# Prospects for Kurdish Ecology Initiatives in Syria and Turkey: Democratic Confederalism and Social Ecology

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#### Abstract

This paper surveys the nascent experiments in political ecology underway in predominantly Kurdish areas of south-eastern Turkey, known as Bakûr, and Rojava (northern Syria). The Kurdish freedom movement is attempting to consolidate a social revolution with ecology at its heart in a most unpromising context, given its ongoing struggle against Islamic State and regional embargoes. This greening of its ideology can be significantly attributed to the influence of American social ecologist Murray Bookchin, an inspiration for Kurdish attempts to implement democratic confederalism, which comprises principles of direct democracy, gender equality and ecological well-being in a needs-based economy. The Mesopotamian Ecology Movement has emerged from activist campaigns opposing dam construction, climate change and deforestation in the region, to inform ecology councils tasked with formulating policies that reflect this philosophical paradigm shift. The essay considers the prospects for the ecological initiatives in Turkish and Syrian Kurdistan. It argues that, confronted by formidable challenges, expansion of the democratic confederal model beyond the heartlands of Bakûr and Rojava, and international solidarity, are preconditions for their endurance.

Keywords: Kurdistan; Rojava; environmental issues; social ecology; Murray Bookchin

"The ecological struggle is the touchstone for the liberation of all humanity." (MEM 2016a)

There are nascent but already extraordinary experiments in political ecology underway in Kurdistan. Ecological well-being is one of the core principles of democratic confederalism emerging in the predominantly Kurdish areas of south-eastern Turkey, known by Kurds as Bakûr, and the autonomous cantons of Rojava, in northern Syria. This bold expression of political ecology can be attributed to a significant degree to the influence of American social ecologist Murray Bookchin upon Abdullah Öcalan, the founder of the proscribed Kurdish Workers' Party (PKK) and the Kurdish freedom movement. There are several accounts of the transformation in the political orientation and strategic approach of the Kurdish revolutionaries since Öcalan, imprisoned by the Turkish state since 1999, and other PKK theoreticians shifted away from nationalism and Marxist-Leninism, towards a fresh synthesis of direct democracy, gender equality, ecological awareness and participatory economics (Stanchev 2016; critically by Leezenberg 2016, 675-678).

The Revolution in Rojava and parallel attempts to implement progressive change under emergency conditions in Bakûr, have been a significant under-reported media story in recent years. Rojava consists of the predominantly Kurdish but multi-ethnic cantons of Kobanî, Cizîrê and Afrîn. These are currently estimated by Salih Muslim, Co-Chair of the dominant Democratic Union Party (PYD), to have a combined population of "around three million" people (via intermediary Sheila Mosley e-mail to author, 25 July 2017), allowing for fluctuations due to the ongoing conflict and mass migration in the cantons. This autonomous area of Syria has been at the forefront of the struggle against Islamic State (IS) and, since the withdrawal of Bashar al-Assad's forces in 2012, the site of one of the most extraordinary social movements in modern times.

What follows, from a point of view of critical solidarity, aims to document a little-known ecological dimension to a political development that has largely been marginalised. While democratic confederalism is based on a threefold aspiration for direct democracy, gender equality and ecological sustainability, the latter has received the least critical attention to date. Despite being overlooked, the Kurdish ecology initiatives are an important aspect of the ongoing struggle for meaningful change, a testing ground for post-capitalist and ecologically informed economics, and an underpinning for a political and cultural alternative to statist and IS forces in the region and beyond. This bid to reconfigure centralised power politics inevitably presents huge challenges. Time will tell whether these challenges prove insurmountable or whether the Kurdish freedom movement overcomes and endures in the face of overwhelming external force and internal threats such as factionalism or authoritarianism, along with cooptation within the capitalist system. I endorse, nevertheless, John Clark's (2016, 109) tribute: "whatever its ultimate fate may be," the Rojava Revolution "already constitutes an enormous achievement." Salvatore Engel-Di Mauro (2015, 1) feared that the Revolution, with its "unthinkable political accomplishments" might already be extinguished before his commentary on the situation was published in early 2015. In 2017 Rojava endures, indeed with expanded territory, yet still the internal and geopolitical threats against the Revolution appear overwhelming.

I will examine the Mesopotamian Ecology Movement (MEM), a coordinating body which has developed from an environmental activist network that dates back twenty years, into an organisation tasked with instigating ecology councils within the framework of democratic confederalism. In this context the MEM continues to conduct activist campaigns, while also raising ecological awareness and seeking to formulate policies to implement ecologically sensitive solutions in a solidarity economy. Their dominant concerns include the construction of the Ilisu Dam and similar infrastructure, the impact of the oil industry and persistent deforestation in the region. Ambitions to reconstruct Kobanî along ecological lines in the aftermath of devastation by IS are inspirational. In addition to such tangible examples of ecological resilience, I note the philosophical aspects of concern for the living world and non-human life forms in the context of revolution, war and state repression.

