

ECO NOIR

A COMPANION FOR PRECARIOUS TIMES



JACK FABER & ANNA SHRAER editors



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This book is dedicated to James, Monina and Mia Faber,
our closest friends and dearest companions.



Assaf Evron, French Colonies, Maroc, 1930 / 2014, Inkjet
print on rice paper with oak frame, 178x117 cm

MOHAMED SLEIMAN LABAT & PEKKA NISKANEN

Family Gardens An Emerging Discourse In The Sahrawi Community

For centuries, the Sahrawi have been pastoralist nomads living in Western Sahara.¹ The nomadic lifestyle they were leading was comprised of several traditions and rituals adapted to the surrounding desert environment.

Small scale family gardens started to emerge in the Sahrawi community in the Hamada Desert, southwest Algeria around 2002,² and they have been increasing in numbers ever since. Currently, there are over one thousand small scale gardens spread through the five Sahrawi refugee camps. Leading figures in the process are Sahrawi agricultural engineers and farmers who have been researching and developing the garden practices in this special

1 Wilson, "Ambiguities of Space and Control", 15; Volpato et al., *Ethnoveterinary of Sahrawi Pastoralists of Western Sahara*, 12.

2 Taleb Brahim, interviewed by Mohamed Sleiman Labat, 26.05.2020, Motif Art Studio Archive [Original File: Audio Segments 05.20/N°6].

location and context.³ This phenomenon is marking a shift in perspective in the Sahrawi community. It is redefining diet perception in the refugee camps, and takes part in the process of creating a new discourse and narrative for the Sahrawi.

The family gardens are emerging in a structured approach through training and workshops to provide and disseminate the knowledge needed for them to succeed.⁴ As we study the family gardens, food cultures and habits of the Sahrawi, one of the central parts seems to be an aim to have a self-sufficient way of living. Gardens and agricultural knowledge are starting to change people's perception about food production, which is essential for this community that has been dependent on international aid since their arrival to the refugee camps in Algeria in 1975.

SAHRAWI FAMILY GARDEN AS A DISCOURSE

Discourse is a manifold term that can be understood from several perspectives. One is based on Foucault's discursive theory and the concept of discursive formation. Discourse could be condensed to mean a certain way of speaking or describing the chosen object of knowledge. Foucault's archaeological method seeks to pinpoint the time and place when a certain discourse emerged and how that discourse became meaningful and powerful at a certain historical moment.⁵ In our research we name the Sahrawi family garden as a discourse.

The non-discursive area is part of the power and authority structure that formulates the discursive knowledge.⁶ In the *Archaeology of Knowledge*, Foucault names "institutions, political

events, economic practices and processes" to be non-discursive practices.⁷ The non-discursive is a practice of a certain discipline, and discourse is knowledge formation about a certain specific area, like gardening.⁸ That is to say, the gardening knowledge is a discourse that has a central role in the non-discursive practices of gardening. In our research, we will name the Sahrawi family garden practices as a central non-discursive practice. However, we don't make a hierarchical distinction between discursive and non-discursive while bringing up the Sahrawi knowledge production. The distinction between discursive and non-discursive is useful only to a certain extent as we view the knowledge and practices around the family gardens.

The archival materials, interviews and documentation of oral knowledge are part of the Sahrawi discourse. This includes the Sahrawi oral poems, the *Nomadic Calendar*,⁹ the stories, the recorded interviews and testimonies. There is little research on the family garden phenomenon in the Hamada Desert and documentation of such histories helps bring the subject to be researched and analyzed. Sleiman Labat has conducted interviews and collected different oral histories in the Sahrawi community through video and audio materials as part of Motif Art Studio's Archive. These interviews and other archives are our primary research material to view the phenomena and discourse from the perspective and position of the Sahrawi.¹⁰

3 Brahim, "Cultivating Hope for Western Sahara", 55-56.

4 Van Cotthem, "Family Gardens in the Sahara Desert of Algeria."

5 Moon, "Narrating Political Reconciliation", 48.

6 Bacci and Bonham, *Reclaiming Discursive Practices as an Analytic focus*, 182.

7 Foucault, *The Archaeology of Knowledge and the Discourse on Language*, 162.

8 Bacci and Bonham, *Reclaiming Discursive Practices as an Analytic focus*, 182.

9 The Sahrawi nomads had a special calendar in which the years are given names of events, plants, geographic referents or natural phenomena. The *Nomadic Calendar* preserves knowledge of history, geography, plants and natural phenomena.

