

8

Case studies.

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fig. 107 - 121: Variety of rooftop functions in Palestinian refugee camps (own photographs)

8 Case studies

The first part of this chapter provides an insight into the abundance and variety of rooftop farming projects in the Middle East in general. The second part focuses on four concrete rooftop farming projects in Palestinian refugee camps in Jordan and the West Bank, which we have visited and analysed in depth during our field research. A juxtaposition of the case studies at the end of this chapter (see 8.3 *Juxtaposition of the case studies within the four dimensions*) detects their *action space* as well as their *limits and boundaries* according to the four dimensions by Safier (2002) (see Chapter 2.2 *Room for manoeuvre*). Thus, this chapter lays the basis for the definition of a *potential action space* for agents operating within community-based projects in the area of climate change adaptation.

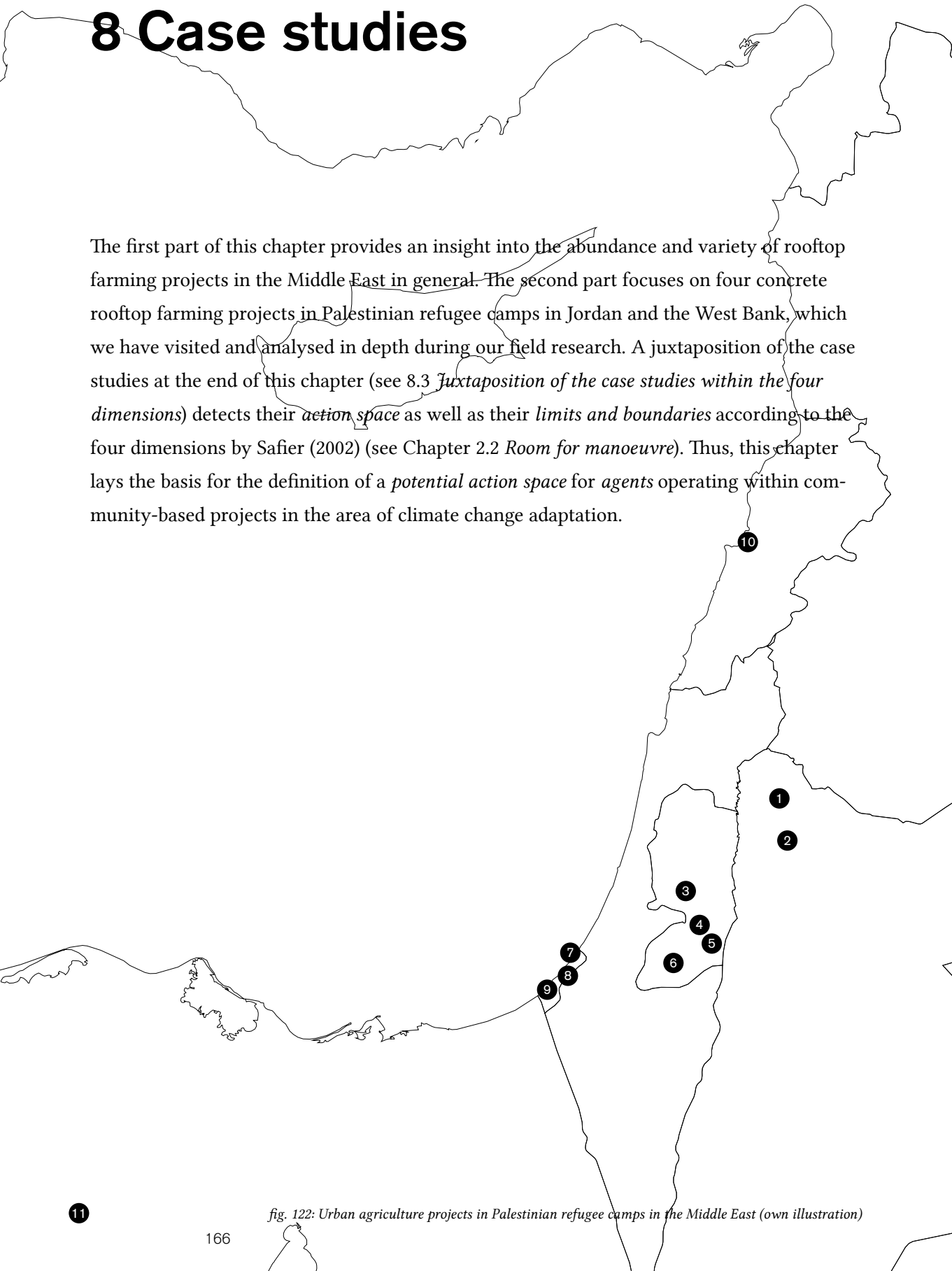


fig. 122: Urban agriculture projects in Palestinian refugee camps in the Middle East (own illustration)

8.1 Urban agriculture practices in the Middle East

The field- and online research revealed that using the roof as a resource to produce food has become a common practice all over the Middle East, and in Palestinian refugee camps more specifically. (see fig. 122) Mostly implemented under the umbrella of international donor-led projects the roof is more and more perceived and used as a productive space.

01

Jordan, Husn Camp – GIZ / Al-Karmel Club

community building, activating existing capacities, self-initiative

This rooftop farm project is one outcome of the 2012 completed CIP and was financed and initiated by the GIZ. Within this process, the GIZ offered four CBOs the opportunity to realise self-initiated projects. As a result, one of the CBOs focused on rooftop farming and implemented 34 greenhouses on private and institutional rooftops inside and outside of Husn Camp. The responsible CBO is embedded in the already existing structure of the local football club *Al Karmel*.

02

Jordan, Jerash Camp and Amman – Greening the Camps

women's participation, community building, cooperation with an existing educational institution

The project is run by the NGO *Greening The Camps*, which consists of an interdisciplinary, international team. The NGO started with a pilot project on the rooftop of a cultural centre in Amman in 2017 and finished their first rooftop farm in Jerash Camp in 2018. In Jerash Camp, the project was implemented on the rooftop of a newly built vocational school and lays a focus on women's participation in rooftop farming. Financially the NGO relies on crowdfunding campaigns and independent donors. (Greening The Camps, n.d.)

03

West Bank, Ramallah – Café La Vie subsistence economy, commercial use

The rooftop farm at *Café La Vie* is a self-organised project initiated and implemented by the owner of the café. The aim of the project is to produce vegetables as organically as possible. The yield is used by the restaurant as well as by the family of the

owner. The beds are self-built and consist mainly of recycled materials. Furthermore, the *Café La Vie* has a garden, where they hold chicken and sheep. The owner is in contact and interacts with organic farmers in Palestine. (Cooper, n.d.)

04

West Bank, Dheisheh Camp – Karama
economic empowerment, commercial use, women's participation

The project is run by the camp-based CBO *Karama*, which aims to enhance the participation of women within Dheisheh refugee camp. The project's aim is to create a business, which goes beyond the camp borders. Thus, it enables women to generate additional income for their households and to raise awareness about healthy nutrition. Within two funding phases, the *European Union* and other donors, installed more than 50 rooftop farm units until 2017. (Karama Organisation, n.d.)

05

**West Bank, Aida Camp – Refutrees / La-
jee Center**
building awareness, subsistence economy, community building

As a critical reaction to the failure of current development and aid programs and in order to end donor-reliance, the Canadian NGO *Refutrees* started an urban farming project in Aida Camp. In cooperation with

a community-based cultural centre they aim to increase awareness on healthy nutrition and provide camp inhabitants with the possibility to grow and consume organic and fresh products themselves. (Ma'an News Agency, 2014)

06

West Bank, Fawwar Camp – GIZ / FCYC
creates a sense of ownership, community building, experimenting on site

The project, which is funded by GIZ, aims to integrate youth and young adults into the development of the camp. For this purpose, the Fawwar Camp Youth Council (FCYC) was formed. The initial farming-project is set up like a laboratory, in which the participants themselves are in charge of designing and managing a feasible prototype of a rooftop farm. Furthermore, the young volunteers implement and support private rooftop farms within the community themselves. (Interview Mura, 2018)

07

Gaza, Gaza City – Global Communities
subsistence economy, training

The project is run by the US-based NGO *Global Communtites*. The funding of this NGO consists of contributions of various large, global companies. Within this project, 2,000 families received a starter kit to implement a rooftop farm, whereas other families received chickens or rabbits. In

addition, all participants receive a training on how to maintain their new urban farms. (Collard, 2013)

08

Gaza, Deir El Balah – Anera

economic empowerment, commercial use, training

Within this project, greenhouses in two neighbourhoods in Gaza are financed by the *Gaza Food Security Programme*, an initiative, which was set up by the American NGO *American Near East Refugee Aid* (*Anera*). Project participants are supplied with greenhouses, farming tools, water tanks, irrigation systems, seedlings and training. The produced vegetables are sold at the nearby market, whereas the thus generated money is used for healthcare services of family members. (Anera, n.d. A)

09

Gaza, Beit Lahia – Anera

economic empowerment, commercial use, visibility in public

This project is implemented by the NGO *Anera* as a pilot project for urban farming, in which mainly strawberries are grown in vertical garden structures. As reaction to peoples' interest in farming, the farm was opened up to interested visitors and schools. As this project passed the global standard test, the farm owner will, besides producing for the local market, also export

his harvest in the future. (Anera, n.d. B)

10

Libanon, Nahr El Bared Camp – Anera
subsistence economy

The project is implemented by the NGO *Anera* and embedded in a broad reconstruction process of Nahr El Bared Camp, which was destroyed due to war in 2007. The project follows a previous successful approach in Ein El-Helweh Camp, where a rooftop farm and vertical farming structures were developed in cooperation with the local Women's Programme Centre. In Nahr El Bared Camp, the NGO provides eight families with plants, trees, seeds, fertilizer as well as boxes and barrels to plant in. (Anera, n.d. C; Anera n.d. D)

11

Egypt, Maadi – Schaduf

economic empowerment, commercial use, use of innovative irrigation system

This project is initiated and developed by the Egyptian company *Schaduf*, which partly focuses on implementing rooftop farms for low-income families in Maadi. Through a pay-back system the initial investment is returned after one year. The participants pay off the loan by selling parts of the harvest back to the enterprise. All rooftop farms were implemented with a hydroponic system. (Kalan, n.d.)

Iraq, Domiz Camp – *Lemon Tree Trust*
and

Jordan, Azraq Camp – *Lemon Tree Trust*
 community building, subsistence economy, building awareness

The project is run by the British NGO *Lemon Tree Trust*. Responding to the ongoing crisis and forced migration of Syrian refugees, the NGO aims to mainstream and encourage urban agriculture and greening innovation by setting up a demonstration garden, supporting the implementation of community gardens and distributing gardening kits in Syrian refugee camps in Jordan and Iraq. The NGO's projects do not focus on rooftop farming, yet, they strongly address community-based and capacity-building approaches within urban farming in the context of refugee camps. (Lemon Tree Trust, 2018)

8.2 Four detected typologies of rooftop farming in Jordan and the West Bank

The four case studies, which we have visited and examined more closely during our stay in Jordan and the West Bank are all located in Palestinian refugee camps, however, following different approaches and aims. Even though they all share the concept of contributing to the resilience of the particular neighbourhood on an economical, ecological and/ or social scale, they can be differentiated into four detected typologies:

- I. rooftop farming as a continuation of existing knowledge of community-based initiatives
- II. rooftop farming as an introduced tool for community building
- III. rooftop farming as an income generating practice
- IV. rooftop farming as part of an educational system

Since the case studies are supposed to generate information about different project setups and approaches, in a first step, they are analysed under the following aspects:

- context
- approach
- project setup
- target group
- involved actors and financing
- timeframe
- used techniques and costs

As described in the chapter 2 Theoretical framework and chapter 3 Methodology, for evaluating the case studies the four-dimensional model of action space by Safier (2002) is applied. Thus, the current action space and the limits and boundaries of the investigated community-based projects are detected. In a second step, the case studies are dismantled into the four dimensions:

- a. improving technical-professional – in the broadest sense – innovations and individual or group ethics and behaviours (technical)
- b. extending institutional and inter-organisational reforms of goals, roles, priorities, procedures and resource allocations (organisational)
- c. expanding social interaction and mobilisation – involvement in modes of inclusive, participative and collaborative bargaining and negotiation (social)
- d. enlarging the scope of strategic analysis and tactical response to the dynamics of urban development in time and place (strategic)

The analysis of the case studies by using the four-dimensional model of action space is made in order to learn from previous projects. By understanding the actual action space and current limits and boundaries of the individual projects, it is possible to draw conclusions for a potential action space. In a second step, this basis, in combination with the overall literature and empirical research of the thesis enables us to give recommendations for community-based urban agriculture projects in the context of Palestinian refugee camps (see chapter 9 Recommendations for action). It is, however, important to note that not all case studies could be analysed equally intensively. Due to the limited travel and accommodation possibilities, the case studies in the West Bank were examined less intensively than the case studies in Jordan.

Typology I: rooftop farming as a continuation of existing knowledge of community-based initiatives (Husn Camp)

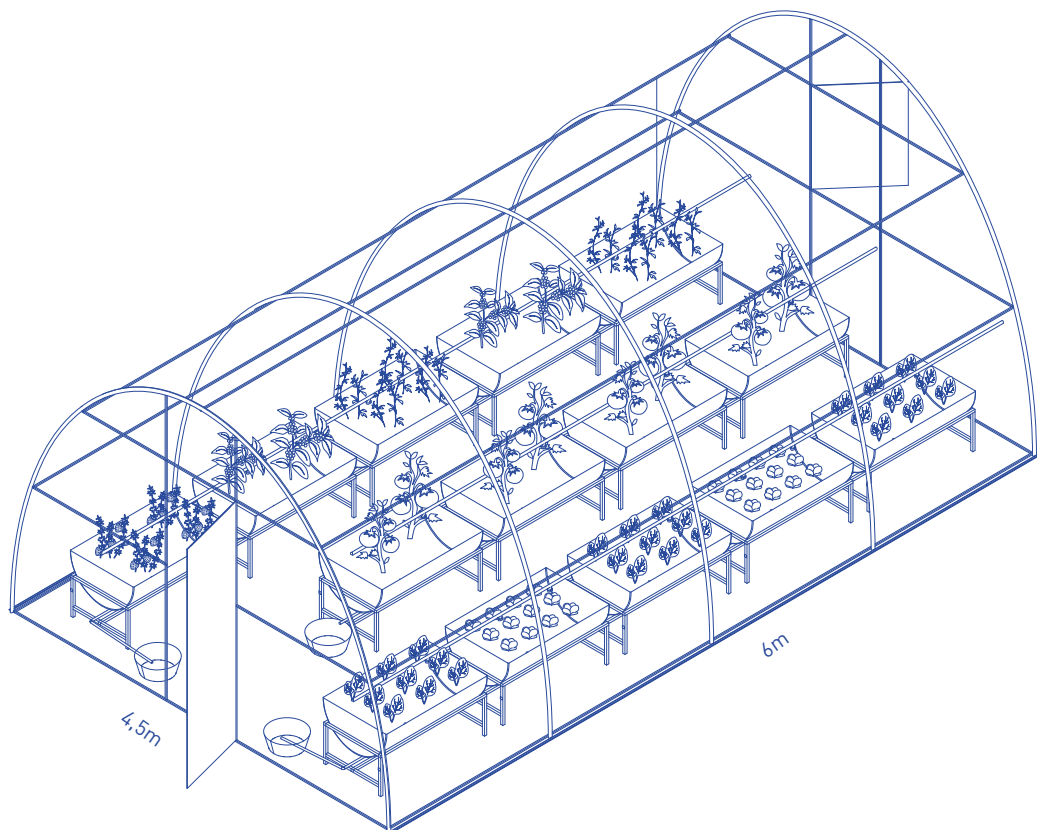


fig. 123: Greenhouse structure in Husn Camp (own illustration)

CS 01: Husn Camp

Context

Husn Camp is located in the north of Jordan, approximately 80 km from Amman on a sloping topography. The camp is situated at the outskirts of Irbid and its immense density contrasts with its rural surroundings. The initial emergency camp was established in 1968 and sheltered around 12,500 Palestinian refugees and displaced people, who mostly originated from the West Bank and were seeking refuge from the consequences of the 1967 Six-day-war. Today around 25,000 inhabitants live on an area of 0.72 km². Compared to the other official camps in Jordan, Husn Camp challenges the highest unemployment rate with 18% of all camp inhabitants. (UNRWA, n.d. D)



fig. 124: Husn Camp 2018
(Google Maps, 2018)

Approach

The rooftop farm project is embedded in the local CIP and was financed and initiated by the GIZ. Four CBOs had the opportunity to apply for the realisation of self-initiated projects. Members of the local football club Al Karmel submitted the idea to design and build rooftop farms on private households. Thereby they adopted already existing individual ideas and implementations in the field of urban agriculture on the roof in order to elaborate them further. Implementing rooftop farms should react to the high density of the camp, create possibilities of self-sufficiency and activate the roof as a productive space. The donors' approach was to promote a small-scale project that would generate environmental and cultural benefits for the camp community. The social participation and internal knowledge transfer of camp residents in this community-based project is intended to be fostered, whereas the generation of income was explicitly not in the focus of the project (UNRWA (ed.) & Federal Ministry for Economic Cooperation and Development (ed.), 2012, p. 227).

