The Lasting Footprint

Facilitation stories

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Department of Environment
Conservation of Iranian Wetlands Project
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Supportive and empathetic farmers who offered their experiences and trusted us
Office of Conservation of Iranian Wetlands Project (CIWP),
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Agriculture Jahad Organization offices of East and West Azerbaijan Province,
and all experts in East and West Azerbaijan provinces,
that provided the opportunity to us for learning participatory work.
In memory of farmers Mr. Saeid and Mr.Soultan Ali that their footprint will be everlasting in this book although they are not among us anymore.

This book is dedicated to:
Our families who patiently accompanied us althrough this project.

Foreword

From a development perspective, the main agriculture agenda in tropical, semi-arid, sub-humid and humid areas of Asia, Africa, and Latin America (Southern hemisphere) is changing the third agriculture into more sustainable and productive systems which can provide sustainable livelihood for the ever growing populations of the future. This is due to the fact that such areas typically host growing populations and have a fragile environment. However, the mainstream research and extension activities are not compatible with this type of agriculture.

The prevailing mode amongst agricultural research and extension professionals is the "transfer-of-technology" (TOT). In this mode, research priorities are determined by scientists and donor agencies. Experts and researchers then experiment on the priorities in laboratories and research stations to produce technological solutions, which are then handed over to extension professionals to be transferred to farmers. This model of research and extension started with the "green revolution" practiced in the fertile and water-rich plain lands of some Asian, African, and Latin American countries and in areas where conditions could be adapted and modified to resemble those of research stations. These areas can take on a simpler structure, be controlled and predicted, and ultimately lead to generalizable results. The TOT mode is deeply embedded in the typical professionalism mindset and its recommendations; be it in training, behavior on the field, or development discourse. However, the mode has proven less effective for third agriculture and the primary reason has been the difference between the natural and economic conditions of research stations and that of third agriculture farming families and fields which are mostly small and resource-poor. Another reason could be the incongruity between the nature of third agriculture and conventional professionalism.

Throughout the history of agricultural development, farmers' non-adoption of extension recommendations has been attributed primarily to their ignorance, and secondarily to farm-level constraints. It has been assumed that with more and better extension activities, farmers will become more aware and by reducing farm constraints, their conditions can become similar to those of research stations. However, with the third agriculture, such assumptions have proven inaccurate. Farmers are far more knowledgeable than agriculture professionals think and third agriculture conditions are not and never will be similar to research stations. But this should not be seen as a flaw. The incongruity between the mainstream conventional professionalism and the complexity, diversity, and risk-proneness of the third agriculture has veiled the potential of this type of agriculture. In other words, when farmers rejected the basic pre-determined "transfer-of-technology" packages experts concluded that third agriculture areas have no potential.

Over the past two decades, innovators in agricultural and social sciences have increasingly collaborated with farmers of complex, diverse, and risk-prone systems to seek solutions to this incongruity. This has led to the emergence of a new mode of agricultural research and extension. The approaches to this mode have been labeled differently, but the key common characteristic of all is farmers' priority and participation. These approaches can be taken as the different branches of the family of "farmer-first" paradigm.

The book at hand can be seen as a practical depiction of the farmer-first paradigm, with each of its narratives demonstrating one or more of the paradigm's aspects. The writers of this book are individuals who have worked, over the past five years, as part of the agricultural service companies implementing the project, "Cooperation in Urmia Lake restoration through the participation of local communities in the establishment of sustainable agriculture and preservation of biodiversity". They have repeatedly and systematically been trained on how to adopt participatory approaches in their work with farming communities. The true value of this book could be that whatever we read about and discuss in meetings and workshops are portrayed in practice. Hence, there is hope that the narratives of this book can provide a platform for connecting and comparing local experiences to global developments.

We have to thank Andisheh Ensanshahr Institute for the facilitation of the process of creating this book. For the compilation of this book, we reached out to the implementing companies of the above-mentioned project, and ten individuals stayed on board till the end of the process. So, we would like to extend our gratitude to Farshad JOUDIAN, Nouruz SHAHAMATAZAR, Latif HAGHI, Chiko AMINI, Haleh TARAM, Sahar AKBARZADEH, Shirin

ABDOLLAHI, Leila VEJDAN, Sonia PIRAN, and, Sonia ROSHANROO for the energy and time they invested in coming up with this book. This does not imply that the Agriculture Jihad personnel, other people working in the agricultural service companies, or stakeholders involved in the project do not have their own unique participatory experiences. Each person in their own capacity might have appreciated and experienced a degree of change in attitude and approach and have moved from mere extension toward facilitation. Thus they have a lot to contribute to the purpose of this book.

(Even for those whose writings have been included, this book cannot claim to be a comprehensive recollection of all their experiences). We compiled this book with a group who could afford the time and whom we could easily access, so that we could manage the scope of work and get to the final product in a relatively short time. We hoped that this way we could present the positive field developments quicker and learn how to document experiences.

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1.The third agriculture is a term coined by Robert Chambers – in contrast to industrial (first) and green revolution (second) agriculture- to describe the mainly dry farming found on "undulating land … in hinterlands, mountains, hills, wetlands and the semi-arid, sub-humid and humid tropics" (Chambers, 1993). Complexity, diversity and risk-proneness are the characteristics of the "third" agriculture. Chambers does not, in any way, belittle this third type of agriculture. Rather, he emphasizes that this type of agriculture has deep roots in the areas where it is practiced and possesses a richness that would justify placing it at the core of agriculture in these areas.

2. Chambers introduced 'farmer-first' as the umbrella term for participatory approaches in agriculture

Contents

Introduction

The necessity of facilitation of a new paradigm

In the past 6 years agricultural service companies have been implementing "sustainable agriculture" in East and West Azerbaijan provinces. The project with the full title of "Cooperation in Urmia Lake restoration through the participation of local communities in the establishment of sustainable agriculture and preservation of biodiversity" is one of the CIWP activities. The CIWP supported by UNDP, GEF, and, DOE was launched in 2005 and is an example of measures to improve wetland management and alleviating the pressure of human activities on wetland resources including Lake Urmia. The role of these companies as the executors of the sustainable agriculture project is different from what is commonly done by expert and agriculture extension professionals. The reason for this difference can be sought in the different approaches of facilitation and extension. The incongruity affects various aspects such as interaction with the farmers, target groups, mutual expectations of farmers and external people. To better understand this difference, one can point to the fact that traditional extension failed in adapting itself with the real the farmers in most southern hemisphere areas.

In previous studies on agricultural systems, the external professionals extracted information from farmers, analyzed them and decided what would be good for farmers, and, what project should be developed and implemented. In the" farmer-first" mode, the farmers themselves conduct the analysis, selection, and trial while the external professionals play the role of a facilitator and supporter. Therefore, in the

participatory approaches, in parallel with external people's attitude and behavior, the interaction between the villagers and external professionals is also the focus of attention.

The inversion of parts of the technology transfer paradigm is the essence of the farmer-first mode; parts that are assumed to be unquestionably evident. For example, inversion of problem statement is tantamount to finding out why a farmer does not use the technology, and stating the technology's shortcomings as the reason rather than the farmer's ignorance. Reversal of learning means that researchers and extension professionals learn from farmers. There is a reversal in positions and roles too. In other words, instead of research centers, laboratories, and professionals, the farmers become the axis of innovation and transform the field into a technology development ground.

We should consider the role of executing companies in establishing sustainable agriculture from the same point of view. They can help farmers in analyzing their current situation and resources first, then plan the new methods, and implement, monitor, and evaluate them. The executing companies can also help them in managing and organizing their community. We have observed significant outcomes emerging from the companies' cooperation with farmers and their families. For instance, farmers could analyze the current situation and look for opportunities, challenges, and possible changes in their field of work. They could also explore new solutions for improving the agricultural situation and to make the situation sustainable and could practice horizontal learning. Moreover, as a result of this process, poor farmer families got involved in the agricultural and livelihood developments.

This book intends to narrate the personal experiences of executing companies in their own language, and draw the attention of its readership to certain aspects of facilitating a participatory approach in agricultural communities. These are the aspects which became of importance to facilitators in the field and gradually turned into a procedure for them. Ten people's experiences are reflected in this book, but the content might sound familiar for many others especially those who facilitate social processes on the field. Thus, as put by one of the authors of the book, it is the reader who can judge whether the narratives "smell like soil".

The book; what it is and what it is not

We narrated the individual experiences about applying a participatory approach in this book that some experts and facilitators of executing companies responsible for sustainable agriculture projects volunteered to practice. Thus, stories and perceptions reflected here represent the narrators' inner impressions other than the experiences of a company at the organizational level. Therefore, other members of the company may have their own stories regarding this method. Hence, one cannot rely on the content of this book for evaluating the executing companies' performance. In fact, the individua experiences only show various aspects of the participatory approach.

This book does not claim to be the outcome of a field study; it is rather a collection of individual stories about the participatory approach. The stories reflect the process of attitude change and the authors' method of work (none of them claims that they reached the maximum level of "participation"). For some of the authors, change means more flexibility and for some means sincere interaction with the farmers. On the other hand, the book is written based on agricultural experiences but it does not include a step by step explanation of how to use agricultural technologies; agricultural techniques are there to serve a tool to talk about the facilitation experiences.

The content of the book is of different natures. Some parts are pretty detailed and perhaps the reader will understand points which bring about an "aha!" moment about the participatory approach. It means that what happened to the author on the field paved the ground for a certain understanding and some learning. There are other parts that are more like interesting stories, probably telling the readers about something unexpected which happened that could "surprise" the reader about the participatory approach and its effects. These wonders could immediately or later shed light on some aspects of the participatory approach.

The book is neither a self-learning nor a theoretical text on the participatory approach. The topics of this book are not comprehensive and should not be assumed as so. It is just a collection of the stories depicting the experiences gained during the project.

The content of the book is classified into three groups. Chapter one includes two sections and seven pieces which reflect the experiences that indicate the "paradigmatic differences" between the participatory approach and the conventional method. Chapter two includes six sections and twenty-one pieces and consists of incidents in the daily life of facilitators which led to a change in the farmers' "attitude or behavior". Chapter three includes three sections and nine pieces that narrate stories which indicate how the participatory approach is stabilized and rooted in their activities.

Who can benefit from the book?

This book can cover a wide range of readership:

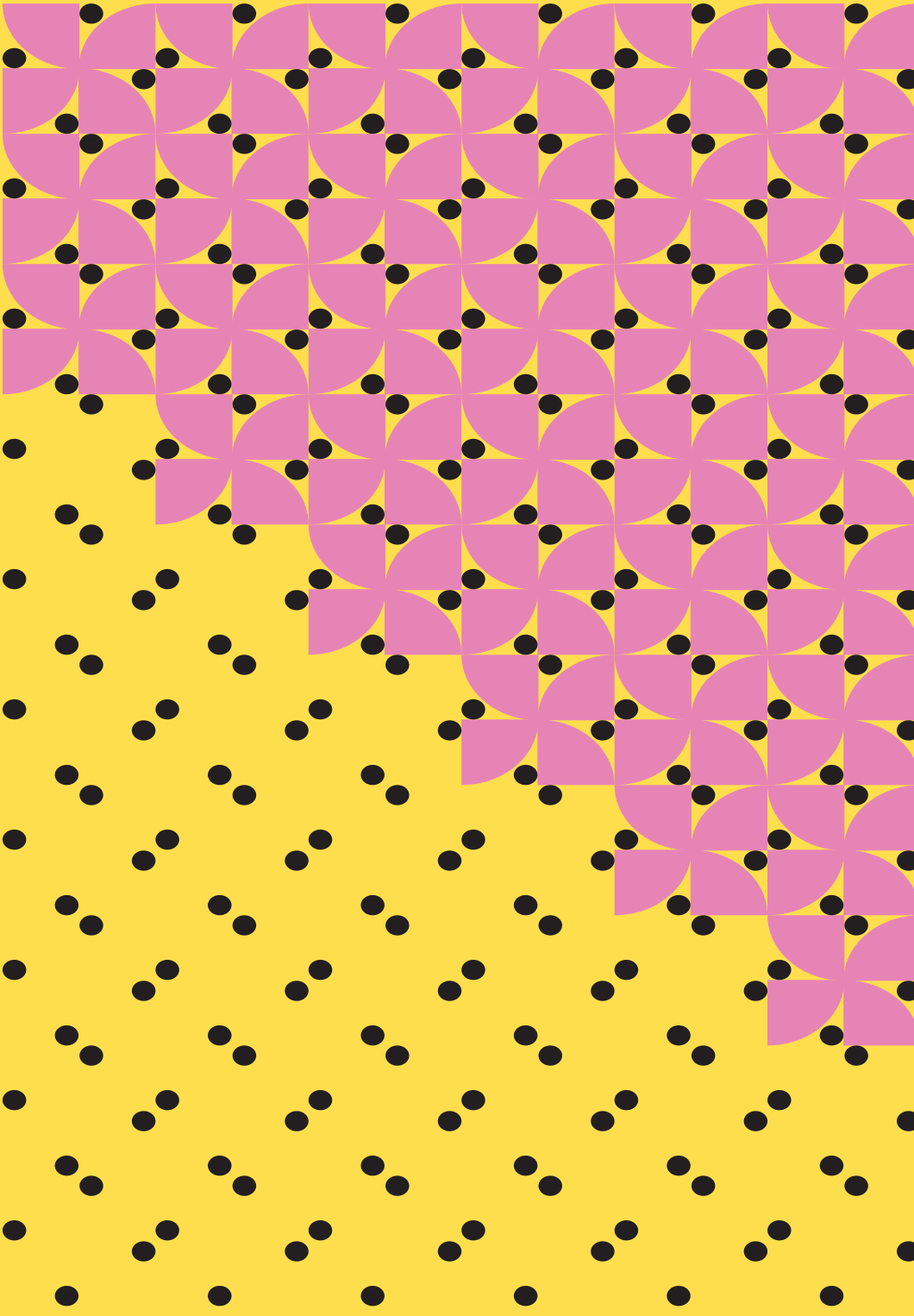
- **Agricultural section staff: to know about the delicacy of facilitation to support the companies;**
- **Persons in charge and policy-makers in the social field: to trust in capacities and abilities of local youths in implementing activities based on a participatory approach;**
- **Agricultural and environmental activists: to know about the participatory approach experiences with local communities;**
- **Students in the agriculture field and those who want to know about the differences between participatory and extension methods: to get familiar with the practical cases based on the concepts and participatory methods;**
- **Educators, extension professionals and facilitators whose efforts are to improve the quality of life of the local community.**

How to read this book?

Perhaps you can read this book from two perspectives or by wearing two types of glasses:

One ___ To read the book continuously from beginning to end assuming that we are reading a cycle of participatory actions. Given this, you can start from any pages of this book and continue till the end.

Two ___ To read each story independently and be inspired by it assuming that each story reflects the feelings of an individual. Perhaps by reading part by part, you can imagine a jigsaw of participatory work.



Science & Eexperience Partnership

We stepped in the local communities based on scientific knowledge and desired to implement modern technologies. In this process, we encountered challenges and failures. In most cases, the reason for failures was the mismatch between a scientific solution and the current situation of agriculture. The farmer knows best about this situation, but his role is ignored. In the process of change we tried to allocate a significant share to the experiences of the local community so that the practical solutions (technologies) can be more compatible with their situation.

It's Impossible to Harvest Wheat Here

Dash Tappeh village

Farshad JOUDIAN

"it's impossible to harvest wheat in this field and even if it were, it couldn't be economically justifiable". This was a statement by an agricultural expert about a piece of land in the Dash Tappeh village.

Dash Teppeh is one of the old villages in Miandoab county. The village is located in the North of Mindoab, 25km south of Lake Urmia. It has 390 ha of agricultural land and agriculture is the major occupation of the villagers.

It was midsummer. We traveled several times to this village to get familiar with the situation briefly. We visited the shop of Agha(Mr.) Bohlul under different excuses, sat in his grocery for a while and Agha Bohlul served us tea. The villagers talked to us and to each other about daily issues. They believed that we were good listeners.

Once, we noticed a farmer who possessed a piece of land near the road. He was harvesting onions. However, from the look of the farm one could notice that the crop is not of a very good quality. During a visit to the village, we met this farmer in front of the grocery. He greeted us delightfully. His name was Mr. Saeid and he had 2 ha of agricultural land that was a livelihood source for his family of eight. While talking to him other people joined us and started to talk about the agricultural problems in the village such as less groundwater, the decline of agricultural lands due to well water salinization, low productivity, late payment after the sale and, so on a so forth.

Saeid consults with an expert farmer about furrow planting technique
Photo by: JOUDIAN

Most of the problems stated by the farmers were related to the agricultural situation of the village. We prepared the resource map of the village at the grocery to encourage their participation and get more familiar with the village. Then together with them ranked the "importance" of each problem. The methods that we were using were interesting to the farmers. It was not just one person talking and others listening. Staring with preparing the map and then moving to defining the production cost of each item and prioritizing the problems, everything was done with the participation of all farmers. Shortage of water and low productivity were determined as the major problems by the end of these interactive meetings.

During one visit Mr.Saeid asked us to see his farm. He explained that "when you are only left with a short time to harvest, well water reduces to the extent that to cover just 1 ha I have to irrigate 6-7 days. This damages my crop and in the end, the yield is not covering even the plantation and maintenance costs". He added that after harvesting onion he desires to cultivate wheat. However, the water shortage will reduce the production of wheat by 40 to 50%.

By preparing a map of resources, local people portray all the natural resources in or around their village –including forests, mountains, rivers, wells and so on- and determine the usage of each. The map can serve as a tool to analyze issues such as level and type of access to these resources, management of common and limited resources and the relation between resources and livelihood.

To explore the issue, the team members asked an agricultural expert to visit the farm. After the visit, he just said one thing to us and Agha Saeed: “cultivating wheat after the onion has no economic kustification”. We knew something about the issue by reading articles and had the same opinion as the expert but kept silent. This was because experiences of the past proved to us that farmers know their farm situation better than anybody else. We waited Mr. Saeid to react. He said that “in our village, following onion cultivation, wheat yields well”. The statement didn’t sound strange to us. During several visits to villages and discussions with locals, we had heard this many times. However, the researcher was sticking to his opinion relying on scientific articles. We were just silent observers. Shall we prevent the farmer from cultivating based on the scientific articles and opinions of the researcher? Or, shall we trust the farmers of the village and agree with Mr.Saeid? Sending off the researcher, we had a short conversation with Mr.Saeid about the cultivation technique, and decided to plant wheat in the next agricultural year with the condition of adding a fertilizer. The fertilizer was to be chosen based on the result of the soil examination to produce a better crop. Moreover, we agreed to plant the seeds on the beds during the hot season to reduce the impact of water shortage. This would lead the water through the furrows and as a result, water infiltrates gradually to seeds instead of flood irrigation. Mr.Saeid accepted all the conditions and we decided to cultivate wheat relying on his and other farmers of the village experiences. We also considered all scientific aspects while planting and the wheat seeds in the presence of some other farmers. The crops grew pretty well and as expected the well water level was greatly reduced at the time of the final irrigation. However, our planting technique helped to irrigate the farm with less water. It is worth mentioning that the final irrigation is the most important stage for wheat production, and the water shortage at this stage will result in 30-50% of production reduction. Mr. Saeid could irrigate the farm during 2.5 days, and contrary to former years no single part of the farm was left unirrigated because the water reached every corner through the furrows. This satisfied Mr.Saeid. Scientific suggestions led to a regular and appropriate growth, and the irrigation was optimized. Now, we were anticipating the result of trust in a farmer’s experience and his insisting on cultivating wheat after onion.

Final product
Photo by Hatam FEIZI

The harvest season started. Not just Mr.Saeid, but other farmers were impatiently waiting to see the result of this participatory work. After harvesting, the truck scale indicated that 11.5 tons of wheat were produced which was a very good outcome. The happy face of Mr.Saeid was heartwarming and refreshing. He earned pretty well by the sale of the wheat. Moreover, he kept some wheat to plant next year and sell to other farmers. His livelihood greatly improved.

We didn't do anything special. We just reminded the farmers of what they were taught by the experts years back. But now something was different; in the past the experts talked and the farmers listened only. This time farmers and experts talked with each other, discovered problems in a participatory manner and come up with solutions in the same fashion. We could have prevented the cultivation of wheat after onion based on scientific evidences, but we trusted farmers relying on our experiences. This experience along with so many other factors resulted in mutual trust between us and the local community. We learned another great lesson: science and experience must be complementary to each other, rather than two conflicting forces.

Haji Nader Was Right

Qom Qaleh village

Chiko AMINI

Qom Qaleh is one of the pilot villages participating in restoration of Lake Urmia. After socializing with the local community and explaining the project procedure we invited interested farmers to cooperate with us. Haji Nader BAHRAM RASH was one of the orchardists who were selected as the exemplary farmer of the spring and whose orchard was monitored by our group. While implementing the techniques for water use optimization, we noticed a piece of land at the orchard where he cultivated cucurbits every year. Since cucurbits require a huge amount of water, we talked with him about irrigation and the amount of water used, and found out that a lot of water is used here.

After a while, our group decided to talk with Haji Nader about one of the sprinkle irrigation techniques (planting by drip tape method in particular) that he previously heard about and was interested in. However, he was not sure about its function and didn't want to take a risk. I discussed with him several times and explained the advantage of this irrigation technique that makes the increase in the cultivated area possible, optimizes water use, is easy, enhances performance, eliminates some diseases caused by excess moisture, reduces weeds and saves time. Haji Nader decided to allocate half of his farm to this technique to validate it. After the necessary studies I made the required arrangements and started the implementation phase in cooperation with the company members and Haji Nader's sons. Everyday Haji Nader was asking questions about the strength of the pipes, the number of drippers, and the irrigation method. We explained the advantages and high performance of this system

During the phase IV of the project, agricultural techniques (irrigation and optimized agriculture) were implemented in a number of farms and orchards of East and West Azerbaijan provinces including Mahabad county. The goal was to find solutions for the optimized use of water and other inputs with the participation of farmers.

to him. On the last day when were done with the job, he appreciated our work and wearing a smile added, “if I turn the pump on, all the pipes you have put in place will explode”. However, I was sure about my work and knew that there is no problem with the design. So I insisted on the good performance of the system by reacting “don’t worry Haji. We considered all the aspects and for sure the system will perform without any problems”.

First of all, it was necessary to wet the soil so we could transplant the seedlings. It was a good opportunity to examine the system. We went to the farm and as soon as we turned the pumps on, something bad happened; just as Haji had said. Due to water pressure, the pipe connected to the pumps was broken, and one of the other main pipes was torn apart plus to secondary tapes. After exploring the reason, I found out that the pressure of the pump was too much for this system to bear. So, Haji Nader was right!

He said: “this problem wouldn’t have happened if you had asked me about the pump during the process of your work. No problem. It was an experience for you to inspect every aspect with the farmer”. I had ignored his information about his resources while he knew that the power of that pump was far beyond the resilience of the pipe. This was proof to me that I failed to put aside my bias and that I still could not trust what the farmers know.

We were looking for a solution with Haji Nader and he said “I have another pump the power of which is adjustable. It would be right for this system”. We installed the new pump, and changed the damaged pipes and tapes with the cooperation of the company experts and Haji Nader’s sons. Now, the system was performing well with an adjustable pump. The experience of Haji Nader has solved the problem.

Local Professionals

Tazeh Kand village

Leila VEJDAN GHAREH BAGH

We implemented the technique of wheat furrow planting in cooperation with one of the village farmers. Later, we visited the farm with the farmer several times, talked about the details and concluded that we made a mistake in the process of implementing this technique. After several inspections, we took note of the problems so that we do not repeat the same next time.

The harvesting season began and we visited the farm with the farmer to see the outcomes of our work. The farmer expressed his satisfaction with the result. At this moment, the combine driver got off after harvesting a row, and came towards us. After greeting he asked about the implemented technique and the farmer explained to him. Then he said to us “it is an interesting technique but there is a problem with the way you implemented it. If you want, I can help you in coming years”. He believed that the long distance between the sowed seeds is the problem and added: “if the distance is shorter, the result would be better”.

It is an interesting technique but there is a problem with the way you implemented it. If you want, I can help you in coming years.

