

Nasser, K.D. 2024. Spring-based irrigation in Battir, Palestine:  
A locus of social agency in the face of hydro-hegemony.  
Water Alternatives 17(1): 20-45



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## Spring-Based Irrigation in Battir, Palestine: A Locus of Social Agency in the Face of Hydro-Hegemony

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**ABSTRACT:** This article discusses the agricultural use of springs as a socio-ecological and everyday matter in the context of structural colonial control over water. It examines how Israel's strategies interfere with the local politics around water. It also investigates how rural communities collectively deploy agency through implementing traditional spring-based irrigation as a 'common' system, and also through ecotourism as a way of building solidarity. As a case study, the article focuses on the village of Battir, which is located on the western edge of the West Bank highlands. The paper utilises ethnographic and qualitative tools for data collection. From an interdisciplinary perspective, the study tries to bridge the theoretical and empirical approaches of water research. It brings insights from political ecology into conversation with social theories of practice. Its aim is to analyse how people exert agency and navigate their actions while immersed in a struggle to define their lives according to their needs. The analysis takes place in the context of the settler colonial condition. The article underlines the role of local practices in water resource management as a counter-hegemonic act in the face of colonial expansion and hydro-hegemony and as a bottom-up approach to enhancing local development, bringing stability to the social field, and strengthening resilience.

**KEYWORDS:** Hydro-hegemony, irrigation commons, agency, *somoud*, settler colonialism, Palestinian highlands, springs, Palestine

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### INTRODUCTION

In the analysis of water's role in global environmental problems, two main ideologies dominate: the neo-Malthusian thinking that considers overpopulation and the resulting competition over resources to be major factors in environmental problems, and the neoliberal perspective that links environmental problems to economic and technical factors (Selby, 2009). Both perspectives focus mainly on technical water management while excluding the roles of politics and power relations. Scholars critical of this technical approach emphasise the importance of political and social factors in ecological studies (see, for instance, Mollinga, 2008). They discuss the development of the "political sociology of water resource management" and identify five domains of water politics investigation; these domains are: everyday politics, politics of state policy, hydropolitics, global water politics, with the fifth domain being the interlinkages among these (ibid). This study focuses mainly on investigating and linking the first and third domains, that is, everyday politics and hydropolitics.

In the Palestinian context, the complexity of the water situation is mainly a result of settler colonial power and its occupational matrix of control. The 1948 Nakba (Catastrophe) affected all aspects of Palestinians' lives including their access to water, and in the course of the 1967 occupation, they lost control over most surface and groundwater (Feitelson and Rosenthal, 2012). The situation has been aggravated by the confiscation of land, the establishment of settlements, the demolishing of water infrastructure, and discriminatory policies for water distribution and pricing that favour settlers to the detriment of Palestinians (Gasteyer et al., 2012).

There is considerable literature on hydro-politics in this context. Far less writing focuses on the social dimensions, however many researchers have documented the local engagement of Palestinian individuals and communities in everyday acts of struggle and their efforts to circumvent obstacles imposed by the coloniser (see, for example, Hammami, 2010; Bourbeau and Ryan, 2017; Giacaman, 2019). Indeed, the focus on everyday practices around water has only recently begun to grow (Trottier, 1999; Wessels, 2015; De Donato, 2018; McKee, 2021; Violante, 2022).

Land, water and human labour are the main inputs of any sustainable agricultural system, all of which are targeted by the colonial system. Agriculture is of central importance because of its economic value as a major productive sector and because of its cultural value as part of the historical Palestinian narrative that valorises connectivity to land. In rural areas of the West Bank, small-scale agriculture is both rainfed and irrigated. Irrigation depends mainly on groundwater obtained from tubewells or naturally flowing springs. This study focuses on local springs as an important aspect of the rural irrigation 'commons'. This issue is of particular importance in the context of increased settler targeting of springs which, according to a 2012 statement by the United Nations Office for the Coordination of Humanitarian Affairs, remain the "single largest water source for irrigation" (UN OCHA, 2012: 1). In a survey carried out on 56 springs with regular documented settler violations,<sup>1</sup> it was found that 30 springs had been fully taken over by settlers and a further 26 were at risk of being taken over (UN OCHA, 2012).

This study is part of a dissertation that investigates the local use of water for domestic and agricultural purposes and the dimensions of water-related social agency in the context of colonial hydro-hegemony. It examines the interference of Israel's strategies with the local politics around water and investigates how rural communities deploy collective agency through strategic actualisation of traditional spring-based irrigation as a common system, and also through ecotourism and solidarity. The study uses an interdisciplinary approach, bringing insights from political ecology into conversation with social theories of practice. Using this perspective, it analyses the interplay between hegemonic colonial power and the community's counter-hegemonic agency. The boundaries between social and political fields are fluid and overlapping; I therefore look at this issue from a relational perspective, which may reveal additional dimensions. Methodologically, I focus on the village of Battir as a case study using ethnographic and qualitative research methods.

The article begins with a critical engagement with the literature, which is followed by theoretical framing and methodology. The second part of the paper is empirical and begins with an analysis of the main spatial transformations that occurred in Battir during the 1900s. The subsequent sections discuss the impact of hydro-hegemonic strategies on Battir and then investigate social agency through springwater management and ecotourism.

## LITERATURE REVIEW

This section on hydropolitics provides the necessary background to pave the way for entering into the details of the villager's daily life experiences. Two major water discourses can be distinguished. The first dominant discourse puts both Palestinians and Israelis on an equal level as victims of ecological challenges that lead to natural water scarcity; it argues that Israel solves ecological problems by developing advanced technology and good governance (Kartin, 2001; Kafle and Bruins, 2009; Siegel, 2015). The second is a counter-hegemonic discourse that considers water shortage to be a result of unbalanced power relations between Palestinians and Israelis but does not neglect other factors. This second discourse shows that the colonial agenda of domination is hidden by a technical approach that focuses narrowly on water and does not frame the discussion within its broader political history and human rights. It further asserts that the donor community plays a role in reinforcing the technical

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<sup>1</sup> The sample includes only springs targeted by settlers and excludes those restricted by the Israeli authority's measures (UN OCHA oPt, 2012).

discourse by accepting the natural water scarcity 'myth' (Rouyer, 1997; Isaac, 2000; Selby, 2003b; Zeitoun, 2008; Feitelson and Rosenthal, 2012; Messerschmid, 2014; Wessels, 2015; Dajani, 2017; Alatout, 2020).

In this study, I do not want to deny the existence of ecological problems or downplay the importance of technology in preserving water resource sustainability; however, the scientific knowledge that presents the limited availability of water as a mere natural or technical problem masks the political facts within which the problem arose. After all, knowledge generated through colonial discourse is not neutral; it is, rather, "research through imperial eyes", as put by Linda Tuhiwai Smith (1999: 56). Such knowledge, in the end, manifests an ideological choice that is defined, justified and maintained by power. This situation provides an example of what Wolfe (2006) describes as reinforcement of the settler colonial reality through institutional structures, ideologies, discourses and practices. It also illustrates what Popperl (2018) calls "geologies of erasure", by which he refers to what is rendered invisible in the hydro-geological knowledge that accompanies settler colonial projects.