10 Motif Art Studio is a space for art creation and art education in Samara Camp, southwest Algeria.

FROM NOMADIC TO SEDENTARIZED CAMPS – CHANGES IN THE SAHRAWI FOOD CULTURE

The Sahrawi, literally, people of the desert, are the indigenous nomadic pastoralists of Western Sahara. For centuries, they roamed the desert in different tribal groupings and clusters, raising camel herds and goats. They speak Hassaniya,¹¹ an oral dialect descending from Arabic and the Amazigh language.¹² In the Berlin Conference of 1884, Western Sahara became a Spanish Colony,¹³ and Spain ruled the area until 1975. After Spain relinquished control, Morocco and Mauritania seized the territory. In 1973, a liberation movement called the POLISARIO Front was established to resist the Spanish and later the Mauritanian and Moroccan occupation.¹⁴ The 16 year war, which took place between 1975 and 1991, caused the displacement of the majority of the Sahrawi and made them seek refuge in Algeria. There they started building camps from fabric tents and mud houses. As the camps grew larger with the increase in population, the Sahrawi refugees built hospitals, schools and other facilities.¹⁵ These geopolitical factors that led to the relocation

- 11 Hassaniya is spoken mainly in Western Sahara, Mauritania small parts of Morocco and Algeria and other neighboring countries.
- 12 Zbeir, *Réflexions sur le Dialecte Hassaniya*, 3.
- 13 Colonialism is a discourse and a western metanarrative that overlooked and foreshadowed the narratives in the colonized areas. A typical feature of colonialism is to take control over areas and natural resources that belong to the people living in that area. Colonialist power almost routinely changes the political, social and cultural system of the colonized territory. (Loomba, 2005, pp. 2, 6.) The West has destroyed during the course of history perspectives of others in the name of colonialism and unifying perspectives that are promoted as western rationality and progress.
- 14 Zunes and Mundy, *Western Sahara, War, Nationalism & Conflict Irresolution*, 99-101.
- 15 Leite et al., "The Western Sahara Conflict, The Role of Natural Resources in Decolonization", 13.

of a nomadic community into settled refugee camps highlights the process of sedentarization.

SAHRAWI NOMADIC DIET

As nomads, the Sahrawi had a pastoralist diet based on the limited food resources available in their environment. In pastoralist systems people depend heavily on herding animals and moving with them to different grazing areas. In the interviews,¹⁶ several people speak about diets based on meat from camels, goats and sheep. The Sahrawi also cultivated wheat and barley, exclusively during the rainy season and mainly around the areas where the valleys collect water. After harvest, the wheat was stored in *Matmura*¹⁷ for times of drought, when camels and goats cannot produce milk. Camels provided meat, milk and fat for food as well as for various medicinal uses, not to mention the transportation uses.¹⁸

In the oral Sahrawi poems, the testimonies and the Nomadic Calendar of Sahrawi, we can trace mentions of plants, farming seasons, greenery and draughts. We find many years in the Nomadic Calendar named after plants¹⁹ and seasonal farming:

- 16 Sulaiman Labat Abd, 15.07.2015; Mohamed Mbarek Said, interviewed by Mohamed Sleiman Labat 20.02.2019, Motif Art Studio Archive [Original File: Audio segments 07.15/N°01].
- 17 *Matmura* is a pit in the ground 2 or 3 meters deep, larger at the bottom, burned and then plastered with fine sand and straws. Harvested wheat can be preserved there for several months. (Mohamed Mbarek Said, interviewed by Mohamed Sleiman Labat 20.02.2019, Motif Art Studio Archive [Original File: Audio segments 07.15/N°08].)
- 18 Sahrawi Nomads navigate the desert geography through plant tastes in the camel milk. When camels digest wild plants, the plant substance is released in the milk with a certain distinct taste. To the nomads, this could indicate the location of the grazing areas. (Sulaiman Labat Abd, interviewed by Mohamed Sleiman Labat 15.07.2015 [Original File: Audio segments 10.14/N°01]).
- 19 In the rainy season, the nomads collect certain plants for medicinal uses, they

The Year of Yelma (1939) a local plant the animals eat. It was plenty that year.

The Year of Saba (1951) a prosperous year in which the nomads planted wheat. Each grain produced up to 12 wheat spikes, something that was unusual to them.