Project setup

Within two years and two phases 34 rooftop farms were realised. Whereas the first phase with 24 realisations aimed at private family households, the second phase focused on ten public institutions. Institutional greenhouses were not only implemented within Husn Camp, but also in Irbid Camp and on further institutions outside the borders of the camps. The latter were implemented with the aim of supporting the connection between the inside and the outside of the camp.

Since the beginning of the project, the local CBO has been responsible for the project management. One manager, one accountant and one other employee were locally hired for the period of the project. Regarding the construction of the greenhouses, local capacities were used. Thus, project participants were included into workshops to strengthen farming skills and gain the necessary knowledge. Individual project participants went beyond the basic offer of workshops and experimented with innovative irrigation systems such as aqua- and hydroponics. However, these projects could not be developed further due to the lack of components such as the required minerals.

The local CBO designed and implemented the greenhouses. The project manager conducted the selection process of the participants in the project. By handing over the full decision-making power to the CBO and project manager, a horizontal relationship was enhanced.

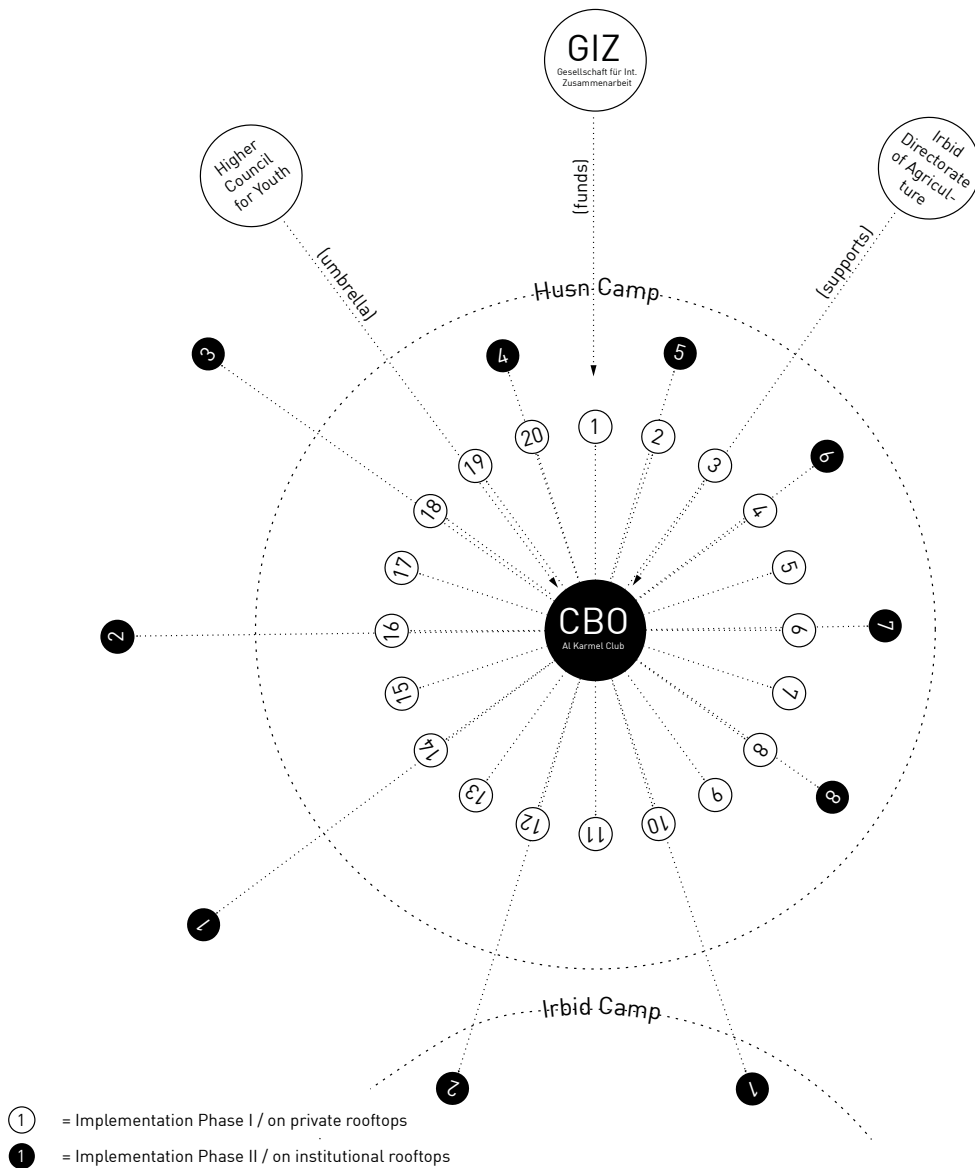
However, local power structures and inequalities were reproduced at the same time. In the end it turned out, that the project manager selected the project participants according to personal relations. This impression is reinforced by the fact that today only eight out of 24 rooftop farms of the private households are still intact and used. It seems that the project manager did not select the participants according to their interest in farming. However, the selection process was probably not intentionally excluding, but it unconsciously made the access to the project only possible for a small part of the community.

The greenhouses on the rooftop of institutions, show a gap between the demands and reality of the project. While the second phase of the project was designed to make the topic of rooftop farming more accessible to the public and to stimulate an exchange of knowledge, the field survey revealed a largely different picture. Often the greenhouse structures remained closed to the public because individual staff members of the institutions operated the rooftops.

Target group

Community-Based-Organisations

Involved actors and financing



Timeframe

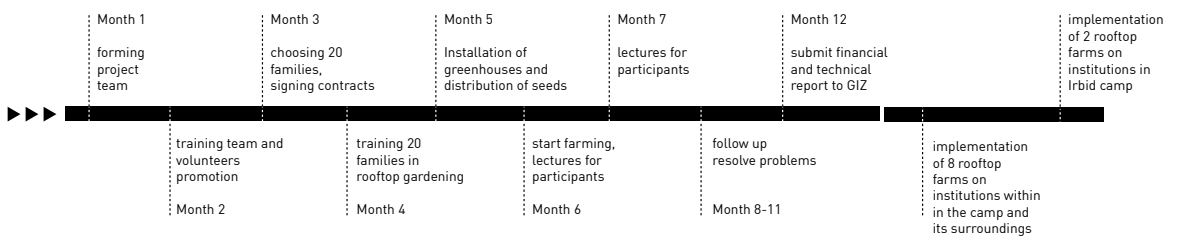


fig. 125: Involved actors and financing and project timeframe in Husn Camp (own illustration)

Used techniques and costs

The greenhouse appears like a micro version of a conventional greenhouse structure used for large-scale agriculture in Jordan. Before the project was launched, several camp inhabitants had already used their roof for urban farming. Two of these self-initiated rooftop farms were visited. Both included recycled local materials in their design.

Based on the experience gained in the first implementation period, the CBO technically optimised the structure of the greenhouse for the second stage. Structural and climatic issues were considered as major challenges for the design. As a result, a steel frame was added for structural improvement, the plastic cover was connected to the steel structure to resist heavy weather conditions and a window was added, to improve air circulation. To respond to spatial changes like vertical building extensions, the mainly welded greenhouse structure was replaced by a more flexible plug system, which can be set up and dismantled quickly.

To avoid a possible damage to the roof, crops are planted in elevated cut-in-half barrels, which are hold by a welded metal structure. Although, the project team developed an automatic dripping system for plant irrigation, watering is mainly carried out manually, as the envisioned system quickly becomes clogged with soil. Water, which has not been consumed by plants, is collected and reused in a specially developed system. The system consists of small hoses attached to the bottom of the barrels, that transfer the water into a collection container. The used seeds are mainly industrial and are bought at the market in Irbid, whereas the soil is imported from Finland and is therefore rather expensive and little sustainable. However, some urban farmers use a mixture of local clayey soil and peat moss to save money. A mixture is necessary because the clayey soil is very dense and impermeable and, moreover, reaches a high weight when absorbing water, which the roofs may not withstand.

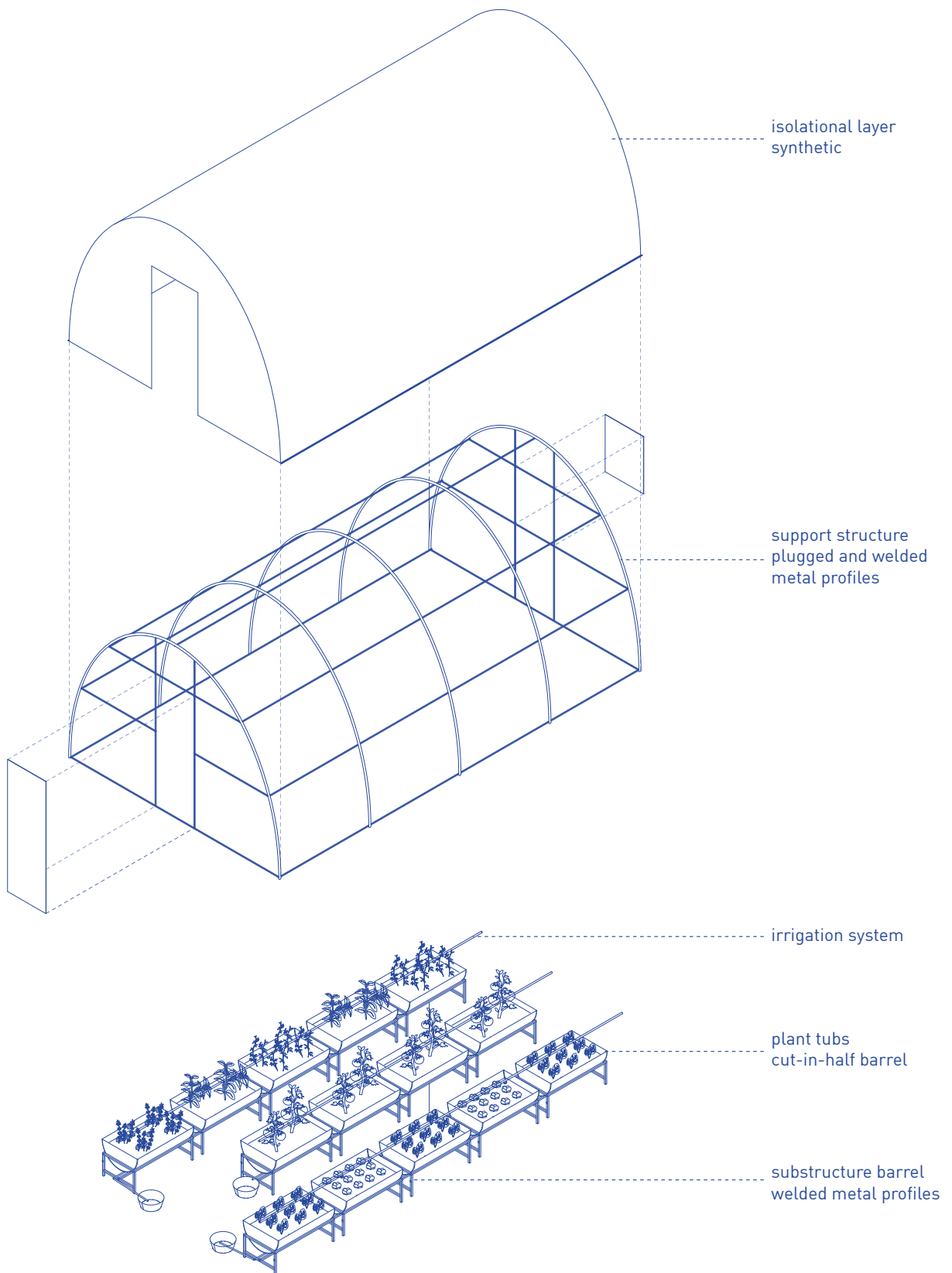


fig. 126: Explosion of the greenhouse structure in Husn Camp (own illustration)

Action space and limits and boundaries within the four dimensions

a. improving technical-professional – in the broadest sense – innovations and individual or group ethics and behaviours (technical)

The project has succeeded in giving space to and strengthening self-governing structures and individual passions for agricultural production. Hereby more general issues such as awareness for a sustainable and healthy nutrition, entrepreneurial spirit and the careful use of resources, were triggered. It was even possible to develop existing technical know-how further and to optimise it over the two phases in the form of the revised structure of the greenhouse. In this respect, the approach has a visible positive impact on individuals and has contributed to the goal of creating some productive roofs.

However, the small number of still functioning greenhouses diminishes the overall success of this approach. People who previously had no contact with or no knowledge of agriculture and food production lacked the expertise, interest or motivation to continue the project on a sustainable basis. In addition, the structure of the greenhouse was too large and expensive to achieve an effective imitation effect of other interested persons. Innovative ideas that go beyond the rather simple system of this rooftop farm, i.e. hydro- or aquaponic-approaches could not be integrated within the project and thus remained without implementation.

b. extending institutional and inter-organisational reforms – of goals, roles, priorities, procedures and resource allocations (organisational)

Due to the low influence of hierarchically higher agents, the project has succeeded in strengthening local initiatives and allowing them to participate in the development of the camp. Thus, the project is also in line with UNRWA's strategy to enable participation on an eye-level.

As a consequence of the lacking continuation, the project offers little prospects. Due to the lack of monetary funds, it can hardly be continued sustainably in the long term. Because of the high initial costs and the absence of new funding, the project did not manage to involve new participants.

c. expanding social interaction and mobilisation – involvement in modes of inclusive, participative and collaborative bargaining and negotiation (social)

The funding of the CBO and the associated formation of a group has led to a new thematic,

social interaction in the camp. The distributed greenhouse prototypes made local ideas and concepts accessible to a selected group of participants. Within this group, the participants exchanged – mostly via WhatsApp groups – about problems and their possible solutions. Also, the cooperation with the urban agriculture project from Fawwar Camp promoted the interaction and exchange of knowledge beyond the boundaries of the camp.

Nevertheless, not only the selection of participants, which was largely based on nepotism, but also the failed opening of the institutional rooftop farms to the public caused that the project remained rather isolated within the camp. By embedding the project within the structures of the existing football club of the camp, it turned out to be dominated by male participants and nepotism was supported.

d. enlarging the scope of strategic analysis and tactical response to the dynamics of urban development in time and place (strategic)

Within the increasingly dense structure of the camp, the approach creates potential spaces for residential (climatic) recreational areas as well as for the urban production of food. This enables the project to react on a small scale to urban dynamics and the associated problems while testing prototypical approaches. Furthermore, the participants used YouTube as knowledge resource, which enhanced their farming capacities and lead, in many cases, to a self-initiated extension of the originally implemented greenhouse. The embedding of the project into a strategy, which goes beyond camp borders (e.g. Irbid Camp), also strengthens the regional transfer of knowledge.

Nevertheless, the short duration of the project and the lack of embedding the project into larger concepts or masterplans, result in a rather minor impact on urban dynamics. Due to the lack of prominence of topics such as greening or urban food production in the key document CIP (see chapter 10 *New Perspectives*), there is no strategic urban development approach to further promote the topic. Moreover, wrong expectations concerning the external financial support of the project beyond the implementation phase, for instance, lead to an early drop-out of participants and thus, enhanced a lack of sustainable and long-term success of the project.

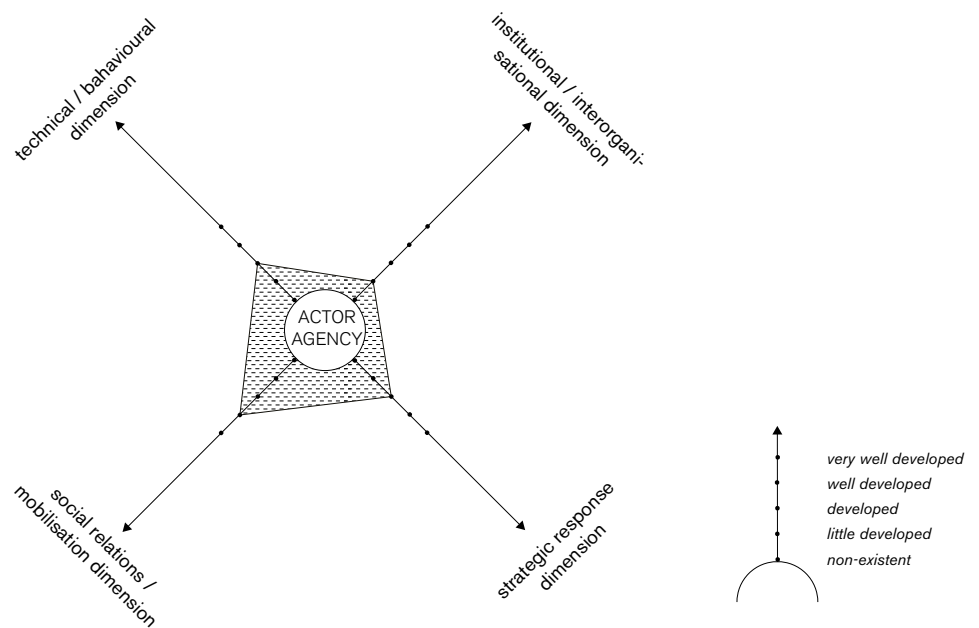


fig. 127 Action space and limits and boundaries of the urban agriculture project in Husn Camp within the four dimensions by Safier (2002) (own illustration)

[I]f you seen somebody [...] interested of agriculture, you can give him the chance, he can manage his life.

- Interview Anonymous, 2018 -

You must... you must find persons [...] carefully, not by relations.