### **Political origin of water problems in the Palestinian context**

Using technical water discourses to mask the colonial reality is an early strategy that was used even before the 1917 Balfour Declaration. During the British Mandate (pre-1948), Zionists realised the importance of water to their dream of building a Jewish state in Palestine. They used a water-abundance discourse to argue that the amount of water available was enough for Jewish immigrants (Zeitoun, 2008). Water specialists played a key role in the production of this discourse (Alatout, 2020) and, along with discourses of land emptiness, oppression of Jews in Europe, and Biblical narratives, it was used to justify massive immigration (Shafir, 2017). Hydrological assessments were then used as one of the bases that determined the pattern of the first settlements and the partition plan in 1947, which led to the establishment of the state of Israel in 1948 (Gasteyer et al., 2012).

Between 1948 and 1967, immigration increased and agriculture expanded, and the water-abundance discourse was shifted to one of water scarcity (Gasteyer et al., 2012). Efforts began to be directed at establishing hydrological systems and infrastructure; these included the drawing up of Israel's Water Law and the establishment of the Water Commission and of Mekorot (the national water company). Alatout (2020: 2) described this process as, "Zionist infrastructures of elimination, infrastructures that erase indigenous natives and make the possibility of indigenous regeneration very difficult, if not impossible".

The 1967 occupation of the West Bank and Gaza is a particularly crucial period that is described by Shafir (2017) as a continuation of settler colonisation. Water scarcity was presented as a national security matter. As such, a set of military orders<sup>2</sup> was issued that guaranteed Israel control over most resources, facilitated the establishment of settlements in water-rich areas, and prohibited Palestinians from using water without permission (Gasteyer et al., 2012). During the 1970s, the "wise management" discourse prevailed, as discussed in the previous section (Feitelson and Rosenthal, 2012).

Following the 1995 signing of the Oslo II Accord, the Palestinian Water Authority (PWA) was established as a centralised system for water management in Palestinian areas. The Joint Water Committee (JWC) was also formed as an official structure that included Palestinians and Israelis who were jointly responsible for cooperation and approval of water projects. Given the powerlessness of the PWA, the fragmented nature of the system, and the PWA's dependence on Israel and on donors (Selby, 2013), this bureaucratic system added yet another layer of indirect Israeli control over water. Power asymmetry in the JWC led to discriminatory water policies and the rejection of most Palestinian projects. Selby (2003b: 133) argues that cooperation in this context is a "misnomer"; it is "domination dressed up as cooperation". Zeitoun (2008) argues that under the Oslo Accord, military control over water was replaced by "hydro-hegemony". Messerschmid (2012: 430) describes the situation as, "Israel's system of exclusive

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<sup>2</sup> For information about the military orders, see Al-Haq (2013).

control and strict separation of standards for the two populations – in other words, a system of jointly operated hydro-apartheid".

The origin of water problems in the Palestinian areas is thus not so much environmental; rather, it is first and foremost political and is a result of the cumulative effects of colonial strategies, occupational military orders, and the Oslo II Accord which sustained the situation.

### **Major consequences of hydro-hegemony on the lives of people**

Rouyer (1997: 61) argues that, "the crucial political problem is not scarcity but inequity". It is in the social field that we can see the consequences of inequity on the lives of "multiply marginalized" (McKee, 2021) Palestinian communities. This section provides an overview of the major consequences<sup>3</sup> summed up in three categories: access, affordability and quality (Messerschmid, 2009).

In terms of accessibility, disparity in domestic water use becomes evident if we look at the average water use per capita. Recent figures of B'Tselem (2023) show that the Israeli individual (including settlers) uses 240 litres/day while the Palestinian individual uses 82.4 litres/day, and in areas not connected to water networks it is 26 litres/day. This situation forces Palestinian municipalities to use rotation schedules to compensate for water shortages and forces people to further reduce their already limited water use. As for affordability, limited access to water forces many people to purchase water from tankers, creating what Selby (2009: 8) calls a "black market in water". Tanker water costs approximately five times more than water from networks (OCHA, 2020). Concerning quality, intermittent water supplies and reliance on tankers affect water quality due to emptying and refilling, which may result in physical, chemical or biological contamination (Alazzeh et al., 2019). More serious is the effect of sewage flow from settlements into Palestinian areas, which leads to water and crop contamination (Hallowell et al., 2017).

Water disparities and restrictions also deeply affect agriculture as it is the most water-consuming activity. Israeli authorities offer water subsidies to settlers for irrigation and allow them to use groundwater in the West Bank at the expense of Palestinian farmers. At the same time, they force Palestinian farmers to pay the same price for water used for irrigation as for drinking, which is often unaffordable (Hallowell et al., 2017). They also prevent local authorities from drilling wells and they destroy any water infrastructure that farmers use without permission; getting such permission is difficult, especially in Area C which constitutes 60% of the West Bank (Messerschmid, 2014).

Hydro-hegemony – of which 'hydro-apartheid' is one element – causes many Palestinians to experience limited choices and severe pressure in meeting their water needs; in this context, human agency may be mistakenly perceived to be absent. Social research reveals that many forms of agency exist among the oppressed despite the structural obstacles they face. The water literature documents several examples of anti-colonial actions such as water theft, and actions oriented against national authorities such as the refusal to pay for water. Such practices are employed as part of calls for justice and water rights (see Cheshin et al., 1999; Trottier, 1999; Selby, 2003a; McKee, 2021). De Donato (2018: 369, 377), in her investigation of water use in Wadi Fukin, states that,

Through these technologies of domination, Israel seeks to atomise the Palestinian society, to alienate Palestinians between each other, separating them and creating disempowered and subordinated colonial individual subjects (...). Palestinians resist the atomisation of the society entailed by global, colonial, and national power strategies by recomposing and reinventing their socio-ecological worlds through water.

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<sup>3</sup> Specific regional impacts of occupation are regularly documented by international and local organisations such as Amnesty International, B'tselem, ARIJ, and Al-Haq.

## THEORETICAL FRAMEWORK

In the sociological literature, the conceptual distinction between power structures and human agency has been a central debate. Structure constitutes a complex set of forces that affect people's choices and actions either by constraining or enabling them, while agency refers to the power of people or their ability to make choices and translate them into actions (Giddens, 1993). Although structure and agency may appear as separate concepts, their internal logic is better understood as a relational one by which each can influence the other (Emirbayer and Mische, 1998).

Based on this understanding, settler colonialism as a structure is embedded in all aspects of the daily life of the colonised (Wolfe, 2006); hydro-hegemony – with its regional variations – constitutes one example of this embeddedness. The literature reveals, however, that the "culture of resistance" is also embedded within Palestinian society (Selby, 2003a); it emphasises further that communities are not homogeneous, but rather may have "divergent visions" (McKee, 2021). The issue of water is multidimensional. It interlinks politics, social issues and ecological questions and problems. As such, hydropolitical and hydrosocial analyses are unified into a single conceptual construct through a theoretical framing that incorporates concepts from across these disciplines.

### Structural control over water in the settler colonial context

According to Zeitoun (2008), hydro-hegemony is guaranteed through three dimensions of power: 1) hard 'coercive power' such as military orders and destruction of infrastructure; 2) softer 'bargaining power' that is practised through agreements and official structures (such as the Joint Water Committee); and 3) 'ideational power' which is practised through the propagation of ideological discourses. I argue that biopower and the inseparable relationship between land and water can also be considered as components of hydro-hegemony.

To conceptualise these dimensions, I take as a starting point two short stories. The first took place during the 1948 Nakba, when Zionists attacked Palestinian villages and those who survived were expelled and forced to walk in the scorching summer heat without water or food. Many died of thirst, not from natural scarcity but because they were purposefully prevented from accessing water (Khouri, 2018). Survivors carried forward the memories of loss and pain. Among them was the Palestinian artist Ismail Shammout, who became a refugee while his brother died of thirst. His 1950s painting "Thirst" (Figure 1) powerfully documents this experience.