Combine driver conversation with us and the farmer, explaining the deficiencies of our work

Photo by: Mojtaba JAVANBAKHT

Although we had realized that there was a problem with our work, the points of the combine driver attracted our attention because what he said showed his interest in what we had done. We thought how good it would be to have local experts with us who can pave the way to get to techniques which can solve agricultural problems.

1. In furrow planting, first seed is sowed to the farm then furrow and bed is made by furrower machine.
2. Techniques are the scientific skills and methods used in planting, care and harvest stages.

The Fasteners Have Not Arrived yet

Khodaverdi Khan village

Sonia PIRAN

We visited a store selling sparkling irrigation tools to help Mr.Aliverdi Zadeh buying some tools of good quality. All the tools and pipes on the shopping list were purchased except for two “fasteners and wires” that Mr. Aliverdi Zadeh did not buy despite our emphasis.

I said “let me buy the fasteners or at least a few meters of wires for the secondary pipes. Tomorrow we are going to put water into the irrigation system and if we don’t find these items in the village we have to wait”. He replied “No. it won’t be an issue. There would be no problem”.

We were all at the farm at 9 o’clock to start the work as scheduled. I was very upset thinking that why he is going for an imperfect job while he is trying so hard and participates in sustainable agriculture.

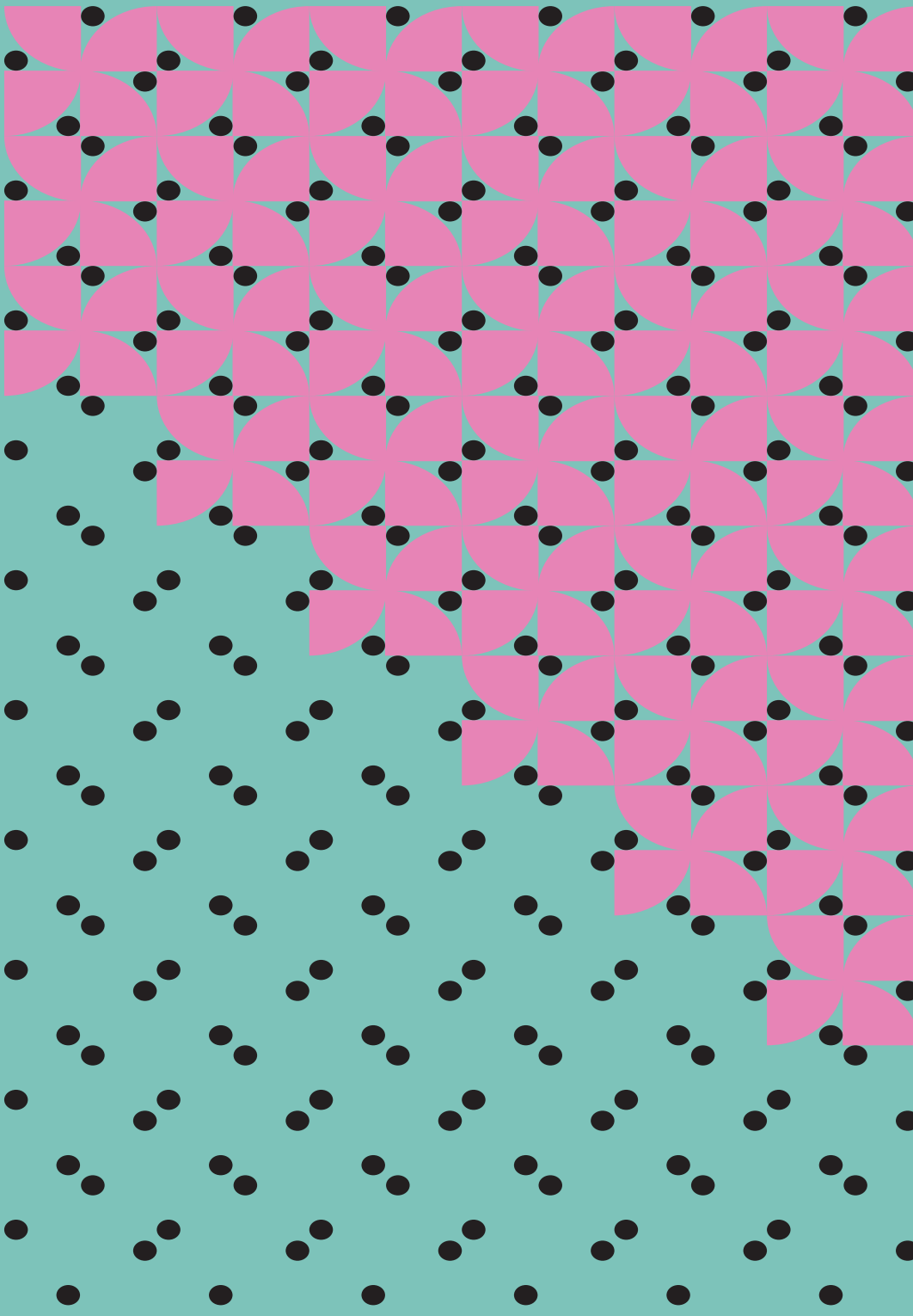
At lunch time I asked him “do you have an idea in mind?” and he answered, “be patient. There won’t be a problem”. We got back to work again and everything was going on well. Neighboring farmers also came to help with laying the tapes. I told him and his son “please be careful. The direction of grooves on the tapes is very important for better discharge of water.” Because, if the grooves are under the tape, instead of dripping the water, they will drain it. Suddenly one of the local people said “it doesn’t matter. It will drip anyway”.

Using bottle cap instead of fastener
Photo by: Bashir AYUB NEJAD

It was time to send the water into the pipes. Mr. Aliverdizadeh brought a black bag filled with empty bottles and pieces of tire tubes. He filled the bottles with water and put them at the end of major pipes. Then said to me “did you learn it?”. I answered: “it’s great. It can’t be better than this, but what about the fasteners at the end of tape’s pipes? We haven’t even bought wires”. He said: “be patient”.
He folded the pipes and blocked the end of the tape’s pipe with a small piece of the same pipe. Frankly speaking, it was the first time we saw this method of work. We released the water into the pipes and I could see the joy in the farmers’ eyes. While inspecting the system I found out the water is draining in some of the tapes. We immediately closed the valve and fixed those tapes. Mr.Aliverdi Zadeh said to me “lady! You studied this field. The direction of drip tape has some influence”. I could see that the utilization of accessible tools in the village reduces the cost and at the same time accelerates the work. This work could not be done just by our knowledge or the mere experiences of the farmers.

1. Drip Tape: a thin-walled strip which is used for drip irrigation.

We released the water into the pipes and I could see the joy in the farmers’ eyes.



A Comprehensive Look at Issues

Before knowing about the participatory approach, we entered the local community having specific goals and unilateral solutions for existing problems in our minds. We did not know that a very complicated and tricky environment is awaiting us; an environment about its socioeconomic and culturalaspects we had no clue. Currently, we apply different methods to solve problems and they are all based on the experiences gained through this project and we look at issues more comprehensively.

Notice Hints

Qarabqolu village

Latif HAGHI

Every experience includes hints that trace back to the past. Even if an experience is a bitter and shocking one, it would still hopefully bring about some awareness. We should learn from the experiences and in case of bitter ones, avoid repeating them. Many pleasant and unpleasant experiences occurred during the implementation of the Sustainable Agriculture Project in the villages around the Lake Urmia basin and every single one of them has so much to say.

We had to work with some farmers, conduct training and suggest technologies regarding water management, fertilizers and chemical pesticides based on the sustainable agriculture specifications. Sure of my good intentions, I provided some suggestions to the farmers but I received some unexpected reactions. Those days we knew little about the conditions and available facilities of the farmers. I never asked myself whether what I am suggesting is fulfilling their needs? Or, do they desire to continue with these technologies in the future without us? If not, what would be the reason? Have we disrupted the social bonds in the village? We became aware of such issues only after some work with the farmers.

Ms. Tarverdi Pour was a farmer who worked on her own. She alternated between wheat and tomato on her small farm every other year. She welcomed our suggestion to plant the wheat seeds using a row wheat planter machine. We were happy that we had considered the technical aspect of the work. She harvested a good quality product, however

unfortunately we did not consider monitoring and evaluation of our job. As put by a friend: "monitoring and evaluation was the missing link of our work". Once in a meeting with Ms. Tarverdi Pour we asked her whether she will use this machine after we leave the village. And, the answer was a shocking big "NO". She explained that the machine is too big that the two ends of her land cannot be planted while she wants all parts to be covered. We had suggested she plants the irregular-shaped 440 m2 land by a row planter with a width of more than 4m. We did not notice that the imbalance results in the non-plantation of some parts and will leave the farmer unsatisfied.

Another villager was a farmer the character of whom I adored very much. He was both funny and thoughtful; was married, lived with his parents and farmed on lands he did not own. We cooperated with him in wheat cultivation in the autumn of the second year of the project. Based on the soil examination his land required fertilizers however he did not purchase any despite our suggestion and as the result he ended up with a poor crop. I could not understand the reason for his inaction until I realized that he was neither stubborn nor intended to ignore our suggestion. The only reason was that he could not afford buying the fertilizers. Perhaps, he desired to go with our suggestions like other farmers, but his poor financial status did not let him do so.

If we insist on farmers' following our plans without taking their financial situation into account, we are just turning a blind eye at the reality and may lose the opportunity of winning their participation.

In another case, a new brand of wheat "Pishgam" was introduced by project executers to the farmers in 2015. Contrary to formerly cultivated wheat " Zarrin" which used to be cultivated in Urmia area, this type was more prone to fall and had to be harvested earlier. However, farmers refused the early harvest without providing any explanation. We arranged a gathering in the summer of 2016 to celebrate the harvest of one of the farmers with whom we cooperated. Other village farmers and experts from Agriculture Jahad Organization joined in. I requested local farmers, agricultural experts and other participants to share their opinion about one year of cooperation with us. Mr. Soleiman Pour who cultivated wheat and was a combine driver asked a question that surprised all. "Do you know why we harvest our wheat later? Do you know where these truck loaded with wheat head to?" Then he continued "These loaded wheats are purchased at a lower price and are sent to the storage houses of the middlemen in the region. The silos are not fully up and running now right or work only in one shift. Because people cannot deliver the wheat on time for each shift, we have to wait for the truck till the next shift and pay more. That's why we have not harvested yet although we are well aware of the falling. This is while you are not still in tune with the specifications of this new wheat".

Sure of my good intentions, I provided some suggestions to the farmers but I received some unexpected reactions

All the above-mentioned stories proved that we could not understand the complicated situation of the village and tried to simplify everything. But this oversimplification could inflict losses on the local community and agriculture in the future. So by just insisting on a measure before considering all aspects can one expect the novel farming skills to be sustainable?

That's why we have not harvested yet although we are well aware of the fall. This is while you are not still in tune with the specifications of this new wheat

What About Wild Animals?

Lalaklu village

Nouruz SHAMAT AZAR

The first project of "establishing sustainable agriculture for Lake Urmia restoration with the participation of local communities" was in 2014. We attended the only mosque of the village with the company team. There have been arrangements in advance for the participation of farmers. There was so much enthusiasm and joy for launching a new project and all team members were keen to use their knowledge and experiences to carry out the project in the best possible way.

Lalaklu village was well-known its people's sense of participation. They were awarded a fire-fighting truck by the governorate as a token of appreciation for their participation in public works. Contrary to other villages, lalaklu had only one mosque which means there were no ethnic or religious conflicts, and as a result priority was given to setting up the necessary facilities. The people of lalaklu believe that this only mosque is enough for them.

They focused efforts on building a clinic, boarding school, healthcare center and alike. In this session, our company team was supposed to set the product priorities and categorize farmers in the presence of the county's agricultural authorities. The officials were late and this made the farmers anxious who out of habit went out to see what's going on. Farmers are not used to wait for a long time in one place and prefer to make themselves busy at farms and orchards, doing something. We were also waiting with Mr. Hazarati, the village council head. He was a grey-haired middle-aged teacher of the village and was quite popular. He talked about the misdeeds and irresponsibility of officials in the past and

believed that the reason why villagers do not trust the authorities is the same chaos they see in administrative affairs. Eventually the authorities arrived after 20 minutes of delay. Farmers were invited back to the mosque.

Mr. Hazrati was a little tense and nervous. He said "you are wasting everyone's time here. You must value other people's time. You shouldn't behave in a way that the farmers lag behind their routine work. They have things to do which are more important than your work". I had nothing to say and kept mute.

While a member of our company launched the meeting, one of the officials received a phone call. I could feel some concern and anxiety among the authorities. The schedule proceeded to the technique of prioritizing the products and everybody was busy reviewing the major products of the village. Meanwhile, one of the officials quietly revealed the content of the received phone call to me and our company's CEO and was communicated to him from the senior officials. It was about the Naksaht (non-cultivation) project.

The situation was very complicated and we had to find a solution immediately. It was not something to be discussed in public. A few days back, the lands of volunteered farmers were scanned and it was very difficult to inform them about this issue, now. After further exploration of the situation we focused on orchard products and wrapped up the meeting. However, one way or another we had to inform the farmers of the Nakasht project. Thus we talked to Mr. Hazrati and faced his harsh reaction. The facilitation team was in a tough situation because the villagers had almost trusted us and once they knew about the change, things would have got complicated.

The company team was about to lose the trust of local people because all their farms were measured by us and they thought it was a trick by officials to obtain information about the lands in their possession. This is while we did not have sufficient evidence to convince them otherwise. We visited Mr. Hazrati's home with other village council members to further explore the problem with the officials on the phone. We wanted to make it clear that our team knew nothing about Nakasht before the meeting at the mosque. It was around 2 a.m. when all village council members were informed about the implementation of the Nakasht project and we decided to somehow break the news to other farmers.

After thoroughly investigating the issue with relevant officials, we went back to the village to continue with our project. There we found out that Mr. Hazrati prepared a letter about the risks of the Nakasht project and visited neighboring villages to consult with their councils. In his letter, he described the environmental problems as well as socioeconomic and cultural challenges caused by this project. He sent the letter to the provincial government and other related organizations.

The letter consisted of 16 clauses and one of them was very surprising to our team. It was about wild animals at farms. Animals that would die out because of the Nakasht project. These animals typically rely on what is left on the field after the harvest as their source of nutrition. I understood that the local community are well aware of their surrounding environment and have a comprehensive look to everything. And, we the external people do not know as much as they do.

Mr. Hazrati was a little tense and nervous. He said "you are wasting everyone's time here. You must value other people's time. You shouldn't behave in a way that the farmers lag behind their routine work. They have things to do which are more important than your work". I had nothing to say and kept mute.

Like A Points man

Qarabqolu village

Latif HAGHI

For years, I was involved in various activities of the participatory project for sustainable agriculture. Every time I was in a local community and interacted with people, I was touched by so many things that reminded me of my big responsibility, and how fastidiously I have to work. The participatory approach had no similarity to whatever I had done in the past. You are more like a pointsman who should be always vigilant about the direction of the train where it is heading. And you should think of the rails you can change to accompany the train up to the destination. Any mistake will change the route and might result in an accident which is far from the goal you had in mind.

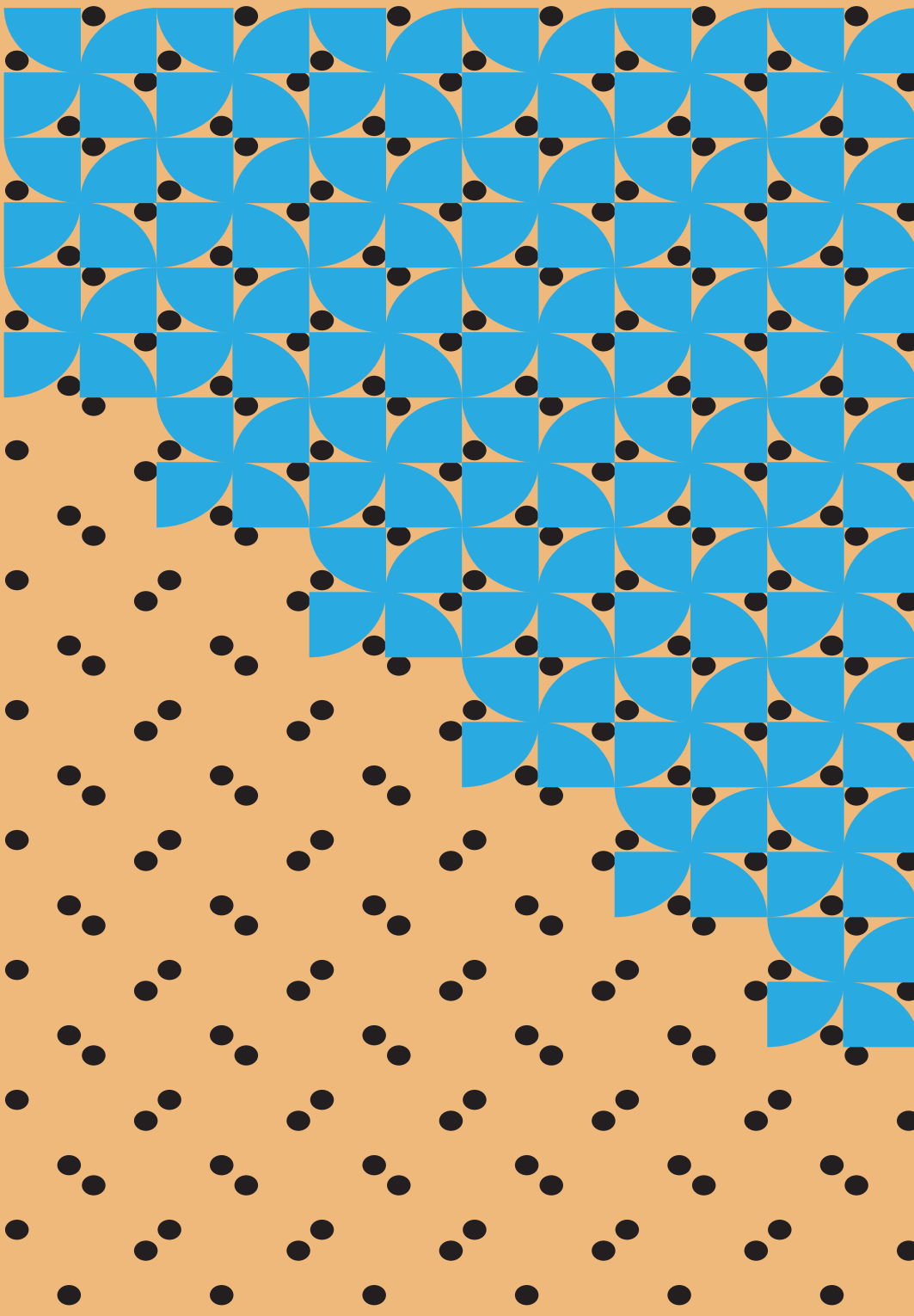
It was the first time I was participating in one of the complementary activities of sustainable agriculture entitled "establishing environment-friendly complementary livelihood" and I had no particular experience in this field whatsoever. Nevertheless, we created livelihood groups consisting of interested people and volunteers in different occupations. One such group was the quail breeding. Two friends were in this group; one from the same village and another from the city. Firstly, they used to participate in the meetings together, but gradually the person from the village was attending less compared to the city friend. The work was progressing well but at times we heard stories about conflicts from the city friend.

We had a plan to hold a Friday market at one stage of the project so that the villagers can put their products on display. The village friend was still refraining from participation. After holding an exhibition in the city of Urmia, we organized a meeting to evaluate livelihood groups' participation in which groups from the village also attended.

One problem that was discussed in this meeting was the non-participation of some livelihood groups including that village friend. He was present in the meeting and said "I chose this job after I received a dismissal compensation from a company I used to work for in the past. I held a senior position in that company and I don't feel comfortable if my previous colleagues get to know about my current job". Then he lighted a cigarette and left the meeting.

It was a touching moment and an answer to my question that I neglected for a long time. I never asked that person "why he is not participating in public meetings while he was one of the main persons in the quail breeding group? Why he is not interested to be known as someone who breeds quails?"

The participatory approach had no similarity to whatever I had done in the past. You are more like a pointsman who should be always vigilant about the direction of the train where it is heading.



Be a listener

We always thought that to be helpful we need to transfer our learnings from the scientific environments to our village partners in meetings and training workshops. However, we never thought that whether what we are providing is exactly what they require.

As we changed our approach, we realized that we were always talking and that it was the simplest thing to do in a relationship with the local community. We understood that over the years we have never been a good listener and simply ignored the opinions of the local community. Vis-à-vis the local community, we had to give up our position as an expert. We should have thought together and get to a mutual understanding to see the problems from a similar and equal point of view.

The prerequisite for this attitude was the art of listening well.

Say One, Hear One

Ghebchaq village

Nouruz SHAHAMAT AZAR

There was a training workshop; the expert discussion was smoothly in progress and everybody was listening. As I entered the workshop, I tried my best to cover all topics relying on my knowledge so that no time is wasted. I always had the impression that my workshops are comprehensive and their content is useful to participants. But this time something was wrong and it was the decreased participation of the farmers. I found them not as enthusiastic as in the previous workshops and thus we had several discussions in our team to come up with a solution. We were looking for a way to conduct a workshop where the majority participate but this never happened and we failed.

Once I was speaking in a session when one of the farmers said “Sir! We know all these”. That came as a shock to me. Later, attending facilitation training courses I understood what the farmer meant. Thus, I tried to conduct my next session in a friendlier fashion so that the farmers’ voices can be heard too. I tried to avoid jargons and wanted to hear about their experiences and let them express their opinions so that I can know about their problems and suggested solutions. This is because the third agriculture has a different dynamic. In the beginning, it was very hard and sometimes I lost control and started to lecture again, but I practiced and gradually managed to create a more group-based environment where everyone could express themselves. I found out that in a rural community people encounter various types of problems and so much happens on their farms. Once I understood the complexities of the rural community, I realized that every single person should be heard and solutions should come out of the

The third agriculture is a term coined by Robert Chambers – in contrast to industrial (first) and green revolution (second) agriculture- to describe the mainly dry farming found on “undulating land … in hinterlands, mountains, hills, wetlands and the semi-arid, sub-humid and humid tropics”. Complexity, diversity, and risk-proneness are the characteristics of the “third” agriculture.

very words of the locals. You cannot prescribe the same for all because they know better about their living environment. I continued with the participatory and interactional methods in my workshops and realized that farmers appreciate such settings more, because that’s where they are heard.

I assume with this change of attitude I could create an appropriate environment for people to express themselves and to be heard. I could also rely on the very local people to understand the problems and come up with solutions. As a result, the farmers attended in the sessions more enthusiastically and had a more effective participation.

An Ear to Listen

Bayqut village

Sahar AKBAR ZADEH Shirin ABDOLLAHI

We launched the Participatory Technology Development (PTD) project in 2016 at the beginning of the phase III of the Establishing Sustainable Agriculture project and entered the Bayqut village. Every time we got to the village, we went into groups to visit various places of the village. For us as an external person, it was interesting to see the villagers talk about their problems openly. We always thought that the role of the women in the agriculture sector is fading out. We greeted many women in the village allies and talked to them about topics that seemed to be important for them such as farming, unemployment, inflation, financial difficulties and divorce. In the middle of one such chat, we heard about Ms. Rahimeh who was a successful farmer and the head of a household. We also heard about her in a visit to the village grocery shop run by women.

One day at the women shop we heard her name again while talking about personal, family and social issues. We requested them to show us Ms. Rahimeh's shop but it was closed when we arrived there. The day after we went to her shop again, bought a few items and left without a word. We started to visit the place often and talked to her. We found out that she is preparing a dowry for her daughter who got engaged recently.