- Interview Anonymous, 2018 -



fig. 128: Husn Camp (own photograph)



*fig. 129 -137: Impressions of the rooftop farm project in Husn Camp
(own photographs)*



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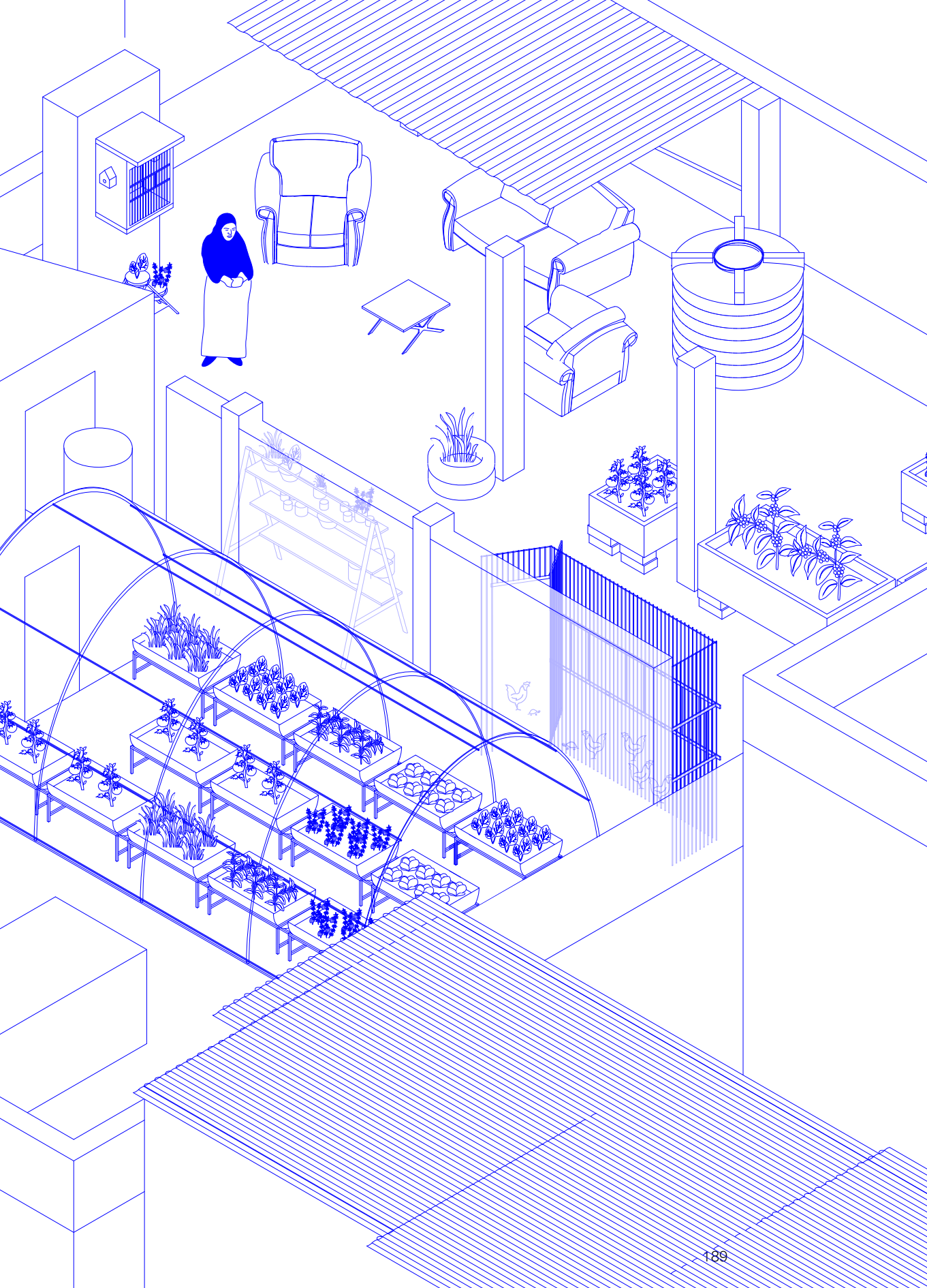
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fig. 138: Isometric drawing of a project participant's rooftop in Hush Camp (own illustration)



Typology II: rooftop farming as a continuation of existing knowledge of community-based initiatives (Fawwar Camp)

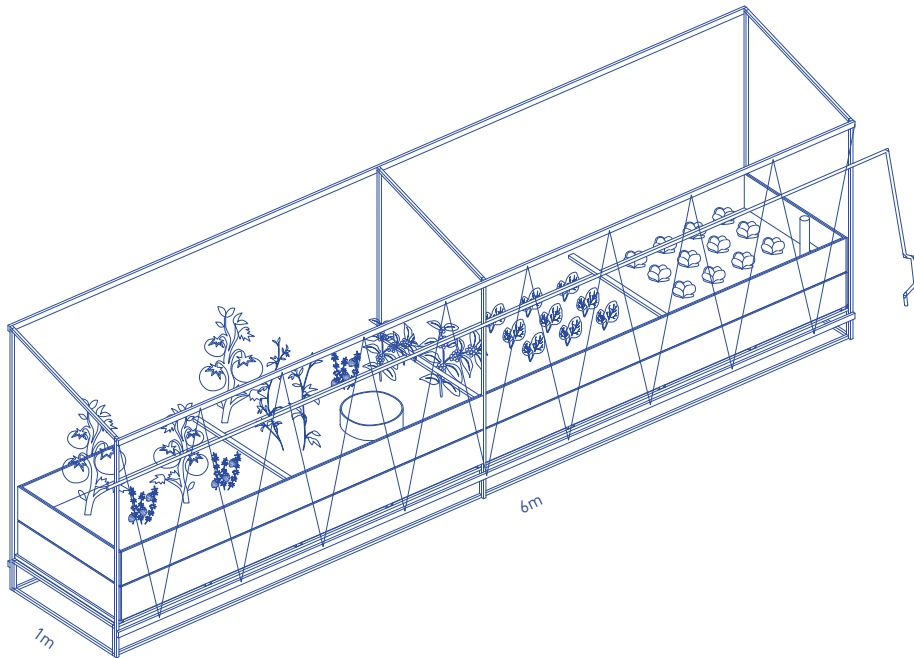


fig. 139: Greenhouse structure in Fawwar Camp (own illustration)

CS 01: Fawwar Camp

Context

Fawwar camp is located in the West Bank, eight km south of the city of Hebron. The camp was established in 1948 and initially sheltered around 3,000 Palestinian refugees. Today it covers a total area of 0.27 km² and is inhabited by approximately 9,500 Palestinian refugees. As most of the West Bank inhabitants, the refugees inside the camp are suffering from the present situation of occupation. The current inaccessibility of the Israeli labour market has worsened the economic situation in the camp and has contributed to the high unemployment rates and poverty. (UNRWA, n.d. E) The Israeli settlement Beit Haggay and an Israeli military camp are located close to the camp. The access to the camp is regulated by Israeli security forces (ISF), which are located at an Israeli checkpoint, including a watchtower right at the camp's entrance. On some days the main road at the camp entrance is temporarily blocked with concrete blocks, hindering any flow of food and goods.



fig. 140: Fawwar Camp 2018
(Google Maps, 2018)

Approach

The project, which is funded and initiated by GIZ, aims to integrate the youth and young adults into the development of the camp. For this purpose, the gender-mixed Fawwar Camp Youth Council (FCYC). The FCYC works as a voluntary institution, which aims to increase a sense of responsibility for the environment of the camp, as well make the youth more visible and let them participate in the decision-making process. For this reason, the donors' focus is mainly on social issues rather than on producing vegetables and generating income. Urban agriculture is only one aspect of the project. The project served primarily as an initial impulse and initiator for the formation of a group, since the FCYC now also deals with topics such as dance, drama and graffiti.

Project setup

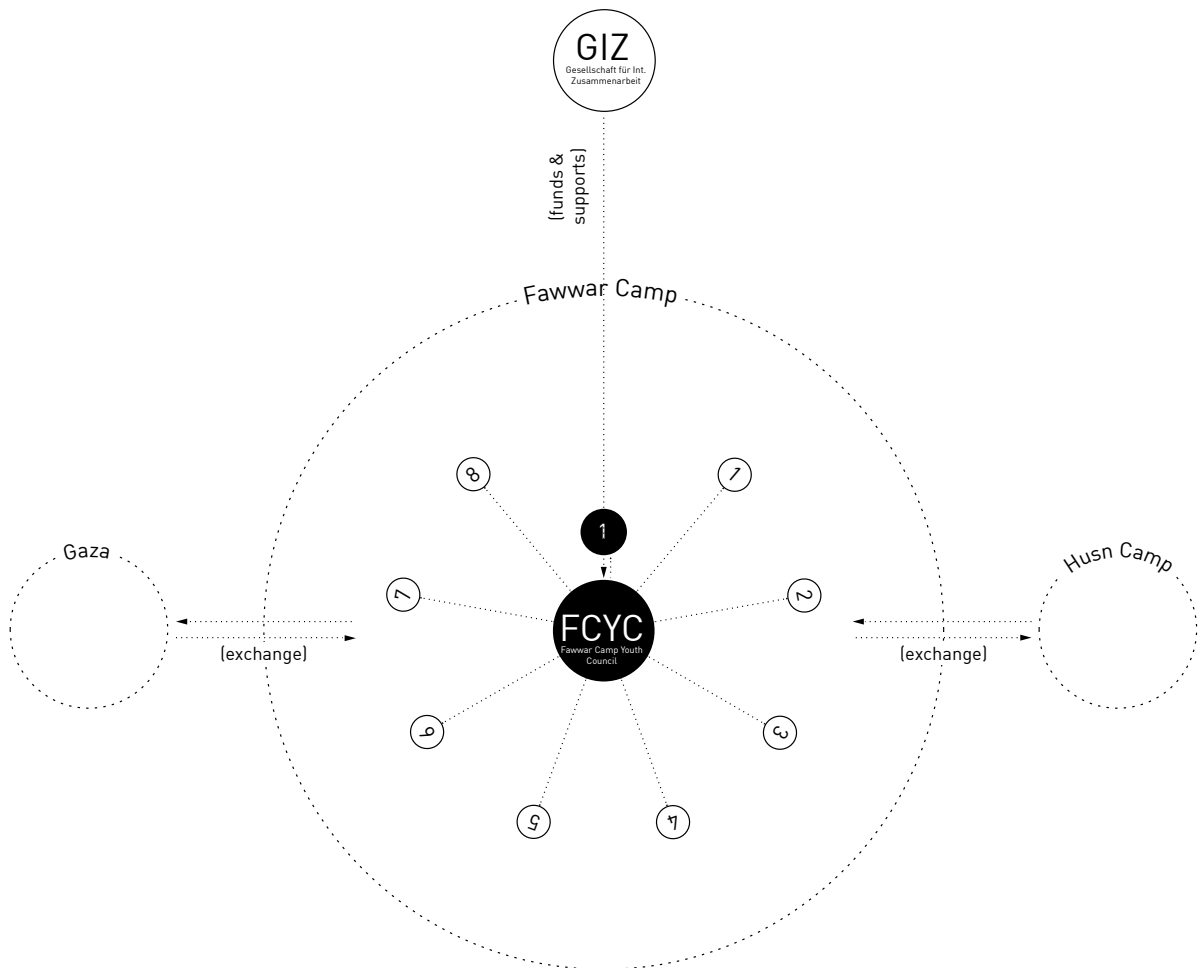
The GIZ brought the idea of rooftop farming into the camp. The initial farming-project was set up like a laboratory, in which the participants themselves designed and managed a feasible prototype of a rooftop farm. GIZ employees conceived and designed the rooftop farm. They then set up and commissioned the farm together with a local youth group. Including the youth already in the construction process enhanced the creation of a sense of ownership by the youth and helped to improve their craft skills and capacities. For its projects the group is allowed to use the rooms and the roof of the local rehabilitation centre. As a consequence, they are dependent on the institution's opening hours, which limits possible activities in the evenings.

Within the first six months, the FCYC tested and evaluated four different systems of rooftop farms (including hydroponic-, dripping-, deep watering systems) on the roof of the local rehabilitation centre. During the project the group decided on a final rooftop farm system and installed it on eight roofs of private households. The group visits the participating families weekly and assists them. Furthermore, they cooperate with other institutions, such as the close-by UNRWA school, which they occasionally invite for workshops at the rooftop farm. To enhance an exchange beyond the borders of the camp and even the West Bank, the GIZ offered to participants to travel to Husn Camp and to exchange about rooftop farming practices. Even though the youth regularly visits a farm outside the camp to learn more about agriculture, they still feel a remarkable lack of knowledge about the topic (this was openly communicated during the visit in Fawwar Camp).

Target group

FCYC (*Fawwar Camp Youth Council*)

Involved actors and financing



- 1 = Implementation Phase I / on institutional rooftop
- 1 = Implementation Phase II / on private rooftops

Timeframe

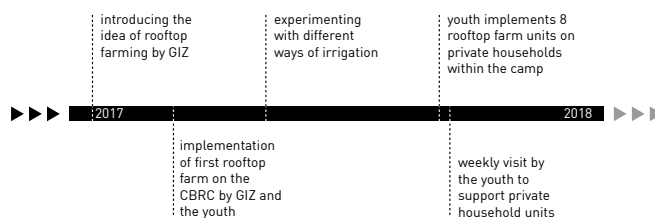


fig. 141: Involved actors and financing and project timeframe in Fawwar Camp (own illustration)

Used techniques and costs

The prototype of the project includes four greenhouses with two different heights, allowing different kind of plants to grow. In contrast to the other projects the greenhouses are covered boxes, where only the plant boxes are covered with a plastic sheet and not as in other cases, where the thermally separated space also includes circulation space for the human being. The elongated beds were elevated on a metal structure later in the project, to prevent a possible damage of the roof.

The youth decided on using deep-water irrigation, which needs to be filled up only once a week. This type of irrigation is particularly useful when a daily irrigation cannot be guaranteed. Particularly for the composition of the greenhouse is also the compost, which is integrated into the bed and thus passes on nutrients to the soil. Synergy effects were also considered in the positioning of the plants. The deliberate use of Rosemary, for instance, ensures a natural defence against pests.

[B]ut the main challenge, I would say again is how to convince the community that such unit [...] could be ...eh...having positive results.

- Interview Mura, 2018 -

Maybe less male than female. And these people they want a reason to go outside the house. They need reason, it's not that conservative, but they want to make something from their own. This is also what make them believe. And [...] to feel the ownership.

- Interview Mura, 2018 -

Its not anyone coming from outside installing, it's just the own capacity of the youth.

- Interview Mura, 2018 -

So they are doing it as a communication. Ja? That's why looking to it from a social cultural... like project not about having a garden products, more about whats happening around these. As a tool.

- Interview Mura, 2018 -

Thats why I am saying we are not a farming project, but we are supporting this, trying to make them visible. In the camp. And to be more active in the community.

- Interview Mura, 2018 -

So here we are making consultant, but they [FCYC] are managing the whole process. Like all other agencies, they are trying to operate as an institution. They have their programme. The timing, the food, participant list, everything. Eh... and the idea of this is not really to make a drama course, or a graffiti course, but they want to introduce how they see the camp from their perspective.