Figure 1. "Thirst", a painting by Ismail Shammout (1930-2006).



Source: Khouri (2018).

The second story occurred 73 years later, in 2021, when a Palestinian water technician from the village of Beita was killed by Israeli soldiers while he was trying to unlock the water valve at the entrance of his village. Water supplies had been reduced as a form of collective punishment, with the aim of disciplining the villagers for protesting a new settlement (IMEMC, 2021). Here, restricted access to water – the most vital biophysical resource – represents a 'biopower' in the Foucauldian sense. Foucault discusses different ways in which biopower is used as a disciplinary tool or "to make live and let die" (Foucault, 1997: 239), like "indirect murder". He goes on to say that,

When I say "killing", I obviously do not mean simply murder as such, but also every form of indirect murder: the fact of exposing someone to death, increasing the risk of death for some people, or, quite simply, political death, expulsion, rejection, and so on (Foucault, 1997: 256).

From the perspective of political ecology, the two stories echo Swyngedouw's (2009: 58) argument that, "[t]rue scarcity does not reside in the physical absence of water in most cases but in the lack of monetary resources and political and economic clout. Poverty and governance that marginalizes make people die of thirst, not absence of water". It is on the basis of these conceptions that biopower can be conceived as one of the hydro-hegemonic powers. Creating unbearable living conditions, restricting livelihoods, and water dependency are examples of using water as biopower.

Water is also closely connected with land, the acquisition of which is the ultimate goal of settler colonialism. In that context, hydro-hegemony cannot be well understood in isolation from land. The land – water nexus could be conceptualised as a dialectal one while the seizure of land allows the colonial power to access and appropriate water as a land-based resource, this appropriation deepens control over land mainly through agricultural intensification, which was perceived by early Zionists as a key activity for establishing ties between settlers and land. As it was put by the former Israeli Prime Minister, the late Moshe Sharett:

Water for Israel is not a luxury (...). Water is life itself (...). Without large irrigation works, we will not reach high production levels (...). And without irrigation, we will not create agriculture worthy of the name (...). [W]ithout agriculture – and especially a developed progressive agriculture – we will not be a nation rooted in its land, sure of its survival, stable in its character, controlling all opportunities of production with material and spiritual resources (Lowi, 1993: 107, 108).

This land-water grabbing is mediated by the colonial modernisation discourse; in that narrative, local communities are portrayed as backward and ignorant of land while 'modern' settlers are able to 'make the desert bloom' (Gasteyer et al., 2012). Edward Said (1978) uses the concept of "imaginative geography" to refer to the processes of creating new narratives and inventing new landscapes to support colonial claims. The colonialist imaginary of empty land is reinforced by the erasure of indigenous history and collective memory (which Pappé (2006) called "memoricide") and by the invention of a new collective identity for the settler community, one that overlays the ecological landscape with new narratives. One example is the process of "de-Arabisation" (ibid) by which thousands of sites – including rivers and springs – were given Hebrew names (see Arraf, 2004).

### **Counter-hegemonic collective agency at the community level**

Water as a social matter lies at the heart of water as a political matter. Given the political colonised – coloniser nature of water, people's actions are not mainly a question of technical management; they are also a question of social agency and everyday resilience and resistance. Bourbeau and Ryan (2017) perceive resilience and resistance as assisting each other rather than being binary processes. In the water literature, Selby (2003a) considers resilience and steadfastness (*somoud*) to be forms of resistance that entail flexible action which does not imply confrontation with power but, rather, is a way of expressing refusal by circumventing it, as we shall see in the case study.

Social theories of practice focus on the empirical study of human action. According to Bourdieu (1986), society is composed of coexisting fields as sites of struggle between agents and structures. In these fields, people's everyday practices are embedded in past knowledge and experience, or what he calls "habitus". Habitus is made up of different types of capital (social, cultural, economic and symbolic) that people accumulate and use either to comply with, or assume control within, their social fields. Bourdieu thus views people as social agents who depend on their habitus and capital for their agency, which in turn determine their position in any field. While Bourdieu conceives agency as largely unconscious and mostly constrained by the power of structures, De Certeau and Scott put the power of people at the centre of their analysis. De Certeau's (1984: xix) conception of everyday life is based on the interplay between "strategies" as hegemonic structures and "tactics" as the ordinary practices of subordinates; tactics, here, interfere with strategies like "a Brownian movement into the system". Relatedly, Scott (1985) studies how oppressed peasants challenge dominant powers using tactics of resistance, or what he terms "weapons of the weak".

In line with these conceptions, there are spatial and temporal dimensions of social experience. Space mediates the relationship between structure and agency. Lefebvre (1991) differentiates between "physical space" and "social space". He classifies the latter into three types: 1) "perceived space" produced in the daily practices of individuals; 2) "conceived space" produced by power structures and ideologies; and 3) "lived space", which refers to people's symbolisation of space according to historical relations with it. While conceived space is produced by hegemonic powers, perceived and lived spaces are counter-hegemonic. The temporal dimension is presented in the work of Emirbayer and Mische (1998) who draw upon several social thinkers to develop a relational conception of agency. They disaggregate agency into three elements that are embedded in the flow of time: 1) iterational (past-oriented), that is, selective reactivation of past experiences by actors in their routine activities; 2) projective (future-oriented), which is the imagination of possible actions by which actors can face future challenges; and 3) practical-evaluative (present-oriented), that is, the reflective ability of actors to adjust their actions in response to present contingencies. These dimensions may occur simultaneously in varying degrees, though one or another may dominate (Emirbayer and Mische, 1998).

To face hydro-hegemony, I argue, villagers employ actions that vary in type and scale according to personal and contextual factors. The analysis of the internal dynamics of these practices is inspired by Bourdieu (field, habitus and the different types of capital of which it is composed), De Certeau (the daily interplay between strategies and tactics), Lefebvre (physical and social space, the latter being composed of perceived, conceived and lived space), and Emirbayer and Mische (iterational and practical agency).

### **Hydrosocial processes at the community level**

Compared to the approaches that separate nature from society, hydrosocial analysis links environmental and social processes through the flow of water (Swyngedouw, 2009). As Domínguez-Guzmán et al. (2023) argue, bringing water research closer to people's actual practices constitutes a source of knowledge that effectively supports groundwater sustainability. In this study, hydrosocial analysis is based on five conceptions/arguments. First, the relationship between villagers and springs is inseparable from their relationship with land which has been threatened by long periods of "colonisation of everyday life" (Kipfer et al., 2008: 294). Second, rural livelihoods can be positively impacted by frameworks for water sharing that are guided and regulated by 'common' systems of socially set obligations (Shiva, 2002). Third, conceiving of water as a 'flow' rather than an 'immobile stock' allows for a more thorough understanding of its various interactions (Trottier, 2018). Fourth, 'interdependent relationships' between people and nature create a sense of identity that is associated with the environment and a sense of responsibility for it (Whyte, 2022). Fifth and finally, the cultural value of water and of traditional ecological knowledge is reflected in spatial practices (Bakker, 2007). As Escobar (1999: 3) argues, "much of what ecologists refer to as natural is indeed also a product of culture".

## METHODOLOGY

The study focuses on the village of Battir as a case study. It is located on the western edge of the Palestinian highlands, exactly where the Green (Armistice) Line cuts through (Figure 2). Its location is geopolitically strategic as it is 7 kilometres southwest of Jerusalem and 6.4 kilometres northwest of Bethlehem (ARIJ, 2010a). Battir has certain socio-ecological particularities which are discussed later; however, it is representative of a number of villages – particularly those located on the western frontiers – that are facing complex realities under occupation. The concept of 'frontiers' is not used here to refer to borders or peripheral areas; rather, it refers to sites where there is obvious intensive colonial expansion and where 'social fields' demonstrate the local agency of the colonised.