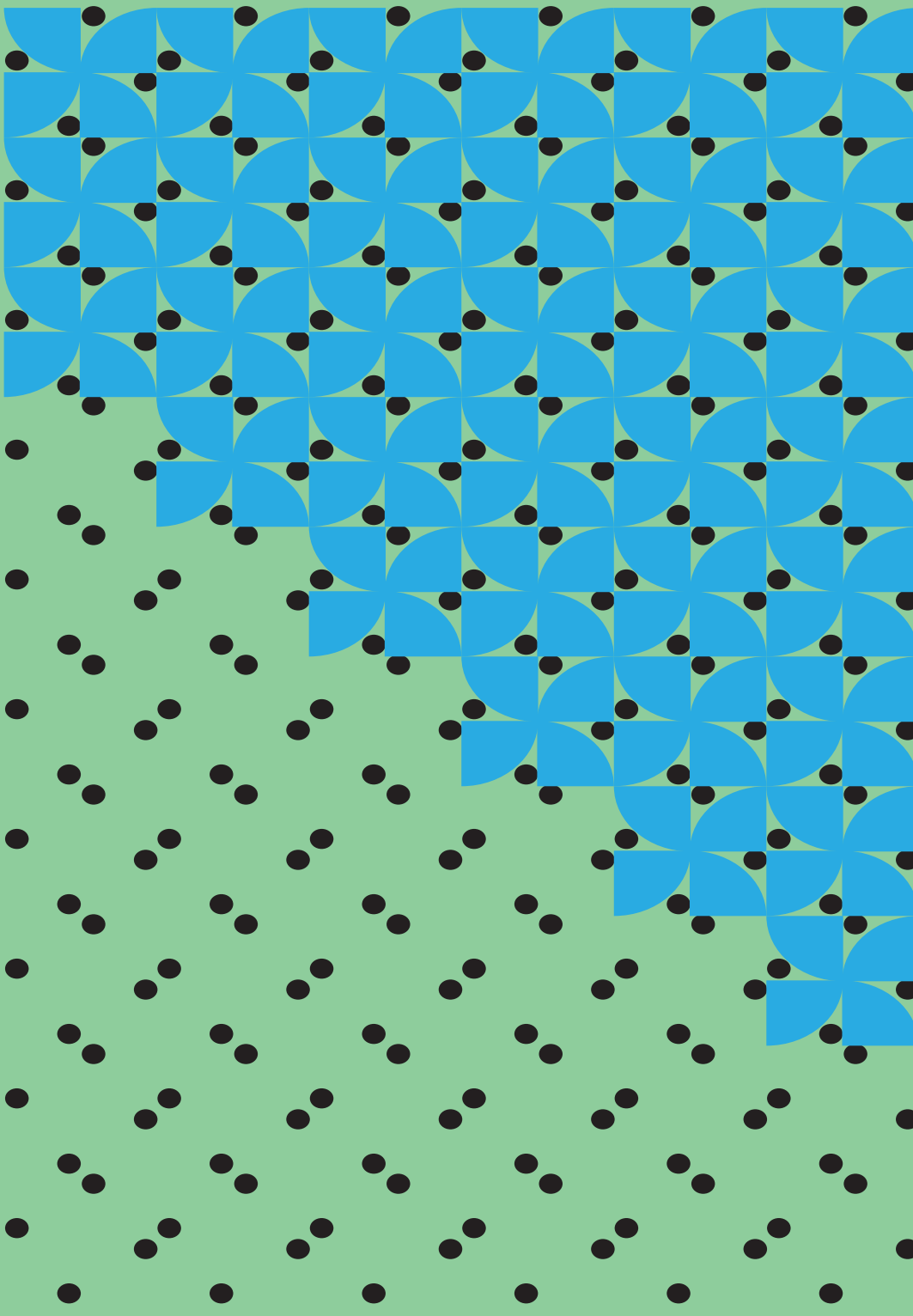
It was around late April when we saw Ms.Rahimeh planting vegetables in the garden. We asked her about the cultivation, sales of her crop and her motivation to start farming. She explained all about the death of her father and the story of her divorce and that after divorce she was taking care of her mother and three daughters. So she should have worked hard as she inherited a piece of land from her father.

We accidentally met Ms. Rahimeh while planting the seeds
Photo by: Torab HANIFI

The village women gradually started to share their concerns and family problems with us. When a person starts talking to somebody it means that they feel sincerity and are looking for an ear to be heard. In any case, now we could listen to them. Listening to them, we thought that maybe we can somehow help these women. During our conversations they said that "women gathered in another village to establish a bank that pays them some money on a monthly basis. Every month one member receives an amount of money. Wish we could have done the same. Would you help us launch this bank?" We immediately said yes to the suggestion.

We realized that women are now more eager for the next gathering and ask each other about the schedule. Likely, the bonds between them was strengthened too and this paved the way for the establishment of women's credit fund in that village. This was only one example of how our informal relationships resulted in initiatives by local groups at some small and large scales. All we needed was to listen carefully.

1. In this writing, we did not intend to explain the process of establishing the fund that consisted of detailed steps and stages. Giving the example of the fund is an evidence to indicate how our continuous informal relations resulted in inspiration and sympathy about the new idea and works.



To see the Invisible Farmer

Sometimes interacting with the local community, we faced people or groups (both men and women) who did not participate in the meetings due to various reasons or did not express their opinion at all. As the project progressed and there was more interaction with the local community, we found out that opportunities should be provided to this kind of people to be seen and express themselves at agricultural analysis sessions.

Their words and experiences have the potentiality to form movements or to influence others;

Movements which reveal the deep layers and latent values of participation reflecting all the various tastes and opinions.

Facilitators must pave the ground for developing these movements and more precise and flexible actions by facilitators will result in better outcomes.

When I Realized Noted their Privacy

Abajaluye Sufla

Leila VEJDAN GHAREH BAGH

After visiting the village for a while and communicating with some of the residents we thought that maybe we are not yet sufficiently familiar with the village and perhaps there are some people we never met; those who never participated in meetings and gatherings or we never saw them on our daily trips to the village.

We noticed that the people of the village have drawn a map of the region and we could see where the farms and orchards are located. So, we decided to go through different routes every day to meet new people.

One day as we were walking on the side roads of the village, we met the Milani brothers who were working in their orchards at noon. We introduced ourselves. One of them said "yes, we know who you are" and uttered our names. It was nice to see that that they knew our names although we have never met them before. They quitted work after warm greetings and started to talk. One of the brothers said: "we live in this village and heard your conversations with other people. We were always curious to know what is the goal of your visits and wanted to know more about you. But, we neither have enough time to do so nor are interested in attending meetings with other villagers. We have our own plan and work till lunchtime and then get back to work after a quick grab. When we go back to the village we are too tired for joining any gathering."

They showed us their farms and orchards and talked about their farming method, challenges, family relationships, the boundary of their farms and asked us for suggested solutions to their

We met the Milani brothers while working in the orchards
Photo by Mojtaba JAVANBAKHT

problems. During our one year stay in the village, we often met the Milani family at their farm and later found out that they are actually three brothers. We could have cooperated with them in planting various types of crops. Knowing the Milani brothers and their participation in the project inspired us enough to take a new road every day to see more people. We learned that to better know a person we must meet them at the places they feel more comfortable. Some people are not interested in public gatherings, because each person's need for privacy is different.

It was nice to see that that they knew our names although we have never met them before.

A Blindfold on Our Eyes

Abajaluye Sufla village

Latif Haghi

It turned into a routine for us: to know more villagers after each visit, to listen to them and to make friends with them. The case of Mr. Reza Milani was the same. He examined the seedling cultivation trays this year because he faced difficulty in using tomato seedlings from traditional storehouses the previous year. We visited his home to ask about his experience.

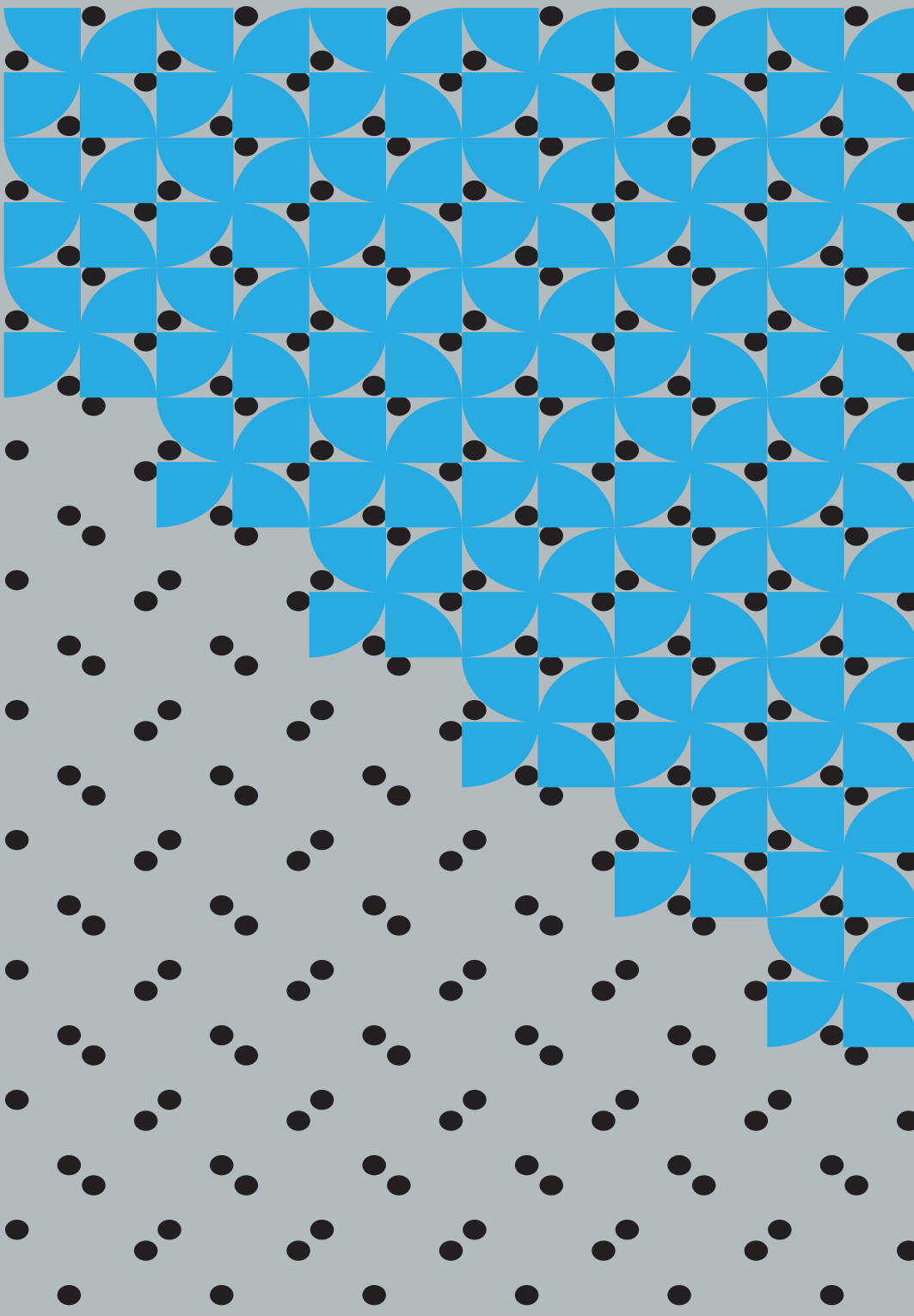
When we arrived he was cleaning a farming tool. He warmly welcomed and invited us in. We accepted the invitation. He said, “my wife is out but will come back soon”. When we asked about his experience he said “Mr. Eivaz Milani knows better than me. He did the same as me. Let me call him”. While waiting for Mr. Eivaz, we chatted.

After a while, Mr. Eivaz arrived with his wife and Mr.Reza’s wife. After a few jokes and small talk, Mr. Eivaz said “I was satisfied with last year’s seedlings. Tomato plants and crops grew well”. We asked if he is going to use seedling cultivation trays in the coming year as well, but he answered: “No. Frankly speaking it was hard and boring”. He continued “Mr.Hassan (another villager) used the trays this year too. He says that it took two days for planting the seeds at the tray. Mr.Ghahremani also says that he failed and seedlings were damaged”. The Mr.Eivaz’s wife joined in and said “it is not hard at all and it is easier than weeding. Mr.Ghahremani’s seedling got damaged because he forgot to put the trays in the storehouse on a cold day. I planted eggplant in the broken tray that was found the other day. The outcome was very good”.

The wife of Mr.Reza also said “yes. I think tray cultivating is better. Because men do not participate in weeding, they do not know how long it takes to weed in a traditional storehouse”.

Mr. Eivaz said laughing “they are right. I never did anything inside the storehouse and my wife does it all”. We were surprised. What were they talking about? How come we never thought about this? Women play a major role in farming and we have had neglected this so far.

It was nice to see that that they knew our names although we have never met them before.



Friendly & Equal Interaction

We got familiar with equal interaction, practiced it and learned that such interaction is a vital and an inseparable part of any work with the local community. Our attitude toward interaction with the local community changed gradually. The old-style relationship in which agricultural experts transfer all their learnings in a one-way top-down manner has now changed into a friendly and mutual interaction. Currently, we are trying to reach to a common understanding and language so that together we can review farmers' challenges and needs together and find a solution.

Here, no One Is a Teacher, No One Is a Student

Qarabqolu village

Leila VEJDAN GHAREH BAGH

A young person joined our gathering in one of our first activities. We knew him from the past. He owned a grocery shop and we often shopped there. Although his father was a farmer, he did not seem interested in participating in our sessions. Anyhow, we welcomed him and expressed our pleasure to have him in our gathering. One of the farmers said jokingly: “What are you doing here? You are not a farmer”. He replied laughing: “Do you mean other than farmers have no right to participate in these meetings? I am here to see what is going on”.

We started our discussion about tomato products and requested farmers to review all the steps from plantation to harvest together and point out their problems at each step of the way in the previous year. We also added some points in the middle of the conversation.

We were in the middle of a hot discussion and the newcomer kept laughing and cracking jokes. It was not the first time to be in such a situation and this was not an issue for us as long as it did not disrupt the group discussion. When a farmer was explaining his major problems and we were trying to find a solution with the help of other participants, the newcomer suddenly said to us “what kind of a meeting this is? What kind of a training is this that you cannot get ahead of your students?”.

Everybody was quiet. Then one of the farmers smiled and said “do not disturb the session. Here we all learn from each other and there is no student-teacher status”. The newcomer nodded and said “Oh! I see” and kept silent. We have tried hard to practice participatory learning with farmers. But we didn’t know that the issue is of even greater importance to famers, themselves.

Whatever I Can Do

Abajaluye Sufla village

Latif HAGHI

One day I was walking in one of the pilot villages. An old farmer riding a tractor was passing by at a high speed. As he saw me, he suddenly pushed the brake so hard that I have never seen before . He hurriedly got down and started to talk to me and left after a friendly greeting.

His behavior was strange. When I went through my memories with him, I remembered the first day of my walk in the village. That farmer was cutting a poplar tree near his home with the help of a neighbor. I stayed with them eagerly and it took several hours to cut the tree into small pieces. It was almost dark when we finished. I received so much energy by this collective activity. Perhaps, he wanted to show respect to me passing by because of this very act of accompanying him that day.

Perhaps, he wanted to show respect to me passing by because of this very act of accompanying him that day.

To listen Without Seeing Is of No Help

Abajaluye sulfa village

Leila VEJDAN GHAREH BAGH

For months we have been commuting in one of the villages, talking to the inhabitants and the farmers about different matters. There was one person who always emphasized his own experiences in farming and of course harvested good crops. We kept saying that we are here to learn and are very interested to hear about the experience and information of the farmers.

One day we saw him driving a tractor toward the farm. He stopped the vehicle when he saw us and said “listening is not helpful to you. Let’s go to my farm to work together”. We accepted his invitation. When arrived there, he started to work on a field where wheat was sowed manually before. He used a leveler and a spring-tooth harrow by a tractor. Both tools had the same effect of mixing the seed with the soil. While, the leveler flattened the surface the harrow created small furrows on it.

We observed for a while and then asked “what do you think will happen if we keep the leveler aside and use a harrow only, Mr.Mahdizadeh?”. “Well, it would be better because the seeds will be placed on the plantation line inside the narrow and shallow furrow that helps the better cycle of the air, and as a result, the whole farm will go green evenly”, he answered. Interestingly, the explanation by Mr. Mahdizadeh was just the agriculture science says.

We both were quiet for a while. Then he stopped the tractor suddenly and got down. Seemingly, he had something in mind. He looked at the farm and said “I think nothing will happen. Water moves smoothly in the furrows created by spring-tooth harrow and the irrigation would be easier. But, I am not the owner of this farm”. He went to get permission from the owner to remove the leveler. A moment later he returned and said “got the permission” and removed the leveler. I think the analytical mind of Mr.Mahdizadeh helped him change his habitual routine and act based on a new understanding. Through accompanying Mr.Mahdizdeh we got to know him better. He was a kind of person who does not accept an idea unless he contemplates over it thoroughly. And once he accepts something he takes action. His pragmatism taught us that we need to visit the farms and work with farmers in top of being a good listener. Later on, our relationship with Mr.Mahdizadeh got deeper and we could talk with him about various topics. We developed some very interesting ideas through such mutual discussions.

Listening is not helpful to you. Let’s go to my farm to work together.

Great Efforts of the Villagers

Bayqut village

Sahar AKBARZADEH Shirin ABDOLLAHI

UNDP planned to visit the Bayqut village at the end of the phase IV of the project to see the project progress. We informed villagers that a team is going to visit your village and talk to you about the conducted activities. Farmers were very happy and welcomed this event more than we expected. They said, "we will accompany you surely". We asked them which orchard would be the best option to be visited. Mr.Zeinali said, "you are welcomed to all orchards and we go anywhere you desire". Another person added, "if you come, I will prepare a place for you. All through this period we tried new things with your support that we never dared to do it on our own. We will talk about all these facts in the presence of the guests".

Mr.Zeinali called after we left the village to say "we have talked with Mr.Mirzaee. We think his orchard is the proper place because it is close to the main road and has enough space". We knew his orchard and had cooperated with Mr.Mirzaee before. So, we agreed.

We placed carpets and cleaned the sitting space. Everything was ready to receive the guests. Villagers picked some cucumber and tomato and served the guests with baskets of cucumber and tomato. The event started. After greetings, guests asked farmers "what changes occurred after the team entered your village?". One of the farmers replied that bean has been cultivated for trial. Another talked about the trial cultivation of onion based on the drip-tape and sprinkler irrigation method.

The friendly visit by the UNDP team
Photo by Mansour Zeinal Zadeh

One other farmer referred to a participatory technology development exhibition held by the villagers and he came up with an idea for irrigating his orchard. We were delighted to hear their stories.

We have been invited by the Villagers to many events and this time they were our invitees. We remembered all the good things we had with these people; all the wedding ceremonies, funerals, religious gatherings that we participated in; all the congregational prayers we did together and the veils we borrowed from them. What the farmers were saying showed that apparently they had noticed and appreciated all the odd hours and the tough weather in which we visited the village and worked. Perhaps, in the absence of such interactions, no relationship of this nature could be established and they wouldn't have participated in the UNDP event so readily.

The passionate participation and cooperation of the farmers, their stories about joint activities and elaboration of positive and negative aspects were very heartwarming both for us and the guests.

My Storehouse Gone with the Wind, Not My Desire

Qarabqolu village

Leila VEJDAN GHAREH BAGH

Imagine a big stone which is pushed by water pressure in a river. Water hits the stone and this causes turbulances which affect the river and the area around it. A rural local community is similar to a river and you and what you do could be described as the stone placed in or thrown into the river. We should be careful about the dynamic and the intertwined relationships of the local people. Someday we will leave the village and what remains is the positive or negative influence of our actions. How good it would be if the stones could be placed based on proper calculations, taking the complexity of the local community into account. This could help with developing a motivating, constructive and common learning circle for local people.

We have been implementing the sustainable agriculture project in one of the villages for three years and we had managed to attract the majority of farmers to this project. Then, the implementation of the complementary project under the title of "developing environment-friendly complementary livelihoods" was offered to work with the local people besides other farming activities. The objective was to develop a complementary livelihood less dependent on water. Despite our efforts, the local people showed little interest in these activities. Proceeding with the work we felt that there are some major problems about which we have no clue. Although one or two residents of the village started up new businesses, they stopped

Proceeding with the work we felt that there are some major problems about which we have no clue.

The structure and its plastic cover is dancing in the typhoon
Photo by Leila VEJDAN GHAREH BAGH

after a short while. When we asked them about the reason, they referred to problems such as market fluctuation and the high price of raw materials. On the other hand, we decided to build a greenhouse in the village about two years ago. After so many discussions amongst the team, we decided to rent a farm in this village to start our business. When we were looking for an appropriate farm, one of the villagers said “I heard you are looking for a piece of land. Do not go far away. You can use mine”.

We accepted the offer conditional to a rental fee. A 300 m2 area was enough for implementing our plan.

Now we had the proper space and needed to prepare the required material. However, we received an invoice from a greenhouse developer in the region and we could not afford the cost. So, we decided to reduce the area and build a seedling storehouse instead of a greenhouse. When we shared this idea with the landlord, he said “I will not charge you anything for such a small piece of land but I would like to help you run this storehouse”.

It was just the beginning of our story. We intended to build a polyethylene structure. From the very first day when we started the construction the villagers kept asking us “what are you doing? and after telling them that were building a small storehouse with polyethylene they looked at us in wonder and exclaimed: “it’s impossible”. Some people tried to remind us of our mistake in jest. Others visited our office and shared their concerns privately. They said, “you’re an agriculture expert. Nobody will trust you anymore if you fail”.

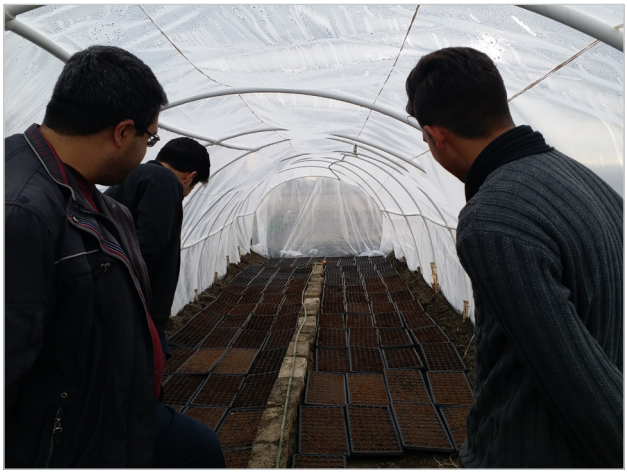
I will not charge you anything for such a small piece of land but I would like to help you run this storehouse.

It took us a week to finish the construction of our one-sided seedling storehouse however what we achieved was not up to our expectations. The structure was too weak to bear the load of the plastic cover. On the other hand, the villagers had some suggestions. For instance, the landlord suggested setting a metal pillar inside the structure. We welcomed his suggestion and eventually covered it with plastic. Everything seemed to be perfect and we could start the next stage. Unfortunately, a strong storm hit the city about two weeks later and caused so much damage to the city. Many big signs collapsed and even the big standard greenhouses got affected. We were in the village at the time of the storm and decided to inspect our storehouse. The structure was floating in the air and the villagers were looking at us with worried faces. We stood for a while and watched the structure and its cover dance in the air. All was gone with the wind. The day after some of the local people gave us a heartwarming visit. Some also blamed us and said, “You see it was impossible”.

A few days after the incidence one of the villagers that cooperated with us in the “complementary project” visited our office and asked, “what are you going to do now?”. We replied “well, we construct it again!”. He looked at us with a surprised face and said “why don’t you give up?”. Then he left our office feeling upset.

We repaired our structure again and this time made some changes to increase strength. We shortened the height and changed it to a double-sided structure. That year, the yield was good. But it could only compensate for the construction costs. One day the same person who felt upset after visiting our office said “I envy your spirit. We are all afraid of doing something new fearing that other people might blame or make fun of us. That’s why we regret so many things we wanted to do in the past but we never did”.

We stood for a while and watched the structure and its cover dance in the air. All was gone with the wind.



The farmer that bought our structure and installed it better than us
Photo by Leila VEJDAN GHAREH BAGH

Hearing this, we realized the reason why people hesitate launching new activities. Unknowingly we had thrown a stone into the river by trying to build a structure. We practiced with the villagers not to be afraid of other people's judgment and tried to contain our concerns over failure by embarking on projects at a smaller scale. We never gave up till we succeeded. Later on, we heard so many farmers say "Let's try; at a small scale, in small units." We realized that sometimes the mental obstacles and fear of judgement could be pretty significant but we failed to properly consider this distress in the implementation of our livelihood project.

The fate of our small seedling storehouse was not over there. Next year a teenager from the village purchased our structure and installed it better than us to cultivate tomato seedlings next to his seedling farm.