The Year of Tafsa (1958) a little plant that appeared all over the place in that year.²⁰

Harvesting wheat in the rainy season also comes up in the *Tishash* poem by Badi Mohamed Salem, a prominent Sahrawi nomadic poet.

*“Or in the watering season,
when the wheat is still to produce its seed,
I am there in the midst of the life of the camp,
doing some little thing about which you do not need to ask.”*²¹

In the recorded interviews, Fatimatu Said makes a distinction between the pastoralist diet she grew up with as a nomad in Western Sahara, and the new diet in the camps based on the emergency food aid. Said also attributes certain health issues to the shift

dry them and preserve them, some of these wild plants or their fruits are edible. The nomadic kids go out to collect them. They sing their names and how sweet they taste. The plants' names and their tastes rhyme in Hassaniya.

“Taydum is delicious in soup

Ashakan is sweet wherever you find it

And if you fill your stomach with Habrazza, it could blow up”

(Fatimatu Said, Interview 03.06.2020, Motif Art Studio [Original File: Audio segments 05.20/N° 4]).

20 The Nomadic Calendar, Narrated by Sayd Ramdan & documented by Sulaiman Labat Abd) Motif Art Studio Archive [Original File: Document N° 7, p. 3, 1993].

21 Berkson and Sulaiman, Settled Wanderers, the Poetry of Western Sahara, 93.

from the old diet to the new one. She said, “We didn’t know about certain health problems related to food when we were nomads, we didn’t know about stomachache, diabetes and blood pressure, we were healthy”.²² The Sahrawi dislocation to Algeria was paralleled by a dietary shift from the indigenous diet in Western Sahara to the new diet in the camps based on food from international aid.²³

Algeria has hosted the refugees coming from Western Sahara since 1975 and since their arrival in the refugee camps in Tindouf, southwest Algeria, the Sahrawi have been dependent on international aid. In 1986, the World Food Programme (WFP) began to assist Western Sahara refugees with basic food.²⁴ When the UN and other international aid organizations and agencies deliver food to the camps, the Sahrawi Red Croissant²⁵ then distributes the food on monthly rations between the families in the camps. WFP provides about 134,000 rations to meet the basic nutritional needs of food insecure refugees.²⁶ “The distributed monthly food baskets are calculated according to the minimum number of kilocalories required by the human body and mainly consist of dry foods such as cereals and legumes, sugar and oil”.²⁷ The Sahrawi refugees are

22 Fatimatu Said, interviewed by Mohamed Sleiman Labat, 03.06.2020, Motif Art Studio Archive [Original File: Audio segments 05.20/N° 4].

23 It is the norm in the Sahrawi community that the family members eat together at home, often sharing the meal in one dish. A few restaurants emerged in the camps recently where menus contain pizza, sandwiches and some ordinary dishes of lentils, beans and vegetable soup. For many, it’s somewhat a strange act to go to eat at a restaurant. Some young people who usually study in Algerian high schools stop by at the local restaurants for a sandwich or a pizza.

24 World Food Programme, “Food Security Assessment for Saharawi Refugees”, 8.

25 The Sahrawi Red Croissant is a Sahrawi NGO that is in charge of coordinating humanitarian aid in the Sahrawi refugee camps. It was founded in 1975 (Digital Source: Media Luna Roja Saharawi [MLRS]).

26 World Food Programme, “WFP Algeria, Country Brief April 2020.”

27 Brahim, “Cultivating Hope for Western Sahara”, 55.

dependent on food aid designed to deal with emergencies. Poor diet diversification has caused widespread acute malnutrition, stunting and anemia, especially among women and children. This is directly linked to consistent food patterns which are decreasing.²⁸ The reduction of monthly food rations has been of particular concern over the recent years, given its impact on the health of Sahrawi refugees.²⁹ A field study concluded that only one third of the refugees had adequate dietary diversity. The Sahrawi are probably at the risk of low dietary adequacy.³⁰ This leads to a great need in creating local possibilities to access fresh vegetables and food to solve such health problems. Family gardens is one way to do so.³¹

28 L'organizzazione di Africa'70. "I paesi: Algeria - Campi Profughi Sahrawi."

29 UNHCR, "The UN Refugee Agency. Operational Update, Algeria."

30 Morseth et al, "Dietary Diversity is Related to Socioeconomic Status Among Adult Sahrawi Refugees Living in Algeria", 7.