Figure 2. Location of Battir.



Source: Desclaux-Salachas (2019).

Alexander (1982) suggests integrating theoretical approaches with empirical studies of the material reality of everyday life to better capture the complexities of social problems. The relevance of this approach stems mainly from what he calls "unpredictability", by which he means that agency in any society is largely unpredictable. Echoing Alexander, I used ethnographic fieldwork as my primary research method. I combined it with a critical engagement with theoretical literature produced by academic, international and local organisations.

The ethnographic investigation was carried out in 2021/2022. I engaged in participant observation while accompanying villagers to springs and surrounding spaces. I used purposive and snowball sampling to perform 15 open narrative interviews and two focus group discussions with community members, farmers and local activists. Through these interviews, I gathered information about people's experiences, daily practices, water supplies, struggles, and colonial violations. I also performed two open interviews in the municipality with the mayor and with a water technician in order to gain insight from the perspective of a local authority. To add another type of insight to the data, I conducted semi-structured interviews with four Palestinian specialists in the field of water.

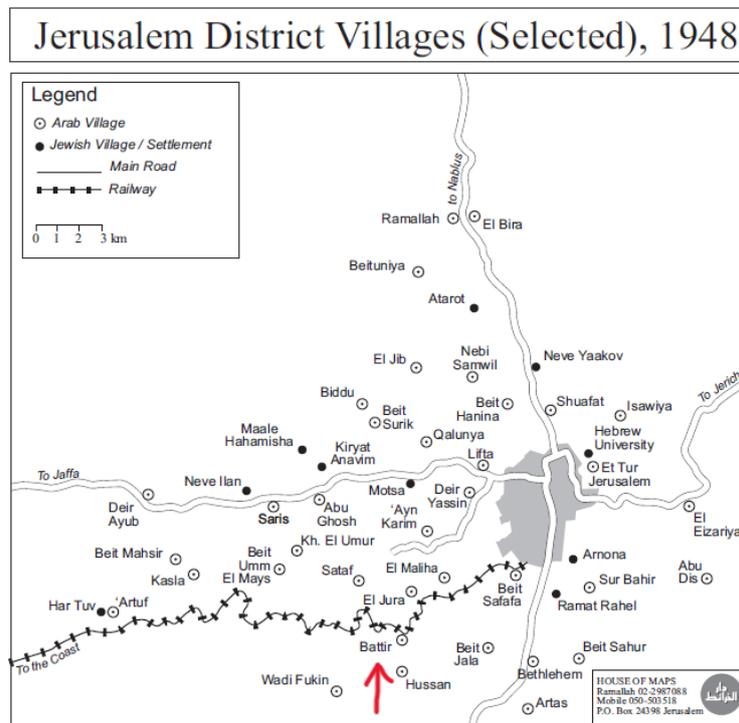
My engagement in this study is aimed at producing situated context-specific knowledge (Haraway, 1988). As a Palestinian researcher who shares the experience of living under occupation, I could access the community, establish trust, and get people involved, all without social or language barriers. Finally, I want to highlight that this article puts limited emphasis on gender and class; these warrant special attention and are addressed in my full dissertation.

**THE CASE STUDY: BATTIR IN TIME AND SPACE**

Having established the general background of the water situation in occupied Palestine, the following sections focus exclusively on Battir. On arrival at the village, one’s eye is struck by the beauty of the horizon and of the green valley below. On both sides of the village’s main road, almost every house is surrounded by dense orchards. Moving down the hill, one sees green cultivated terraces cascading like stairs and hears birdsong that harmonises with the sound of the springwater that floods the terraces. From the first moment of entering the village, it is clear that water gives life to this place and that its inhabitants live in dynamic interaction with nature’s living and non-living elements.

Historically, people established communities near water sources and Battir is an old village that was developed around springs. It is known for its cultural and ecological history, which dates back to the Roman era (MoTA, 2013). Its land area is 6795 dunums (678.5 hectares) with a further 533 dunums (53.3 hectares) isolated behind the Green Line (Al-Dabbagh, 1991). Most of the land is arable and the inhabited area constitutes 11.9% of the total (Nasrallah et al., 2020). The population is 4646, of which 76% are refugees, although Battir is not a refugee camp (PCBS, 2019).

Figure 3. Bani Hasan villages.



Source: Tamari (2002).

### Spatial restructuring and encirclement of Battir

Since 1948, colonial spatial transformations have deeply affected Battir and have influenced the socio-economic situation and the accessibility of land and water. During Ottoman rule, Battir was one of nine villages sharing origin and social relations called *Bani Hasan* villages. They were under the Jerusalem Central Governorate and included *Al-Walajah, Al-Malḥa, Battir, Al-Joura-Ṣataf-khirbet al-lawz, Sharafat, Lifta, and Beit Ṣafafa*. Battir was also the first of five halt stations of the Ottoman Jaffa – Jerusalem railway that was opened in 1892, the other four stations being Al-Lyd, Al-Ramla, Sajd and Deir Aban (Al-Dabbagh, 1991).

Battir has a sub-humid climate, rich soil and abundant springs (MoTA, 2013). Its geographic and hydrological characteristics encouraged agricultural productivity while its geopolitical characteristics and proximity to Jerusalem allowed agricultural trade with the city and its surrounding area. Moreover, the train station offered the village a trade hub and the train provided a mode of transport to markets in Jerusalem (Kuntz, 2015). Battir was a flourishing farming area known as the vegetable garden/basket of Jerusalem. The characteristics that brought prosperity to these villages, however, also gained the attention of the colonisers who wanted to eliminate the inhabitants and gain exclusive control over Jerusalem and its surroundings. During the 1948 Nakba these villages were attacked, the objectives according to Tamari (2002: 75) being:

- (1) To clear Jerusalem – Jaffa Highway for the free movement of Jewish forces, and (2) to clear Arab villages on the western flanks of Jerusalem from their Palestinian population to provide demographic depth and linkages between the proposed Jewish state and the city of Jerusalem.

Another factor related to the hydrological characteristics of the area should be noted here. As discussed, from the very beginning of the colonial project water was linked to land acquisition. Battir was one of the villages that faced the risk of 'ethnic cleansing' as described by Pappé (2006). Many villagers were threatened and many were forced to move to refugee camps (which accounts for the refugee status of some villagers). However, most of the refugees were able to return after a temporary absence, as the village was defended by a group led by the local leader Hasan Muṣṭafa (Kuntz, 2015). After the 1949 Rhodes Agreement, Battir's land was divided by the Green Line (Abu Sitta, 2010).