A Different Type of Interaction

Saeedlu village

Latif Haghi

My biggest concern as an agriculture graduate was how to transfer my learnings to the farmers. To this end, I had to establish a relationship with them, get to know about their needs and challenges and then utilize my academic background to solve their problems if necessary.

I had no specific opportunity to do so until 2014 when I got involved in the sustainable agriculture project. This project applied a participatory method that entailed a different approach to interaction with other people including the farmers- and offered new attitudes and perspectives. I was eager to put my newly acquired knowledge of participatory approach into practice and always asked myself "is the local community going to accept this news method?"

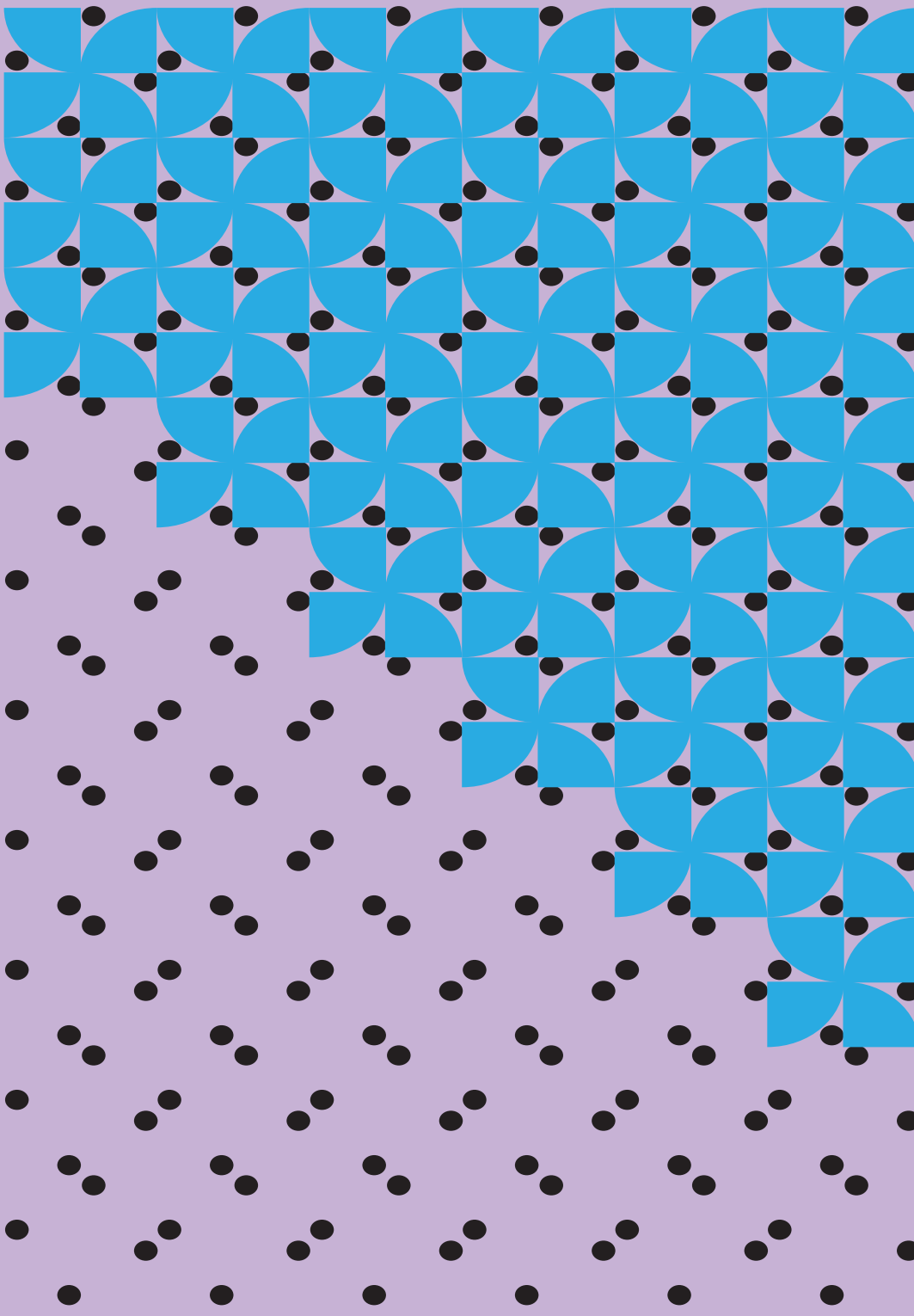
In the phase V of the sustainable agriculture project, I entered Saeedlu village with a new colleague who had lived in another village for a long time before moving to the city. His parents were still living in the village and thus he was a frequent visitor to the village.

Our team decided to adopt a participatory approach towards interaction with the people of Saeedlu. Therefore, we did not conduct any group meeting in the village for a long time. We interacted with them through several visits to the village and friendly conversations about daily life and how people were doing. We told them about ourselves and never asked them anything. We tried not to boast about our academic background and all we wanted was to mingle with them. Sometimes, we helped them with their daily tasks. Gradually we could build trust with some people. Hence, some families invited us to their

family get-together. They had a lot to talk about in these private circles. We could have a more realistic assessment of the situation this way. For instance, we could draw a clear map of village resources at these family gatherings. This is something which could be done with so much difficulty in the past or was left in the middle of the project.

In one of the visits to the village my new colleague mentioned something that I had never heard before and it was the answer to my long-lasting question about the acceptability of a new method by the local community. I wanted to know whether what we are doing is a proper way of interaction in the eyes of the local community or someone close to them? My colleague said, “as someone who lives in the village I think this method of interaction with the villagers is a more appropriate one compared to other methods. You must socially mix with farmers, meet them face to face, become friends and introduce yourselves to them. Then this sincere approach and thorough understanding will make it easier for them to share their problems with you and ask for help and cooperation. At this point, the farmers will volunteer to do what they believe is sensible in their life. For example, my family and I will neither cooperate with a newcomer in the village whom we do not know nor will listen to his scientific advice. For sure my father will not participate in the meetings conducted by a strange newcomer”. We became more determined to proceed with this approach once we heard these comments.

We tried not to boast about our academic background and all we wanted was to mingle with them. Sometimes, we helped them with their daily tasks.



They Know, We Don't

Traditionally speaking we always thought that any knowledge is transferred from the expert researcher to the target group one-sidedly.

However, gradually we corrected our perception through numerous interactions with the local community and got a clear understanding of the very complexities of each and every local community. We realized that many of our expectations are merely rooted in on our ignorance of the community's abilities and limitations. This is while the farmers take action based on a true understanding of their environment. They do not act haphazardly just because they don't know things. So, before teaching them anything we must know that they are more aware than us of their own issues and we have to respect their knowledge.

Simple but Real

Qarabqolu village

Latif Haghi

There were times in the sustainable agriculture project that we had to change our routine according to the needs of the local community. In such situations we need to inform the contractor and project supervisor by some means and get their guidance. Sometimes we had difficulties doing so which could result in conflict with the other project stakeholders. Therefore, it was necessary to come up with a common language with all relevant parties.

In the phase V of the sustainable agriculture project, we found out that due to some reasons the farmers intended to cultivate less wheat compared to previous years. This was revealed to us through talks with the villagers. This meant that in the new agricultural year, wheat could not be the major product of the village. Therefore, we had to report the reason to the contractor and project supervisor as why we are changing our normal procedure and opt for an alternative product. But the question was how? We decided to explore the issue by using a participatory rural appraisal tool with the participation of the local people. Among the applicable tools, the Pie could be useful to find out how the farmers are going to allocate their lands to each crop and to hear their reasons for such decisions. This probably could be an introduction to the next round of discussions in the village. We thought that this could help us collect more tangible and documented evidences about the real picture of the village. These documents could prove helpful for the project itself, as well.

The participatory rural appraisal is an approach based on which the information is in the hands of the rural people and they carry out an analysis by themselves. Thus, local people conduct mapping, modeling and grading, draw charts, defining the points, observe, interview, analyze and plan more than external people.

We conducted the meeting at a grocery shop in the village. Some of the local people were already in the shop before our arrival and some others arrived later. All gathered around the heater while old people sat on the chairs and the youths were standing up. They precisely defined the share of each crop on the Pie chart. Whenever someone joined us in the middle of the meeting, we explained the share allocation to them, too. With the help of a team member we could make the chart clearer by drawing a symbol of each crop. As a result, the newcomers and the less literate could better understand the analysis and cooperate with us. The simplicity of the Pie chart made it easier to relate to the villagers and helped them in expressing their views. They even modified the crop shares on the Pie chart once or twice after some internal discussions. At the end they reached a consensus over crop allocation. They elaborated on their reasons which we noted down by the same technique. The farmers made it clear that they prefer to cultivate spring crops such as tomato, sunflower nuts and pumpkin nuts rather than wheat, fodder corn and other crops based on their list of priorities and challenges.

The Pie chart served us as a means to negotiate and convince the contractor and project supervisor. When we looked at the chart with the project supervisor, the techniques and the analyses were so obvious that the supervisor confirmed that we have to focus on other major crops such as tomato and sunflower nuts without asking us for further explanation.

1. For more information, refer to: Robert Chambers, Challenging the professions, translated by Alireza Khormaee, Arghanoon publications, 1st edition, 2002, chapter 7.

The pie chart tool is useful to analyze the share of each element out of the whole. The "Whole" could be anything such as costs, income, time, and work. To show the "Whole", a big circle is drawn or a round tray full of rice can be used for instance. The share of elements forming this "whole" is analyzed and compared by using a pen to draw lines on the circle or a string to divide the rice.

There are Buds But What About the Crops?

Gug Tappeh Village

Farshad JOUDIAN

Our team started their visit to Gug Tappeh village in the 2nd year of the project. This village is located in Marhamat Abad district of Miandoab county and with 1380 ha of farming land is one of the biggest villages in this region. Gug Tappeh is 22 km off Southern Lake Urmia.

We started our trips to the village rather late and had not much information about the area and its farming lands. This is while the autumn plantation had already started. So, we started coordinating the crop plantation with farmers. One of the farmers “Mr.Jadidi” was a former truck driver but for some reason had to sell his truck. He rented farms to earn a living. After seven days he called and said that he is going to rent a 3 ha farm. The landlord did not request any rental fee and instead signed a contract to receive 20% of the crop. The land was located in an area that suffered water salinization due to the overuse of groundwater and all farmers used the saline water to irrigate their farms. They could use the freshwater of the canal only once in each farming season. As Mr.Jadidi demanded we examined the soil and it turned out that the soil salinization was 16ds/m and thus not suitable for any cultivation.

He had rented 4 ha of fertile land on top of this saline farm and thought that if the less fertile farm produces poor crops it is still good enough to cover the plantation costs of all his other rental farms. He kept saying that the landlord wants to rent and just has to be given 20% of the yield. He even showed us the neighboring farms where sprouts were grown. We insisted that “the sprout grows but there would be no crops. The money

It grows but there are no crops
Photo by Siamak Mostafanejad

you are spending on this 3 ha will go to waste and you will gain no profit". We managed to convince Mr.Jadidi of giving up the saline land and this was satisfying to us. Of course he insisted a lot and other farmers believed that the land is good for wheat cultivation. Relying on agricultural books and articles we succeeded in convincing the farmer and were happy that he was not going to suffer any loss. But we were still contemplating over what the farmers were saying about the possibility of harvesting crops in this piece of land.

The landlord cultivated wheat on the low-quality land himself. During the harvesting season, many farmers with whom we had cooperated were happy with the result. We were happy too. Once, Mr.Jadidi called and asked us for a visit. He showed us the truck scale's receipt related to the above-mentioned 3ha farm and said: "the farm you told will not produce more than 2 tons of wheat, has yielded 12.5 tons. Moreover, the landlord covered all of his cultivation costs by selling the straw". We went through all that happened in silence and realized that before any suggestion or comment, we have to get rid of this top-down approach and get to a joint understanding of the situation and the farmers prior to any action. We also learned that we have to take farmers' opinions into account in the decision-making process. Nothing is possible in the absence of farmers' participation.

From Assumption to Truth

Abajaluye Sufla village

Leila VEJDAN GHAREH BAGH

At every community we have entered, we found truth like the sun behind clouds. But even one does not see the sun, it doesn't mean that can deny its very existence. When we first enter a local community, we are not able to understand it all. Perhaps, it is because we never ask questions or do not explore in detail. Or maybe because we rush into a judgment based on our own assumptions.

Over years of involvement in the sustainable agriculture project, we frequently requested farmers to plant wheat at a specific time to avoid pests and increase the quality of the yield. In Urmia, the wheat plantation starts early October and continues till mid-November. Any delay can lead to a decrease in the crop.

We visited the village in October and saw a group of rural people in a conversation. We joined them after greeting and talked about the weather and other everyday issues. One of the farmers asked, "does anyone know the guaranteed price of the wheat for this year? "We saw the question as a good opportunity to talk about the plantation date. "Yes. It seems that the price would be around such and such. By the way, now is the proper time for sowing the wheat seeds", we said. An old farmer answered, "Yes, now is the time for plantation, but the crops from last year are not harvested yet. And even if it is harvested, it takes time to prepare the farm for another round of plantation". This was of significance but not an every year issue for all farmers. But still it made us aware of different conditions of farmers.

Another farmer said "when we plant the seeds early we need to irrigate them twice and that does not make sense when suffering

from water shortage and other difficulties. Thus, we wait for the rain. If we see a high possibility of rain during the next two weeks, we will plant the seeds and irrigate. This way we can avoid a second round of irrigation".

We kept silent. Clouds were partly removed from the sun. Later, we thought that if we had tried to understand the farmers and their situation first, we would have probably planned and acted differently.

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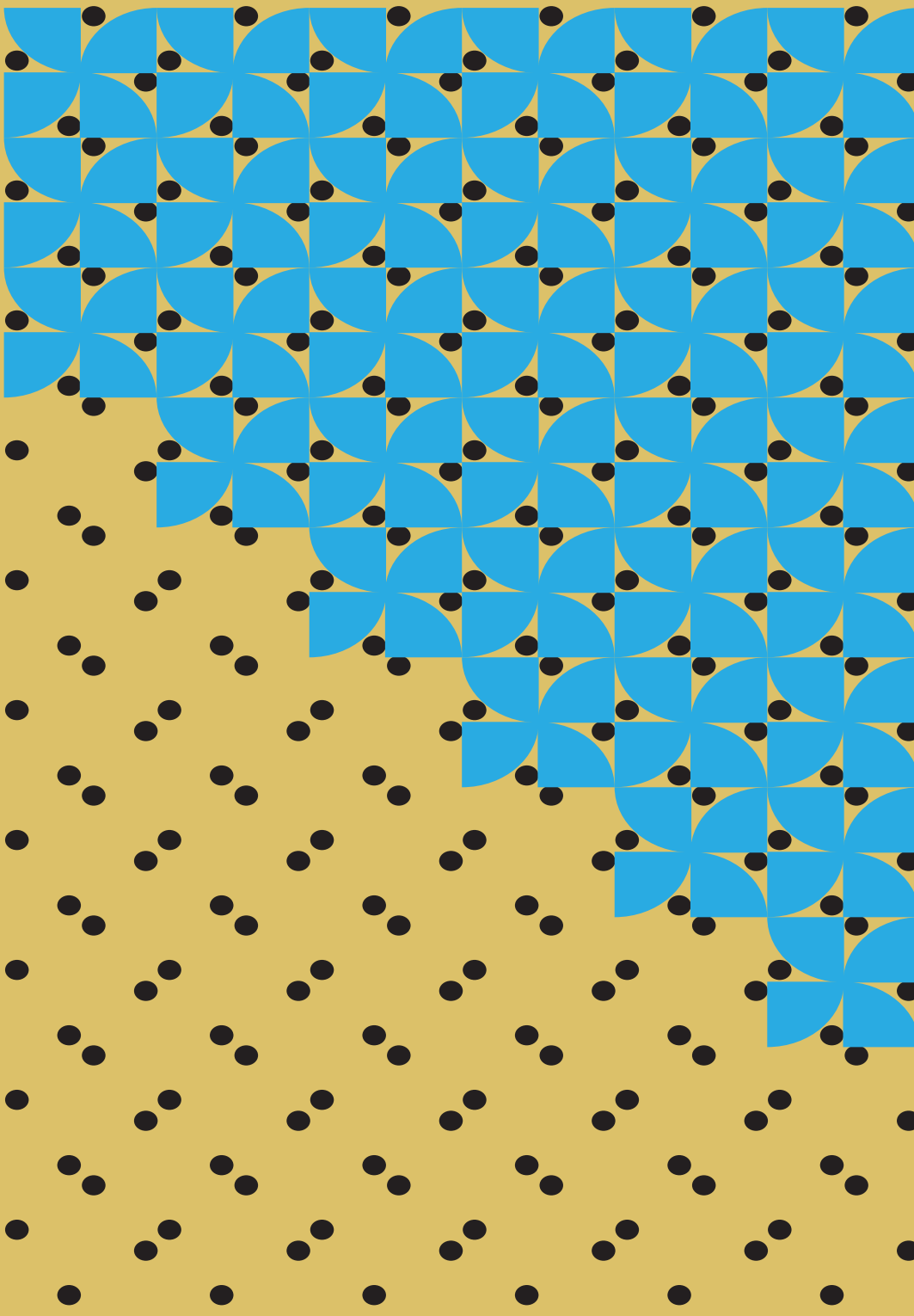


The Domain of Participation

It is difficult and time-consuming to simultaneously consider the quantitative and qualitative dimensions of interaction with various groups in a local community. We took the complexity and diversity of the local community into consideration and understood that the work and life of the farmer are intertwined and inseparable and that one cannot take the farmer a separate entity from his living environment. We found out that most of the initiatives that considered the limitations, possibilities and the farmers' right of choice have been proved effective and sustainable. Thus, we tried to think through the qualitative dimension of our relationship (limitations, possibilities and experiences) in addition to the quantitative dimension including work in more villages and contact with more diverse groups (women, children, non-farmers).

“This Artwork Does Not Fit Here”

Khodaverdi Khan village

Sonia PIRAN

It was the opening of the exhibition on achievements and experiences of the sustainable agriculture of the year 2018 at Khodaverdi Khan village. With my colleagues I was busy arranging the equipment for the exhibition that was planned to be held at the village sports hall. I arrived in the village in the afternoon and called Mr.Piradeh –the person in charge of the sports hall- to bring the key. Some of the interested youths and farmers also joined us to prepare the booths and other stuff.

There was a nine-year-old boy who was helping me. I cut sponge into pieces that he placed under the table legs to avoid damage to the floor. Around evening he said “Madame, may I bring an artwork of my father from home? Because this year we had no cultivation and by bringing the artwork we will participate in the exhibition as well”. I said, “no problem as long as your parents permit. I will be very happy”. Frankly speaking, I even did not know him.

Half an hour later he came back carrying an artwork of beads and glasses in the 80’s style. I placed it on the table and the boy seemed very happy and excited.

Half an hour later he came back carrying an artwork of beads and glasses in the 80’s style. I placed it on the table and the boy seemed very happy and excited.

The exhibition opened the next morning and persons in charge and farmers attended the venue. Mr.Mahmoud Fazli arrived when I was arranging the tables. He was one of the farmers and often participated in training workshops. He did not seem convinced of the stories about the increased drought in the Lake or anything like sustainable agriculture and all we did in this project. He frequently used to say in the meetings that it's by the performance of persons in charge and God's will that certain developments are happening.

He asked me "Ms.PIRAN, what is this artwork? How does it relate to the exhibition and what's the point"? when I said: "if you think it is not proper here, I can move it", he said, "it is undermining the exhibition". I replied by saying "not at all! It is the craft of one of the villagers from here. His son helped me last night but hasn't arrived yet for the event. This can turn into an opportunity for making some money if we note the ideas and suggestions of other farmers." His reaction was "How interesting. I never thought that way" and he left.

The exhibition ended after two days and again some of the farmers came to help with collecting everything. The boy was there too. He took the artwork and told Mr.Fazli "Dad! Let's go". I was very surprised and wondered. Despite the fact that Mr.Fazli knew about his artwork, he had asked me "what is this artwork? How does it relate to the exhibition and what's the point?". Maybe, he wanted to see what we thought or had other intentions. I had to ask him later.

After the encounter, our relationship with Mr.Fazli deepened. Now he and his friend, Mr. Kazemi have bought a line seed and fertilizer planter machine and in their own village and the neighboring villages suggest farming techniques such as soil examination before plantation, seed treatment, and, using organic/phosphate fertilizers. This story once again reminded not to ignore anyone. Knowing the potentialities of people and respecting them can affect their involvement in a newly emerging phenomenon.

You Cannot; It's Impossible in This Village

SafarGholi Khan village

Haleh TARAM

It's an old village with just a mosque as a facility to socialize. A very small population is living here compared to neighboring villages. Through some visits to the village, we found out that the village has consisted of three major tribes only. The villagers mostly interact within their own tribes and you do not see the typical gatherings of men, women and children.

Last year we conducted the "sustainable agriculture" project at this village. However, only one farmer cooperated. The only outcome of the project was that the farmer and his family got familiar with some techniques of sustainable agriculture. We intended to continue the project this year and launch another project under the title of "women empowerment". We started our meetings with the family who participated in the last year's project. They said "the only thing we remember is the glass that was told to have useful tiny creatures . From among the options that the lady engineers offered we chose to purchase the glass. We used it while transplanting tomato seedlings and the tomato grew very well. Only a few seedlings died and the chemical fertilizer we used was one bag less than before. If we can find the same this year we will purchase and use for sure".

We were approaching the plantation season. We started the sustainable agriculture project with the village men. We got familiar with them and listened to them. We wanted them to talk about the village, draw the social map of the village and describe the seasonal timelines of their activities. They mostly asked for the costly and not-easily-accessible facilities to implement modern techniques; something different from

Executing seasonal calendar technique by local people
Photo by Aylar Shabgiri

their current routines. They had seen such methods in movies or had heard about their advanced settings. They found it untouchable by existing facilities. In cooperation with the inhabitants, we developed a roadmap to implement the project in the village. We felt pleased that relying on the available resources, they could come up with more practical solutions which could be put into action in their own farms.

Local analysts draw a map of the village starting from one point and using the simplest available tools. The map is completed gradually by including various facets. This map could be provided to locals on different occasions and every time some more details and analyses can be added so that a relatively comprehensive image of the village social life is portrayed. This is of particular importance in the areas which are usually hidden or the specific sensitive problematic or impactful spots. It also helps with locating resources and facilities. The social map is a valuable opportunity for winning the participation of the people if facilitation is carried out well. The map is relevant to all and nobody can complain that it is not applicable to them. The local map as simple and non-engineered as it is can be tangible for all including the less literate and the marginalized. Meanwhile, the map can serve as tool to transfer the initiative to the people themselves. The facilitator can gradually withdraw and delegate the work to the people. Depending on the subject at hand, new layers can be added to the map analysis.

After a while of starting the work in the village we were thinking that both plans were proceeding well. The volunteer groups consisted of men and women and even the village children seemed pretty eager. We were trying our best to make it possible for the villagers to combine their native experiences with the new technologies in carrying out tasks. So far despite all difficulties to win local participation, we somehow proceeded with the work. Some families were supportive but still there were concerns among executive experts and agricultural researchers. Worried about the project they said "it's impossible. You cannot do it. Nothing will happen. There is so much detail and the work is progressing so slowly. You should take things in your hand. Pay them some money. Provide them with the best facilities possible to create the best sustainable agriculture model in the region!". However, based on experience in implementing the sustainable agriculture project in the previous year the outcomes we witnessed we knew that that only those parts of the project could remain sustainable that involved volunteer farmers and took their resources and choices into account. Thus, we decided to proceed in the same fashion. We were determined to keep faith in them and let them be the main executor of the project. We got ready to work with women and planned a micro-credit fund for them using their own fund. This way they could turn resource management and environment protection solutions into an income source and support their family livelihood. We were exploring appropriate solutions recommended by rural women, themselves which didn't seem easy given the little money we had and the time scarcity. About seven people attended the first meeting, the majority of whom under forty young women. They commented: "we need the loan for our men to build a livestock farm", "less than 1 billion Rials is useless", "we just help our spouses in farming and livestock". However, one or two said, "we need money to buy gold or smart phones for ourselves".