- Interview Mura, 2018 -

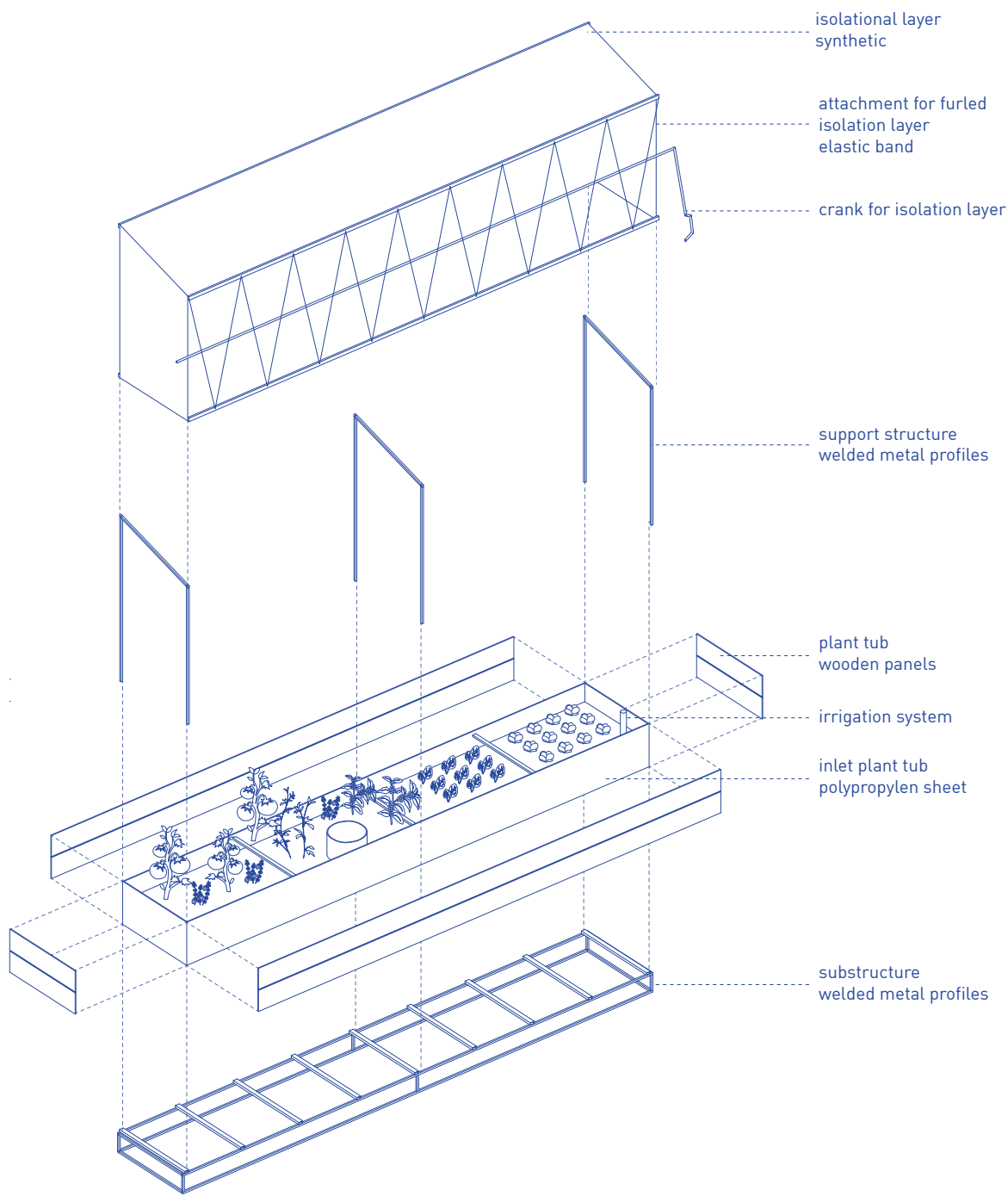


fig. 142: Explosion of the greenhouse structure in Fawwar Camp (own illustration)

Action space and limits and boundaries within the four dimensions

a. improving technical-professional – in the broadest sense – innovations and individual or group ethics and behaviours (technical)

The experimental character of the project, which involved testing various technical systems for cultivating crops, established a relevant basic knowledge and manual capacities within the participating group. This cautious approach to the rather unknown matter not only generated a sense of ownership for the implemented structures, but also provided a technical overview of the various possibilities of rooftop farming, which counteracts possible misunderstandings. A common misconception mentioned during interviews was that plants were cultivated directly on the roof, leading to roof- or water damages inside the house.

But even in this project, the problem of low imitability due to the high costs of the structure on the one hand, and the still high technical requirements on the other is evident. Despite the involvement of the youth group in the technical development of the greenhouse, they have mentioned that the lack of knowledge in the field of urban agriculture continues to be a hindering factor.

b. extending institutional and inter-organisational reforms – of goals, roles, priorities, procedures and resource allocations (organisational)

The fact that the responsible youth group is in close cooperation with other relevant organisations in the camp is an indication of the FCYC's scope of influence. For example, the joint project work with the UNRWA school allows the project to outreach more. It is also beneficial that the group has developed as an independent actor with a sense of responsibility for their project. Furthermore, as perceived during the field research, the relationship between the youth and the GIZ employees revealed a communication rather on an amicable eye-level, which might have enhanced open communication about faced challenges. Promoting gender-mixed activities addresses a generational shift taking place in the camps and shows new cooperation formats of a community.

However, the proximity to the existing institutions also brings disadvantages, since the absence of own room creates a dependency, which in itself reduces the accessibility and the range of possibilities.

c. expanding social interaction and mobilisation – involvement in modes of inclusive, participative and collaborative bargaining and negotiation (social)

In addition to the sense of responsibility already mentioned, it should be emphasised that the project achieved to allow a group of young people to take part in participative and creative developments concerning the camp. Although it seems that urban agriculture was only a vehicle for this purpose, the process of the project shows that a critical mass of interest and motivation for the topic can also be aroused within young people. By implementing and continuously supporting farms also on other roofs in the camp, the project reaches a wider range of the camp community. Furthermore, the fact that the responsables are a mixed-gender group is a progressive development, especially in the context of the camp. However, it should also be noted that this project remains financially dependent on the donor GIZ. In addition, this approach was not based mainly on existing knowledge, but rather on targeted thematic input from outside. The project thus remains both knowledge-wise and financially dependent on external action.

d. enlarging the scope of strategic analysis and tactical response to the dynamics of urban development in time and place (strategic)

The project succeeds in reacting to the urban dynamics of the camp. To actively involve the often unasked and neglected youth and young adults in community-based projects not only provides information about their visions and perspectives, but also creates new motivated actors in the camp development. The exchange with other projects such as Husn Camp also created an exchange beyond the borders of the camp.

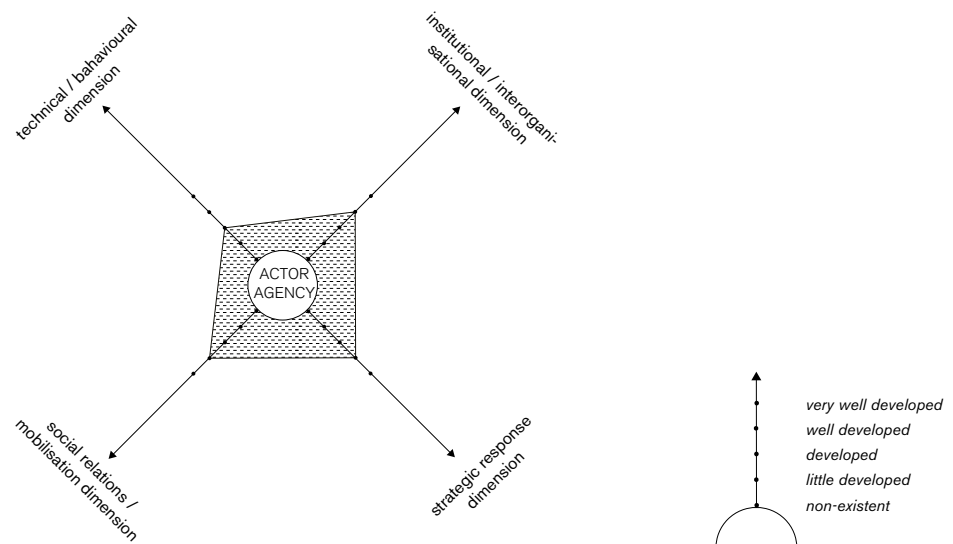


fig. 143: Action space and limits and boundaries of the urban agriculture project in Fawwar Camp within the four dimensions by Safier (2002) (own illustration)



fig. 144: Fawwar Camp (own photograph)





fig. 145 -151: Impressions of the rooftop farm project in Fawwar Camp
(own photographs)

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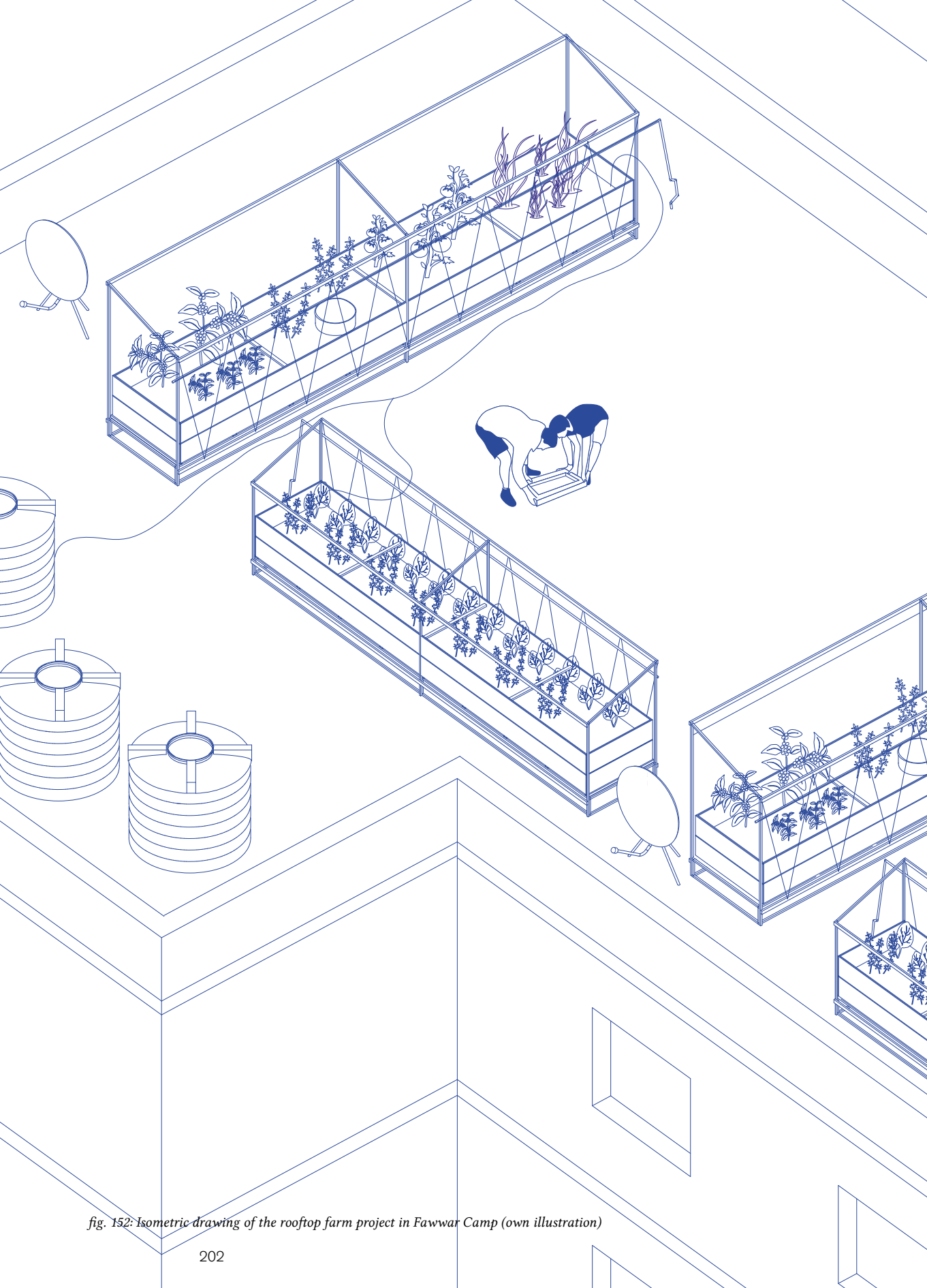
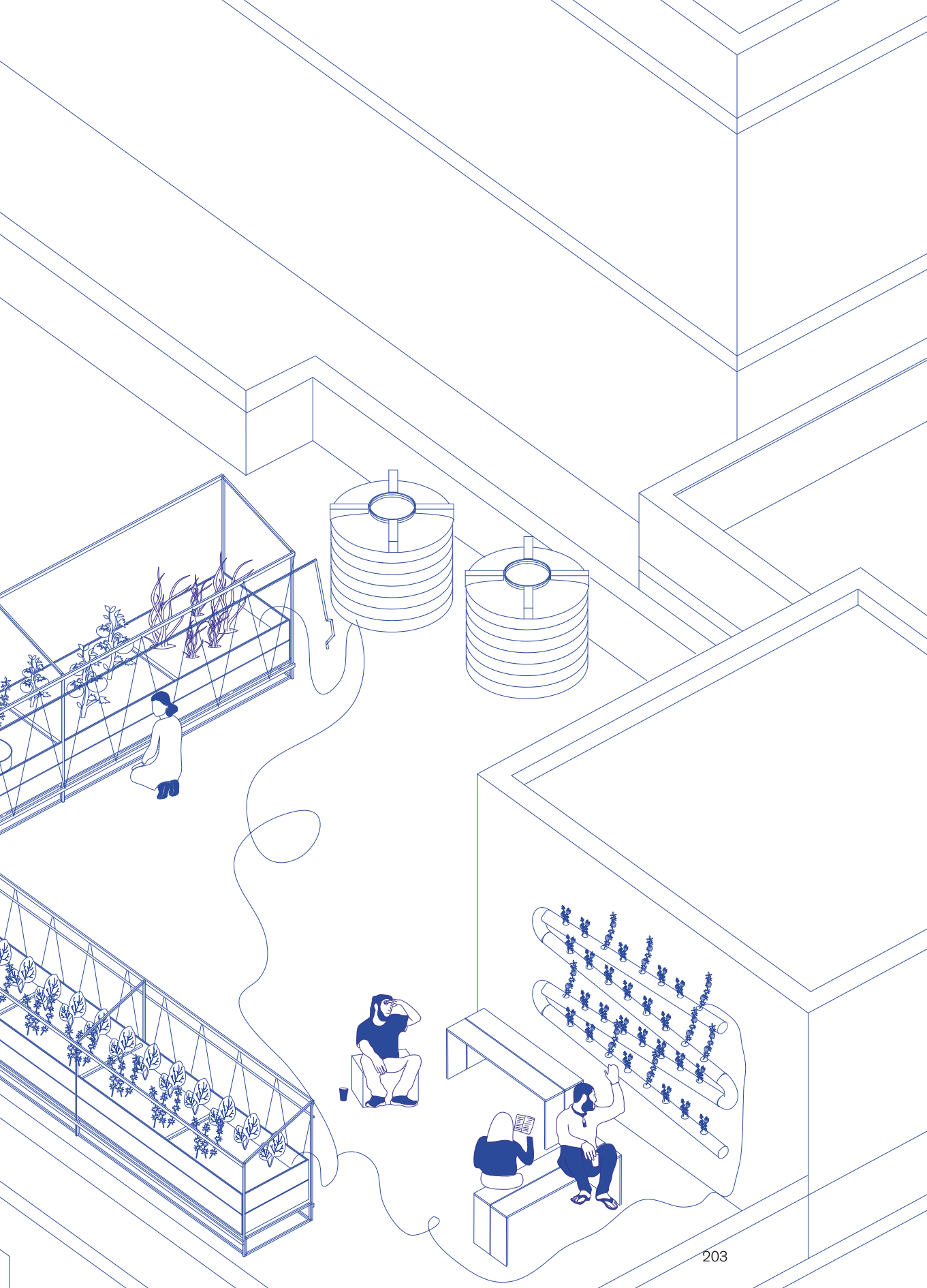


fig. 152: Isometric drawing of the rooftop farm project in Fawwar Camp (own illustration)



Typology III: rooftop farming as an income generating practice (Dheisheh Camp)

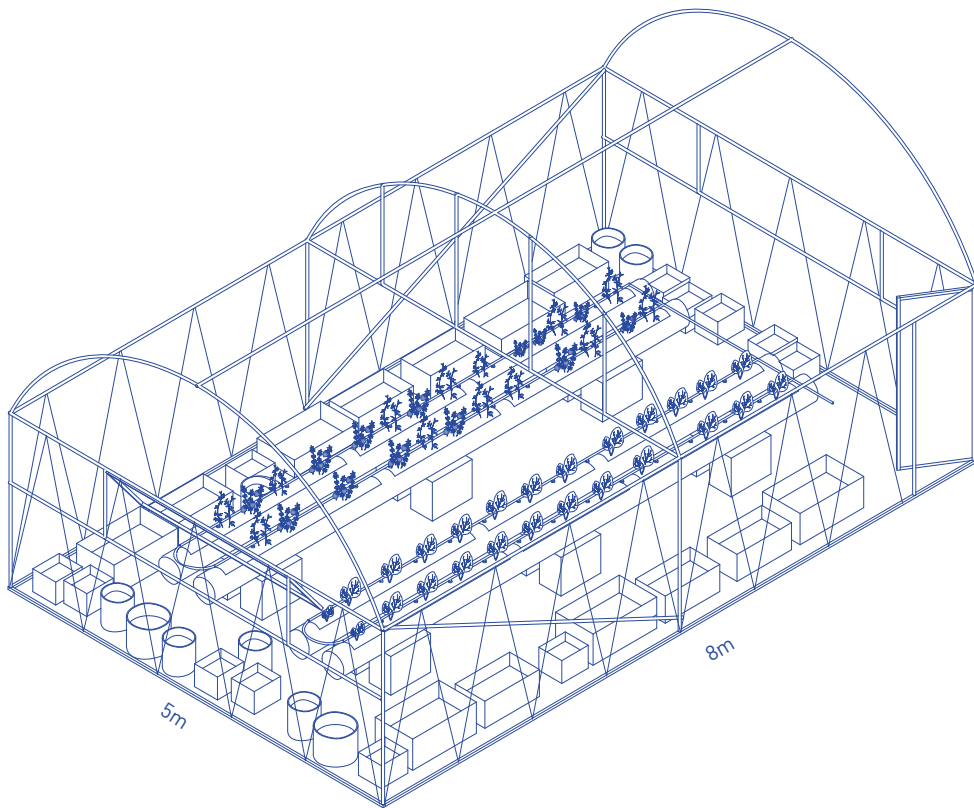


fig. 153: Greenhouse structure in Dheisheh Camp (own illustration)

CS 03: Dheisheh Camp

Context

Dheisheh camp is located in the West Bank, it is situated on the main road to Bethlehem on a sloping topography. The camp was established in 1949 to shelter around 3,000 Palestinian refugees. The camp covers a total area of 0.33 km² and is currently inhabited by 15,000 refugees. As in Fawwar Camp, the camp community is constantly affected by the conflicts and consequences of the occupational situation in the West Bank. (UNRWA, n.d. F)



fig. 154: Dheisheh Camp 2018
(Google Maps, 2018)

Approach

The project, which was initially funded by a private U.S. donor and later on by the European Union and the cosmetic company Lush, is run by the camp-based CBO *Karama*, which aims to enhance women's participation within the camp. The *micro farm* project is therefore exclusively targeting the women of the camp. The approach shall generate additional income for their households and raise awareness about healthy nutrition.