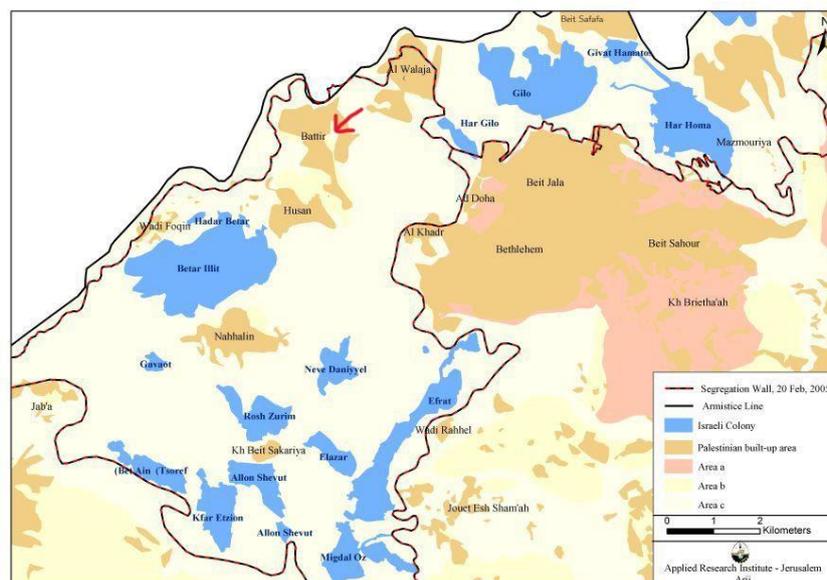
Although Battir was saved from falling under Israeli control, this was the first episode in the spatial restructuring process. Battir, from then on, was on the frontier between the West Bank and the land occupied in 1948; it was cut off socially and economically from neighbouring villages, which had been taken over by Israel. The train came to belong to Israel. It continued to pass by Battir but the villagers were prohibited from using it and the station was closed. With these transformations, began the separation of Battir from Jerusalem. The land behind the Green Line came under Israeli municipal control but the villagers were given access to it in exchange for ensuring the safety of the railway. The rest of the land came under Jordanian control and remained so until 1967.

The second episode occurred after the 1967 occupation, which was characterised by an expansion of colonial infrastructure and settlements, particularly on hilltops (Handel, 2009). According to Baumgarten (2006), the Israeli scholar and civil-rights activist Israel Shahak was the first to point out that a central factor in establishing settlements was to gain control over water that descends from the mountain ridges where it separates, either east or west. In Shahak's words, "Whoever controls water reserves in the West Bank can very simply cause the Israeli coast to dry up" Baumgarten (2006: 301). From this point on, Battir began to turn to Bethlehem instead of Jerusalem.

The third major episode followed the 1995 signing of the Oslo II Accord. This agreement divided the occupied land into areas A, B and C,<sup>4</sup> with 76.3% of Battir land being classified as Area C while 23.7% fell into Area B (Figure 6) (ARIJ, 2010a). This zoning further fragmented Battir since most agricultural land and springs came under the control of the Israeli permit system which constitutes one of the main tools of the colonial matrix of domination (Shafir, 2017).

The fourth period was in 2002 with the announcement of the plan to build a separation wall. Military orders<sup>5</sup> were issued to confiscate several pieces of land for the wall construction which threatens groundwater resources (ARIJ, 2010b). Anti-wall activities led to a temporary suspension of the plan. Battir is currently flanked by the settlements of Har Gilo to the north and Beitar Illit and Kfar Etzion to the south (Figure 4); these settlements continue to expand on the land surrounding Jerusalem (Hasson, 2022).

Figure-4. Encirclement of Battir.



Source: ARIJ (n.d.).

Settler colonial strategies thus may shift or vary over time to fit the different political periods, but the ideological objectives remain constant. The fragmentation of space that affects water use and livelihoods is illustrated in the following section. It is not unique to Battir; rather, Battir constitutes one example of the different ways by which the colonial "conceived space" is produced.

### Hydro-hegemony in Battir

Historically, Battir had 13 springs; of these, 8 remain active today. They are fed by groundwater from the western aquifer, which is the largest and most prolific basin (Messerschmid, 2014). Battir is mountainous with an average elevation of 761 m above sea level and a Mediterranean climate that affords a mean annual rainfall of 653 mm (ARIJ, 2010a). It is a subhumid climate zone that serves as a catchment area for Mediterranean precipitation; rain feeds groundwater with a high recharge coefficient of 30 to 50%

<sup>4</sup> According to the Oslo II Accord, the occupied land was divided into Area A under the full control of the Palestinian Authority, Area B under the civil control of the Palestinian Authority and the security control of Israel, and Area C under the civil and military control of Israel (United Nations, 1995).

<sup>5</sup> Orders number 31/04/T in 2004, 86/05/T in 2005, and 69-06 in 2007 (ARIJ, 2010b).

(Messerschmid, 2014). Underground and surface water flow in a westward direction, crossing the Green Line (Figure 5). Due to these hydrogeologic conditions, Israel disallows the construction of wells or reservoirs that may tap or store springwater for use in the village. Limiting Palestinian use of water resources ensures the continued natural flow of water to Israel (Selby, 2013).

Figure 5. Direction of groundwater flow.



Source: Fanack Water (2023).

Hasan Mu'ammam from Battir, in an 18 July 2022 interview, describes the local water situation:

With all these springs in our land, the only storage reservoir is the ancient Roman pool. When it gets full, water floods over the terraces and runs down the valley. It fills the aquifers that Israelis collect, pump, and sell back to us. This is one of our major problems in managing water. Since springs are located in area C, we need Israeli permissions to build reservoirs to store water which are very hard to get. We tried many times to find ways to benefit from our water and use it efficiently, but we failed. We do not use springs in winter as we depend on rainfall, and in summer we only use part of spring outflow. This means that 80-90 percent of it is lost from our side and used by Israel. We have enough water to supply Battir and the surrounding villages, but we lack control.

The water that is 'lost' from the village side flows down the valley to recharge groundwater there, thus constituting a gain on the other side of the Green Line. The annual discharge from the main springs is around 202,760 m<sup>3</sup> (ARIJ, 2010b). The village relies on one ancient pool for collecting springwater in the irrigation system because the construction of reservoirs is disallowed. The volume of water that Battir is unable to collect and use efficiently due to infrastructural restrictions may seem negligible at the macro level; indeed, it is only a minute portion of Israel's total water extraction. That volume of water, however, is of considerable importance at the micro level and its loss directly undermines livelihoods and constrains agricultural expansion. This clearly illustrates the role of water as a biopower. The water that is lost could instead be collected in reservoirs to provide an abundant and more sustainable water supply for the common irrigation system.

In the 1980s, Israel implemented development activities in the occupied areas. During this period, the Battir water network was established and was supplied with water purchased from Mekorot, the national water company. Development was driven by a colonial 'modernisation' mindset which, as Barnard and Muamer (2016: 63) argue, came as a "form of social engineering, pacification, and image management

for the colonial powers". It did not include any infrastructural development of springs as a possible resource that could be used, nor did it include a sewage network to protect underground water from contamination.

Villagers still remember soldiers shooting at rooftop water tanks and causing leaks, and the long curfews during the first Intifada (which erupted in 1987) when water became a critical issue. With the supply from the water network cut off during this emergency, only water from household wells remained accessible, but the quantities were insufficient. Springs thus became the primary source of water despite the presence of the water network, and women risked their lives collecting it during curfews. This is another clear illustration of biopower. As stated in interviews on 4 October 2021 and 26 July 2022 with two Battir villagers named Majdi and Kamal,

We have passed periods when we did not have a drop of water to wash our hands or faces. During the first Intifada, people ran out of water because of long curfews and sometimes due to water cutoffs as a form of collective punishment. As soon as the curfew is suspended for a few hours, the whole village runs to 'ein Al-balad to collect water for their daily use.