No one showed up in the next meeting except for one or two. We went home by home looking for a reason. We asked the trustees of the village and found out that the village men did not let their women participate in the meeting. They have told them: "if there is a loan, we will receive" and "we don't want our wives to participate in classes". But the women

A seasonal calendar is a tool for analyzing various issues over a year and the seasonal changes of livelihood and livelihood activities. Analysts can divide the year in any method that makes sense to them (month, season, etc.) and start their calendar from any day of the year. Then, they indicate all of their and their families' livelihood activities in the various section of the calendar (month/week/season). They can be as detailed as they want regarding the activities, mark them or place them in rows one after the other. Plus, livelihood activities other variable elements during a year such as income, costs, disease, precipitation, water shortage, work volume (even separately for each person in charge) could be reflected on the calendar if necessary.

wanted to participate even though "there was no 1 billion Rials loan". It took us several months to solve this problem. We wanted to see some of the ladies who attended the first meeting to explore the reason for their absence. However, unfortunately after several trials, we still failed. We heard from their neighbors that they are afraid of their husbands and are not even allowed to talk to us. So, we decided to have a meeting with the men again. At the meeting, we understood their concerns and came up with some solutions through their own words. At the same time, women talked with their families and tried to persuade them. Eventually, they could plan group sessions. We tried hard and overcame obstacles with the help of women, we could have the same gathering as the first one, or maybe a bigger one. Of course, from an expert point of view, the participation rate is still low.

The women started insisting at their homes on establishing women groups and their own saving account. This made the men talk by saying "we cannot defeat the women". A few days later, we understood that the men also wanted to have some kind of a training in green livelihood besides sustainable agriculture. It was very interesting because up until a few days ago they were saying that "There is no way we start another business in the village" or "our occupation is agriculture and cattle breeding", "women must help us in farming" and "women have no time to waste for tailoring and other time-consuming tasks". Therefore, we were very glad to hear that the men wanted to do something additional to sustainable agriculture for protecting their village and natural resources. So we decided to conduct green livelihood training workshops plus the sustainable livelihood project. We even executed some joint workshops for families in which both men and women participated.

The women micro-credit fund was established some months ago and each member had received the first 5 million Rials of loan and used it to establish

a business. Their spouses were very supportive and helped them greatly. They asked "is it possible to have a fund for men too?" They seemed happy with the money coming from the fund. "Work as a family" turned into a hot topic in the village. While this year's project was about to finish soon, we tried to launch the "environment-friendly complementary livelihood" project in this village since the village families expressed interest.

Well, our efforts proved fruitful and we launched the "environment-friendly complementary livelihood" project there. The family groups were formed and the men were interested in establishing small workshops besides their farming job. Group were made up of two to seven members. Some groups consisted families who had a lower rate of participation in workshops. A series of new activities started relying on the minimum available resources. The fund required for the workshops was supplied through loans of women's fund and sale of agricultural products. Some small business were up and running in many village homes. Most volunteer families decided to make use of spaces for which they assumed no function before.

It's two years now since we have launched this participatory project in this small village and the project is still in progress. Everyday more people are joining us. The old village has now a different ambience due to the innovative ideas of its people.

And we have also learned a lot from the villagers who participated in this project. We wondered if we had given in to those comments such as "you can't" and "it's impossible in this village" we could never manage to see families' cooperation at this level. Could we witness the active currents of entrepreneurship among families with such great goals if we had surrendered to those comments? Could we see the local people using their limited available facilities in the village to prepare the ground for green livelihood? Could we discover children's concern over the conservation of wetlands around their village?

Patriarchs confirm and complete the map of the village's resources
Photo by Aylar Shabgiri

Perhaps, what we observed in this participatory activity is no more than the tip of an iceberg and so much is there to be seen yet. We as the ones who went through so many ups and downs along with the families believe that this could be the beginning of a bigger movement.

1. Bio-fertilizer
2. The Bacillus subtilis, Bacillus sp., Citrobacter amalonaticus bacteria are stabilizers of nitrogen (azote) and solvent of phosphate. It means they have ability to supply both azote and phosphorus for the plant.

Looking for Water in the Sea

Abajaluye Sufla, Tazeh Kand, Qarabqolu villages

Leila VEJDAN GHAREH BAGH

As the external people, we tried to develop updated packages based on our own knowledge for the farmers during our activities in the village. However, we did not know that the farmers often do not accept such things unless it promises a solution to their problems. Our cooperation with the farmers regarding wheat cultivation was another experience for us. The experience made us think more about the activities of the farmers which are inspired by their years of experiences. Perhaps, any solution should be sought in their experience-based activities.

Farmers talked about their problem regarding the “growth” of the wheat. The wheat grows up to 50 cm in the spring and it is impossible to enter the farm. Therefore, foliar spraying would be difficult and farmers avoid it and mostly feed the crops through other methods such as irrigation . Based on the strip farming method which is regularly used in the region, they have difficulties in spraying the pesticides because they have to trample on the plants to enter the farm.

Over a year we heard about such problems in many occasions. We investigated the farming techniques in the region and found out that some farmers are using bed farming for some crops. We thought the problem of foliar spraying could be solved by the same method. However, it was an unusual method for wheat cultivation. Anyhow, we talked to the farmers about it. “You plant tomato and sunflower on the bed. Do you think this method is possible for the wheat as well?”. “It might be possible but we never tried it. Do you know if this method is used anywhere else?’ they answered.

Farmers periodically visit the farms and mutually evaluate the plantation method
Photo by Leila VEJDAN GHAREH BAGH

So we decided to research more and found out that in Golestan province this method has been successfully used. We looked for an expert who had participated in the bed farming project in Golestan. We shared the information received from him with the farmers so that they decide if they are going to consider it as a solution. Eventually, they decided to try.
Although we had told the farmers that bed farming could be an appropriate solution to their problems, we faced many difficulties in execution. For example, the specialized machine for implementing this technique was not available in the village. We visited the owner of the only shaper machine in the region to talk about the issue. He also thought that this method could be effective but he could not bring his machine to our desired venue due to the long distance and shortage of time. Eventually, we decided to share the challenge with the farmers and see what they thought.
We arranged a meeting and invited the farmers who were interested in wheat bed farming; those who owned farming machines and sufficient experience and skill for using them. We discussed the issue and in the end, farmers said that bed farming is not possible due to lack of the required machines. Then they recommended trying the furrow planting technique that has similarities to bed farming, and suggested three methods to use the existing machines in the village to create proper beds on the farms.
A farmer who was present in the meeting as a mechanization said: “When I use the strip farming method, I have to use a flood irrigation system. Since the length of my farm is too long, the water is not reaching the end of the farm and as a result, the growth of the crops is not leveled. The furrow plantation will make my irrigation convenient and I would like to try it”.

These farmers formed a group and we visited furrow planting trial farms accompanying the members of the group. We could see the farmers talking about this new plantation method and evaluating it. During one of the visits, a farmer said “the plant is strongly growing on the bed compared to the old method. Maybe because the root of the plant is not placed under the water the same as in the flood irrigation. I think this is the right method to use but we need the special machine”.

From then on, we have always tried to arrange for an opportunity so that farmers can do some analysis and evaluation by themselves and solve their problems based on their abilities and capacities.

1. While using this method could result in saving fertilizers.
2. In the strip farming, the planter machine is used for automatic plantation if the slope of the farm is appropriate and the farm is irrigated in large parts. But, if the slope is not appropriate, the farm is divided to several plots.
3. In this method, the plantation is done on the bed with the width of 45-70 cm, ridge with the width of 25-30 cm and depth of 12-20 cm. The water is leaded through these ridges.
4. Shaper is a machine used in tobacco and sugar beet. This machine flattens the surface of previously created bed. Some farmers call it the iron.
5. In the furrow planting method, firstly, the farm is planted and then furrow and bed is created using furrower machine.

Voluntary Company

Tazeh Kand village

Latif HAGHI

We visited the tomato farm of Mr.Mashahd Hosseini the reference farmer of Khanjar Gheshlagh village in 2017. He rented his farm from Mr. Pourmoghaddam to cultivate tomato. At some point in a visit to the farm we had a conversation with Mr.Pourmoghaddam. It was a friendly conversation about daily life and his experiences. He elaborated on his experiences and we listened to him eagerly. Once he said, “I wanted to do something about farming and stock raising in the past. However, I faced many barriers and was disappointed with governmental offices”. We knew how he felt and chose Mr.Mashahd Hosseini’s farm for one of the visits by the contractor and project supervisor. It was a proper choice because a new technology was used for farming and the result was good too. We sought the permission of Mr.Mashhad Hosseini for this visit as usual. While we never asked for permission from a person except for the reference farmer, we talked with Mr.Pour Moghaddam considering his sensitivity. As expected, Mr.Pour Moghaddam did not favor the presence of government officials in his land. So, we canceled the visit despite its importance to us.

Later we realized that Mr.Pour Moghaddam was satisfied with what we did. He visited our office several times after this incident and called us frequently. Once he told us about his decision for planting wheat and requested our support. Therefore, Mr.Pour Moghaddam voluntarily joined the sustainable agriculture project. In a discussion on the participatory technology development, he chose planting on raised beds among other suggested methods to address his

wheat cultivation problems and the water shortage at his well. In the next meetings which were arranged per his request, he showed us a notebook that excited all of us. He had carefully designed his farm based on our recommended method and marked each division of the land for plantation. He had even indicated the location for installing the water transfer siphons from major to minor canals. Now, he was asking us about the details to be considered. This reminded us again that if we provide an opportunity for analysis, selection and trial to the farmers they would be able to do it themselves. He took photos of his farm and the progress at each stage, and shared his documentations with us. He was actively participating in the monitoring and evaluation phase too.

This was our experience with the voluntary company of a farmer. We started our interaction by giving importance to the farmer's opinion and listening to him. As a result, we could plan and implement technical farming with the help of the farmer, facilitator and technical expert.

1. Belongs to the Urmia county and located at 8km distance of Urmia-Mahabd road.
2. This method is implemented using planters equipped with furrower. This device has small shovels to open the furrows in front side of seed tubes. It also equipped with the flattener to shape the furrows and hit the ridges to increase the surface and lateral penetration and reduce the vertical penetration of the water. In this method water is easily moving through furrows and moisture is leaked to the seeds. Seeds are planted in 3-4 rows above the beds by existing devices, and the distance between furrows is 50-60 cm based on the rows planted on each bed. (Wheat Guidebook, "Preparation of the land and planting", first volume, p.13)

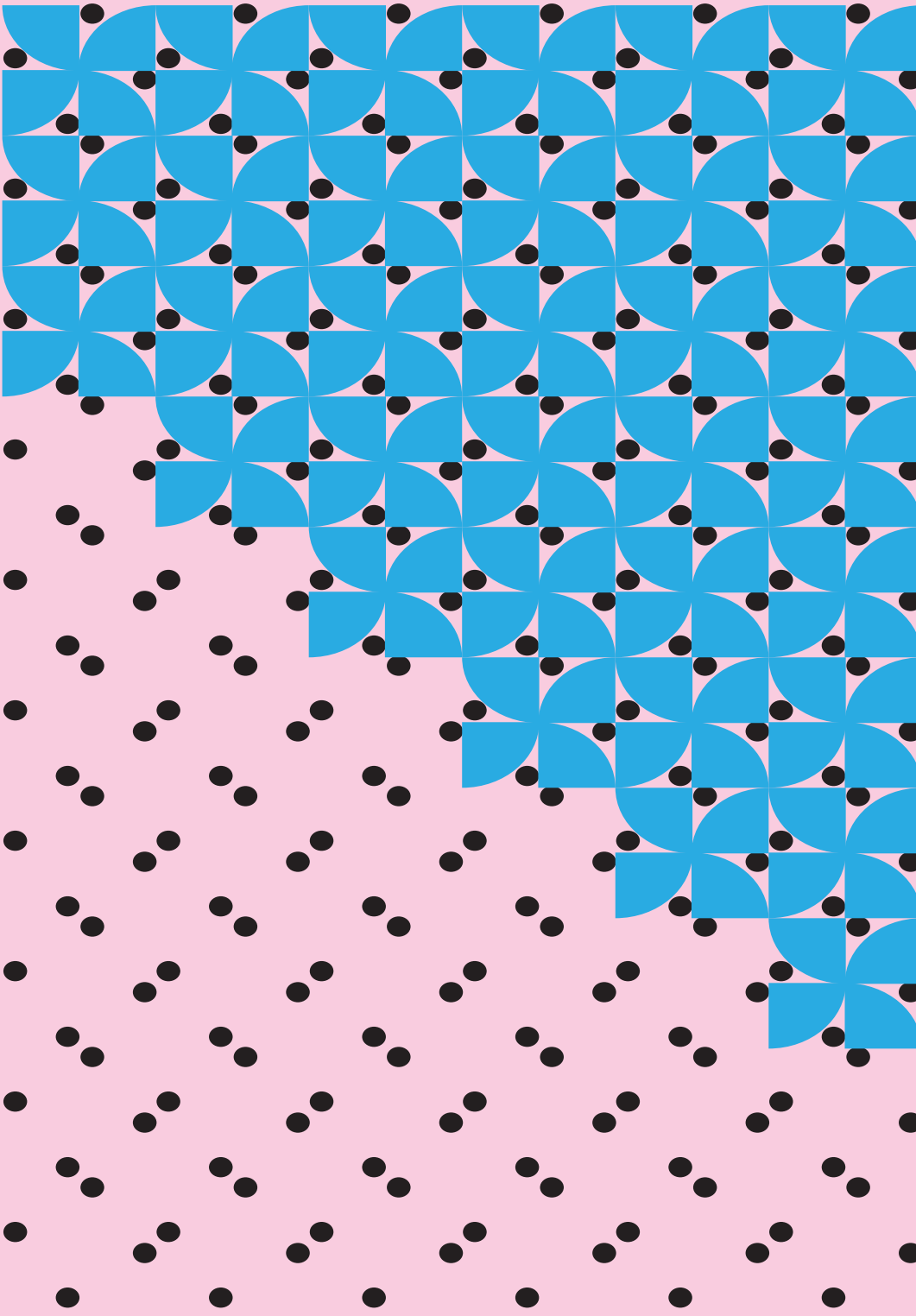
Evaluating wheat plantation on raised beds with the participation of Mr.Pour Moghaddam

Photo by Leila VEJDAN GHAREH BAGH=

Mr.Pour Moghaddam had designed the shape of the farm based on the recommended method

Photo by Leila VEJDAN GHAREH BAGH

Every company has to work with 25 volunteer farmers based on the service description of the sustainable agriculture project. This specifically included use of water management techniques, fertilizers and chemical pesticides. In the service description of the project, these 25 people were called the “reference farmers”. From the participatory point of view, the reference farmer does not necessarily have the facilities and ability to utilize the promoted packages. The reference farmer is preferably one who volunteers to try a novel idea. Moreover, he should be in the same situation as the farmers of the region. So that the outcome of his work can be applicable to his fellow farmers.



A Fresh Look at Our Surrounding

Interaction with the local community and working in their complicated and diversified environment provided an opportunity to us to apply fundamental reforms in our approach and put our lessons learned into practice. We learned that farmers come first and that we cannot work unilaterally in the local community or just among ourselves; we need to listen to everybody. This made us change our behavior from healthy competition to friendship. During the project, we encountered a big gap between the different players in the project when it came to establishing relationships. We wanted them to get closer to each other bridge this gap. Therefore, we used participatory tools as a common, clear and understandable language. That's how we observed a mutual understanding among all players.

Dredging Was Necessary

Chiko Amini

As a result of my education and years of work with organizations and government offices I have been always under the impression that what I say as an expert or an educated person is far better than what the famer or the local community knows. I assumed that I am the one who knows and has the scientific rational at hand to convince others. Thus I had this to-down approach all the time, believing that whatever is delivered to me from an organization is correct because these orders come from the seniors. Even when I was told to do something which was against my own beliefs, I had no right to object.

This was the case till I got employed in a private company in a new position. The first meeting I attended was with companies from the cities of Mahabad and Tabriz. A video clip was screened about a village's farmers' participation in dredging the water canal to show that all farmers were dredging by shovels. This canal supplied two villages with water and the source was in an upstream village. Since the upstream village provided the downstream village's water, they agreed that the downstream farmers carry out the dredging. The division of labor among the downstream farmers was according to the area of their farms. I was surprised and wondered why the government is not doing something for these people? And, why the farmers have to dredge this large canal by shovels?

It got more interesting when the members of the two companies discussed the farmers and rural people's participation, analyzed the video and explored ways to work with all village inhabitants. I realized that all villagers cooperate with one another towards a common goal far from any rivalry. Maybe to the eyes of

The participatory tool is a collection of techniques and means that let the local people and farmers express themselves and analyze more easily and clearly. The problem tree is one such tool which consists of three major parts: the trunk represents the problem, roots are the causes and effects form the branches of the tree. The more one can add to the roots and branches through further analysis, the better one knows about the various aspects of the problem at hand and finds better solutions.

the outsiders that seemed like a small goal, but since everyone was involved in labor division and decision-making and had a say, a sense of commitment and motivation prevailed. Later on, I started to doubt my knowledge and superiority. I got more interested in the participatory approach and tried to further explore the topic.

After a while, I attended a session about the participatory approach in the city of Tabriz which increased my knowledge regarding the concept of participation and its importance. In this session people from relevant companies participated who had the experience of working with these tools without a sense of competition. They sincerely provided feedback on each other's work and helped each other fix problems. Listening to different viewpoints helped me gain more experience and take note of many of my habits and biases. The participatory approach provided an opportunity for the local community to better express their realities and opinions.

As I got aware of this approach, something sparked inside me that made me think about the people with whom I have had interactions. I participated in teamwork and listened more to the people around me. Moreover, my relationship with other relevant companies and people improved and I got even more experienced in this new approach.

When something is done through participation of all and when we analyze a problem collectively at the same level problems can be solved much easier. The relationship between me and the local community became more friendly and I listened to all, giving everyone equal importance. Many of the potentialities of the rural community has taken a new shape for us as the local realities. I was blind to many of these realities that could help with so many problems. Nowadays these realities play an important role in better understanding of the local community, knowing their problems and considering them in our decision-making process.

From Competition to Friendship

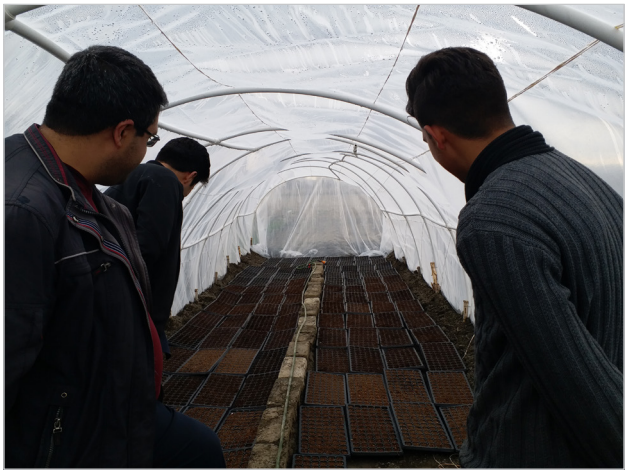
Sonia ROSHANRU

Along with another colleague got employed in a company in 2014. The former staff of the company were now working with Agriculture Jahad Organization and could not continue work in agricultural service companies anymore. Therefore, the first phase of the sustainable agriculture project was suspended after 6 months when it was assigned to this company. We were all newcomers and had no information about neither the project nor facilitation and participation.

I participated in a 3-day facilitation training course for the first time in Urmia city during the phase II. The topics of the course were very interesting and new to me. The course looked more like a friendly gathering and a game rather than a training course. I thought that these fascinating talks and all the work are a targeted introduction to new methods that we have to implement with the farmers without the need to ask them for involvement. On the last day of the training, I found something interesting out! These friendly discussions were the very content of the training.

It was a different type of training. One has to put aside formalities and enjoy an open conversation with competitors from other companies. We have always seen ourselves in some sort of rivalry with competitors, knowingly or unknowingly and now they have turned into some good and sympathetic friends that were complaining of the inflexibility of the conventional top-down methods as me.

Facilitation prioritized the farmer and believed that “they



Farmers are monitoring the implementer company by participatory method
Photo by Ghahreman ABDI

know something that I don't". It was different from the former methods which were based on a top-down approach and the opinions and experiences of the farmers were never reflected. In the older methods, the result was more important than the experience and the process of carrying out a task based on the practical examination of the theoretical knowledge was not that important. Of course, we were beginners at facilitation and often we were still inclined toward a traditional manner. Our facilitation was temporary and case by case. The facilitator was a member of the company who showed up on specific days only to carry out the required activities. He was mostly present at the time of entry to the local community, when the effectiveness of the project was evaluated and when training courses on facilitation were in place.

Facilitation courses were arranged once every few months. Discussion about facilitation tools gradually started. We learned and practiced some techniques. However, practicing in the training course was far different from the real world.

After a while, the project contractor requested the company for the arrangement of a meeting with farmers at the villages covered by the project to evaluate the effectiveness of the project using some facilitation techniques. What a trouble! We had no clue about where to start and what to say.

We prepared some colored papers, markers and tapes by imitating the workshop trainers. Since one of the techniques was called problem tree we thought that we have to talk about the problems of the local community and completely forgot about the main topic of evaluation. We told farmers "we want to talk about your problems. Tell us about any problem you have in this village". Then we placed all the problems of the village as the fruits of the tree and their causes as the roots. All other techniques were similarly implemented in an amateurish way and with no particular relevance to the topics.

We sent the evaluation report. I am sure they were easy on us since they knew that we are amateurs.

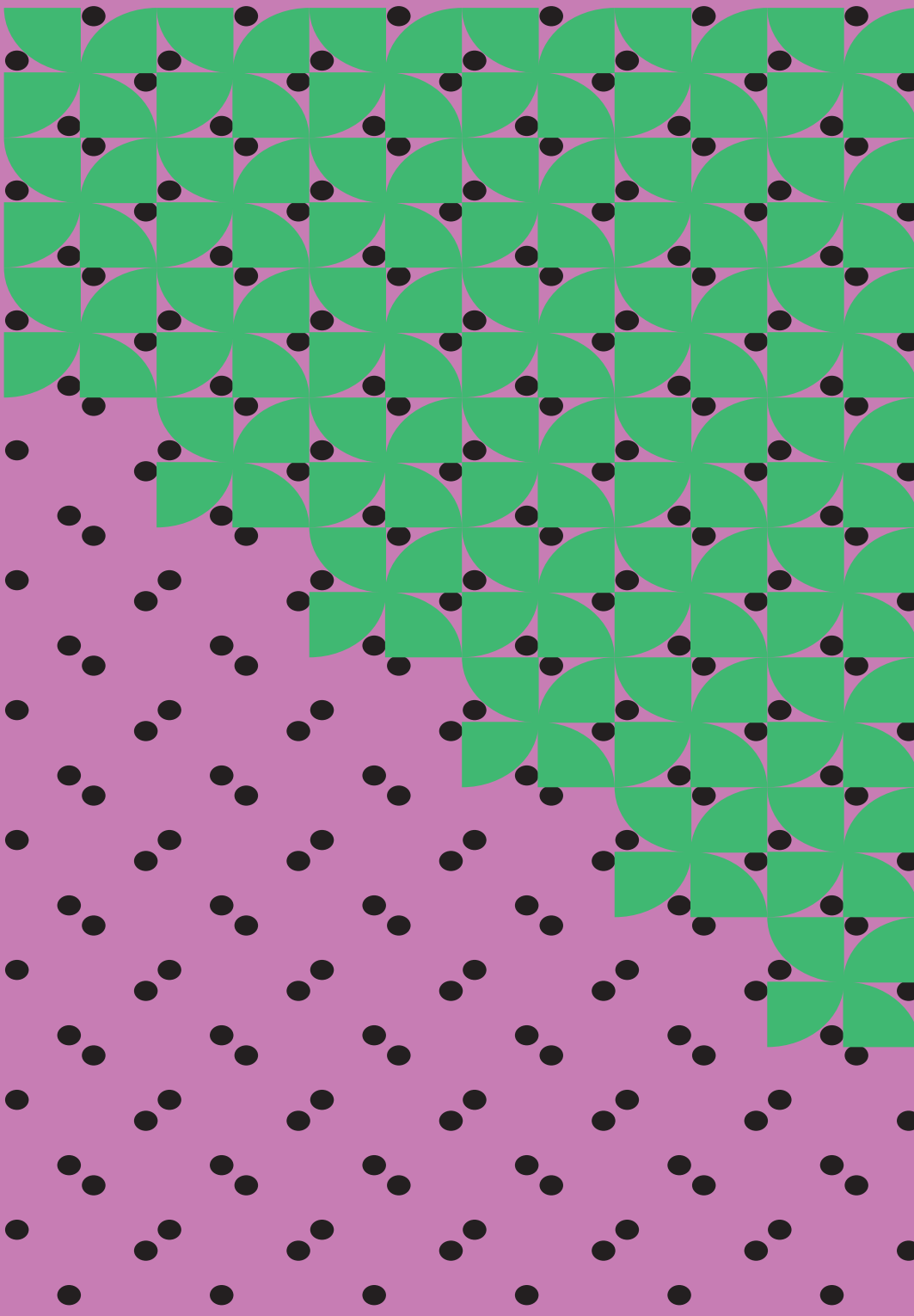
Based on the problem tree technique, the problem is written down on the tree trunk. At the upper side where the fruits are, the effects and consequences of the problem are indicated. The roots of the tree are the origins of the problem. We have to continue looking for the roots until all dimensions and details of the problem are clarified and we can reach to a solution.