31 There have been several food art projects outside the refugee camps in Europe that have been based on the diet of the Sahrawi. Niskanen and Sleiman Labat had a Food Ethics Course in the Art School MAA, Helsinki during the autumn semester 2019. Sleiman Labat prepared a vegan couscous meal together with the art school students. A USA artist Robin Khan took part in dOCUMENTA(13) 2012 with her installation and community art project The Art of Sahrawi Cooking. Khan has described the Sahrawi tent she installed at Kassel park to be "a Sahrawi home-in-exile". Her project was based on a cookbook, Dining in Refugee Camps: The Art of Sahrawi Cooking, she had produced two years before dOCUMENTA(13). She had gathered the material for the book during her month-long trip to the Tindouf refugee camps in Algeria 2009. In an interview, A Woman's Place, Khan states that "They [Sahrawi] can't grow food and they have to rely on humanitarian aid for survival". (Digital Source: Bailey 2013. "A Woman's Place? Robin Kahn in conversation with Stephanie Bailey". Ibraaz. 004 / 29 March 2013) There was a limited number of family gardens in the Sahrawi refugee camps ten years ago. The Sahrawi TV has a cooking show Cooking With Dignity hosted by Haha Ahmed Kaid Salah since 2011. It has been aired in a weekly or monthly format usually following the evening news at 21:30. (Meyer-Seipp 2018. "Haha, Sahrawi refugee turned TV chef finds the recipe for success." World Food Programme Insight. Dec 19, 2018).

FAMILY GARDENS IN THE SAHRAWI REFUGEE CAMPS

The Sahrawi refugee camps are the outcome of the Moroccan occupation of Western Sahara and, subsequently, the dislocation of the Sahrawi people. The family garden discourse could be understood as part of this wider discourse, parallel to it or a consequence of it.

According to the United Nation High Commissioner for Refugees (INHCR),³² there are around 173,600 refugees currently in five camps, Awserd, Boujdour, Dakhla, Laayoun and Samara,³³ near the town of Tindouf, Algeria, approximately 2,000 km southwest of the capital Algiers. It is an isolated, arid region with periods of extreme heat, where the desert temperatures range from very low at night to extremely high in the daytime – the peak in the summer can reach up to 51 degrees Celsius.³⁴ The agro-ecological environment is harsh, water sources are scarce and heavily mineralized.

The family gardens are spread over the five main camps.³⁵ Water sources availability usually determines where the biggest number of gardens could be found. Two of the five camps, Dakhla and Laayoun have access to underground water through wells.³⁶ There are more family gardens in these two camps than in Samara, Awserd and

32 World Food Programme, "Food Security Assessment for Saharawi Refugees."

33 The Sahrawi named the refugee camps in Algeria after major cities, villages and places in Western Sahara to keep a cultural connection with their homeland.

34 SandShip Meteorological Station Archive, Climatic Data (2018), Auserd Camp, Algeria.

35 Taleb Brahim, interviewed by Mohamed Sleiman Labat, 28.05.2020, Motif Art Studio Archive [Original File: Audio Segments 05.20/N°6].

36 Rahmasary, "Water and Sanitation During Emergency", 5; OXFAM Briefing Paper, "40 Years of Exile", 11.



Boujdour, where underground water is hard to reach. These camps receive desalinated water through a distribution system by water truck delivery.³⁷

A family garden itself is usually a small scale piece of land designated to grow food by a family. The families are growing basic ordinary vegetables and herbs such as tomatoes, onions, carrots, coriander, mint, basil, etc. They speak about the importance of simply “growing our own food”.³⁸ The sizes of family gardens vary, and range from a couple of meters to over 10 meters. The gardens are not placed next to each other, they are located at every family’s compound. Each family chooses the location of their garden and builds a mud wall to determine the gardens’ borders and to protect it from sandstorms and goats. For example, families in Laiun and Dakhla may decide to set their gardens close to the wells where they could easily water the garden.³⁹ They receive material support⁴⁰ in the form of garden tools, water bladders, irrigation system, green houses, seeds as well as training and workshops by Taleb Brahim and his team of assistants. Brahim is the National Director of the Home Gardens Projects with the Sahrawi Ministry of Economic Development.⁴¹ His position, expertise and

knowledge enable him to research and develop the gardens in such an environment. He also acts as a consultant to the World Food Programme and other international NGOs in different agriculture practices.