Project setup

Talking about the initial phase of the project in the camp, the CBO manager reported, that in the beginning he felt a lack of interest in the rooftop farm project, which he traces back to reluctance and mostly technical misconceptions. However, after he advertised the project on social media and local television, the interest has increased abruptly.

Within two years of funding acquisition and implementation, 50 rooftop farm units were installed. The initial phase contained 20 greenhouses, whereas the following phase resulted in 30 further, technically upgraded greenhouses, which were installed in 2017. Since the project specifically addressed women, all farms were built up on their private roofs. The participating women, however, were not involved in the construction process of the greenhouses, since it was conducted by external workers.

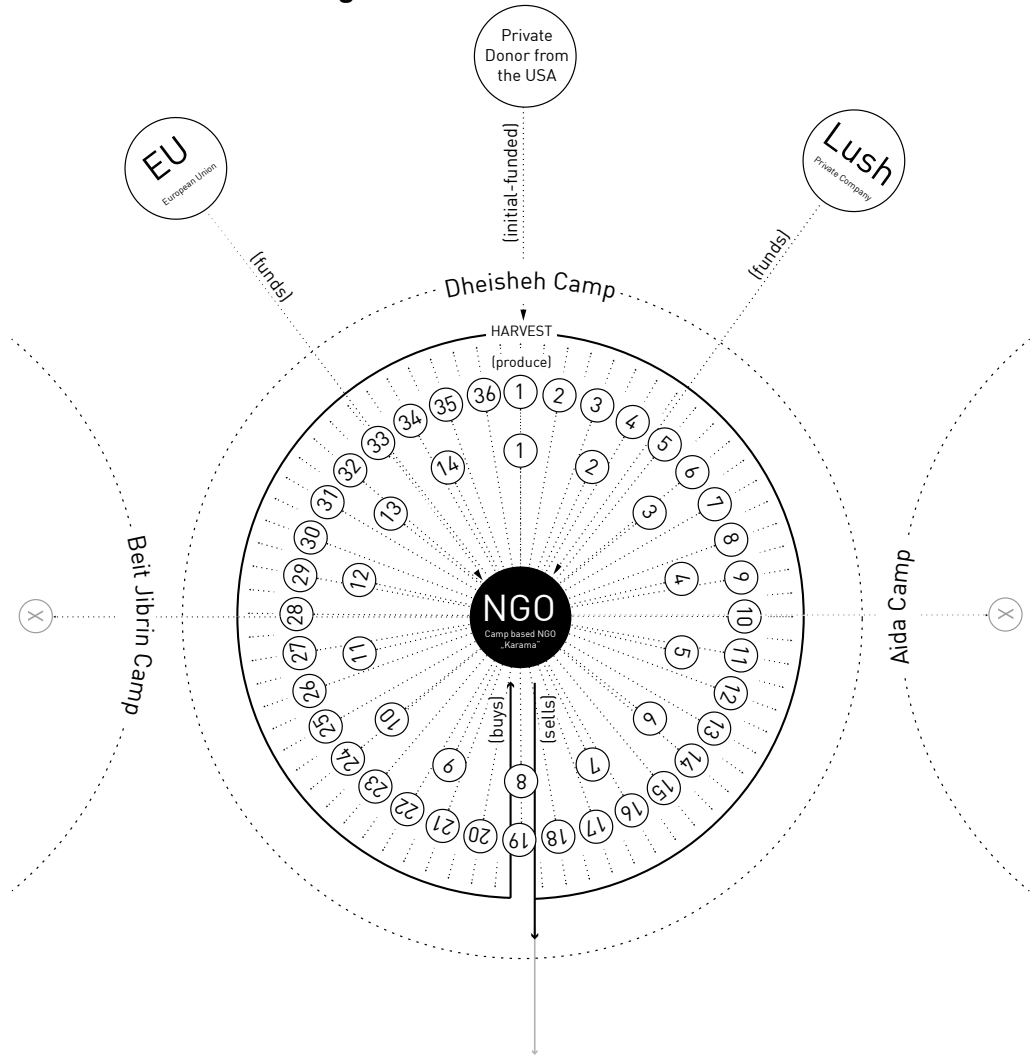
The participants sign a contract with a duration of four years, which obliges them to participate in the meetings taking place twice a week. Additionally, *Karama* provides technical support on demand and is constantly visiting the involved roofs. While the participating women keep 10% of the organically produced harvest, *Karama* buys off the other 90%, which is then sold inside and outside the camp and partly distributed to needy camp inhabitants. Even though, women can buy back their harvest for a reduced price, the fact that a major part of the crops is sold to the CBO makes the women highly dependent on the success and financial capacities of the CBO.

By 2021, *Karama* plans to be completely independent from external donors. In order to achieve this independency, the CBO aims to expand their activities to other camps in the West Bank, such as Aida, Fawwar and Beit Jibrin. Furthermore, a plan to acquire additional farmland outside the camp aims to increase productivity and the quantity of goods. Finally, exporting food such as pickles and sauces to Europe is a proclaimed aim of the CBO. To achieve these goals, the CBO manager works on co-operations with local supermarkets and branch offices in larger European cities.

Target group

women

Involved actors and financing



- ① = Implementation Phase I / on private rooftops
- ① = Implementation Phase II / on private rooftops

Timeframe




fig. 155: Involved actors and financing and project timeframe in Dheisheh Camp (own illustration)

Used techniques and costs


The greenhouse consists of a mainly plugged metal structure, which is covered with a plastic sheet as thermal separation. A black net on top of the plastic layer secures the plants from extreme sun exposure. The crops are grown in recycled drainage pipes. To enhance a less time-consuming irrigation, the beds are irrigated through a dripping system, which connects all beds with each other through a small hose.

Soil is provided by the CBO only in the first year, and is, as in the other projects, imported from Finland. To be more efficient and to guarantee a stable outcome, the CBO decides on which plants should grow in each of the greenhouses. Regarding the evaluation of the first phase, small technical improvements were conducted in the second phase of implementation. The size was enlarged slightly, and the ventilation was improved through an additional window.



After 4 years, they should be independent with themselves. Then they don't need me. And if you continue with them for four years, when you leave them they will love the project. They will love it.

- Interview Al Haj, 2018 -



Actually, some of them just attend the training. You know? They love it, it's the idea to make them love it. When they eat organic, yani, encourage them this is something unusual, this is something perfect.

- Interview Al Haj, 2018 -

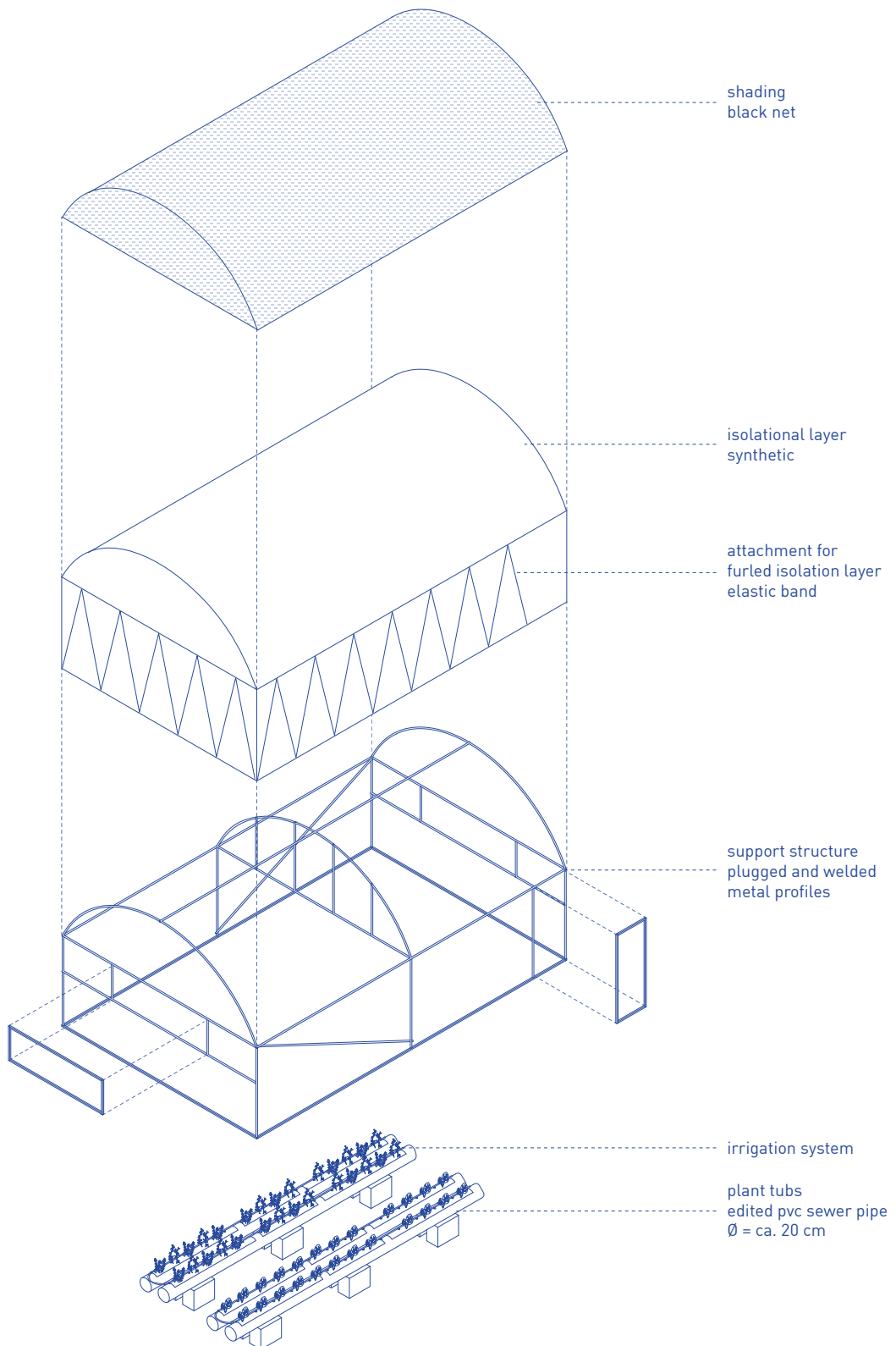


fig. 156: Explosion of the greenhouse structure in Dheisheh Camp (own illustration)

Action space and limits and boundaries within the four dimensions

a. improving technical-professional – in the broadest sense – innovations and individual or group ethics and behaviours (technical)

Karama not only activates the roof as a productive space but also creates new perspectives within the camp using an entrepreneurial approach. Technical knowledge is generated by the intensive support of the participating women during the weekly meetings as well as by generating income with quantifiable feedback and benefits. At the same time, the project's focus on healthy, sustainably produced food sets an important accent that confronts contemporary problems.

However, the imitability of the project has been compromised. The expensive greenhouse structure and its design and construction by external experts reduce the necessary exchange of knowledge and the feasibility of the structure as a subsistence model.

b. extending institutional and inter-organisational reforms – of goals, roles, priorities, procedures and resource allocations (organisational)

The project is embedded locally and follows its own agenda and therefore shows a progressive example in an environment often determined by the external *agents*. Finding one's own funding partners reduces the dependence on goals that one might never have set oneself.

The selection process of female participants appears to be less affected by nepotism structures. The contract made between CBO and participants is a firm component of the project strategy, which enhances a sense of responsibility and includes monetary incentives. The weekly meetings allow a certain transparency of the participants regarding the overall project and create a basis for participation.

Caution is required with the ambitious plan to be completely independent of external investments in the future. If this promise cannot be kept, the further feasibility of the project would be strongly limited.

c. expanding social interaction and mobilisation – involvement in modes of inclusive, participative and collaborative bargaining and negotiation (social)

The regular meetings, the large number of participants and the diverse feedback stimulate social interaction and promote the formation of networks. In particular, the role of women as income-generating members of families is strengthened.

It is precisely this orientation of the project, however, that also carries the risk of sabotage or blockade by other non-integrated target groups - primarily men. In addition, the strongly regulated set-up of the project implies that there is little room for implementing own ideas in the rooftop farm.

d. enlarging the scope of strategic analysis and tactical response to the dynamics of urban development in time and place (strategic)

The local roots of the CBO imply a better understanding of present dynamics in the camp and how to react to them within a strategic framework. The strategic use of media, the progressive adherence to one's own agenda, as well as the appropriate and important goal of independence from external investments by 2021, prove this impressively. Moreover, the multiple partnerships and media attention of the CBO inside and outside the camp enables feedback and recognition. The creation of realistic income opportunities also contrasts with many donor-related projects, which often lack the integration of financial incentives as main motivator. The fact that trends such as organic food production are brought into the context of the project and made entrepreneurially usable underlines the good integration and reaction to local and global dynamics.

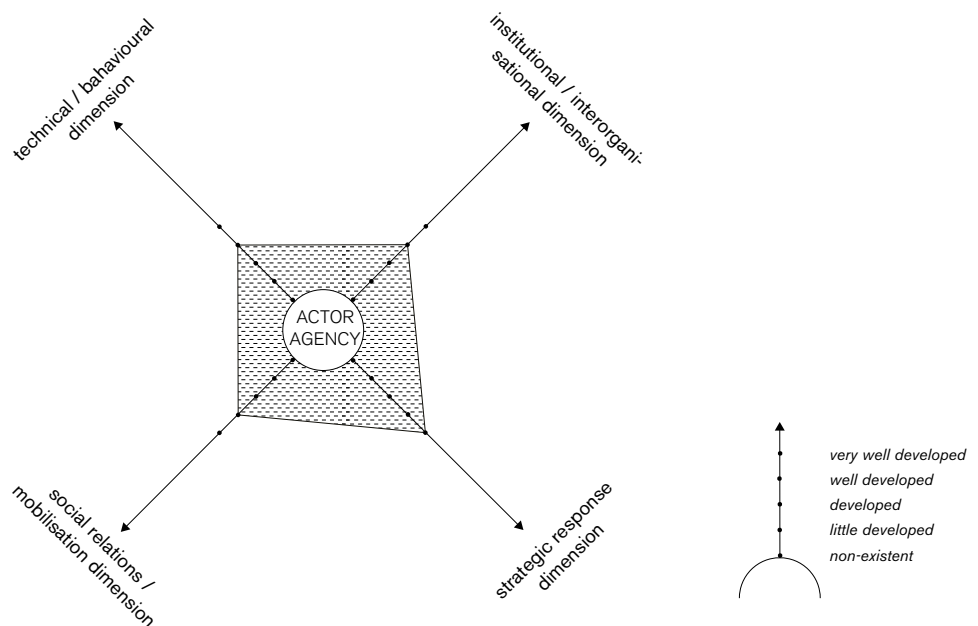


fig. 157: Action space and limits and boundaries of the urban agriculture project in Dheisheh Camp within the four dimensions by Safier (2002) (own illustration)



fig. 158: Dheisheh Camp (own photograph)





fig. 159 -166: Impressions of the rooftop farm project in Dheisheh Camp
(own photographs)