Participatory monitoring at the field in Mahabad by the attendance of teams from Bostan Abad, Osku, Miandoab
Photo by Ghahreman ABDI

Facilitation training courses were gradually inculcating concepts and behaviors that could direct our mental framework. As a result, we became open to criticism and optimistic. The person who respects the opinions and interests of others, will not judge them and for sure there is always something more to learn.

Facilitation training courses were gradually inculcating concepts and behaviors that could direct our mental framework. As a result, we became open to criticism and optimistic. The person who respects the opinions and interests of others, will not judge them and for sure there is always something more to learn. In my case, the former thoughts, beliefs and learnings were stored in my mind like a messy storage filled with books. The facilitation courses cleaned this store and made it nice and neat. The books were placed properly based on their topics and content and each course added one more book to the shelf. I gradually understood the concepts better and these learnings became the basis of my behavior toward farmers, associates and even relatives. Our work process changed gradually. There was no need to play the role of someone else. We knew what to do. Now we were friends of the farmers. Our friendship was like the old time friendship; when a person had something he shared it with the others. We had the updated scientific information and they had the resources and enough ground for assessing this information. We experienced together, sometimes on a small scale and sometimes on a bigger one. The experience was more important than the result for us. We could claim complete happiness only when we got an appropriate result besides experiencing and obtaining new information. At the same time in case of failure nobody blamed others. Rather, we detected our deficiencies and shared our experience with other people. The participatory approach made the local community more eager to experience new things and further cooperate with the company.

1.Top-down: to be inculcated by researchers and experts in farmers and local community disregarding their opinions, facilities and limitations.



The Farmer and I; Before and After Participation

Today when we look back at our past memories and experiences, we notice the changes that are interesting and contemplative for both farmers and ourselves. These changes of attitude, behavior and knowledge are observed in all components of participation including facilitator, farmer, teams of executing companies, etc. We used to invite farmers to implement our suggestions and technical recommendations without knowing the least about their situation. As we got further aligned with the participatory approach of the project, we took the situation and facilities of the farmers into consideration. Thus, we could win their trust and participation and come up with practical solutions with their own help.

We learned not look at the farmers from the top, respect their years of experience and see science and experience side by side. We also learned to give them the lead in solving problems so that they can combine the expert knowledge and their own experience, examine possible solutions and choose the best available option.

Tell Me What Are You Doing Here

Bayqut village

Sahar AKBARZADEH Shirin ABDOLLAHI

We were commuting to the village for a few months. Every time we walked or drove there we were gaining a general understanding of the village but we needed to know things from a closer distance. This time we decided to visit various places in the village in two separate groups. So we asked the driver to take us to the main bridge of the village. This way, we could walk to the village the same as the villagers and have the chance to greet some people on the way.

A group of people were sitting near the bridge. Our team was made up of two ladies. We went to greet them. However, were not welcomed. One of the men in the group said "here ladies do not speak in the alley or on the bridge. If you have something to do invite everyone to the mosque. There we can talk". This came even before we could introduce ourselves and find a way to talk to them. We said nothing but an inaudible goodbye.

During our next visits, we tried to avoid that man as much as possible. Instead, we went to other gatherings and got to know many village residents. Once, we were passing an under construction building near the mosque when we suddenly met that man again. He was supervising the construction. We tried to go away silently but heard somebody calling "Madam! Madam!". It was him and by now we knew that his family name was Mr. Mohammadzadeh. He was calling us. After greeting he said "Following that day I have seen you several times. I asked others about you and heard some stuff about you but you would rather tell me what are you doing here yourselves". So, we introduced ourselves and our company. He said, "True. The people of the village said exactly the same thing". We were

happy to know that we could attract the locals' attention. The villagers could explain our presence and job to Mr.Mohammadzadeh.

Mr.Mohammadzeh showed more understanding towards us from then on. Every time he invited us to their group with a warm greeting. He was participating in all the meetings and requested others to do the same. He joined the analysis and discussion and was the first volunteer for executing soil examination with us.

Following that day, I have seen you several times. I asked others about you and heard some stuff about you but you would rather tell me what are you doing here yourselves.

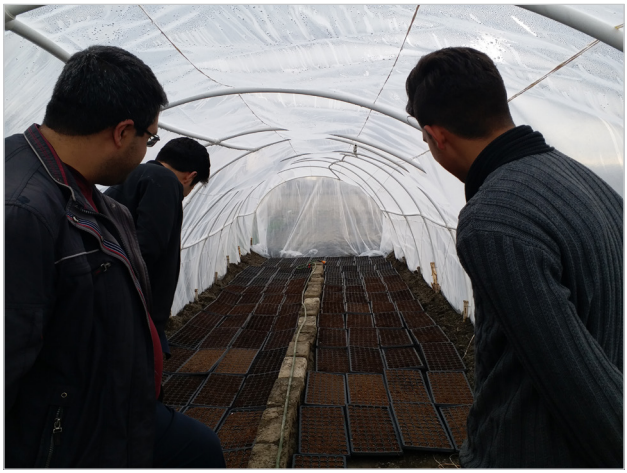
It's Good That We Drew the Map

Tappeh Ismaeel Abad village Sahar AKBARZADEH Shirin ABDOLLAHI

Once we decided to visit the orchards of the village. We lost our way because we were not familiar with the village. Thus, we decided to draw a map of the village including all routes and resources on the next visit to the village. If we could find a group of people helping us with this purpose, we could know more about the village and its people.

After a few days, we went back to the village and saw a group of old and young people while walking around. We joined them and asked for direction. They showed us the routes in the village. We asked them "could you please draw these routes on a piece of paper"? An old man said, "we are illiterate and can just draw the lines". Mr.Heidari a young man who was an assessor in the village and his job was to measure lands said: "you can use the GIS map and easily go everywhere". We replied by saying: "we want to go now and have no time to find the GIS map. The map you draw for us would be more easily and we can learn the routes easier".

Mr.Seddigh, whom we knew from our former visits said: "bring us some paper. I'll describe the routes and Mr.Heidari will draw them with my son". We brought some papers and Mr.Heidari stated to draw the map without any objection. The participation of the youth in drawing the map was on the rise. Everyone said the name of their schools, homes and shops. The young people said the name of alleys as it was common among them, but the elders were against using the old names. They erased the old names and wrote the new ones. The elders believed that "some people living there do not like to see the old name of their district in the map". Therefore, they wrote the new names instead of



Drawing the map with the village's people
Photo by Ruhollah Rostam Zadeh

the old ones. Mr.Heidari looked at the map when it was completed, saying "It was good that we drew it. It is far better than GIS. You can see all the details of the village at one look". Afterwards every time we visited the village, the youths who helped us draw the social map of the village asked us "is, the map helpful to you to know about the routes? After talking with you we went through some routes to check whether we drew it correctly or not. If you have the map now we can draw some more routes." We also wanted a precise and complete map of the village based on the opinion of the majority of people. So, we took the map to our next meetings. We left the map to be completed by the villagers.

Later we used the map drawn by the villagers to understand the districts, resources, routes and orchards. For instance, once we gathered in the mosque to inspect the soil samples. We, could help the selection of sampling routes which were identified by the villagers because of the understanding we acquired through the map. On later occasions, they could use this map for some collective analysis such as livelihood ranking and specifying poorer and wealthier groups on the map.

What Means to Be a Pioneer

Qom Qaleh village

Chiko Amini

Qom Qaleh village was selected as a pilot village for implementing irrigation techniques and agricultural management in Phase IV of the sustainable agricultural project. After getting in the local community and explaining the project objectives and our company, we called for the cooperation of volunteer farmers. Some of them registered themselves as autumn reference farmers and some as spring reference farmers.

One of the spring references was a pioneer farmer who accepted cooperation with us just because he had relations with Agriculture Jahad Organization and other organizations. Works done by our company were supervised by these organizations as well. This pioneer farmer was selected as an exemplary beet farmer of the county several times and possessed many agricultural machines and devices. He did not consider any expert opinion necessary and was cooperating with us due to his relation with Agriculture Jahad Organization officials. For instance, he never attended the farm visits and ignored the guidance and advice from the experts. Since he has been a pioneer for years, he only relied on his own knowledge.

We selected the farm of this pioneer farmer for monitoring irrigation techniques after selecting spring reference farmers. I selected his farm after checking the situation by the spring reference farmers along with the person in charge of the provincial monitoring group. We talked with the pioneer farmer about the techniques which were up and running on his farm. Although he did not agree with the (drip) tape

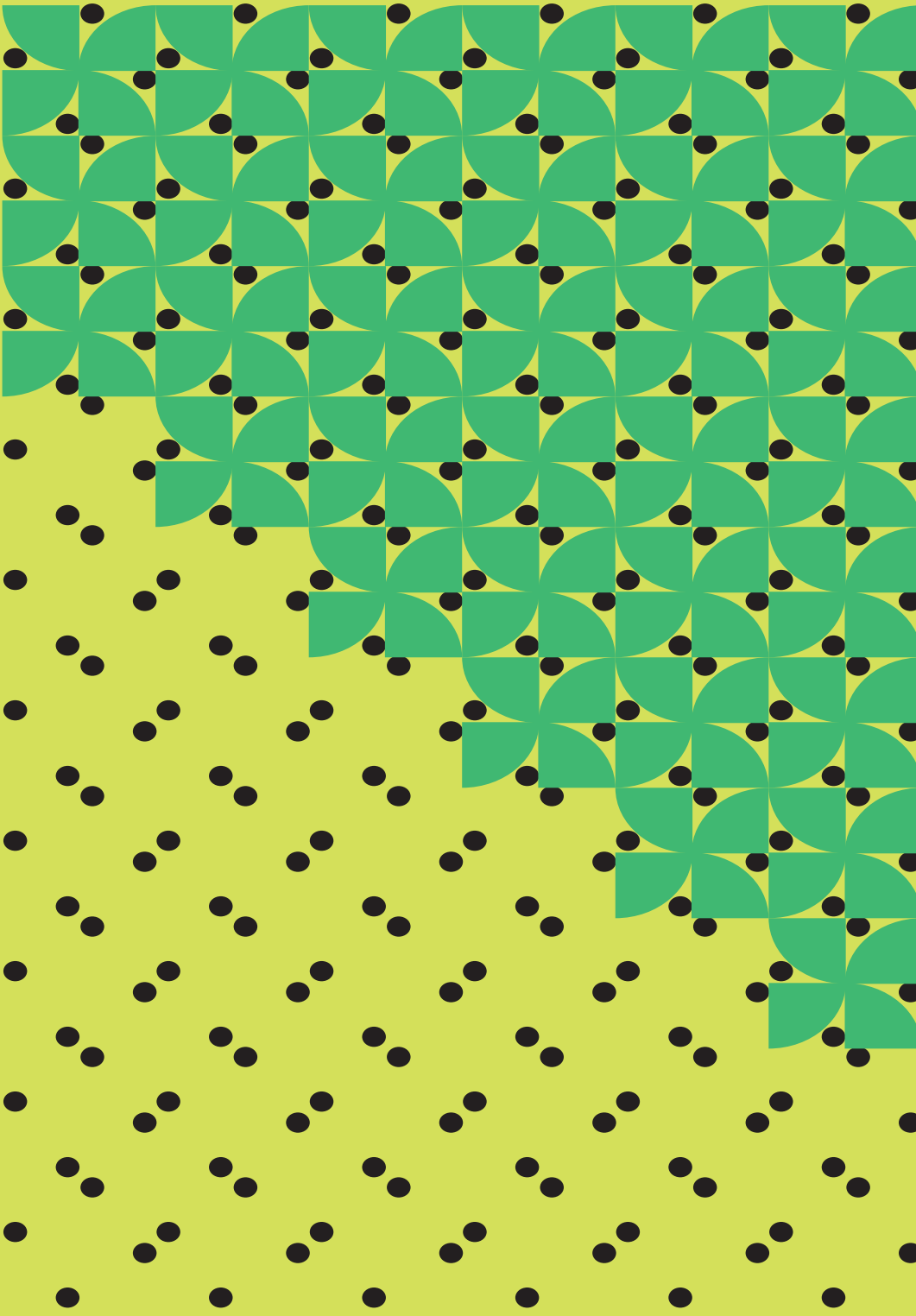
Usually, the reference farmer is selected from farmers who are interested in implementing agricultural techniques (irrigation and optimal farming) on their farms. Selecting the interested/ reference farmers is the significant difference between the conventional and the participatory approaches. The reference farmer in the conventional approach is a farmer with relatively more facilities, financial ability, better communication skills and education who starts to use the promoted packages earlier than others. It is assumed that his success in using the packages would be a model and motivation for others in the region. However, in the participatory approach efforts aim to prepare the ground for the participation of farmers with fewer or just standard facilities, capabilities and education. Hence, the credit for their "reference" comes from the similarity of their situation with a wide range of farmers in the region.

irrigation, he allowed us to try this method in any part of his farm. Thus, after taking all factors into account, we launched the design and implementation phase in coordination with the monitoring group.

In every visit to the farm, we invited the pioneer farmer to investigate the situation of the farm and the implementation of irrigation system. However, most of the time he didn't show up. Despite his indifference, we launched the implementation of the irrigation system following all executive principles, and all our company members were busy working on his farm. He cautiously joined our work when he saw our efforts. Now, we gradually started to inspect the situation together. He even requested me to explain the irrigation system, how to operate it, its function and performance, time consumed by irrigation as well as the advantages and disadvantages of the irrigation system.

He invited me to his farm after a while and showed me the best spot of his land that was near the pump and could decrease the cost of water transfer. At the same time, this part of the land would not block the movement of agricultural machines and had an easy access to the irrigation system. I started the work with the company team at the spot suggested by the farmer. After the implementation, we noticed a better optimized solution thanks to the clues provided by the farmer and the execution principles.

At the beginning, the farmer said that since he was busy and the tapes were a barrier to his farming activity we must do the irrigation by ourselves. After several trial irrigations, he was checking the system by himself and said: "I have a bigger land. If I knew that the irrigation system functions like this and you are so persistent we could have run it there together".



The Farmer as an Examiner

Once we claim that our method is not based on extension, it means that we are not going to offer solutions to the problems of the farmers based on our one-sided diagnosis. In fact, we seek to help farmers try some ideas in their own environment which following some modifications can fulfill their needs. Strengthening the "trial" mentality among farmers is an important step toward increased innovation. This mentality could be supported to the extent that trial becomes a permanent component practiced by the farmers; This way they are not dependent on external factors –including us- to examine something. Meanwhile, we should not forget that trial and error has been an inseparable part of farming and farmers are familiar with the concept. So maybe my following the same trend, we can lend proof to the same old good practice and stabilize it.

The Bakhshayeshi Beans

Bayqut village

Sahar AKBARZADEH Shirin ABDOLLAHI

Been four days since our last visit. We got off the car a few meters before the destination and walked the distance. We arrived at the teahouse in the central part of the village and noticed many people there. We have placed the map of village resources that were drawn by the locals on the wall of the teahouse. Some of the elderly did not confirm the validity of the map and believed that it would have been better if a more general map bearing local names had been developed. We expected them to complete the new map the next week. As always when we entered, all seats were already occupied. The new map was drawn using the marker and papers supplied by us and they claimed that all the errors were corrected then. They had put the map on the wall. While talking about the daily circumstances of the village and the cultivation of tomato, they mentioned the interest they had in drawing a map we noticed a gentleman who was sitting in the teahouse most of the time, but we never had heard him unlike other people. The villagers tried to invite him to cooperate in drawing and completing the map. However, he had no interest in doing so. As people were saying he had a cattle and did not farm that much. We got more interested and decided to talk to him who was always seated somewhere near the window in silence.

We asked him, “Don’t you have any idea?”. He lighted a cigarette and said with hesitation, “No. they’re the hunters and know the routes better than me. I have a cattle and just a small farm”. We asked, “Do you cultivate the major product of the village? Tomato?”. The gentleman named

Comparing local beans with Maragheh beans
Photo By Sadegh KHADEM MOGHADDAM

Analysis after harvesting beans with help of village's people
Photo by Dariush FAKUR

Mr.Bakhshayeshi answered, "Yes. Generation after generation. we have learned from childhood to cultivate tomato. But, my wife and I cannot work anymore because of backache and foot pain. Thus, I'm thinking about an alternative product which requires less effort. I visited the farm of my friend in the city of Maragheh and found out that bean yields well. As the result, I decided to cultivate less tomato and plant beans instead. A few people are cultivating bean in this region and I think that it would have a good market for sales".

Another man who was hearing our conversation said, "I planted beans next to tomatoes this year, but it was hard to harvest". Mr.Bakhshayeshi said, "Yes. The growth and harvesting are hard when the bean is planted next to other crops, and the final product may not be up to one's expectations. I'm sure if you hadn't planted next to other crops it wouldn't have turn out to be so hard and you could harvest better yield". The man said, "It was for personal use only and not for sale. Thus, I didn't think about it that much".

We met with Mr.Bakhshayeshi many times and got familiar with his old spouse and the son. We visited his home and drank tea together while listening to them. They talked about their various worries and interests and showed us photos of their friend's bean farm in Maragheh. They got more serious in their decision to plant bean next to tomato after some analysis. We accompanied this family in planting two different types of bean in spring.

Mr.Bakhshayeshi purchased a certain type from Maragheh and the other one from the village's grocery shop. We visited his farm several times between plantation and harvest season. Other interested farmers also accompanied us in the visits. Then,

we arranged a meeting with a group of farmers at the village mosque after harvesting the beans. In this meeting, Mr.Bakhshayeshi elaborated on conducive and challenging factors in bean cultivation. Mr.Bakhshayeshi's son and some of the literate participants recorded this analysis, which eventually made some other farmers cultivate beans.

Some of the interested farmers accompanied us for periodical visits to Mr.Bakhshayeshi's farm and some other arranged visits later to observe the farm closely. These farmers mastered the subject and eagerly participated in the analysis.

The analysis indicated that the beans from Maragheh are more suitable compared to the local type due to various reasons such as shorter irrigation periods and a smaller workforce. The Maragheh type bean was better than the local type both quantitatively and qualitatively. It was also more resistant to climate and environmental conditions. Thus the decision was to plant the Maragheh type bean next year.

Providing an opportunity to a farmer who had been always silent and seemed detached from the subject at the first glance, resulted in the trial of a new experience in the village and affected other farmers too. As a result, a land with a fertile area of 1 ha was allocated to bean plantation in the next year and there were hopes that this crop will survive in that soil.

The Roadmap for Learning

Qarabqolu village

Leila VEJDAN GHAREH BAGH

We noticed some problems over years of work in the village. Although we had some solutions to those problems, we didn't know how to offer them to the farmers in an acceptable way. For instance, there were problems in tomato cultivation. The farmers of this region traditionally planted tomato seeds in storehouses (small plots) to produce seedlings. One of the problems they faced at these so-called storehouses was the management of weeds and mole cricket insects. The roots of the seedlings were damaged partially during transplantation and this resulted in a decreased efficiency of tomato cultivation.

While we knew that planting the seed in seedling trays could mostly solve the problem, we did not know how to share this idea with the farmers. Many times we heard the farmers saying, "We are not interested in doing anything unless we see how it is done by our own eyes and understand its positive and negative impacts". Thus, we decided to take action by ourselves.

We looked for an appropriate place to rent for establishing a storehouse for planting tomato seeds in the seedling tray. One of the farmers offered his small land for this purpose.

We built a small storehouse and started to cultivate the tomato seedlings. Since we built the storehouse inside the village, a friendly relation was created between the people of the village and us. They comfortably commuted to our small storehouse and observed the production process of seedlings directly. Sometimes they sat for a while and watched us work. Some

of them disappointedly would say at times: “no doubt nobody will welcome this idea and it will prove useless. What would be the use of these seedlings?” We could understand them because the cost of producing each seedling was far more than in the traditional method. We explained for them that the money spent on pesticides and weed management in a traditional storehouse is not that much different from the total cost of a traditional seedling storehouse. Continuous rain left many farms unprepared for planting the seedlings due to the high humidity rate. Thus, some of the farmers who planted their tomato seeds earlier, could not transplant it on time and the seedlings were overgrown at the proper time for transplantation Therefore, many of the seedlings in the storehouses were destroyed. This is while we could have managed the growth of the seedlings by controlling the conditions.

Some of the farmers were doubting the use of our seedlings, while some others were saying “these seedlings are alive and will adapt to our farms as soon as transplanted”. We recommended the use of our seedlings in a part of their farms as a trial but they had to pay for them. Then we helped the interested farmers transfer and transplant the seedlings in their lands.

Once, transplanting the seedlings at a farm, some of the farmers expressed satisfaction by saying “planting these seedlings is easier and takes a shorter time. The roots of the seedlings are easily placed in the soil. we thought it will take longer compared to our seedlings but it is the opposite”. Another farmer said, “We should keep the empty trays to sow the seeds next year by ourselves”.

Farmers had another problem in tomato cultivation. For instance, they were interested in trying the tape irrigation method, but they did not know adequately about it and could not implement it on their own. After a while, we heard about a person that came from another village and cropped tomato in his rental land. That person was using a tape irrigation system that seemed like a novel idea in the eyes of the villagers. But, they did not know about details. We saw it as a good opportunity and requested the newcomer for a meeting with the other tomato farmers of the village. We aimed to introduce this newcomer to the villagers in this meeting. After the meeting, farmers visited the newcomer’s farm either with or without us and asked their questions.

Therefore, some of the villagers volunteered for implementing the tape irrigation method at the village. The newcomer attended the farms of volunteer farmers at this stage and guided them regarding the execution and details of this irrigation method. The cooperation of the farmers resulted in a decrease in labor costs. Hence, the method got wide spread in the entire village.

Another problem with implementing the tape irrigation method was the low quality of the water that made use of a filtration system a necessity in some farms. Many of the farmers could not afford the huge cost of a filtration system. Thus, we tried to find a solution with the help of the farmers.

We asked them whether these minerals were always pumped out from the wells? If not, when was the volume of the mineral of the well water at the highest? Some answered, “these minerals are not always there. It occurs during the first 10-30 minutes of the irrigation and

after that there are no minerals". Together we decided to install some bypass pipes to return the water into the well. Therefore, the farmer must not start irrigation right after turning the pump on. He could transfer the water to the main pipe after a few moments of waiting. Although this solution could not be a permanent alternative for the filtration system, it could be useful for launching the system.

We got tired accompanying farmers for implementing tape irrigation method in their farms, but it was worth it since we had gained a precious experience. A small portion of the volunteer farmers' lands was used for the new technology to prevent possible losses in case of failure. If it was successful in that part, it could be easily compared with the main farms and then the farmer could expand it to other parts of his farm or even the farms of other people if he was satisfied with the results.

We came up with a new way to communicate our message to the farmers. We could address the problems of tomato cultivation in the village, implement and develop new technologies by first trying the new technology in a small part of a farm, relying on local experts, listening to farmers and finding solutions together with them.

1. Mole cricket is an omnivorous insect that causes the death of the plant by chewing its roots and burrows the agricultural land.