The garden discourse draws from the ethnobiological knowledge of the Sahrawi⁴² in combination with some permaculture design methods. According to Bill Mollison, Permaculture is a sustainable methodology of working in harmony with nature. Permanent agriculture is to design and maintain agricultural activities while respecting other ecosystems, their diversity, stability and resilience.⁴³ As part of the gardening methods that Brahim follows, he combines permaculture methods with ethnobiological knowledge from the nomadic practices and knowledge of plants and their uses – He emphasizes the importance of traditional diverse agriculture. For instance, organic fertilizers are used instead of chemical fertilizers or pesticides,⁴⁴ and by integrating the livestock into the gardening system, Brahim can use compost from animal manure or bio liquid fertilizers prepared through a process of anaerobic fermentation

37 Taleb Brahim, interviewed by Mohamed Sleiman Labat, 26.05.2020, Motif Art Studio Archive [Original File: Audio Segments 05.20/N°6].

38 Yuguha Mohamed Mbarek, 17.04.2019, Motif Art Studio Archive [Original File: Audio Segments 05.20/ N° 7]; Mohamed Salem Mohamed Ali, both interviewed by Mohamed Sleiman Labat, 31.5.2020, Motif Art Studio Archive [Original Files: Audio Segments 03.19/N° 5].

39 Taleb Brahim, interviewed by Mohamed Sleiman Labat, 26.05.2020, Motif Art Studio Archive [Original File: Audio Segments 05.20/N°6].

40 Several NGOs have been funding and supporting the family, community and hydroponic gardens in the camps; WFP, OXFAM International, NFI, CERAI, ASE and SUKS.

41 The Sahrawi Ministry of Economic Development is part of SADR; the Sahrawi Arab Democratic Republic, a government in exile with institutions, ministries

and some diplomatic relations. It’s a member state of the African Union, but it’s not recognized in Europe or North America. The POLISARIO Front organizes and runs the affairs of the Sahrawi refugee camps in Tindouf. The UN recognizes it as the representative of the Sahrawi. The POLISARIO Front declared the SADR in Feb 1976. (Wilson, “Ambiguities of Space and Control”, 12; African Union, “Member States”).

42 Ethnobiology is the study of the biological knowledge of particular ethnic groups – cultural knowledge about plants and animals and their interrelationships.” (Anderson, “Ethnobiology: Overview of a Growing Field”, 1).

43 Mollison, *Permaculture: A Designers’ Manual*, ix.

44 Western Sahara has some of the world’s biggest phosphate reserves. Phosphate rocks from Western Sahara are used to make fertilizers for agricultural activities. It gets shipped to many places around the world without the consent of the Sahrawi. (Western Sahara Resource Watch Report, “P for Plunder: Morocco’s Exports of Phosphates from Occupied Western Sahara”, 9).

and other kitchen waste ingredients as well as some Sahrawi folk medicines as pesticides.⁴⁵

The gardening practice does not seem to aim at any exoticification of the phenomenon. It simply refers to how locally created gardens can help provide food for immediate family consumption. The process, however, is allowing more interaction with the plants on a daily basis. As we look into the discourse and phenomena of family gardens and how it marks a shift in practice among the Sahrawi, the whole experience seems to narrow the distance between the Sahrawi and plants by growing their own food, allowing a connection and a dialogue between people and plants. The Sahrawi are experiencing new relations with plants as they interact with vegetables and herbs in the gardens. Sometimes the plants are placed inside the house. Such is the case of Yauguiha Mohamed⁴⁶ who integrates the garden with her house compound as she desires to have some plants for aesthetics. The placement of plants inside the house is allowing them to co-inhabit the space. The decision of where to place plants in regard to where people live highlights intimate habitat overlap between plants and people. The family gardens offer a poetic experience to the Sahrawi who have a long tradition of oral poems. Poetry is an important part of their everyday life.⁴⁷

In the new Sahrawi garden discourse, there seem to be different levels of discursive and non-discursive practices – rational as well as poetic. Some practitioners of the family gardens in the interviews express their connection with the garden on a practical

level. Some highlight the knowledge they accumulate throughout their practice and strongly express the importance of the intended results such as obtaining food, accessing healthy diet and achieving self-sufficiency. While others talk about poetics in the gardening practice. They bring up the desire for different colors, smells and tastes. The Hamada desert, where the Sahrawi live, is a very harsh, hot and dry environment, with no vegetation. Therefore, there are very few stimulating colors. The desire to experience multisensory pleasure in the garden has been mentioned by some gardeners, but the majority simply stress the importance of growing their own food.