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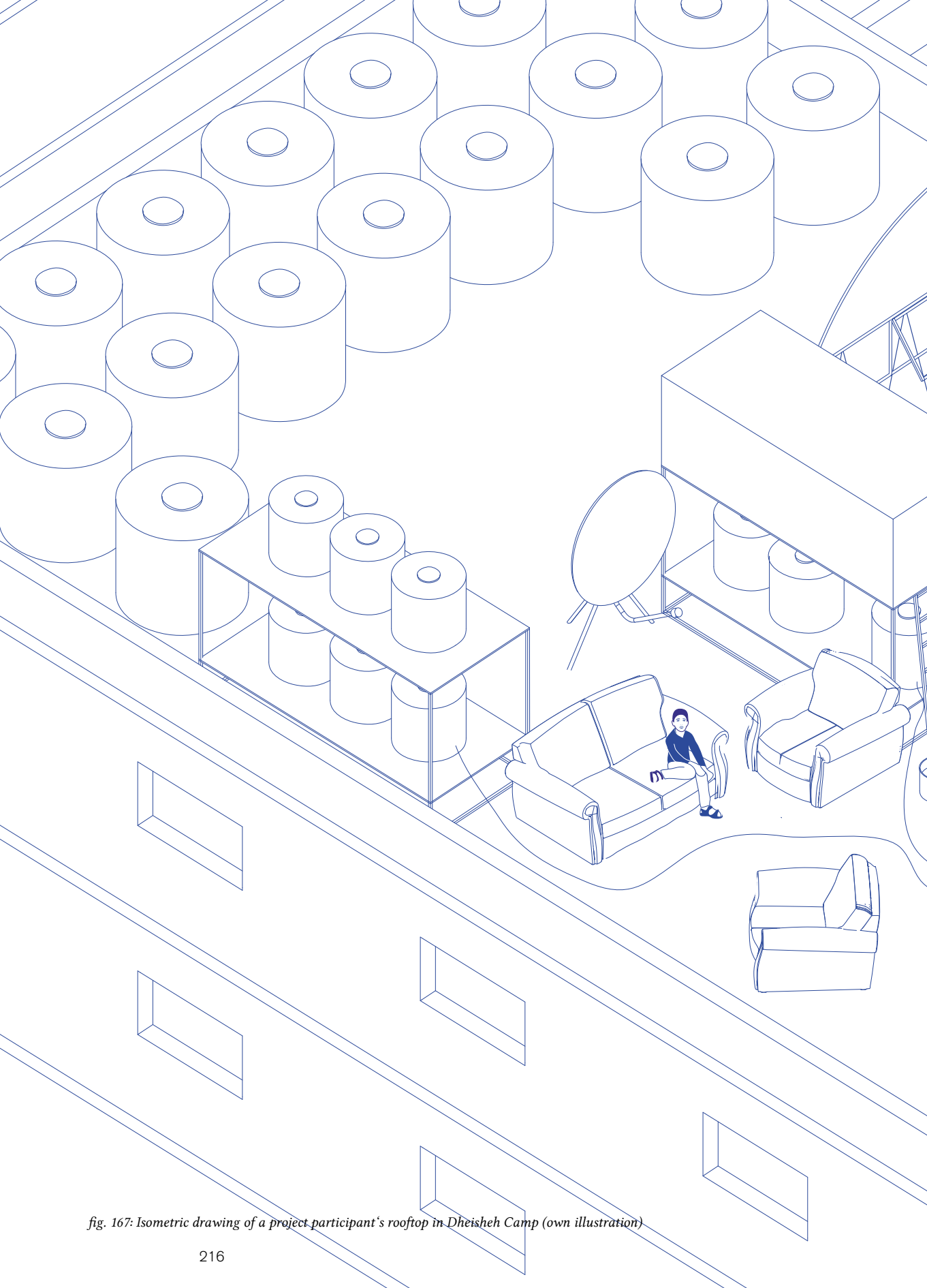
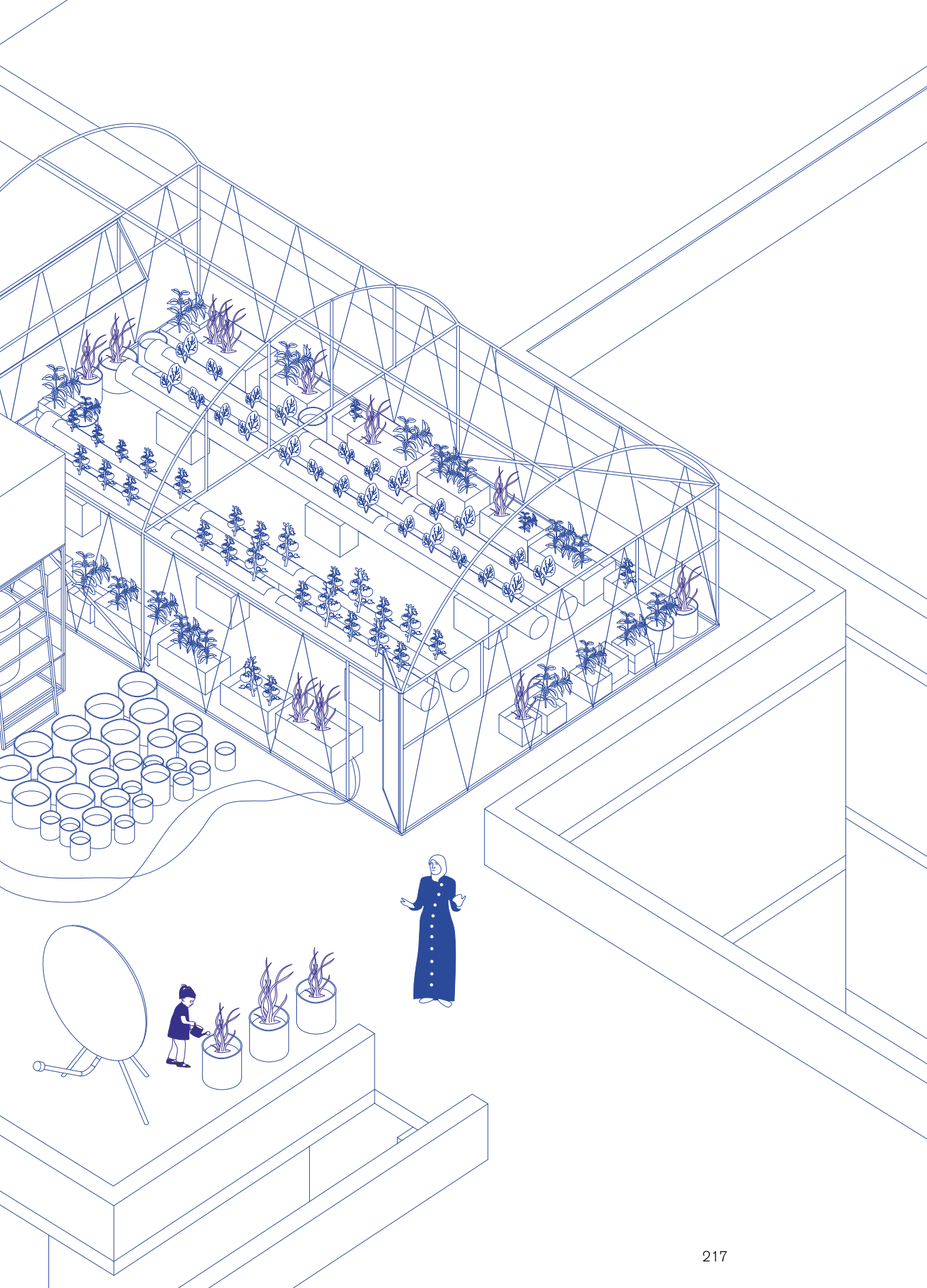


fig. 167: Isometric drawing of a project participant's rooftop in Dheisheh Camp (own illustration)



Typology IV: rooftop farming as part of an educational project (Jerash Camp)

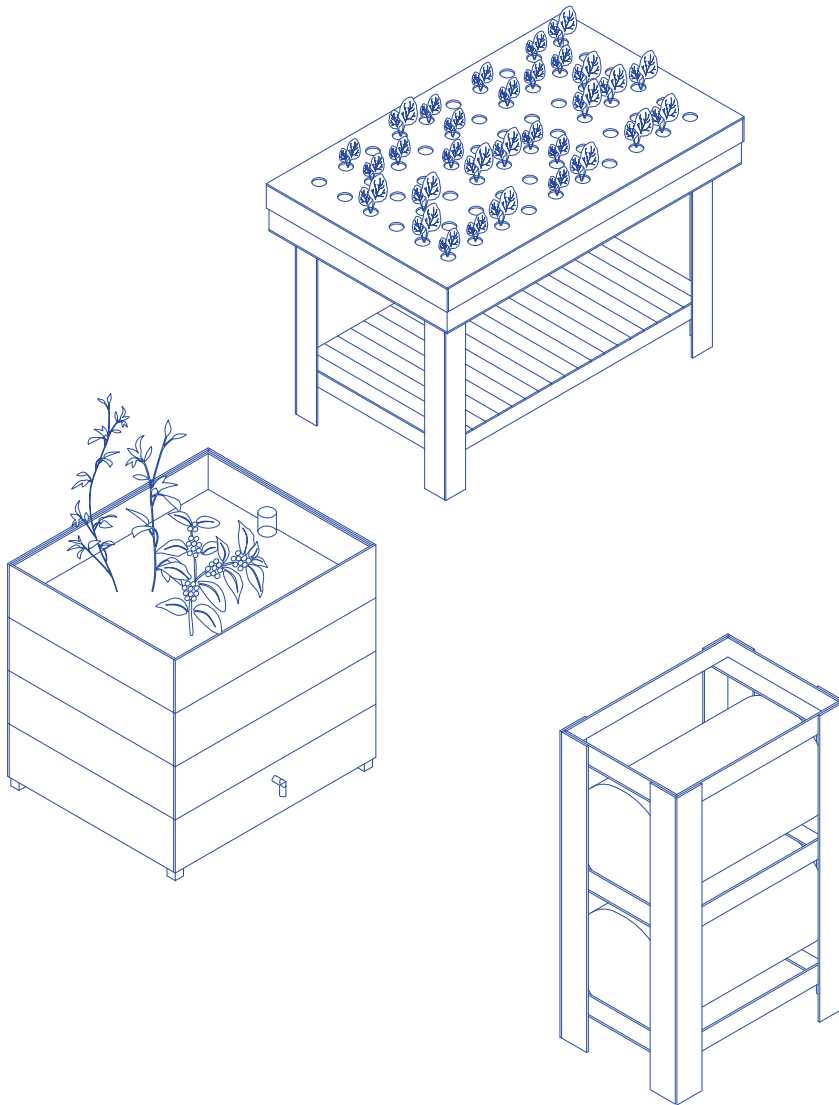


fig. 168: Greenhouse structure in Jerash Camp (own illustration)

CS 04: Jerash Camp

Context

Jerash Camp is situated in the outskirts of Jerash City and is surrounded by agricultural areas and forests. The camp was established in 1968 to shelter around 11,500 refugees and displaced persons, who are originated mostly from the Gaza Strip. The camp covers a total area of 0.75 km² and is currently inhabited by more than 29,000 Palestinian refugees. Unlike other camps in Jordan, the inhabitants of Jerash camp do not have a full citizenship (see *Citizenship of Palestinian refugees in Jordan* in chapter 4.2 *Rights of Palestinian refugees and their legal and political situation in Jordan*) and therefore, for instance, suffer from significant restrictions in the labour market. As a result, Jerash Camp is considered the poorest among the ten official camps in Jordan. (UNRWA, n.d. G)



fig. 169: Jerash Camp 2018
(Google Maps, 2018)

Approach

The project is run by the European NGO *Greening The Camps*, which consists of an interdisciplinary, international team who finance their project through crowdfunding campaigns. The NGO aims to introduce the concept of rooftop farming as a tool of self-sufficiency and to align with the existing Palestinian narrative of the *Fellahin* (see *The notion of the fellahin* in chapter 4.4 *Collective memory and common narratives*).

Project setup

After implementing a first prototype in a cultural centre in Amman, the NGO formed a partnership with the local camp-initiative *One Love* to implement their first rooftop farm on a vocational school inside Jerash Camp, which is currently under construction (state: June 2018). By cooperating with other upcoming camp-based institutions, the NGO tries to incorporate existing dynamics and strengthen synergy effects. However, the project is not yet integrated into larger organisational and economical structures of the camp. Here it is important to note that the NGO tries to work independently and without any cooperation with big institutional stakeholders, such as UNRWA or the DPA.

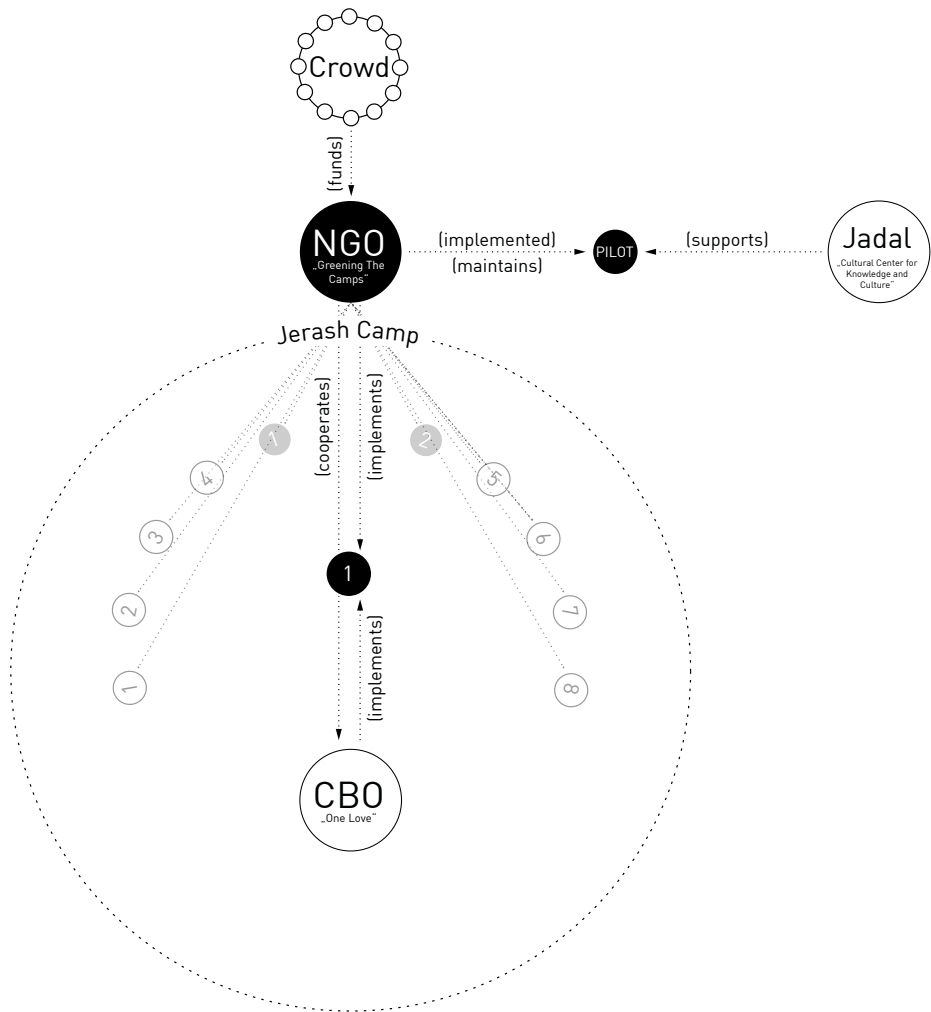
The NGO started with several low-threshold craftsmen workshops in the camp, mainly addressing the youth. Nevertheless, the final construction was conducted by the NGO itself without involving the community in planning and realisation processes. The construction was finished in March 2018, but farming practices had not commenced during the field research. The project consists of six beds, which will be given as trial beds to different female members of the camp community, who can then find out whether their interest in urban agriculture is of long-term. After testing the interest of the participants, in a second phase rooftop farms should be implemented on the private roofs of participating women. By thinking in phases, a sense of ownership and responsibility among the participants is created slowly. At the same time, the NGO can evaluate who is really interested in the project and willing to continue.



During field research the official operation of the rooftop farm was hindered by gender-related issues. As the rooftop farm is situated on the roof of a gender-mixed vocational school, the women were not allowed by their men to access the rooftop farm through the school (see *The role of women as an example for invisible power* in chapter 6.2 *Power structures*).

Target group

women

Involved actors and financing



-  = Pilot-Implementation Phase / on semi-public rooftop
-  = Implementation Phase I / on institutional rooftop

Timeframe

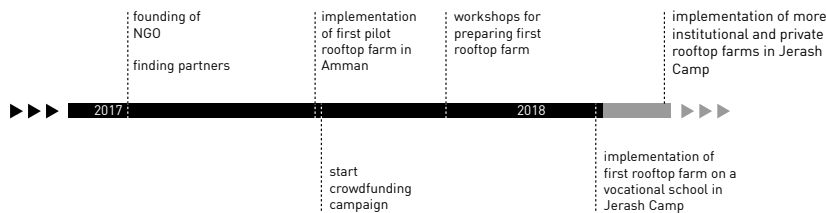
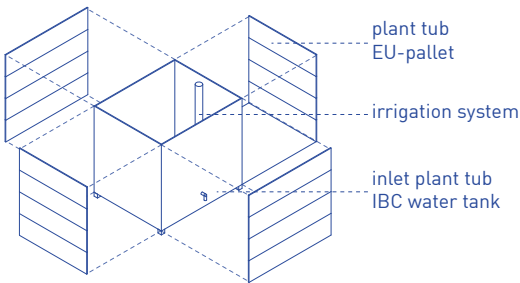
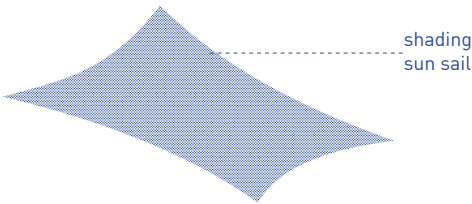


fig. 170: Involved actors and financing and project timeframe in Jerash Camp (own illustration)

Used techniques and costs

The greenhouse consists of a mainly plugged metal structure, which is covered with a plastic sheet as thermal separation. A black net on top of the plastic layer secures the plants from extreme sun exposure. The crops are grown in recycled drainage pipes. To enhance a less time-consuming irrigation, the beds are irrigated through a dripping system, which connects all beds with each other through a small hose.

Soil is provided by the CBO only in the first year, and is, as in the other projects, imported from Finland. To be more efficient and to guarantee a stable outcome, the CBO decides on which plants should grow in each of the greenhouses. Regarding the evaluation of the first phase, small technical improvements were conducted in the second phase of implementation. The size was enlarged slightly, and the ventilation was improved through an additional window.



