural resources. The community greatly welcomed this initiative, and saw the significant advantages it gave.

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LIVESTOCK BREEDERS BENEFIT MORE, TOGETHER

Ziad Odeh Rasheed Alneimat

The breeders in the district of Eil lacked an official organization, leading them to lack access to development opportunities. Through persistence, personal commitment and endless voluntary work, the breeders' organization finally became a reality.



Animal husbandry is considered one of the main components of food security in Jordan, and the Badia region is home to the highest number of Bedouin. Here, most families depend on animal husbandry to secure an income. The government provides this segment of the community with fodder and vaccines through the Directorates of Agriculture and Veterinary services affiliated to the Ministry of Agriculture.

Organizing Eil's breeders

According to statistics from the Ministry of Agriculture for the year 2014, there are 450 livestock breeders in Eil district in Maan Governorate. They face different challenges, especially without an official body to address their problems and look for development projects. This lack of representation became evident when international institutions showed an interest in supporting them, but found no organization to work with.



Thus, it was crucial to establish an organization that could support and strengthen collaboration among the livestock breeders, and help to improve the livelihoods of the entire community. Furthermore, an organization could give the breeders an opportunity to exchange information and combine their efforts to find markets for their livestock products. It would also improve competition and help them become more aware of different issues related to their herds, such as animal health, reproduction, vaccination, and how to avoid contagious diseases that are transferred from animals to humans.

The Jordanian Cooperative Corporation, a governmental body that works with breeders' organizations, requested those from Eil to establish an organization. Initially, it seemed that this would be unsuccessful because there were no volunteers to take up the idea. Because of my concern for the breeders, the mayor of the municipality, Mr

Sabah Aneimat, encouraged me to implement the idea myself. I was already strongly involved in the community as a member of the Feek Alkheir organization, a member of the Advisory Council of Center for Youth, a liaison officer in the Ministry of Energy and Mineral Resources in Eil District, a member in Alshar Sport Club, and a member of the local council. I spoke with the representatives of many different bodies to secure their support, and started working with the herders themselves.

Growing collectively

We first held a kick-off meeting to discuss the initiative, but this meeting was futile because the breeders failed to see the need to establish an organization. In a second attempt, we invited an expert from the Cooperative Corporation to talk about the advantages and about the importance of working together as breeders. The expert shared many success stories of



other organizations. He continued to hold regular meetings and make field visits to the breeders' locations to convince them. Afterwards, around 20 people attended the next meeting. They were asked to convince others about the importance of joining an organization. More meetings followed, and more people showed an interest in joining.

These steps prior to establishing the organization took around six months. In this time, we highlighted how the organization would offer financial and moral support,

attract projects that would offer services, address their problems and find the best ways to use their resources.

After convincing them, we collected the personal data from all the prospective members. This took two months. Then we submitted the membership application to the Cooperative Corporation. Membership fees were paid in monthly installments to minimize the financial burden on the breeders. In the final phases that preceded the establishment of the organization, many breeders were eager to become members. Finally, in February 2014, the organization was officially registered. Mr Mohamad Salem Alneimat was nominated as chairman not only because of his willingness, enthusiasm and hard work, but also because he was—and is—trusted by all breeders.

In a short time, the number of associate members grew to around 125. Currently the organization plays an effective role in serving the breeders in Eil district. For instance, a fodder crusher was made available to the breeders for an affordable price.

An agreement was signed to rent land from the Eil municipality at a nominal cost of one dinar per year for 90 years, to provide a space for implementing projects such as a factory for processing dairy products. The organization decided that establishing a factory would be important, as it had started buying milk from the breeders. The

organization then employed several women with experience in processing dairy products. These products were then sold, and the profits benefitted the organization and its members.

The importance of voluntary work

I work in the organization as the head of the council, offer logistic support during meetings, use my office to welcome associate members, copy and distribute the necessary documents to participants in meetings, and help convince the head of the municipality to approve the tenure of the land for the organization. The head of the organization communicated with the Ministry of Agriculture, the Ministry of Environment, the Ministry of Planning, and also with different international organizations which

could help implement projects that serve the community and support the breeders. Such projects include agricultural activities and also the establishment of pastoral reserves.

There opportunities in life, but who will grasp and use them? Everyone must work hard to advance the community. It is important to act together to promote the concept of voluntary work with our children, as they are the future. I am very proud to have helped to establish this organization, where I paved the way for others to continue. I encourage young people to get engaged in voluntary work, given its immense benefits. And I hope that the breeders' organization continues its march on the road of success, serving the community.

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