In the beginning of the phenomenon, Taleb Brahim has developed theoretical knowledge and practices to maintain the gardens. The theories and practices developed by Brahim and other farming practitioners have become rule-based knowledge in the Sahrawi gardening community. The Sahrawi family garden discourse has had meaningful input from the non-discursive practices of the participants. Together with the theoretical knowledge, they form the core of the Sahrawi family garden discourse. The challenging geographic, climatic and cultural context created some obstacles to the family garden experience. Brahim speaks about the concrete obstacles like water shortage, high temperatures, sandstorms, lack of fertile soil and the difficult task of convincing a population of a nomadic background to farm.⁴⁸

45 Taleb Brahim, interviewed by Mohamed Sleiman Labat, 26.05.2020, Motif Art Studio Archive [Original File: Audio Segments 05.20/N°6].

46 Yuguiha Mohamed Mbarek, interviewed by Mohamed Sleiman Labat, 17.04.2019 Motif Art Studio Archive [Original File: Video & Audio Segments 03.19/N° 5].

47 Awah, "Oral Literature and Transmission in the Sahara", 60.

48 Brahim, "Cultivating Hope for Western Sahara", 55-56; Taleb Brahim, interviewed by Mohamed Sleiman Labat, 26.05.2020, Motif Art Studio Archive [Original File: Audio Segments 05.20/N°6].

HYDROPONIC AGRICULTURE

Hydroponic agriculture has been introduced to the camps very recently. In 2017, Brahim started his own initial experimental hydroponic system to test the possibility of producing green fodder in the camps to feed goats and sheep.⁴⁹ Hydroponic agriculture is a soil free farming system that is designed with a structure of several floors on top of each other. The containers of wheat green fodders are riddled with holes to allow water to drip from one floor to the other and collect in the bottom. Hydroponic systems are integrated in some family garden locations so that the water that goes through the different fodder floors and gathers in the bottom can also water other vegetables planted in the soil. This method helps maximize the use of water as the hydroponic model uses 90% less water than non-hydroponic agriculture. The small-scale hydroponic systems provide 15 kg of green fodder a day to feed the animals.⁵⁰ The initial hydroponic model provided by WFP was a high-tech unit that costs USD \$40,000 but Brahim researched and devised a locally made low-tech model at the cost of only USD \$250.⁵¹

Normally, goats and sheep in the camps eat only leftovers, cardboard or trash and the idea was to provide them with nutritious food to help them produce more milk. Hydroponic gardens are an example of how practices guided by thought and action produce and shape knowledge and direct our perception and observation of the world in a particular way.

49 Porges, "Environmental challenges and local strategies in Western Sahara.", 9.

50 World Food Programme, "How to Grow Green Deep in the Sahara Desert."

51 Taleb Brahim, interviewed by Mohamed Sleiman Labat, 26.05.2020, Motif Art Studio Archive [Original File: Audio Segments 05.20/N°6].

A SHADE HOUSE IN THE BACK OF A LAND ROVER

The knowledge and practices evolving around the family gardens help develop a protected/controlled agriculture practice. This includes creating methods to protect the plants from different natural elements such as strong sunlight and desert temperatures that can harm certain plants. Garden practitioners have resorted to various methods to provide this protection. They use structures from common cane, fabrics, mesh nets, and trees as wind breakers. Shade houses can be found in some hot areas.⁵² Mohamed Salem Mohamed Aly is a 19-year-old gardener in Samara Camp and together with his father, Mohamed Aly Mohamed who is a mechanic they use the back of an old Land Rover as a shade house in the summer to protect coriander from the sun.⁵³ At some point during the summer when the heat becomes extreme, the coriander can't survive even in the Land Rover shade house. When the car is not used for coriander, Mohamed Salem uses it to protect chicken. Creating shade houses in the garden is part of the non-discursive practices that help develop the knowledge of responding to the natural elements. Understanding the different factors effecting the process helps improve response, namely, providing protection from the sun and sandstorms.

The family gardens, hydroponic gardens and the shade houses are not the only types of agricultural activities taking place in the Sahrawi refugee camps. Since the 1980s, there have been community gardens in every camp. They helped produce vegetables for the community although they faced certain challenges. Nowadays, there are also communal gardens in some institutions and ministries.