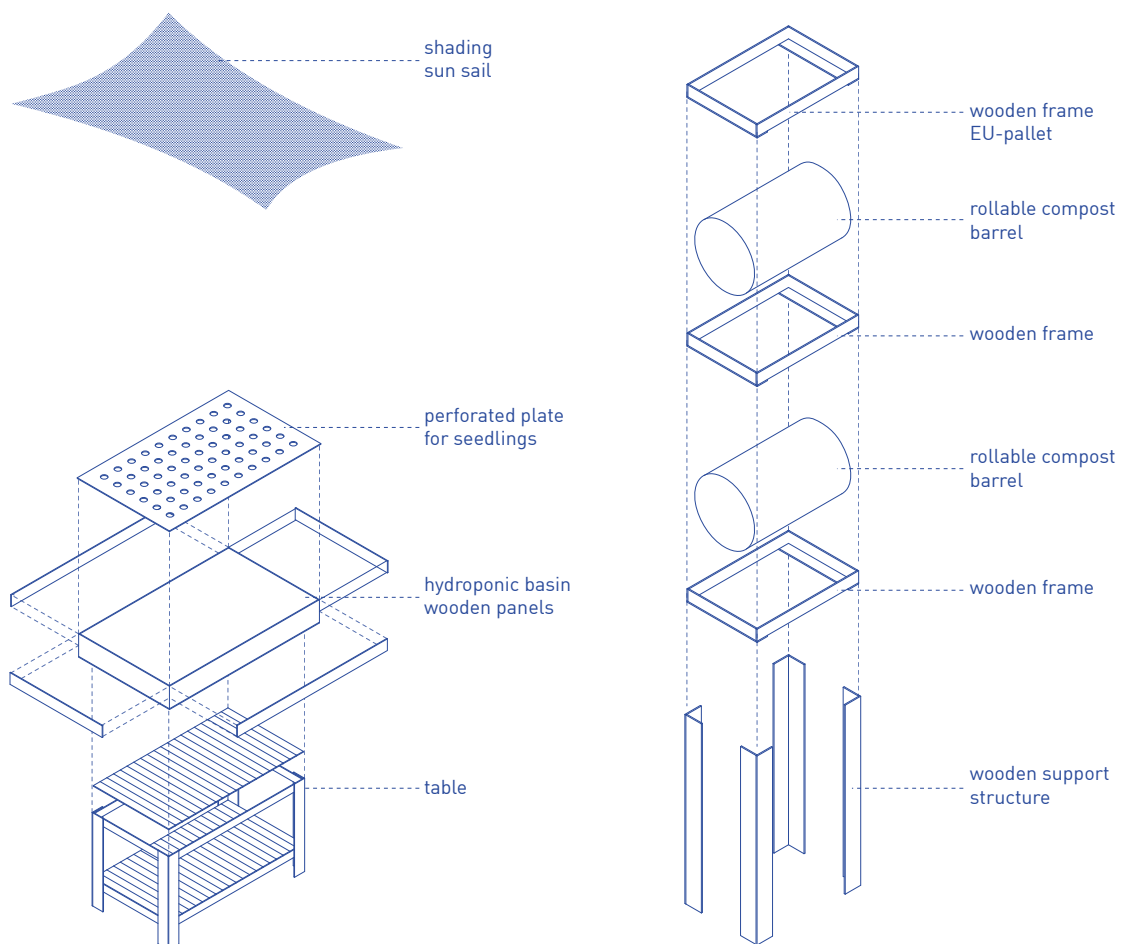


fig. 171: Explosion of the greenhouse structure in Jerash Camp (own illustration)

Action space and limits and boundaries within the four dimensions

a. improving technical-professional – in the broadest sense – innovations and individual or group ethics and behaviours (technical)

The focus of the project is the innovative use of existing resources and the integration of modern technical solutions concerning irrigation systems and recycling of waste. By realising these ideas through various prototypes, the project brings a technically high-quality impulse to the camp. Furthermore, low-threshold craftsmen workshops are an attempt to build manual capacities within the camp community.

However, the use of materials that are unusual and costly for the camp context makes the rooftop farm appear like an alien and questions its feasibility. Here, too, doubts remain as to whether the project can be adapted within the camp community. This assumption is further underpinned by the fact that the NGO has mainly designed and built the structures autonomously like a service provider. The transfer of knowledge remains low at this point.

b. extending institutional and inter-organisational reforms – of goals, roles, priorities, procedures and resource allocations (organisational)

By linking up with the dynamics of an up-and-coming local initiative, the project, which otherwise requires no major cooperation partners, has gained access to parts of the camp community. By working directly on site and being closely connected to the local initiative, decision-making processes are simplified, and goals can be measured and evaluated closer to the actual field of action. The phasing of the project, furthermore, helps to slowly create a sense of ownership and detect real interest among the participants.

However, the project's independence from players like UNRWA could easily lead to structural problems and obstacles, as the local power structures are still dominated by a few actors who have a great influence on spatial and ownership issues. Especially male power structures already appeared as a hazard, since males try to limit the women's access to the project, which is located in a gender-mixed vocational school.

c. expanding social interaction and mobilisation – involvement in modes of inclusive, participative and collaborative bargaining and negotiation (social)

Due to the early stage of the project, it is not yet clear whether it will be capable of increa-

sing social interaction within the camp in a long-term view. By cooperating with the rather young academics of the local initiative, the NGO avoids the structural, power-based problems that may prevail in UNRWA projects, but by doing so, only a certain target group is addressed. By taking over the role of a service provider, the NGO makes the emergence of social participation more challenging.

d. enlarging the scope of strategic analysis and tactical response to the dynamics of urban development in time and place (strategic)

The proximity to the camp context and the fact that the project *agents* are working on-site enables the recognition of urban dynamics and how to respond to them. Especially the integration of the rooftop farm project within the construction of a vocational school shows high potential, since the project can be embedded in an existing process, profit from synergies and does not have to stand on its own. The project also addresses contemporary issues by tackling resource awareness, promoting healthy nutrition and local food production.

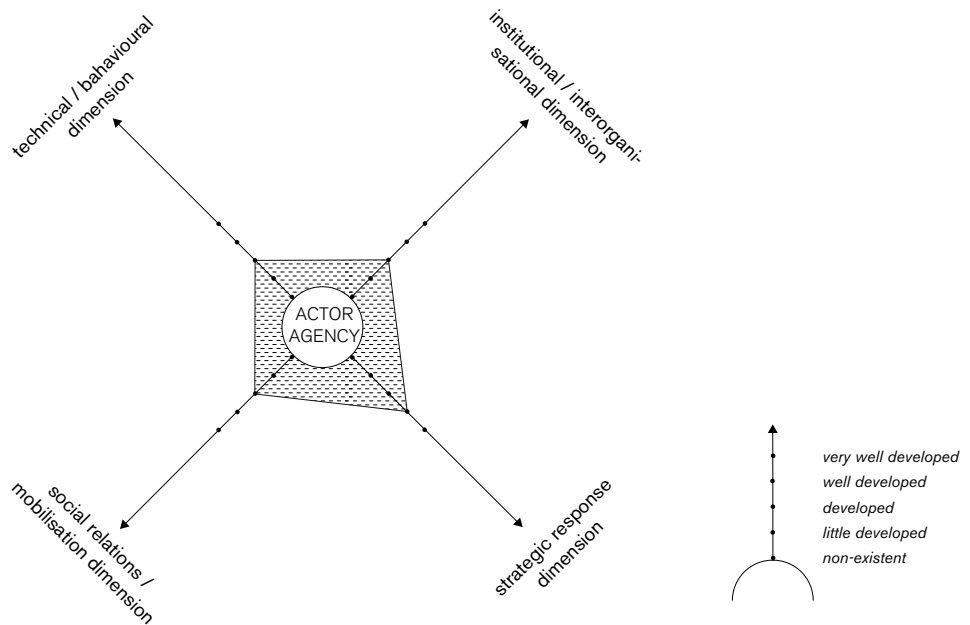


fig. 172: Action space and limits and boundaries of the urban agriculture project in Jerash Camp within the four dimensions by Safier (2002) (own illustration)



fig. 173: Jerash Camp (own photograph)



*fig. 174 -180: Impressions of the rooftop farm project in Jerash Camp
(photographs by Greening the Camps (n.d.))*



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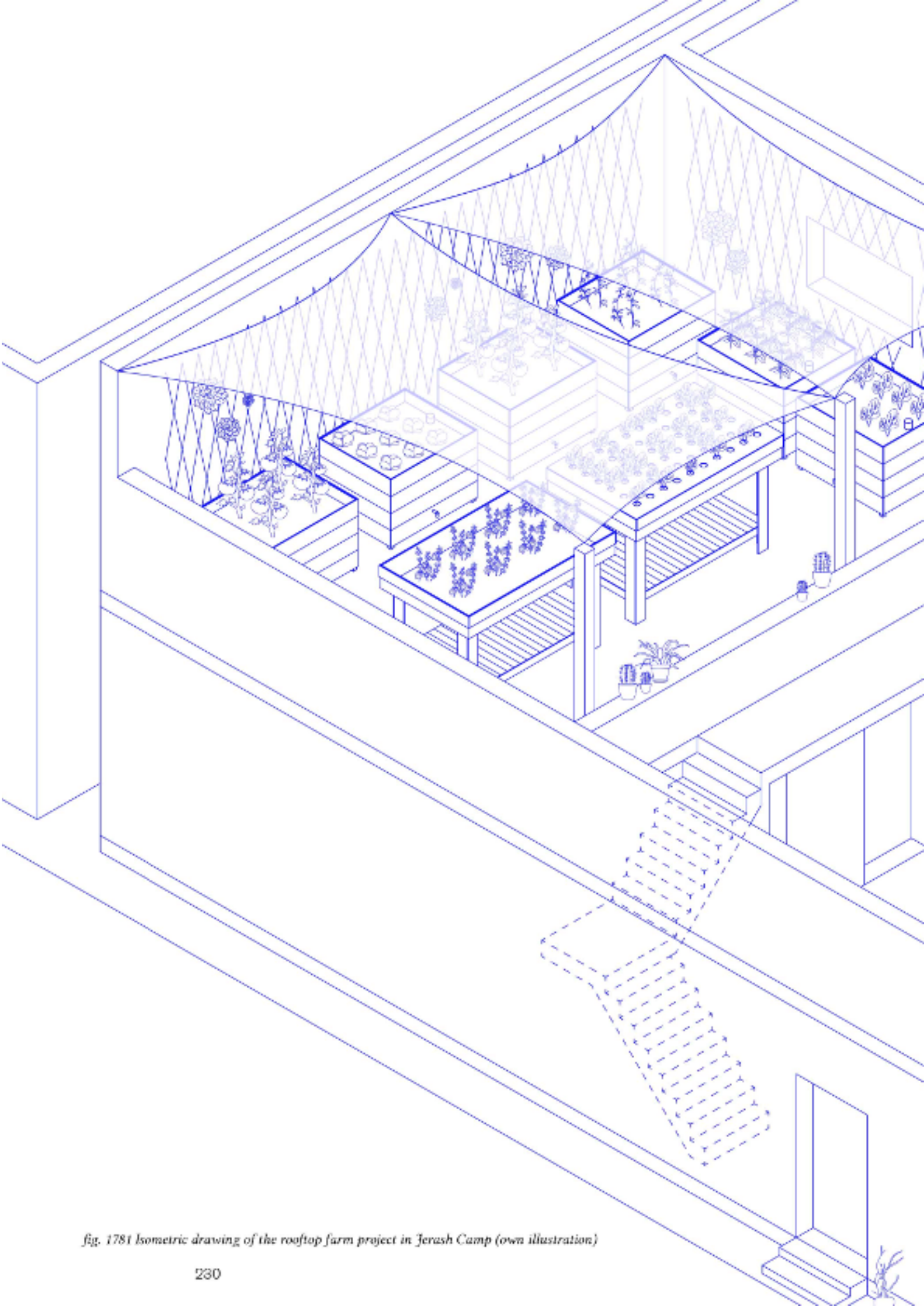
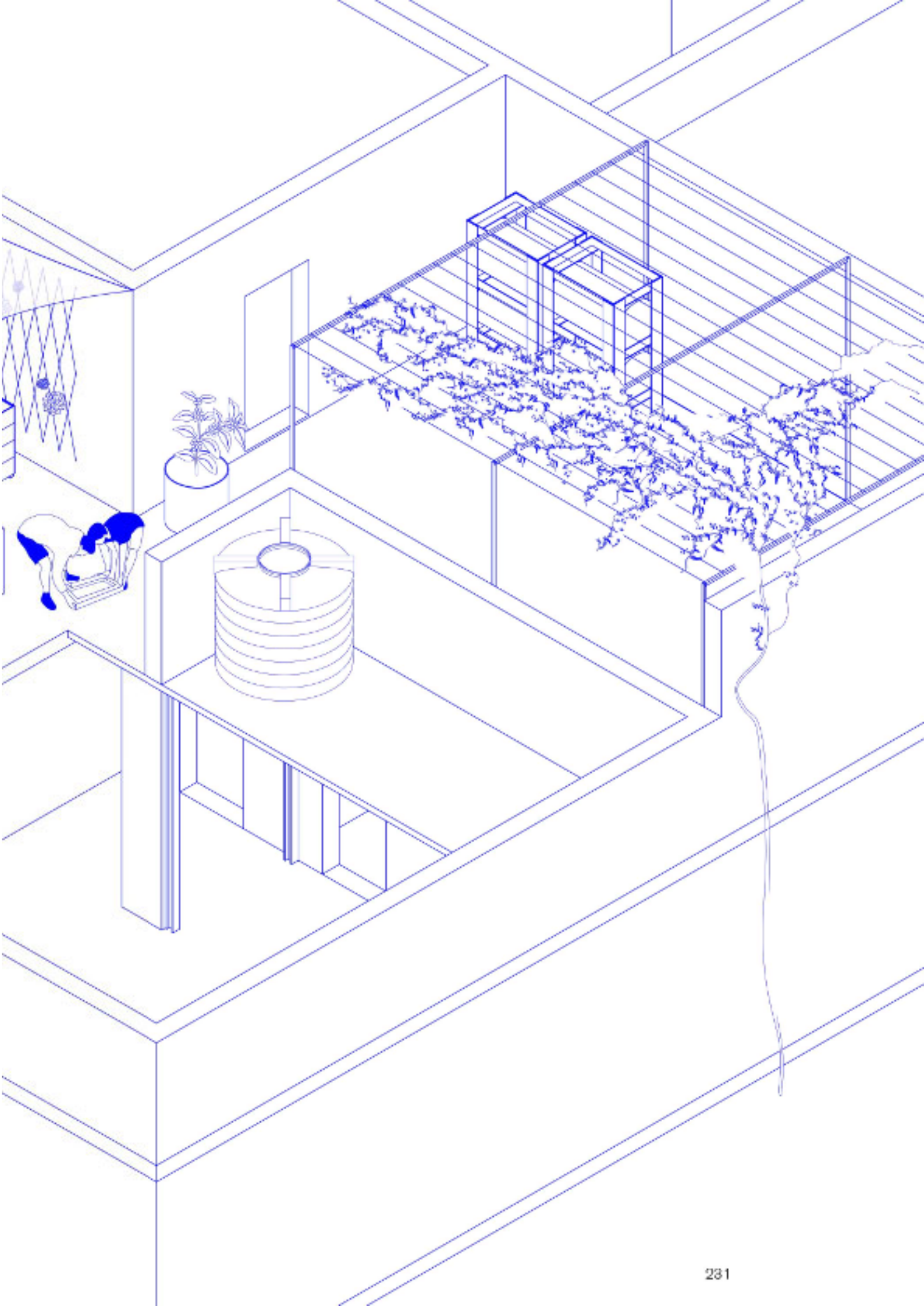


fig. 1781 Isometric drawing of the rooftop farm project in Jerash Camp (own illustration)



8.3 Juxtaposition of the case studies within the four dimensions

Action Space	Husn Camp	Fawwar Camp	Dheisheh Camp	Jerash Camp
technical/ behavioural dimension	<ul style="list-style-type: none"> enhances awareness for healthy food, subsistence economy & sustainable resource management (e.g. recycling, water reuse) structure improvement in the second phase 	<ul style="list-style-type: none"> integrates experimental, easy-care irrigation systems and different kinds of plant cultivation builds manual capacities for male & female youth understands & resolves technical misconceptions 	<ul style="list-style-type: none"> participants gain technical knowledge through weekly meetings enhances awareness for healthy food participants generate income with their produce 	<ul style="list-style-type: none"> advanced water saving and easy-care irrigation systems ecological and organic approach steady prototyping provides low-threshold craftsmen workshops
institutional/ interorganisational dimension	<ul style="list-style-type: none"> keeps up with new UNRWA guidelines (plan participatively and on eye-level) 	<ul style="list-style-type: none"> set up youth club as an independent institution with institutional responsibilities cooperation with other institutions, e.g. UNRWA schools (give classes) funders and participants on eye-level promote gender mixed activities 	<ul style="list-style-type: none"> promotes transparency in project evaluation and accounting, while criticising corruption, nepotism and aid agencies' agendas weekly evaluation and consultation creates responsibilities through binding contract work in different phases 	<ul style="list-style-type: none"> NGO works on site which facilitates decision-making processes steady evaluation applies phasing to slowly create a sense of ownership and detect real interest
social relations/ mobilisation dimension	<ul style="list-style-type: none"> supports CBOs in implementing their own ideas makes use of local capacities use a whatsapp group as communication platform enhances self-initiative enables exchange between different camps (Fawwar) 	<ul style="list-style-type: none"> enhances sense of responsibility for own project (e.g. via participation in building process) supports other urban farmers enhances youth participation and visibility in the camp enhances self-initiative enables exchange between different camps (Husn) 	<ul style="list-style-type: none"> offers regular activity and constant contact persons for women creates a network for women strengthens the role of women as income-generating family member ownership also after the contract term 	<ul style="list-style-type: none"> works with existing networks like local CBOs (One love)
strategic response dimension	<ul style="list-style-type: none"> embedded in a strategy, which goes beyond camp borders use YouTube as knowledge resource 	<ul style="list-style-type: none"> increases mobility of project participants through embedment into GIZ-project (visa and invitation) creates findings about (mixed) youth participation 	<ul style="list-style-type: none"> project increases independency from occupying power uses media for promoting the project reacts to current trends (e.g. organic food movement) business plan to become independent by 2020 embedded in a strategy beyond camp borders 	<ul style="list-style-type: none"> combine the establishment of new alternative educational institutions (vocational school) with rooftop farming practices create synergies with other upcoming initiatives

fig. 182: Juxtaposition of the case studies within the four dimensions (own illustration)