Whatever You plant, You Will Harvest the Weeds!

Safarqoli Khan village

Haleh TARAM

He is a thin and tall man that lives with his old mother. He is known as a livestock breeder in the village. They said to him, “You are not a farmer, Mahdi. Why do you participate in these workshops?”, and laughing at him added: “whatever you plant, you’ll harvest weeds. You will never be a good farmer. You’d better graze your sheep”. We had a private conversation with Mr. Mahdi several times after our introductory meetings with the villagers. He told us about his farm that was used for producing fodder for its livestock. What we knew now was that he had planted fodder corn and alfalfa that required a lot of water. The area of the farm did not seem to be small, too. We also found out that other people were making fun of him because of his incorrect and inefficient farming methods. He didn’t care much about his farm compared to other people and his farm was full of uncontrolled weeds.

He was not interested in participating in group discussions about the crops at the beginning. Although sometimes inspired to participate, he was quiet and withdrawn after seeing the grinning faces of the other farmers. But we tried to involve him in group activities more and more by giving the same time-sometimes even more- to Mahdi as others. Other farmers used to joke all the time and this made the meeting ambience pretty fun. As Mahdi accompanied the group, he got more interested in farm management. After the meeting was finished, he wanted more time to continue the discussion and we welcomed him. We provided him with more brochures since he

was interested in studying. He gradually started to take part in group conversations. We noted that he is very eager to learn about new cultivation methods. A few times, he dared to talk about his ideas in the group. Now Mr.Mahdi is a permanent member of all meetings, activities and gatherings in the village.

There was a large group activity ahead of us at the village. We had to hold an exhibition of sustainable agriculture achievements and technologies and decided to focus on public participation and mutual experience exchange by farmers in addition to introducing technologies relevant to sustainable agriculture.

The day of the exhibition arrived and Mahdi was more energetic than anyone else. He made a maquette of drip irrigation. This irrigation method was what everyone was joking about with Mahdi and the same topic inspired him to ask for more training by our expert team. He took responsibility for bringing the chairs and tables from the city with his friend who owned a pick-up. We asked for a maquette to show the new irrigation method which was to be installed in the center of the village. The volunteers took care of the task under the supervision of our experts. Mahdi was cooperating so diligently as if it was his own farm.

The plantation season started. Mahdi decided not to plant one of his farms and instead prepared drip-tapes for other farms. He put this idea into practice with the help of our irrigation consultant. Since he didn't have enough fund for implementing this system he aimed for a minimum of half of his land. He chose corn because a few people had cultivated corn using drip-tape irrigation in neighboring villages. He even decided to plant dragonhead and bean using drip-taped irrigation for the first time. He explained eagerly his initiatives to the friends who visited his farm. This showed that he was content. He described to them how he is transferring the tapes on his own to irrigate all planted rows by drip; how he could manage weeds and how he is not going to harvest weed like before when he had no time to get rid of them. Some of the village farmers were inspired by his idea and tried to use it for planting their farms. One of his friends also decided to allocate a small piece of land in front of his house for cultivating tomato by drip-tape irrigation.

It seems that the courage the cattle owner showed in using new farming technologies convinced others that this is something which can be done with a limited budget and that they do not need to wait for state loans or save a huge sum of money for this purpose. Since one of the big landowners of the village had just implemented this method in the past, everybody thought that this would require a big budget. However, currently many farmers with limited financial resources are interested in drip-tape irrigation and they are ready to start with their small pieces of land.

1. One of the modern irrigation methods for agricultural crops.
2. Its scientific name is Dracocephalum and belongs to the Lamiaceae family. Native to a wide region of Eastern Mediterranean. Nowadays, it is cultivated for ornamental and medical uses and for producing the honey.

The Participatory Omelette

Gapis village

Sonia ROSHANRU

Drip-tape was one of the new methods for reducing water use for agricultural crops during the phase IV of the sustainable agricultural project in 2017. Most of the government organizations that had to do with water shortage and Lake Urmia, supported this irrigation method.

My colleagues and I had never seen how a drip-tape irrigation system works during the farming season. All that we knew was limited to our visit to a pilot village at Mahabad city and an unofficial verbal elaboration by other people. Thus, we were very eager to see its function from a close range. We requested farmers to introduce us to a farmer who had implemented this method previously. Since this was a new method, nobody wanted to risk and try it. Mr.Mohammad Kurdeh was one of the farmers in Gapis village . He was one of the reference wheat farmers during the 2nd and 3rd phases of the project and always participated in training workshops and meetings of facilitators with the local community.

Kak Mohammad said at the meeting arranged for the selection of the spring reference farmer, “let’s execute the drip-tape irrigation system in one part of my farm for spring cultivation”. It was a good opportunity for him and for us to examine this method and verify our knowledge.

The reference farmer is selected from among the farmers who are interested in implementing technical farming techniques (irrigation and optimal farming). From the participatory point of view and field work, a reference farmer is a person who volunteered for trying a new idea. Moreover, his situation has to be very similar to other farmers so that his performance could be possibly a point of reference for other farmers in a real world setting.

In the meeting, we talked with the farmers about crop selection for plantation and their worries at. Kak Mohammad, said “my biggest concern is about price fluctuations and the possibility of inability to sell my products at the harvesting season. The sugar factory did not purchase my beets last year and I had to sell it to dealers at a low price”. We recommended dividing the farm into smaller parts and planting various crops at the same time. He welcomed this idea and said, “This way the problem of price instability would be solved and there is no need to worry about the sales as well. Since the volume is decreased, even if I have to sell at a lower price, the loss won’t be that damaging. On the other hand, among different crops at least one or two would be sold at a good price to cover the loss which may happen”.

Kak Mohammad allocated half of his farm to beets and the other half to cucurbits such as tomato, onion, cucumber, beans and pepper. We suggested halving the tomato farm for implementing drip-tape irrigation. Therefore, we could irrigate half by the traditional method and the other half with the new method. So we could compare the drip-tape and flood irrigation for the outcomes.

The plantation season started and we had to think of labor division. “We will provide the tools, design and implement the drip-tape and will take care of the specialized tasks. We will visit the field regularly until it’s time to harvest” was our offer. Kak Mohammad also said, “I will take care of plantation, growth and harvesting, but you should help me prepare my land for plantation. I will serve you a cup of tea made on wood as well”.

Supervision and monitoring were regularly taking place and the advantages/disadvantages of the project were becoming clearer day by day for farmers (that regularly visited the farm) and us. Even the farmers from other villages visited Kak Mohammad’s farm in addition to the water monitoring team of the project. This was a pleasant outcome for us as well as other people in the region. It was a new experience that provided an opportunity for testing our theoretical information and hearsay about the drip-tape method.

Kak Mohammad shared his newly acquired experience about the utilization of the drip-tape method on a daily basis during the stage of growth. He said “the crops of trial part (which was irrigated by drip-tape) grow faster than the other part (flood irrigated). The trial part has fewer weeds and pests. While the bushes are more intense, irrigation is easier. However, the life of tapes is short and they are destroyed after a short while in addtion to nozzles clog due to muddy water. I have to design and implement it every year which would be very costly. On top of that, the tapes made by non-biodegradable plastic pollute the land”. Mr. Amini, our colleague. monitored the water of the farm and got some new information. He said that, “the water usage and waste at the treatment part is very lower than in the control part”. This way, the advantages and disadvantages of the drip-tape irrigation system were clarified for us in a practical and documented way.

The harvesting season arrived and our crops were fully grown. Kak Mohammad invited our company and their families to lunch prepared by ingredients which were produced through a participatory approach. We cooked a delicious omelet with onion, tomato and pepper harvested after an agricultural season’s efforts.

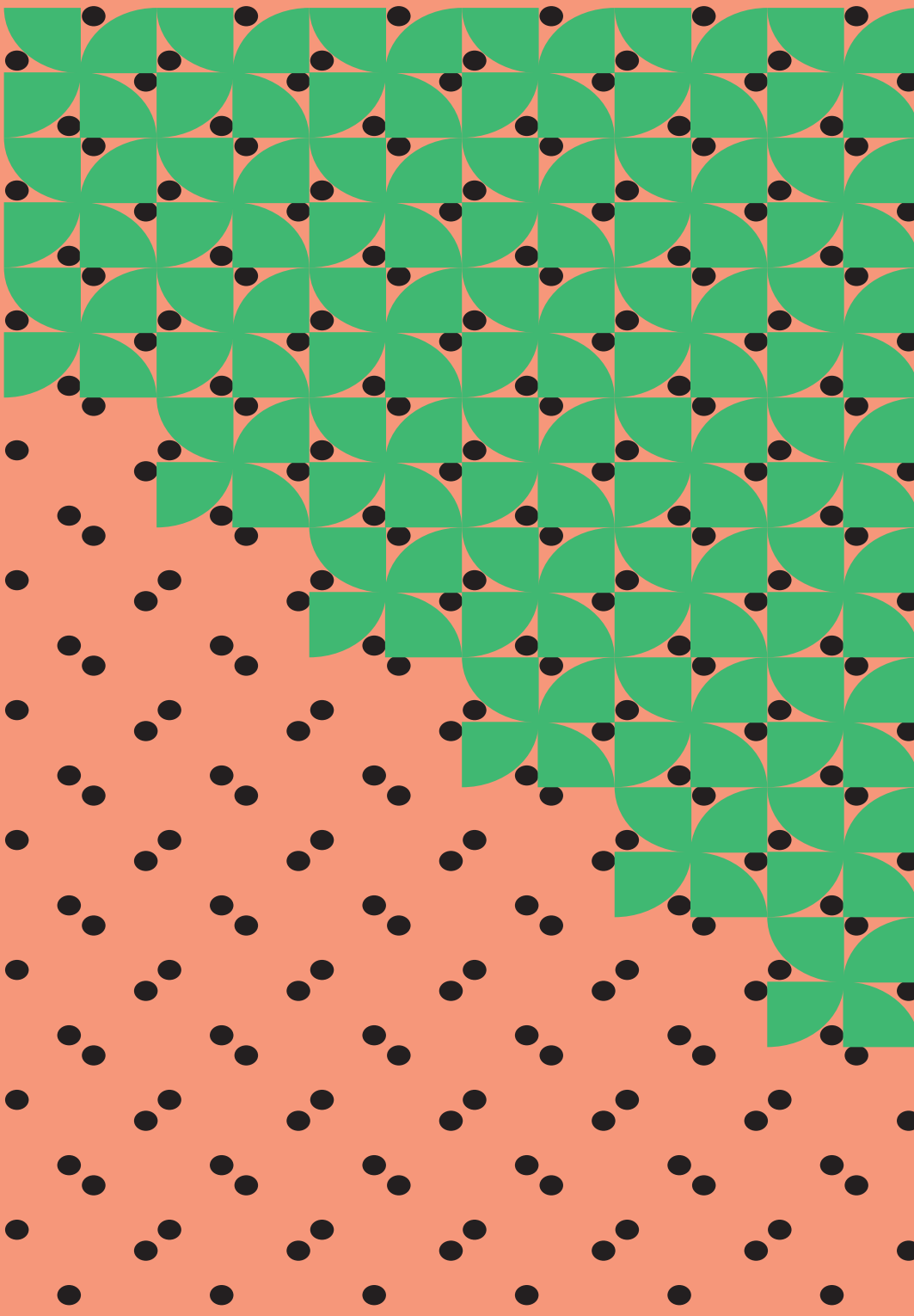
Launching drip-tape irrigation system
Photo by Homayun ABBASI

There were other impacts too. If we were questioned as an expert regarding drip-tape, we could answer based on our experiences of its advantages and disadvantages, We were sure about what we were saying because it was not based on some verbal and undocumented knowledge anymore. Besides, when we entered a new village for the phase V of the project we found out that the villagers had already visited Kak Mohammad's farm and they were interested in cooperation since they were aware of that equal participation.

Kak Mohammad said, "It was a good experience to work with your team. I harvested a good product this year. Since the price of the tomato was high, I made a profit. The price of the other products was good too and my income was not dependent on a specific crop. Since I had a variety of products at small scales, it was easy to sell and most of them were sold even before harvesting. Thus, I did not worry about the low price of the product. I also found answers to my questions about drip-tape irrigation and I will practice the same method next year. But, I will switch the parts I plant beets and cucurbit for crop rotation. I will use drip-tape irrigation for all crops."

Even though the Gapis village is not covered by the phase V of the project, we are using our experiences and keep in touch with Kak Mohammad. Also, the participatory approach had positive impacts on trust building with the local community.

1. Gapis village belongs to Mahabad county at West Azerbaijan province and located in the basin of Lake Urmia.
2. Kak or Kake means Older Brother in Kurdish language and used for calling men.



The Sustainability of Participations Effects

At the beginning, we were under the impression that just transferring some concepts and technical skills to the farmer community in a village is a success for us. At the end of each farming season, measuring the extent to which they have used the techniques we evaluated their performance. But we were ignorant of the fact that given the unpredictable nature of farming the local community needs more than just one season to evaluate its ideas or new technologies. It means that farmers' patience in the face of any kind of change is a calculated move. Along with the local community we listened, seen and examined and found some solutions to various issues. We have seen farmers voluntarily implementing many practical techniques during our several years of work in villages and, we hope that the farmers will use the same experiences in coming years so that we can witness the long-term sustainability of such moves.

Did You Know About This?

Firuz Abad village

Noruz Shamat Azar

We arrived in Firuz Abad which served as a pilot village for the "sustainable agriculture project" in October 2015. Farmers gathered at the village mosque following an invitation. We described the project and listened to the farmers' problems. They complained about water shortage in recent years. They had lost trust in everyone because nobody had ever taken any action to address the issue. One of them (bravely) said, "You have passed many villages just to get here, but why?", and continued saying, "Here we suffer from water shortage while other villages have more water."

Firuz Abad village is 12 km away from Lake Urmia. The water for agriculture is supplied by a saline drain. We realized the problems through a semi-structured interview with farmers. Since it was not easy to solve the water shortage problem, some of them volunteered to learn new methods of cultivation to use the water optimally. Mr. Yusef Ebrahimi was one of the tomato farmers who volunteered. He expressed readiness to change his cultivation method to use less water.

One of them (bravely) said, " You have passed many villages just to get here, but why?"

Teaching two-row seedling plantation for saving water
Photo by Mehdi Eskandarzadeh

He could harvest a good crop and used less water thanks to the two-row plantation of tomato in the spring of 2016, and it inspired him to think more about new methods. He changed the water-consuming one-row plantation with a two-row technique in addition to use of seedling instead of direct sowing. His neighboring brother did not change his method and his farm turned into a comparison tool for Mr.Ebrahimi to measure his own work.

About a year later we visited Firuz Abad village to see the tomato seedling plantation of Mr.Ebrahimi. On the way to Mr.Ebrahimi's house we talked about the other farmers who have accepted to use seedling instead of direct sowing, hoping that all tomato farmers will do so. When we arrived in the village and met with some other farmers, we understood that their seedlings were damaged partially due to rain and hail. We headed to Mr.Ebrahimi's house and saw that all seedlings at his big rural home's garden were undamaged and healthy. When we sought the reason he said, "At one of the specialized training sessions, I heard about checking weather conditions before/in the middle of plantation. I checked the region's weather on the Internet. Because my seedlings were damaged last year, I covered them with plastic this year to protect them."

Mr.Ebrahimi was a young and strong man, and very interested in farming. He eagerly participated in any meeting concerning the sustainable agriculture project. He was on time and always very precise. He listened and asked proper questions. It seemed that he had a plan. As put by himself, before getting involved in the project, he was merely practicing traditional methods. Mr.Ebrahimi volunteered for public learning activities and often took responsibility for coordination of training workshops. He had gained the trust of the village youths.

We went to Firuz Abad village again in 2018 for inspecting the tomato seedlings as well as holding an exhibition on our activities. Mr.Ebrahimi excitedly said, "I invented a new method for planting tomato". We eagerly headed toward his house and was surprised when we got there. He had invented a very simple way for planting tomato. He had dug small holes on the rows and planted the seeds inside the holes. To this end, he had used 2000 liter of water for irrigating the entire farm while the figure was 1000 liter in the direct sowing method.

Mr.Ebrahimi excitedly explained that it is just a trial and that eventually he would be able to save 3000 liters of water if this technique works. Then he asked us, “Did you know this?” Amazed, I reviewed his method again. Everything was correct and rational. I informed Agriculture Jahad Organization about this new technique and realized that in participatory sustainable agriculture projects the creativity and self-confidence of the farmers are boosted and they try to find new solutions to their problems. We were all happy and excited to see that farmers had found various solutions for their problems after external people left their community.

Mr.Ebrahimi excitedly explained that it was just a trial and that eventually he would be able to save 3000 liters of water if this technique workd.

It's Better to Be Patient

Khanjar Gheshlagh village

Latif HAGHI

Khanjar Gheshlagh is one of the villages around Urmia city. Since the village is near tomato paste factories in Urmia, most of people farm tomato in this village. When we launched the sustainable agriculture project in 2016, we found out about a common method of tomato seed plantation during our initial assessments. This specific method was named "Gum Karti". They directly sowed a lot of seeds at the main farm and irrigated it at least 2-3 times until the bush is rooted at the farm. Through this method, they can sell extra seedlings and gain a part of their income for the same year. However, it is a water-consuming method and causes the growth of broomrape weeds that could damage the plants. Besides, it is difficult to prevent soil-borne diseases.

Thus, in our meetings with the farmers we recommended use of seedling trays or peat moss ground for producing seedlings. On 17th of March 2017, Mr. Hafez Nurollahzadeh and his brother Ferdows called us and voluntarily requested our support for planting tomato seedlings on the trays. We planted the seeds together two days later while some other people in the village were watching. We had recommended the peat moss as the ground preparation and they purchased one bag of it. After noticing the price of the peat moss, the brothers came up with an amazing initiative. They guessed the components of the peat moss by touching it, and understood that so many similar substances can be easily found in their village.

Therefore, they prepared the ground with other substances to compare it with the peat moss. The substances consisted of rotten wood, rotten manure and clay soil, all easily accessible in the village. They chose different types of trays (50 holes, 72 holes, 105 holes) to see which tray is more effective. In the meantime, they added fertilizers through different methods for trial. They sowed the seeds in a small land next to the storehouse as well. All of these examinations were executed in a small place that was similar to a small research farm where the farmers played the role of an examiner.

We visited the trays with farmers twice on March 24 and 27, 2017. Unfortunately, none of them sprouted. Farmers asked for consultation as whether it is better to wait or plant again. We replied, “We think it would be better to wait for another 2-3 days, but the final decision is up to you and we’ll follow”. Mr. Hafez called me on 30th of March and had the good news about the sprouting of the plants. I visited them a few days later. Mr.Hafez cheerfully said “more and more of them have sprouted after the day I informed you”. He showed them to us while Mr.Nabizadeh, another villager, was looking at us at the storehouse gate.

They concluded that their innovation worked better than peat moss and believed that the trays with fewer but bigger holes are far better. Eventually, they preferred tray cultivation to direct seeding at the farm, believing the former to be more efficient. Of course, a few seedlings died due to use of urea fertilizer.

The two brothers visited our company accompanied by some other villagers including Mr.Nabizadeh in 2018. By then, we had already left the village as the project was completed. Mr.Nabizadeh was only watching during the first year and had no specific activity. They came to the city for preparing seedling trays. The Nurollahzadeh brothers are now experts who advise and help other people.

Mr.Hafez was showing us the seedlings while other people of the village including Mr.Nabizadeh were watching at the front of the door

Photo by Leila VEJDAN GHAREH BAGH, 2017-18

This time Mr.Nabizadeh planted the seeds trays with the help of Mr.Hafez and his brother without any needs to us

Photo by Leila VEJDAN GHAREH BAGH, 2017-18

Their invitation provided us with an opportunity to visit Khanjar Gheshlagh village again. We saw that about four more people joined the initiative. This is while we never thought that this method would get popular so quickly and be effective for more people in the village. Perhaps, the reason for its acceptance in the village was that some of the farmers were empowered by this technology, and transferred the same to others.

From the Pea to Tape Irrigated Wheat

Bayqut village, Lekler village Sahar AKBARZADEH Shiran ABDOLLAHI

It was mid-February. We arranged a meeting at a shop that almost all the villagers were commuting to it. We were supposed to talk about tomato as the major crop of the village. Farmers complained, “We plant tomato out of habit; it gives us nothing but backache and pain in the legs. No single person ever made a profit by planting tomato. There was not much water-saving and even drip irrigation has failed”.

During our conversation a middle-aged man entered the shop to purchase pea which turned into a new topic of discussion. Mr.Nouruzi, one of the farmers said, “the pea that this gentleman is buying is several times more expensive than tomato and this is while pea requires half of the work of tomato. It consumes less water and it lasts longer than tomato.” Then we asked, “So why don’t you cultivate pea?”. They said, “Well, we have no solid reason. Maybe it’s just an old habit”. Tomato cultivation is a common tradition among the people of Bayqut village.

Mr.Zeinalzadeh, whom we had met at the village shop, called us after two weeks and requested to meet him again when visiting the village. The next day we went to meet Mr.Zeinalzadeh and Mr.Nouruzi. He said, “I have been busy thinking about alternative crops like pea”. He had consulted with his family, brother and his wife and they wanted to rent a suitable piece of land for pea cultivation just to try in addition to their routine tomato cultivation. We accepted his request. We and Mr.Zeinalzadeh promised to collect more information about the pea before our next meeting. The fact that the farmer requested our cooperation for his trial cultivation made us work more studiously.

Periodical farm visiti ng
Photo by Behzad Salemi

Next time when we met each other, we found out that our information regarding pea cultivation is insufficient. Thus, we decided to share the issue with the head of the extension office and the farming expert of the county. Hence, we went to the Agriculture Jahad Organization department of the Malekan county with Mr.Zeinalzadeh. We asked about the most suitable types of pea for this region and purchased the Kashan type as per advice of a farming expert. We consulted about other issues as well including irrigation period, disinfection of seeds to prevent possible diseases, depth of plantation, pesticides and fertilizers.

We talked about irrigation with Mr.Zeinalzadeh. He said, “I have to bring water from the neighboring farm for irrigation. Thus, irrigation would be very hard and a lot of water will be wasted on the way to my farm”. Mr.Nouruzi asked, “Is it possible to use drip-tape irrigation the same as in tomato?”. Our answer was “we don’t know. Never heard about it”. Then he said, “we want to examine the tape irrigation for pea. Let’s see what would be the outcomes”. They had to sow the seeds in the row for drip tape irrigation. Due to the high costs of the machinery and the small size of their farm, they could not use raw planter machines. Therefore, they used the manually designed seedling planter machine .

Other farmers periodically visited the farm of Mr.Zainalzadeh and Mr.Nouruzi after the pea plantation was completed. The effort by Mr.Zeinalzadeh, Mr.Nouruzi, and their families for trying the pea cultivation was an example of family participation. The harvested crop was about 3.5 tons per hectare. Then, facilitators arranged a series of meetings for analyzing the harvest and what was to be proceeded with other interested farmers. Mr.Zainalzadeh and Mr.Nouruzi stated at the meeting “we will plant pea at a bigger farm next year”.

The trial cultivation of the pea was fruitful. However, they could not continue cultivation next year due to the high rental fee of the farm and some conflicts with the agricultural soil and water department. Still, the periodical visits to the farms were a new experience for us. For instance, Mr.Farhangi that accompanied us during periodical visits was using traditional wheat farming methods, but drip tape irrigation method of the pea was interesting to him, too. He told us, “There is a farmer in the Lekler village that cultivated wheat by drip tape

irrigation. Do you think that it will work well?" It seemed that the drip tape irrigation for wheat remained a question for him. He wanted to know how it is planted and how it is even possible to do such a thing? This question was a trigger to transfer the experience from the Lekler village to the Baiqut village.

We suggested a group visit to Mr.Najaf Nia's wheat farm at Lekler village that used drip tape irrigation. Mr.Farhangi and other interested farmers accompanied us. There, Mr.Najaf Nia verbally explained the work, plantation and irrigation method. They were supposed to keep in touch for comparing the flood and drip tape irrigation at the harvesting season. The amount cultivated from the drip tape irrigated farm was 9 tons per hectare while the traditionally planted/irrigated farm produced 4 tons per hectare.