The occupying power that 'legalises' illegal settlements is the same one that disallows and destroys the instalment of essential water infrastructure by Palestinians for being 'illegal'. As argued by Braveman (2021), this illustrates the settler colonial power's use of criminalisation as a technology of elimination. Given the inseparable relationship between land and water, the water reality in Battir is threatened by settlement expansion. In 2020, Beitar Illit settlement announced plans for constructing an industrial zone and, in 2023, Har Gilo settlement announced the initial approval of its expansion. These plans mean confiscation of more land and exploitation of more groundwater and, as EcoPeace specialists reveal, carrying them out would damage the hydrological systems of the mountain aquifer that feed springs (AP, 2023). Although some plans have been temporarily suspended due to the efforts of environmental organisations (including Israeli ones), others may still be granted approval. Villagers also face frequent settler violations such as the establishment of agricultural outposts on villagers' land, the use by settlers of their cisterns, and the damaging of their terraces (PeaceNow, 2022).

Hydro-hegemony that directly constrains efficient use of springs thus also affects local water; it fragments and encloses space, puts the community in a state of time suspension, and gives rise to uncertainty, all of which is aimed at breaking the ties between people and land. As Violante (2022) argues, "theft of water" was not only material or spatial; it also disrupted social practices and transformed water from its social and environmental context into an object of investment in the colonial capitalist system. Moreover, military control was mainly over wells, not local springs (De Donato, 2018), however this control is increasingly being expanded, primarily by settlers. As Messerschmid (2014: 56) states "Military Orders No. 92 and 158 refer to (and expand control over) all water". Springs are thus also put at risk of appropriation. Compared to the direct military control that was exercised in 1967, hydro-hegemonic and spatial strategies for depriving Battir of water are slower and less visible; the process is also less overt than it is in other places such as the Jordan Valley, where military targeting of water resources is more visible, more intensive and much blunter, and has more immediate destructive effects.

In addition to colonial strategies, intra-Palestinian politics also play a role in threatening the sustainability of local irrigation systems. Trottier and Perrier (2018) show that the Palestinian Authority, in cooperation with donors and local investors, promotes a "scientific discourse on efficient water use" as part of its neoliberal strategy to drive development on "pioneer fronts". Such interventions lead to a deep reconfiguration of farmers' interactions with land and water. As argued by Trottier and Perrier (2018: 293, 308) they,

(...) contribute to the dispossession of ancient water users and to the destruction of long established water tenure systems (...). The interstitial agricultural frontiers (...) are necessarily transient phenomena. Either they will complete the dispossession and destruction of the surrounding modes of land and water tenure, or the social fabric of Palestinian society will successfully resist.

Within this framework of multiple hydro-hegemonic strategies, social agency in preserving local water is an act of "resilient resistance" (Ryan, 2015). In what follows, the main focus is on the everyday agency of Palestinians in Battir facing these strategies.

### SOCIAL ORGANISATION OF SPRINGWATER IN BATTIR

"Wein? 'ala al-'ein" is a common saying in Battir, meaning "Where? To the spring" (from an interview with Hasan on 20 July 2022). In other words, anyone who is asked where to go or where to meet will reply, "At 'ein al-balad". This saying reflects the centrality and symbolism of the spring as a public space with meaning and social functions, as well as its significance as a water resource. The villagers consider 'ein al-balad to be the most important feature of Battir.

The hilly terrain of Battir descends from the northern hilltops towards the south. 'Ein al-balad is located near the middle of this terrain at the heart of the old village (Figure 6). Looking at the village (Figure 7), it can be noticed that houses are clustered on the hilltop while the area from the middle of the slope to the valley has a green cover and almost no houses. This pattern of settlement is related to historical factors and to people's need for protection; however, it is also functionally linked to the location of the 'ein al-balad, which acts like a virtual line between the inhabited areas and the irrigated terraces.

Figure 6. 'Ein al-balad.



### 'Ein al-balad and agriculture on the hills

The agricultural use of water from the spring is reflected primarily in terracing and irrigation. Terracing is the process of converting steep hillsides into flat areas that are suitable for agriculture; they are surrounded by stone walls called *sanasel*. Battir's terraces reduce water runoff and prevent soil erosion. They are what give the landscape its characteristic appearance and they also serve as the boundaries of land ownership. Due to land fragmentation by inheritance, the area is characterised primarily by smallholdings.<sup>6</sup>

<sup>6</sup> This issue is partially solved through the exchange of lands or through social organisation within families. A particular family member, for example, may take on the responsibility of farming the land on behalf of others (Trottier, 1999).

Figure 7. Terraces.



Source: Battir municipality (2018).

Terraces can be classified according to irrigation methods:

1. Downstream terraces: locally called *al-jenan* (paradise), they are used for irrigated agriculture. They are divided into smaller plots of land called *maṣateb* which are planted with vegetables (mainly the Battiri eggplant), fruits and aromatic herbs. The proximity of these terraces to inhabited areas is important for farmers because water-dependent crops require intensive care.
2. Upstream terraces: locally called *al-karrm* (farms), they are used for rainfed farming because their upstream location does not allow for irrigation by springwater. They are divided into smaller plots called *ḥabalat* and are planted with olives, grapevines and figs, which do not require regular care (MoTA, 2013).

Irrigation depends on water flow from springs. Developed in Roman times, this system has been preserved in its traditional form until the present. The main irrigation system is associated with 'ein al-balad and is shared between all the families of Battir. Other springs – such as 'ein jam'a – are associated with irrigation systems that are shared between the members of one *ḥamoleh* (large family), as the right to use springwater for irrigation is obtained through land ownership. When land is inherited, sold or rented, an associated share of springwater is specified. The use of springwater for drinking or domestic needs, however, is open to all through a special outlet which is locally called *sabeel* (open source).

The irrigation system can be classified into two elements. The first element is the physical infrastructure which consists of the spring, a central canal that connects the spring to the Roman pool where water is collected, and a web of open canals that connect the pool with the terraces. Springwater runs through the central canal to the pool, where it forms a *serdab al-'ein*, or waterfall (Figure 8). The strength of the waterfall is a sign of how good the rainy season has been and how well the groundwater has been replenished. The second element is the social distribution system or *al-ma'dood* (the counted system), which refers to the portioning out of water. It operates at two levels, the first being the distribution of water among Battir's eight big families (each of which has the right to collect and use springwater for one day in eight), while the second level of distribution is what takes place within each family on its assigned day.

Figure 8. Waterfall from serdab al-'ein.



Source: Desclaux-Salachas (2019).

During the night, water is left to flow from the 'ein al-balad into the pool. In the morning, a family representative measures the level of water in the pool using al-ma'dood (a wooden stick from which the system took its name). He uses thorns to mark the level of water and then to mark water portions for his family members. These portions are blocks of time and not water amounts. The time between sunrise and sunset is divided into units according to the area of land each owns. Thus, time units are measured by days in the first level of distribution and by hours in the second. The duration of each unit depends on the number of family members, while the quantity of water in each unit depends on the amount of water collected in the pool overnight, which in turn depends on spring outflow. When it is his turn, a farmer opens the junction at the bottom of the pool to allow water to flow into the network of open canals called *mashakib* that reach all terraces. The farmer directs water by blocking and unblocking the junctions of these canals using soil or any handy material. At sunset, a representative of another family closes the pool outlet to allow water collection for the following day.

Figure 9. A farmer uses al-ma'dood to explain water measurement.



Source: Photo by the author.

## **Social agency, resilience and steadfastness (somoud) through the maintenance of spring-based irrigation**

Preservation of the old traditions of irrigation and terracing has the intention, I argue, of sustaining the rural way of life and resisting colonial strategies. Transforming such ordinary practices into 'weapons' in the face of power represents a form of somoud. The use of these traditional practices can also be described as a form of "iterational agency" which, as put by Emirbayer and Mische (1998: 971), means,

[s]elective reactivation by actors of past patterns of thought and action, as routinely incorporated in practical activity (...). The past, through habit and repetition, becomes a stabilizing influence that shapes the flow of effort and allows us to sustain identities, meanings, and interactions over time.