Limits & Boundaries	Husn Camp	Fawwar Camp	Dheisheh Camp	Jerash Camp
technical/behavioural dimension	<ul style="list-style-type: none"> many structures remain as unused ruins innovative ideas (e.g. aquaponic, hydroponic) are not yet supported low external impact limits imitation effect 	<ul style="list-style-type: none"> participants feel a lack of knowledge considered necessary for the project used materials (e.g. wood) are costly, which limits imitation effect 	<ul style="list-style-type: none"> lack of knowledge transfer: NGO constructs structure, which is why technical skills are not transferred 	<ul style="list-style-type: none"> used materials (e.g. wood) are costly, which limits imitation effect lack of knowledge transfer: NGO constructs structure, which is why technical skills are not transferred
institutional/interorganizational dimension	<ul style="list-style-type: none"> lack of sustainability due to short project phase misses follow-up strategies 	<ul style="list-style-type: none"> location on public roofs hinders free access already at early night time, which is why youth group lacks access to their space whenever they want 	<ul style="list-style-type: none"> high dependence on the overall success of the company 	<ul style="list-style-type: none"> male power structures limit the target group's access to project in the gender-mixed vocational school misses inter-organizational cooperations (e.g. with the DPA & UNRWA)
social relations/mobilisation dimension	<ul style="list-style-type: none"> projects on institutions remain private with low external impact access to project is mainly dependent on nepotistic (male-dominated) structures 	<ul style="list-style-type: none"> project idea was proposed from above 	<ul style="list-style-type: none"> barely space for own ideas or extensions 	<ul style="list-style-type: none"> practice of „service providing“ excludes community right from the beginning, which limits a sense of ownership
strategic response dimension	<ul style="list-style-type: none"> project remains isolated and lacks integration into a broader scope (e.g. CIP) wrong expectations concerning the project lead to early project drop-out by participants 			<ul style="list-style-type: none"> misses integration into larger strategic structures in the camp
target group	<ul style="list-style-type: none"> families, institutions 	<ul style="list-style-type: none"> youth 	<ul style="list-style-type: none"> women 	<ul style="list-style-type: none"> women

8.4 Critical reflection on the application of Safier's four-dimensional model of action space to the case studies

What were the advantages and disadvantages in applying Safier's four-dimensional model of action space to the investigated case studies?

By applying the model of *action space* by Safier to the case studies presented before, it was possible to approach each of them in a specific manner and to discuss their actual *action space* as well as their *limits and boundaries* within the four dimensions given. During the analysis of the case studies, a recurring occurrence of certain aspects across the investigated projects could be perceived (e.g. the low imitability of projects due to high initial costs). The assignment of these aspects to the four dimensions of Safier provides information about possible *limits and boundaries* and thus, opens up the possibility to develop recommendations for action within the four dimensions. In this respect, the interdimensional model of Safier was particularly helpful.

Similar to conventional and commonly used urban planning analysis tools, such as the SWOT analysis, the model reveals potentials and limits of the project. In contrast to it, however, it simultaneously embeds the project into four predefined strategic dimensions for a more precise evaluation. Furthermore, the selected dimensions are designed for practices, which aim to introduce social justice and *empowerment* and are therefore suitable for the investigated context (Safier, 2002, p. 128). A further advantage is that while four dimensions are given, they are rather indicative and can be easily adapted for the analysis of the respective project.

The applied model, however, shows limitations in the comparability of the four case studies, since the comparison of the resulting graphs hardly reveals any significant differences between the projects. The reduction of many aspects to the respective dimension and the resulting, sometimes inappropriate, equal weighting makes the evaluation of the projects almost look alike and lacks the representation of important points of the analysis. Therefore, a comparative evaluation of the different case studies through the application of the graph only provides little informative value. Furthermore, the missing differentiation within the four dimensions leads to a lack of concrete recommendations for actual project implementations.

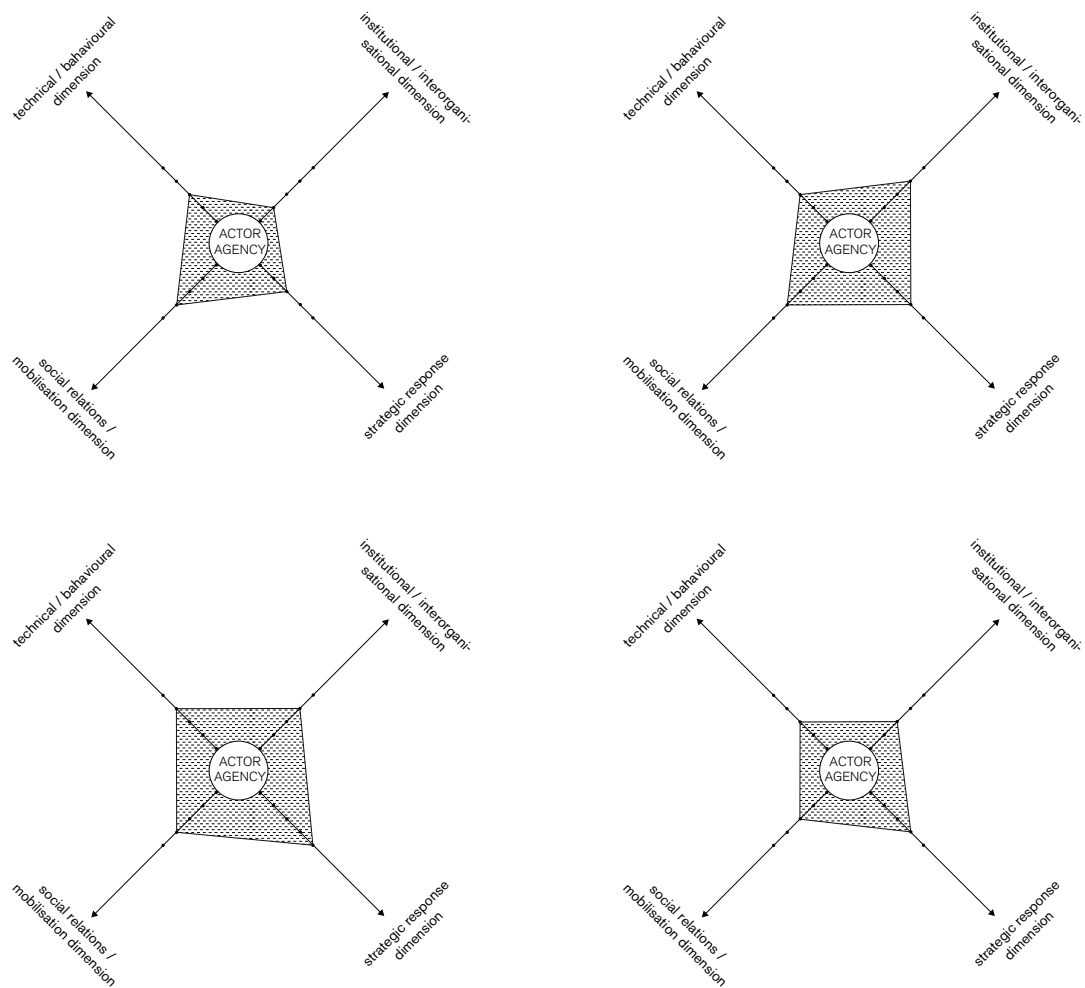


fig. 183 Application of Safier's four-dimensional model of action space to the investigated case studies (own illustration)

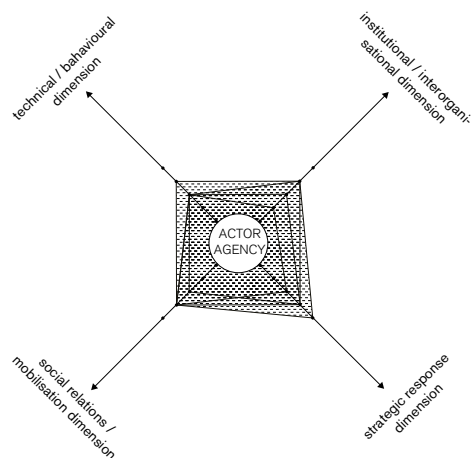


fig. 184: Overlay of the applications (own illustration)

Excursus: Get-together in Amman

The results presented in the last chapter (see chapter 8 Case studies) were produced during our field research in Jordan and served as an important intermediate status that we didn't intend to keep merely to ourselves.

Many of the people and projects we got to know during our investigation, had worked parallelly on the topic of rooftop farming practices in Palestinian refugee camps (which was also the name of the event we organized) but there were barely any points of interaction or exchange and therefore the projects themselves stayed rather isolated concerning relations beyond the individual camp borders. That and the desire to acknowledge the enormous help, hours of interviews and hospitality, gave us reason enough to organize a get-together where we would at least invite everyone who was involved in the rooftop farming projects we had visited in Jordan (due to difficulties or the sheer impossibility of border-crossing, contacts from the West Bank could not be invited). From the very beginning it was clear to us that the ambition to stimulate a network with one event was utopian. Nevertheless, in the context of an event, which was also conceived as a farewell and meant to express gratitude, we wanted to try out whether approaches for such networking could be fruitful after all.

As a location we chose the Amman-based cultural centre Jadal for Knowledge and Culture since it was best accessible for all. Furthermore, we felt the need to provide a neutral ground to avoid exclusionary effects caused by local power structures (see chapter 6.2 Power structures) and to provide a setting, in which an equal discussion would be possible. Also, we were aware, that if we would have met in one of the camps, the high commitment to hospitality by the camp inhabitants would create, even if unintended, a lot of work for the camp inhabitants hosting the event.

The get-together was divided into two parts: an internal part and a public part. Furthermore, the event was complemented by an exhibition which was set up in the courtyard of Jadal. The exhibition contained our visualised analysis of the four investigated case studies as well as a collection of photos taken by 10 camp inhabitants with disposable cameras, which we had distributed some weeks before. The camp inhabitants had slipped into the role of a photographer and thus the photos showed their individual perception of places associated with plants, greening, recreational qualities and places that they connected with the memory of Palestine.

Internal part – process, objectives and formats

For the internal part we deliberately did not invite any (potential) donors, as we feared that their presence could hinder people to openly speak about their problems and could possibly lead to a distorted representation of their projects. For this first part of the event, we invited rooftop farmers and camp inhabitants who shared a general interest in the topic. Our guests came from Husn Camp (10 persons), Talbiyeh Camp (5 persons) and Jerash Camp (1 person). Beyond that the NGO Greening the Camps (GTC), which operates in Jerash Camp, participated (3 persons).





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fig. 185 - 189: Impressions of the get-together in Amman (own photographs)

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Our main objective of the internal part was to share the knowledge and insights we had acquired during our stay and discuss about future possibilities of how to exchange the experience, knowledge and challenges the participants are commonly facing. Since we had heard from various people that there was an interest in creating and maintaining a network, we also assumed the meeting could offer a chance to initiate a series of get-togethers, and thus promote a network that could evolve after our departure.

We started with input lectures about our research results and the structure of the GTC project, whereas in the second part of the block there would be room for open discussions. The preceding input would serve to present different models and techniques, which can then be discussed in the large plenum. We had deliberately decided to conduct the discussion in Arabic and to refrain from direct moderation. This should ensure a fluent and open discussion between the various participants. Through whisper translation we were kept informed about the discussed contents in order to be able to intervene as moderator if necessary and to ask further questions. By reducing our moderation activities, we wanted to stimulate the exchange between the invited actors and to enable us to listen as silent observers. It should be tested whether an exchange within the group could also function without us as intermediaries. In case the discussion faltered, we had prepared a set of thematic proposals. As a third component, breaks and a joint lunch would provide space for informal discussions.

Internal part - resumé

The first get-together of the rooftop-farmers at Jadal has left a generally positive impression on us. People from different camps got to know each other, exchanged themselves on technical problems within the scope of rooftop farming and gained insights on the farm techniques, which GTC had implemented in the cultural centre. Moreover, it surprised us that also women were actively involved in the discussions. Almost everyone in the group, independently of gender and age, took the opportunity to speak up and participate in the discussion. Nevertheless, the male-dominated aura often undermined the female participation in the discussion. Another challenge we saw the get-together confronted with, was the urge for self-representation by the rooftop farmers themselves. Most of the invited persons were rather focused on presenting their own rooftop farms and merely looked at their own pictures in the exhibition, which hindered an exchange about problems on eye level between the camp inhabitants.

Regarding the appearance of the NGO GTC, we got the impression, that a few camp inhabitants considered them as part of the GIZ, and therefore projected wrong expectations in the meeting or might have even been hindered to speak openly about issues. It became clear once again that external agents such as the members of the present NGO, despite the opposing classification, are still perceived as potential donors, which makes an open discussion difficult.

With regard to the formats chosen, it can be said that although there was a lively discussion, it was hardly possible to follow it through the whisper translations due to the speed at which it took place, so that some parts of the discussion remained concealed from us. It also happened frequently that the discussion was interrupted to put us in the picture or because participants addressed us directly. This inevitably led to a fragmentation of the conversation. It also became clear that although we deliberately did not put ourselves at the centre of the discussion, a certain focus

and expectation was nevertheless projected onto us. Finally, the unanswered question remains as to how much of the participants' commitment was caused by the desire to fulfil our presumed expectations as hosts.

What we took for our further research regarding the content of the discussion, was the general interest in income-generating models (such as implemented by Karama in Dheisheh Camp). Furthermore, participants from Husn Camp valued GTC for being on site in their project in Jerash Camp, as they criticised the lack of expert input into their project in Husn Camp (only little technical support, not enough workshops). Very interesting for us was the lively debate about rooftop farming in publicly accessible spaces. We jointly talked about challenges that are faced when moving the farm from the private rooftop to a public or institutional space. Most of the participants saw vandalism as one of the major issues, even though positive examples such as the green house in the WPC in Husn Camp were also mentioned.

However, at the end of the internal part a number of open questions remained: Did the need for a network among rooftop farmers, which we assumed, turn out to be a misconception? A network could broaden the horizon and enhance the exchange of ideas and problems, but is there really an interest in creating one? After the get-together, only GTC approached us and asked for contact data from the participants, since they liked the idea of continuing to organise a row of future events. However, at the time of writing, three months later, no further meeting has taken place. Even if it remains a feeling, which is hard to prove, it seems as if the emergence of such a network requires more (also financial) incentives. Finally, the question remains to what extent our own presence, as external urban designers and architects, has created expectations for this meeting (e.g. possible funding), which ultimately remained unfulfilled. It should also be considered that even if the intrinsic interest in such a networking-event is not sufficient, participation can also be seen as part of a gesture of hospitality considered a necessity.

Public part - process and objectives

The idea of the second, public part, where we invited people via a public facebook event of Jadal, was to bring the idea of rooftop farming into a broader discourse. By organising guest lectures, the intention was to give an overview of current developments and different approaches within the scope of rooftop farming in Palestinian refugee camps, to outline their potentials and to show their relevance by embedding them into the context of climate change adaptation as well as introducing permaculture as a holistic agricultural approach.

In this part, we stepped back to the role of moderators and only introduced the guest lectures as well as the exhibition and guided the discussions. Firstly, the CBO manager from Husn Camp introduced his rooftop farming project and was followed by Elham A. Abaddi, permaculture expert and farmer, who was invited to show what urban agriculture can learn from permacultural approaches. The intention of the second input was also to give the camp inhabitants the opportunity to learn and discuss about new dynamics and trends in the (urban) agricultural sector. The lectures were held in Arabic with English translation to address the largest possible target group.

Public part – resumé

With approximately 40 participants, the public part turned out to be very popular. The visitors were mainly expatriates who were interested in the topic of rooftop farming and were especially curious about the practices we found inside Palestinian refugee camps as they are not yet publicly known. Very interesting concerning our research was that problems and challenges, which had been discussed in the private part, were barely mentioned by the project manager while his presentation of the rooftop farms in Husn Camp. The large number of international expats probably had a crucial influence on the just positive presentation of the project. The problem of hiding problems out of fear, but also due to strategic considerations vis-à-vis possible donors, became visible. It was also remarkable that not a single participant of the internal round remained until the end of the lectures. The early departure of our guests raises the question whether such formats and the context of an event mostly attended by expatriates are the right approach for an exchange on eye-level. Overall, it can be summarised that the guest lectures produced interesting insights and discussions but missed their goal to include the invited participants of the internal part.



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fig. 190 - 198: Further impressions of the get-together in Amman (own photographs)



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