52 Peter, Basics of Horticulture, 231.

53 Mohamed Salem Mohamed Ali, interviewed by Mohamed Sleiman Labat, 31.5.2020, Motif Art Studio Archive. [Original File: Audio Segments] [05.20/ N° 7].

At the beginning of the planting season, people working in such institutions go out to the field and work the the land. The food produced in such gardens is intended for the consumption of the institution workers.⁵⁴

Ploughing the land and preparing the soil, setting the irrigation systems, planting the seeds, building protective walls against the wind and goats, creating protective shades and harvesting are all activities that have developed over the years to enhance the gardening practice in the camps. Families often resort to discarded materials and reuse scraps of wood, metal and fabric for construction. Such non-discursive practices come up in the discussions between the families in some formal and informal sessions of interaction. In Brahim and his assistants' workshops participants share knowledge and tips of how they respond to certain challenges, participants tell about their personal solutions, others may replicate the solutions, adapt them, modify them and improve them.

CONCLUSIONS

In the discourse of the Sahrawi family gardens, the Sahrawi desert knowledge and western gardening knowledge meet and fuse into a new discourse that could be named as the local Hamada desert Sahrawi gardening discourse. The sedentarization process of the Sahrawi highlights the societal, political and environmental transition the Sahrawi went through from a nomadic community into settled/sedentary refugee camps. The way of life in the Sahrawi refugee camps is a result of diverse cultural, economic and political forces that reshaped the Sahrawi pastoralist nomads into settled refugees. This way of life has been going on for 47 years. The Sahrawi have

54 L'organizzazione di Africa'70, "Orti agro-ecologici comunitari nelle tendopoli Sahrawi."

lost much of their material and immaterial traditions⁵⁵ throughout the process of becoming refugees. The new phase of their existence in the new context requires acquiring a novel set of skills and habits to adapt to their situation. The family gardens are helping the Sahrawi establish relationships with plants and food. They are making their own interpretations of plants and food especially with regard to food sovereignty and self-sufficiency. The practice and discourse of family gardening is helping develop new knowledge and solutions fit to the context of the refugee camps.

The family gardens in Hamada desert started to emerge when poor diet adequacy and malnutrition intensified among the Sahrawi who live as refugees in a limited piece of barren land. The family gardens helped respond to these health issues caused by the poor diet based on the international aid. The Sahrawi discourse of place, nature and time is strongly related to the desert knowledge as opposed to the new culture that stresses the diverse institutions and their role in the development of the diasporic culture in the camps. The new phenomenon of family gardens is introducing such changes as self-sufficient food production, dietary change and contact with plants. They are improving the life and food quality of the Sahrawi refugees and consequently, their health. The emerging agricultural knowledge and permaculture practices will continue to spread in the camps. The family garden discourse will build a new narrative of food culture and perception in the Sahrawi community.

Accumulation of knowledge and experimentation around this discourse will give birth to stronger non-discursive practices in the

55 Material traditions refer to the objects, plants and landscapes and artifacts from materials native to Western Sahara that the Sahrawi cannot have access to because of the dislocation, immaterial traditions lost in the process of displacement refer to the oral histories, narrations and the desert wisdom that was lost through it all.

form of locally devised solutions and inventions customized to suit the environment. The family gardens will become more feasible with the development of such solutions.

Niskanen and Sleiman Labat work in a three year PhosFATE research group funded by Kone Foundation. They created a small-scale garden at a host family in Helsinki where they experiment with growing different vegetables in parallel to the family gardens in the Hamada desert. The artists are using the garden as a meeting point to experience small scale food production practices. The experience is a lab used to study certain aspects of the practice and to develop some solutions regarding the two different environments and how plants adapt to them. They practice and discuss the use of organic methods that avoids the usage of processed fertilizers from phosphate and/or other chemicals. The artists experiment with new and old low-tech methodologies of watering and water preservation. The practice is part of a discussion with some of the gardeners in the camps. The discussions about different aspects of the practice deepen the research and open new questions and ways to relate to plants. The artists received funding for their project from the following institutions: Kone Foundation, Saastamoinen Foundation, Perpetium Mobile.

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PhosFATE -research group

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Mia Seppälä, De-painted Barnacle Geese, 2019, Off-painting (digital photograph printed on canvas, water, brush), 30x40 cm

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