The concept of iteration may be controversial since its agentic dimension is unclear, and it thus could be conceived as a simple automatic repetition of old practices or routines. While this may be true, there are cases where iteration constitutes an agentic act. Agency lies in the processes in which social actors give conscious attention to past practices, select which ones are appropriate to sustain, and make strategic decisions to maintain them as part of everyday routines (Emirbayer and Mische, 1998). In what follows, I discuss villagers' agency in maintaining past practices. I classify these into three dimensions: a conscious sense of belonging to the land, the material value of the common system of irrigation, and cultural awareness of nature.

### *Conscious sense of belonging to land and place*

Most Battiris continue to farm their lands, even those who have other sources of income. Even villagers who leave their land in the care of others will return and invest their time in farming in certain situations such as curfews during the Intifada and, most recently, during the COVID-19 quarantine. Moreton-Robinson (2003) describes the relationship of indigenous people with land as an "ontological relationship" from which the sense of belonging arises. The somoud of Battir stems mainly from this relationship, which connects villagers with their land and generates a sense of belonging. In a focus group that took place on 22 September 2021, farmers described the inseparable connection between land and water thus:

We belong to this land; it is our history and future. The somoud of Battir is rooted in its rural nature of which land constitutes the major feature and water is the second. 'ein al-balad is the soul of our land that brings it to production and gives it the green colour.

Villagers perceive the maintenance of land and water use as a way to protect land ownership and water sovereignty from colonial interference. As two farmers (Huda and Abu Wesam) commented in a 22 July 2021 interview, "Because we get old and cannot farm all our land, we rent the distant areas to other farmers without money but in exchange for taking care of it. Land should not be neglected or left to colonizers". The intentional employment of old practices and their incorporation into daily routines materialise the "perceived space" and bring stability to the "social field" or "lived space" in the face of colonial strategies. It enables the villagers to protect land and springs from settler attacks and from colonial confiscation under absentee laws. The local independent management of springs (in which the municipality has no role) also enabled the villagers to register them as shared property for Battir families despite the Palestinian Authority's attempts to convert them into state property. Since communities are not homogenous, however, some villagers do not set objectives for their actions but instead respond according to their "habitus" in the iteration of old practices.

The communal sense of belonging is also influenced by the contemporary history of Battir. Hasan Muşţafa's name was mentioned earlier for his role in defending Battir during the Nakba. To protect the village from Zionist invasion, Muşţafa and his colleagues employed various "tactics" to show that the inhabitants were remaining in the village to defend it and that they were practicing their daily activities

normally. Using springwater for irrigation was one of these tactics. Muṣṭafa is also known for his key role in leading local bottom-up development in Battir. One of his main initiatives was the renovation of 'ein al-balad in 1950, in which he mobilised the community to volunteer their labour to work collectively, which is locally called 'ouneh. In interviews, Muṣṭafa was mentioned as a pioneer in national and social work; he is praised by members of the community, even by those who belong to generations that never met him. As stated in a 26 July 2022 interview,

It is impossible to mention Battir without mentioning Hasan Muṣṭafa. We call him the hero of Battir. We are inspired and proud of his stories and try to continue his role. We pass his stories from generation to generation and we tell them to visitors and tourists.

These stories of somoud and local development continue to generate a sense of pride and belonging in the community. They inspire people to engage in forthright action that continues Muṣṭafa's role in protecting their place. 'Ein al-balad, where Muṣṭafa's name is written on a stone at the central outlet (Figure 10), is a spot with symbolic value that keeps these memories and spirits of the past alive in the village. As Trottier (1999) notes, the social organisation around water in Battir is anchored in the spatial and social realities that make it hard for Israel's colonial power to intervene in water management.

Figure 10. Muṣṭafa's name on 'ein al-balad.



Source: Photo by the author.

### *Material value of the common system of irrigation*

The villagers consider 'ein al-balad to be an abundant and sustainable resource and the irrigation system as an efficient zero-cost system, irrigating around 3000 dunums (300 ha). The springwater is free of cost. The water does not require pumping for extraction because it emerges naturally from underground, and it does not require pressurised pipes for distribution since it flows by gravity following the village topography; nor does it entail employment since it is managed by the community. It exists in an "interdependent relationship" between people and nature. It cannot irrigate upstream terraces, however this issue is solved by leaving those terraces for rainfed agriculture, which is also an important component of the ecological landscape.

The accurate design of the irrigation system also makes it the preferred choice for water sharing. It accomplishes equal distribution of water and ensures equity through the rotation scheme. This scheme follows a 'serpentine order', meaning that the member who was the last to receive the water portion will be the first in the next cycle. Equity is also ensured through compensation whereby the last farmer to receive his water portion is compensated for any loss due to lower water flow by giving them *nafal* (an extra amount). As stated by Abu Wesam in a 25 August 2021 interview,

The flow of water in 'ein al-balad and 'ein jam'a is abundant and available throughout the year. I am 75 years old; I have never seen the water stop. It was always sufficient to provide water (*tesqi*) to the whole village. In dry seasons in the old days, people from the neighbouring villages used to come to Battir to get water.

These characteristics allow irrigation to run smoothly, which in turn allows farmers to focus on using their skills efficiently and working collectively to get the maximum benefit of water. The few disputes that arise are solved internally in consultation with respected elders. In addition to being an anti-colonial barrier, the irrigation system thus also has a material value around which the villagers intentionally organise their livelihood. As Violante (2022) notes, this forms part of the "temporal rhythm" and calendar of everyday life. As stated by a farmer named Mousa in a 2 May 2021 interview, "We have land and water which are the bases of agriculture, why dispense them? Our ancestors succeeded in using springs efficiently in agriculture, and we continue to do so after them".

### *Cultural value of human – nature interaction*

The location of 'ein al-balad within the inhabited area enables the community to maintain control over it. Its location as an integral part of the 'lived space' also allows for direct and constant human – water interaction. Every day, people touch water, see it flowing, hear the sound of it as it falls from the serdab, and smell it as it mixes with the soil. This interaction creates a sense of identity associated with the environment and generates a sense of communal responsibility and care for it. This, in turn, motivates sustained collective effort to preserve and protect local water as part of the community's 'cultural capital'. As stated by Sultan in a 22 September 2022 interview,

The spring space gives us a special feeling; it's like there is an aura that keeps us generation after generation attached to it despite the presence of the water network. 'Ein al-balad gets more precious with time; its value is not limited to being a water source but it is part of our heritage and rural identity as fallāḥīn (peasants).

As stated on the sign shown in Figure 11, the rehabilitation of 'ein al-balad in 2020 was accomplished through the efforts and funding of Battir families; this is reminiscent of the previous rehabilitation by the community in 1950. This sign is unusual in that development projects are usually funded by donors who state their names for visibility. Local activists and youth engage regularly in 'ouneh (volunteer work) to repair terraces and clean canals and women also play active roles in farming, irrigation work, and commercial food production.

Figure 11. Sign proclaiming villagers' role in spring rehabilitation.



Source: Suhail Makhol (PalestineRememebered, 2017).