Mr.Farhangi decided to cultivate wheat by drip tape irrigation at Baiqut after noticing the results of Lekler village. He established a warm and friendly relationship with Mr.Najaf Nia and consulted about almost everything with him including pesticide spraying, the distance between the tapes, irrigation method and the type of planted wheat. At this stage, farmers mutually visited one another's farm and asked about the advantages and disadvantages. This resulted in exchange of experience from one village to another and turned out to be the true interpretation of "from farmer to farmer" to us.

The Story of Mr.Najaf Nia

Once we visited Lekler village in the phase III of the project, Mr.Najaf Nia who was a farmer cooperating with the project told us about his decision about trial cultivation of wheat by using drip tape irrigation. Since this was new to us, we started to have doubts. We asked him about his reasons. And he answered, "I used sprinkler irrigation for wheat and alfalfa last year and the outcomes were good. I think drip tape irrigation will work as well. I will do it if you help me". We started planting wheat using drip tape irrigation after consulting with Jihad- agriculture experts and accompanied Mr.Najaf Nia during stages of the plantation, growth and harvesting of the wheat.

1. Interestingly, Mr.Zeinal Zadeh developed a manual pea planter by modelling a tomato seed planter.

We Accompanied and Learned Together

Dash Tappeh village

Farshad JOUDIAN

It was a different day. We were returning to Dash Tappeh village for the second year after a pause of a few months. The village is 25 km off Miandoab county. While driving toward the village everyone was silent in the car. The team members were not saying a word. Maybe the same as I, they were also going through the process of entering the village and starting the work. We assumed our work in the village last year as a good one and through villagers' cooperation used new techniques such as wheat furrow planting, two-row planting of beets, reduced farm partitions and tomato plantation covered by plastic. But the story of our work in the village in previous years is a long one.

A Pairwise Comparison Matrix is used for selecting and prioritizing choices. In this regard, the choices that should be compared are inserted in the top row of the matrix table and the first column as well. Then, the items in each row are compared with one another. After each pair were compared, the frequency of the repeat of each choice could be counted to calculate the relative priority of each item. In this process, the reason for prioritizing an item over the other is discussed and recorded to clarify the reasons (criteria) for giving priority to a choice over others.

I remembered Mr.Bohlul's shop where we had our meetings with the villagers. Our meetings started with 3-4 persons and reached 30-40 participants toward the end. I could hear the voices of the rural people in my head. Every time we offered some technical advice they would always say, "Yes. You're right". However, once we left they were back to just what they used to practice in the past. When we described the plantation method to them, they exclaimed, "That's great". But, then they resisted implementing it. We found out that farmers are well aware of what we say, but they do not execute it. We found ourselves in a dead-end. It seemed that our approach was not working and we needed to come up with something new. The question was what to do then? We started to study the situation through various means. Eventually, we found out that rural people resist change. It was a good to know because if we could facilitate change we could perhaps get to better outcomes. I remembered that we could work better when we cooperated with the people who could find their own solutions or when a solution was found in the participatory manner. Yes! The solution to our problems was the farmers' participation. I remembered well that they were complaining about the government officials who only visit the village to give a speech. They complained about the concrete canals that were designed/constructed imposing huge financial and environmental costs but without considering the locals' opinions. And they noted that after 8 years no water has been yet released into the canal. Farmers wanted their voices to be heard and their opinion to be considered as far as village problems are concerned but we could not get the message. Eventually, we decided to stop talking and instead listen to them.

Force field analysis tools help analyze the conducive and hindering factors behind change. The relative effects of these factors could be inspected from the analysts' point of view. In the beginning, the change or the subject at hand is set as the title of the chart and the field or page is halved under the title. The dividing line of the page indicates the current situation. We write down the conducive factors at one side and the hindering ones on the other. When this is done, we draw an arrow from each conducive and hindering factor toward the center of the field. The thickness of these arrows indicates the relative influence of that factor on the occurrence of the change. Thus, a thicker arrow means a bigger influence of a factor.

Participatory analysis at the gathering of the farmers
Photo by Vahid HESHMATII

Going through all these thoughts, we arranged a time through a phone call to have a meeting with the villagers. We arrived at Mr.Bohlul's shop on time. The villagers were there too. As always we started to talk. However, this time we asked questions and recorded their replies by using pairwise comparison matrix and field analysis tools. Thus the farmers were helped in getting a new understanding of the issues. For instance, in the past farmers thought that water and soil condition are hindering factors, but after the analysis they found out that the absence of the appropriate agricultural devices and machinery is a major challenge. This method of work was interesting to the farmers because they discovered that the very basis of any decision is the simple conversation they have. We held our next meetings in a participatory fashion. Farmers inspected technical methods and implemented the ones they found feasible. They expressed their opinions about other techniques and mentioned their reasons for accepting or rejecting a technique. Eventually, we implemented those technical solutions that were selected through the participation of the farmers at 15 village farms.

As we got closer to the village I remembered that those techniques resulted in less wasted water and more crop efficiency. Meanwhile, the most important thing for me was the active participation of the farmers in various stages of cultivation. One significant thing was the word of an elder man whom we met for the first time. He knew about our activities and told me, "The farms that you planted have done well. I will also use these methods next year". The fact that farmers shared the lessons they learned with the help of this participatory method with other farmers was outstanding. We just worked with 15 farmers but many other farmers were practicing our methods. As an example Mr. Agha Mohammadi, one of the farmers, said, "Sir, we shared the methods and techniques obtained through the meetings with other farmers". The change that we were witness to mattered most.

Farmers wanted their voices to be heard and their opinion to be considered as far as village problems were concerned. But we could not get the message.

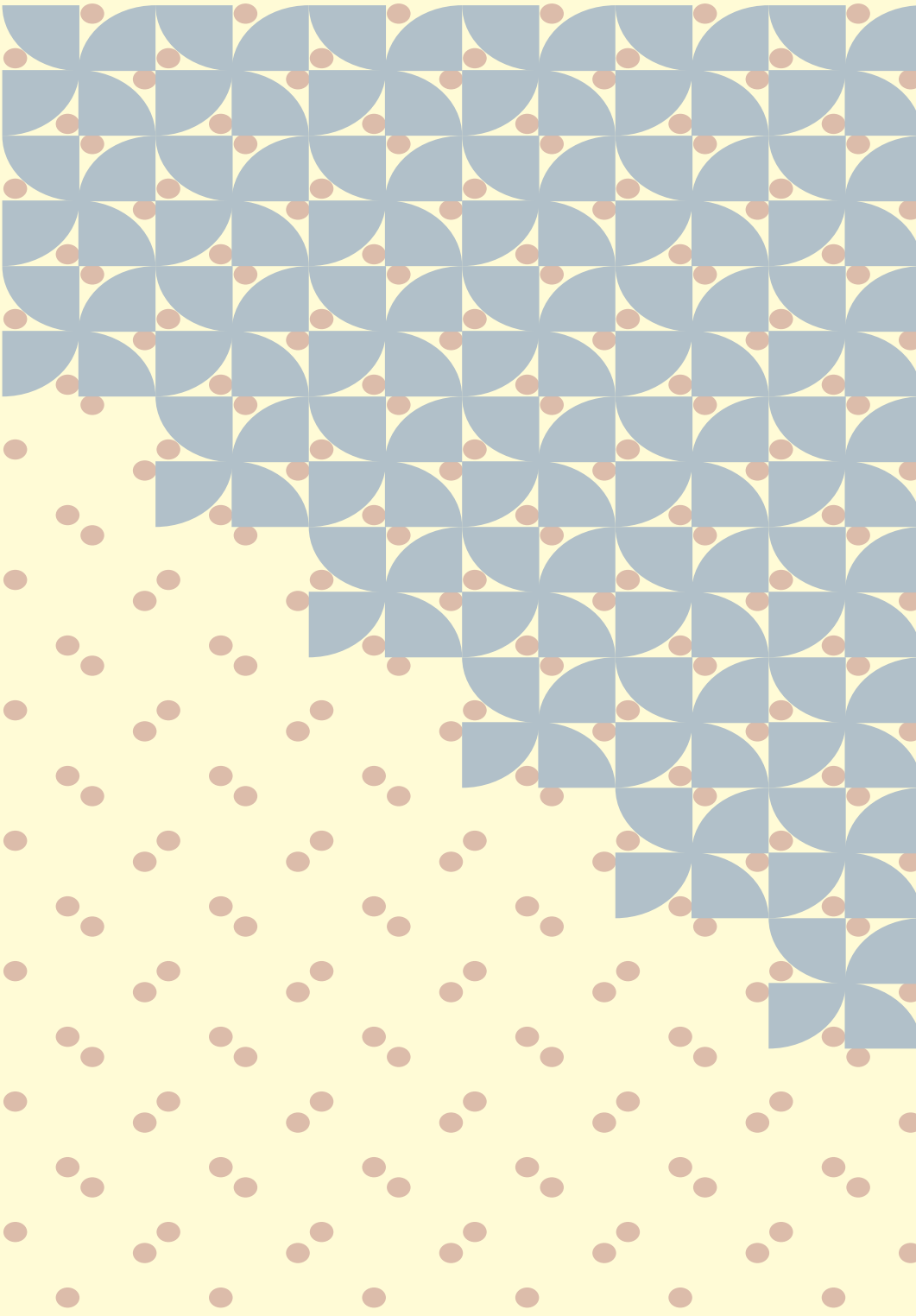
The closer we got to the village, the more excitement and stress we felt. We were a team but our members were not these few people in the car only. Our team consisted of four young trainers who eagerly taught us facilitation, the employees of Agriculture Jahad Organization department who always supported us, the employees of wetlands office who were our humble supporters and so many other people who conscientiously helped us toward one goal: facilitating change in the local community and restoration of Lake Urmia through local community participation for establishing sustainable agriculture.

We arrived at the village and went directly to Mr.Bohlul's shop. The villagers also joined us. Some new faces were among them but everybody knew about the subject. Since there was a big group of people there we had to move to the village mosque. After a few words, the points expressed by the locals made us think. It looked like the majority of the villagers have already participated in our last year's meetings. Later we found out that so many people are implementing the techniques that we executed last year with the participation of wheat farmers.

Last year, we planted beet on two-row of the beds. Based on the Force Field Analysis we found out that the biggest hindering factor at Gug Tappeh and Dash Tappeh village is the absence of the required machinery. Two types of machinery were supplied thanks to the follow-ups by farmers and the help of Agriculture Jahad Organization of Miandoab county this year, and more farmers could plant beet this way. Farmers discovered the problem and the solution by themselves. Examining the "sustainability of participation effect" by using the Pairwise Comparison Matrix we realized that some of the techniques have reached to some extent of sustainability including the ones for reducing the size of partitions, seed treatment, soaking the roots of seedlings and pesticide spraying management. More than 30% of the farmers are currently using these techniques and some will apply two-row beet plantation now that the machinery is available. This means that hopefully in coming years the number of farmers using this method will increase.

Participatory analysis at the gathering of the farmers
Photo by Farshad JODIAN

We learned that change is a necessity for sustainability; changes that let the farmer play the main role in the analysis and detection of problems and based on which they choose and try.



Appendix

The Definition and Goals of CIWP

The international wetland project was launched in 2005 in cooperation with the Iranian government (Department of Environment), global Environment Fund (GEF), and United Nations Development Programme (UNDP) under the title of "Conservation of Iranian Wetland Project". The goal of this project is to permanently reduce or eliminate threats and in general safeguard the sustainability and survival of the Iranian wetland ecosystem. The project seeks to promote its experiences within the framework of introducing an ecosystem oriented approach and establishment of a new management system. It tried to provide the legal mechanisms for implementing the same in other wetlands of the country.

The degree of drought at the Lake reached to the point that its Southern part was thoroughly dried in 2014. One of the major factors behind the problem was the decrease of water flowing into the Lake which resulted in an imbalance between evaporation and nutrition in the Lake. Although the climatic condition has had an undeniable impact on the current situation of the Lake, another important factor is also related to the imbalance and unsustainable development at the basin and irregular water withdrawal from water resources especially during the past two decades. It is impossible to ignore the share of agriculture in the drying of this basin. Agriculture has developed widely in this basin in recent decades. Given the scarcity of water resources, underground water in particular, the continued trend will endanger the sustainability of the region's agriculture and the livelihood of the people in the future.

As the governments of Iran and Japan started cooperation at a senior level to address the problems of Lake Urmia, the project entitled "cooperation for Lake Urmia restoration through local community participation for the establishment of sustainable agriculture and protecting biodiversity" was defined in the CIWP office in 2014. As part of this project, DOE in cooperation with Agriculture Jahad Organization tried to bring about some changes in traditional farming of the region through training the farmers and winning their participation. The aim was to increase water efficiency at the farms while protecting farmers' interests and income so that as a result, saving of water at the farm can help with part of the water right of Lake Urmia.

The project sought to pave the way for the participation of beneficiaries and carry out integrated management plans by executing ecosystem-oriented management at national and local levels. These management plans were prepared in a participatory process aimed at creating synergy between development projects and conservation initiatives at the basin level. The responsibilities of each governmental and non-governmental organization in relation to the conservation of the wetland were defined in line with efforts to establish sustainable development. Meanwhile, such issues as the livelihood of local communities, public awareness and water and soil management were taken into consideration in addition to the protection of wetland's biodiversity.

Due to the time-consuming nature of the development projects and their achievements in 2014, the project was extended for six continuous years. Moreover, the facilities and resources of the governmental and non-governmental sectors of Iran were mobilized. This led to a social movement calling for participating in the restoration of Lake Urmia at the level of the local communities and the role of each player got defined. The roles in brief are as follows:

CIWP office is appointed as the national executor of the project by DOE and is in charge of implementation. The office, which is the main center of the project is officially in charge of some activities including:

- "Providing the required cash resources for implementing sustainable agriculture projects at each site" through signing contracts with NGOs or Agricultural Technical Engineering Companies.
- "Coordinating affairs to support the project implementation" at the level of national organizations and cross-sectoral cooperation (DOE, Ministry of Agriculture Jahad Organization, Ministry of Interior, Ministry of Energy and other beneficiaries) as well as any entity relevant to this project at national and provincial levels

The main responsibility of this office is management, coordination and facilitation of the project at various levels.

Agriculture Jahad Organization in East and West Azerbaijan provinces are the main executive partners at the provincial level. These organizations are in charge of facilitating the executive affairs of the project in addition to their supervisory role. A variety of responsibilities have been mentioned for these two organizations in the upper hand documents. For instance, they are obliged to technically supervise the techniques carried out by the companies for reducing water consumption and other resources. The research centers of Agriculture Jahad Organization also have a significant role in education regarding the water use reduction, chemical inputs and the project impacts on farmers' economy.

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The Map of the Villages of the Experiences

The Process of Participatory Recording of Experiences

The Andisheh Ensanshahr institute defined the recording of experienced obtained from the establishment Sustainable Agriculture project at the phase V of the Capacity Development Plan about 6 years after the start of the project. What inspired us to launch this work was the stories about the field experiences of project implementing companies that we heard on various occasions. They gained these experiences due to changing their attitude from the extension approach to the participatory approach. Neither would the official reports refer to these experiences, nor was there another opportunity to record and share it while they could indicate the layers of the consequences and processes that were helpful for a better understanding of the background and situation of this kind of project. Therefore, we decided to follow a participatory process for documenting these experiences.

In the first step, we invited the persons who cooperated with the project as the agricultural service companies and participated in previous phases of the capacity strengthening plan through a participatory approach. Among all people who accepted our invitation, eventually, ten of them accompanied us to the end of recording field experiences. The present text is an effort for recording this process.

The process of developing this book started with a two-day session for initial coordination with the volunteers and continued with writing the content and several times of editing based on the feedback. A writing workshop was held up at the next stage. Each content and its place was determined during the intensive four-day workshop, and, we reached an outline of the book elements and structure. We contacted through email after the workshop to finalize our decisions that resulted in holding a one-day session. Then, the content of the book was edited and the page layout was designed. In the end, another one-day session was held for revising the final edition.

This text reflects the process that volunteers –that we call them authors of the book hereinafter- gone through for developing this book. This process is not perfect and could not be a model for the participatory production of a book about the experiences. Instead, it is only shared as an experience about the recording experiences and learnings of field activities in a participatory method. More details about each stage as it was planned and implemented are described below.

Two-days session

The first step in this process was the two-day session at Urmia. To determine the topics of the book, at this session we asked the participants about the length of being with the farmers and the difference from their previous experiences. Every person shared his answer with a group of 3 to 4 members. The answer classification at the group defined the headlines that clarified the topics of experiences. Then each participant announced their selected topic and the authors of each topic were decided.

It was necessary to reach an agreement about the type and style of the writings between the group's members to add coordination to the diversity of the contents. For this purpose, participants reviewed the samples of experience recording of participatory work that was selected among various written and translated sources at the groups with four members. The result of the review was their status about the characteristics of each text that can make it proper for being inserted into the book. The collected points mentioned by them at this stage was defining the characteristics and expectation of the group regarding the contents of the book.

They compared the features of the verbs, word selection, length of the sentences, and placement of the sentence's element of selected samples for deciding on the style of writing. Then for more exercise, the texts were written by these participants previously provided to the small groups without their name on it. Every group tried to use more steady and closer language to the common use of language. All members were not necessarily perfect at the final of this stage at using the official language that the group agreed on it. Although, they knew that what would be the final form of the text.

"To whom would you like to give the first volume of your published book for reading?". Each person wrote the names of two persons and they discussed why they had chosen that person at the group with three members. Answers were reviewed and finalized at the groups. Given this, we reached the collection of possible objects (readers) of the book.

Writing, feedback, and rewriting

As the two-day session, it was concluded to prepare the first edition of the book by mid-December and our team as the facilitator of the process give the feedback in January. The book revision and improvement of its contents based on the feedback would be done in February, and, to conduct the workshop for finalizing the contents and structure of the book –writing workshop- at the mid-February. However, this schedule had many changes.

Some of the authors conducted internal group revision for writing the initial texts or visited the farmers to make sure about their writings. While some of them wrote the texts using their former documents or based on their memory. Thus, the preparation of the initial edition took more time than expected and we received it gradually from mid-December to mid February. Each received text was given feedback based on the criteria that were defined at the workshop. Some of the criteria were the relation of the text to the selected topic by the author, clarity, and sufficiency of text's learnings, having sufficient evidence, details, reflecting the personal experience of the author, correspondence with the texts that were agreed at the workshop, quality of the language, and, readability of the text.

This process took place once for some texts and twice for some other ones. At this point, we realized that checking by the determining criteria is not helpful for some authors. Therefore, feedbacks were given more clearly by writing the comments at the next stage. Giving and receiving of the texts continued until late March 2019. Our team wrote an introduction for this book considering the essence and goal of developing it during this time.

Writing, feedback, and rewriting

When all texts were relatively prepared, a four-day writing workshop was implemented in April 2019. All contents of the book received feedback from other authors at this workshop and each author edited his text based on it. And, the title of each content was finalized and authors decided about the order of contents and chapters. Meanwhile, there was some recommendation for the title of the book, and, the priorities about the cover and page layout were agreed upon. The authors read the written introduction for the book and gave their feedback too.

Receiving feedback about the book

At the beginning of the workshop, each participant held a copy of the introduction written by our team and moved forward or backward on the big size -1 to 10 digits written on the floor while reading it. Then they explained the parts of the text that made them move forward or backward by mentioning their reason for it. We wrote down these points and our team rewrote the introduction content based on the received feedback, and, provided it at the other occasion of the workshop to receive the final feedbacks.

It was necessary to implement the group feedback process about the contents written by the authors. First of all, the inspection method by the facilitation team was explained to them using the feedback table. After everyone understood the feedback criteria, we started to work on the contents. A copy of the contents was put on the tables and each person chose one of it for reading. While reading it, they wrote comments, recommended titles for it, and, moved to the next content. Eventually, each author chose the title for their contents with the help of others. All titles were provided to the group with a summary of the content, and, participants expressed their opinions about it.

Time for individual writing

After the content was read by at least two persons, it was time for individual writing. Each author started to edit their content by using the feedback one by one. Some authors that their contents required less edition could help others at this stage. Editing the contents and using the feedbacks progressed not only at the workshop but, at the public hall of the residence too.

Preparing the table of contents

It was necessary to see the outline of each topic –the headlines of the book- with its whole content. For this purpose, topic stations were defined and authors started to work at 2-4 membered groups. At each station, they had to inspect the relation between each content to the topics and other related contents, and, to determine the order of the contents. Meanwhile, they had to determine what the deficiencies of specific headlines to be used in the book were considering the existing contents.

At the next stage, each headline was assigned to an author from a different station. He was supposed to review the whole chapter and judge its quality as the final reviser. Each reviser reflected their opinion on the pasted (printed) range on the wall by mentioning their reasons. Therefore, everybody could see that which chapters of the book were almost ready and which chapters required more effort. In the end, when the order of titles under each headline was determined, the groups started to arrange the headlines –the table of contents- order. We spread the large papers that were used for headlines at each station on the floor. Every person tried to suggest an order that indicated the conceptual and rational relationship between the headlines. Eventually, the group reached an understanding and the final table of the contents was written on the floor with headlines and titles of each content.

Choosing the book title

When the headlines were determined at the two-day workshop, some limited options were suggested for the title of the book. At this stage, the authors had new suggestions added to the previous ones. We tried for voting on the options, but, it was not a helpful method. Thus, we postponed it to email communication after the workshop.

Revising the book's objects

At the end of the two-day session, inconsistent and diversified groups of people were determined as the readers (objects) of the book. Participants at this workshop revised this range and divided formerly named people into three groups. The first group was the readers of the book that supposed to read and utilize its contents. The second group was the people that the authors wanted to mention their names and appreciate them. And, the third group was the people that the authors wanted to dedicate the book to them. When people at each group were clarified, the authors prepared the texts related to each of them.

Cover design, page layout, and, introduction for each chapter

Some volumes of the book with different page layout were provided to the participant at the end of the workshop. These samples were compared using Pairwise Comparison Matrix and we reached desirable characteristics for page layout and cover design.

At the same time of discussion regarding the appearance of the book, some of the authors were working on the introduction for each chapter as the representatives of the group. They tried to make the introductions representing the whole contents under the headline. For this purpose, they defined a common pattern. They showed the pattern and some samples of the introduction to the group and received the confirmation. They were supposed to write and complete the introductions after the workshop.

We received a copy of edited texts with its related photos one week after the workshop. Its contents were edited during the next week. Some points that were considered during this edition were: the rational relation between sentences, fluency, clarity of the story logic, the order of incidents, and, representing an aspect of the participatory approach. Feedbacks were sent to the authors and we received the final version of the contents until one week later. Some of the deficiencies that were noticed in the content edition remained unanswered by the authors.

Complementary works after workshop

The contents written for each headline were revised based on our feedback and sent to other members of the group. The team in charge of editing the introductions executed the final edition. We also revised and finalized the book introduction based on the feedback received at the workshop and prepared the cover text.
The options for the book's title were sent separately to the authors in addition to some new suggestions by the group. However, the email was not an appropriate tool for group discussion and final decision-making. Our team had some suggestions about the appendix of the book that could help the readers to understand more about the background of developing this book. It seemed that there could be some minor changes at the table of contents too. Thus, it was necessary to meet each other for more discussion.

One-day session

We decided to hold a one-day session in early July to discuss the above-mentioned issues. At this session, we solved the content deficiencies, finalized the title of the book, and, collected photos and complementary information for each content.

Edition and page layout

The book was given to an editor after the one-day session to be matched with the official Persian language and for more fluency of the sentences. The page layout was done based on the appearance features acquired from the writing workshop. Two covers designed were prepared to help us choose the proper one. We printed five volumes of page layout output to receive feedback from authors about its various elements.

Finalizing session

We gathered with the authors of the book at Urmia city to review the final product on September 11, 2019. We provided printed versions to two-membered groups of the authors to read their contents. Therefore, the required changes were written as a comment on printed pages. Then we compared two suggested page layouts and reached for a new idea about it. In the end, we requested authors to read the book from viewpoint of clients and tell us about the helping and hindering forces. Some of the authors carried out a field study to answer this question. They showed two volumes of the book to external people and asked about their opinion.

The feedback received at the finalizing session was the basis for the revision of the contents and page layout. The new layout design was sent to authors through email and finalized in this way. Therefore, the book was sent to the CIWP office to proceed with administrative procedures for publication.

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