Despite their exposure to other cultures through tourism, villagers continue to use local terms for places and processes as part of their identity, examples of which are those mentioned in this article. In doing so, they contribute to the preservation of the Palestinian narrative and memory in the face of colonial "memoricide" and "de-Arabisation". The complexities of the irrigation system are also not easy to understand and only after several field visits and meetings with farmers did I grasp its operational details. Most Battiris, however, including women and young people, are completely familiar with these details whether or not they actually use the irrigation system. Its intricacies are part of villagers' cultural and ecological knowledge which are passed down through the generations. As Hasan said in a 28 July 2022 interview,

We learned from our grandparents every single detail of the irrigation system, how to use it, how to measure the level of water, and how to change the direction of water as it flows. We grow up with this knowledge as part of our history and heritage that we must save.

De Donato (2018) documents that residents of the neighbouring village of Wadi Fukin do not trust spring restructuring projects or the technical knowledge of experts, which they consider unsuitable. Residents of Battir take a similar position and refuse renovations that do not preserve the traditional character of the spring systems and fail to respect local knowledge. Obviously, 'command-and-control' interventions are largely ineffective (Molle and Closas, 2019: 2).

### **Social agency through ecotourism and building solidarity**

The story of somoud in Battir is not limited only to sustaining past practices. In some cases, efforts are made to maintain patterns of traditional behaviour that long preceded the colonial project, while in other cases decisions to act are developed in response to emerging colonial challenges. As Emirbayer and Mische (1998) argue that, indeed, in certain circumstances actors choose to distance themselves from past practices and devise new responses to current challenges; this is referred to as practical-evaluative agency. This section briefly discusses social agency through ecotourism (for details see Barnard and Muamer, 2016).

In the period between 2007 and 2011, in cooperation with international actors (UNESCO and École Nationale des Sciences Géographiques), local actors in Battir used the power of maps to materialise 'perceived space'. Inspired by Hasan Muştafa and led by Hasan Mu'ammār, they mobilised the community to survey the village and produced detailed cartographic maps of all features including springs and terraces. They also established the Battir Ecomuseum as an educational hub for young generations (Desclaux-Salachas, 2019). Following these efforts, local actors and the village council cooperated with international bodies to build solidarity against the separation wall plan. They collectively engaged in political and environmental battles to expose the danger of the wall to the ecology and heritage of Battir. In 2011, Battir won the UNESCO-Greece Melina Mercouri International Prize for the Safeguarding and Management of Cultural Landscapes, and in 2013 the construction of the separation wall was suspended for re-evaluation by the Israeli Court (Hasson, 2022). In the following year, Battir was recognised as a UNESCO World Heritage Site thanks to the joint efforts of local, national and international bodies. This recognition was mainly symbolic and was based on cultural and ecological justification and not on the primary danger of land theft. It nevertheless played a significant role in supporting Battir and giving it more visibility, which led to a further suspension of construction of the separation wall in 2015.

With its entry onto the world heritage list, Battir caught the attention of researchers, journalists and tourists locally and internationally. As De Certeau (1984: xix) argues, the oppressed are, "always on the watch for opportunities that must be seized". This recognition encouraged the villagers, supported by UNESCO, to invest in ecotourism as a way to promote their narrative and strengthen their resilience; it was also a way to develop an economic activity that would enhance employment opportunities in the village and open new markets for agricultural and cultural products. To bring this vision into reality, the municipality incorporated the development of tourism infrastructure into its plan for 2018-2021. Despite

some donors' support, however, implementation of the plan still faces challenges; these include Battir's encirclement by settlements (which restricts the free and safe movement of visitors) and limited financial support from the Palestinian Authority. Many community members also have little trust in national and local authorities' interventions, concerned that such interventions may change the rural character of the village which they strive hard to maintain.

### The irrigation system as a socially cohesive tool in the face of spatial and social fragmentation

Interaction between the various dimensions of social agency strengthens Battir's somoud. The analysis shows how conceiving water as being held in common acts as a cohesive tool that preserves social ties, brings stability to the 'social field', and sustains agriculture. This system could not have been sustained without cooperative work. The village's eight families invest in 'social capital' in the form of a traditional social contract that is highly respected by the community and is based on the principles of equality, equity and shared responsibility (Figure 12).

Figure 12. A handmade artefact that carries the names of all eight Battir families; it is a symbol of unity and cooperation.



Source: Photo by the author.

The social organisation around springs thus acts as a counter-hegemonic socio-ecological barrier in the face of colonial expansion and spatial and social fragmentation. As Giacaman (2019: 370) argues, somoud and resilience, in this context, constitute, "a dynamic process which, in the Palestinian setting, is embedded in agency, everyday practices and relatedness/connectedness to context". Social agency enables the community to sustain small-scale farming as an important aspect of culture, livelihood and daily life activities; agriculture, however, has become a secondary activity for some villagers who think that depending on farming alone for livelihood is not enough. It is important to avoid romanticising the situation, nor should one think that sustaining agency and resistance does not face challenges in the context of a web of interacting global, colonial and national forces. Farmers are pushed away from farming by a number of factors; these include an increasingly globalised modern lifestyle, the structural constraints imposed by occupation, the expansion of settlements that exploit Palestinians as cheap labour, and the Palestinian Authority's neoliberal policies and plethoric administrative system which absorbs the workforce at the expense of agriculture (Trottier and Perrier, 2018). According to an ARIJ (2010a) survey, the Israeli labour market absorbs 65% of Battir's workforce. Of the remainder, 20% are employed in the governmental and private sectors, 5% work in trades, while for 10% agriculture is their main source of income.

## CONCLUSION

In the Palestinian context, water is a key element of politics and has a continuous impact on the lives of people. Springs located within Palestinian villages remain an important aspect of the rural irrigation 'commons'; however, hydro-hegemony and colonial strategies such as settlement expansion, fragmentation of space, and restrictions on infrastructural development hinder the efficient use of springs and threaten their sustainability.

The study focuses on the engagement by residents of the village of Battir in everyday acts of struggle and in the navigation around obstacles imposed by the coloniser. Based on hydrosocial analysis, two main timebound forms of agency were identified and discussed. The first of these is the intentional actualisation of past practices of springwater management to become part of contemporary everyday routines. The second is the employment of new creative tactics in facing present challenges; these include the building of solidarity and the development of ecotourism, both of which support and give voice to the villagers.

Interaction between these types of agency strengthens the somoud (steadfastness and resilience) of Battir and acts as a counter-hegemonic instrument that protects land and water resources and supports the Palestinian narrative. Local practices in water resource management also act as an actual socio-ecological barrier in the face of colonial expansion, and conceiving of springwater as being held in common by the community protects the social fabric and the rural identity of the village and brings stability to the social field. In Battir and in other similar environments, springs as natural resources support livelihoods, and as sociocultural spaces they partially liberate villagers from the state of ongoing water dependency of the Palestinian Authority. Finally, the article underlines the importance of micro-level agency and actual practices in water resource management; it illustrates their centrality to counter-hegemonic forms of agency and to sustainable bottom-up approaches to local development.

## ACKNOWLEDGEMENTS

I would first like to thank my PhD supervisor Professor Helga Baumgarten. I am deeply grateful for her scientific and practical advice. I am also thankful to Professor Jan Selby for reviewing the paper and providing valuable insights, and to the Water Alternatives editors and reviewers for their insightful feedback. I would like to particularly mention the late Dr. Clemens Messerschmid – may his soul rest in peace – for his encouragement, support and comments on the draft of this paper.

Many thanks to the Palestinian American Research Centre (PARC) and the scientific research committee in the Faculty of Graduate Studies at Birzeit University for providing fellowships and financial support for performing the fieldwork. My deep gratitude goes out to all the respondents who gave me their time during my fieldwork in Battir, with special thanks to Hasan Mu'ammār.

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