I will assess Kurdish attempts to alter the prevailing political paradigm in order to protect the natural environment and develop sustainable economies in precarious circumstances. I argue that the ecological dimension is integral to the intention of bringing about thoroughgoing social revolution, and that the inclusion of environmental awareness within the programme of democratic confederalism constitutes a remarkable endeavour to implement ecological sustainability. A survey of practical outcomes must consider some of the formidable challenges to the ecology initiatives. I conclude that both the expansion of the democratic confederal model beyond Syrian and Turkish Kurdistan, and large-scale and effective international solidarity, are essential for the survival of this inspiring and audacious experiment in political ecology.

This research is informed by first-hand communications with prominent commentators on the Kurdish solidarity movement, Ercan Ayboğa, Janet Biehl and Zaher Baher, as well as analysis based on extensive monitoring of reports and commentary in English-language activist and academic sources relating to recent ecological developments in Kurdistan.

## **Ecology and Democratic Confederalism**

The opportunity for a dialogue between Murray Bookchin, the originating theorist of social ecology, and Abdullah Öcalan, the imprisoned founder of a formerly Marxist-Leninist national liberation party in Kurdistan, could have made for a rich, mutually illuminating philosophical exchange. Such a conversation, however, never happened. Bookchin's biographer and partner, Janet Biehl (2015, 316-317), records a brief correspondence between Öcalan's intermediaries and Bookchin in 2004 (published in Ahmed 2015), regretting that, near the end of the latter's life, it was too late for direct dialogue. Nevertheless, although there was no personal exchange between them before Bookchin's death, their minds apparently met in the realm of ideas.

Ecology is integral to the emerging idea of democratic confederalism. Both Bookchin, in the 1940s, and Öcalan, in the 1990s, became disaffected with their respective Marxist-Leninist legacies. Both subsequently drew upon thinking derived from their Marxist roots as a wellspring for fresh syntheses of ideas. In two seminal texts, Toward an Ecological Society (1980) and The Ecology of Freedom (1982), Bookchin emphasised the importance of hierarchy as a more general form of domination predating class as the origin of social injustice in human society, and bemoaned productivist aspects of Marxism. Hierarchy was both a corollary of the human domination of the natural environment and an ideological formation that would need to be deconstructed if there was to be progress in establishing a sustainable relationship with the rest of the living world. Bookchin proposed that patriarchy and ecological destruction were aspects of the same problem:

Even before man embarks on his conquest of man—of class by class— patriarchal morality obliges him to affirm his conquest of woman. The subjugation of her nature and its absorption into the nexus of patriarchal morality form the archetypal act of domination that ultimately gives rise to man's imagery of a subjugated nature (1982, 121).

Öcalan's close reading of Bookchin's philosophy of social ecology was to inspire the mutually reinforcing aspects of his emerging concept of democratic confederalism: direct democracy, gender equality and ecology. Biehl (2012) records that Öcalan particularly recommended to his

followers *The Ecology of Freedom*, a book since then read by several thousand activists within the movement (Ayboğa in Skype interview with the author, 18 August 2017). Öcalan digested a wide range of other philosophical texts in prison, while fellow Kurdish thinkers, still directly engaged in struggle, also made significant contributions to the future direction of their cause. Nevertheless, Bookchin's ideas were uniquely germane to the particular character of the radical transformation and repositioning of the Kurdish freedom movement as expressed in the "Declaration of Democratic Confederalism in Kurdistan":

The principle of democratic confederalism promotes an ecological model of society. ... It seeks the establishment of democracy in all spheres of life of Kurdish society which is based on ecology and equality of the sexes and struggles against all forms of reaction and backwardness. (Öcalan 2005)

Bookchin coined the term "libertarian municipalism," which he expounded in such works as *From Urbanization to Cities* (1995). Here he analysed various models of direct democracy which he adapted for the purposes of his own day. Bookchin identified the face-to-face democratic assemblies that flourished in classical Athens as a foundational model for an authentic participatory polis, one that resurfaced most conspicuously at rare but scintillating historical moments, for example the Paris Commune of 1871, as well as in the early stages of the Russian Revolution and the Spanish Revolution. He advocated direct democracy, with recallable delegates and built-in checks upon concentrations of unaccountable power, as a means to realise an antihierarchical politics ultimately able to negate the nation-state and potentially to establish the kind of egalitarian human relations that, he hoped, could challenge structural domination and oppression.

Bookchin saluted this radical tradition as the aspiration for a "Commune of communes" (1995, 268). He also considered the term "Unity of diversity" (1982, 5) to encapsulate the fundamental concept of the ecosystem, with immediate implications for social ecology. Its application to the political realm was to support dynamic pluralism, a desirable alternative respectful of ethnic differences and promoting inclusion as an integral aspect of social ecology. The Zapatistas took up the theme when they proclaimed "We want a world in which there are many worlds," as they practiced their own form of direct democracy, setting up 32 "autonomous municipalities," in Chiapas, Mexico (Chiapaslink 2000, 9, 19). The English-language translation of *The Political Thought of Abdullah Öcalan* also uses the term "unity in diversity" (2017, 42) to describe the key governance objective of councils run on principles of democratic confederalism. In Kurdistan an inclusive, federal approach is not only ethically and theoretically sound but also constitutes a pragmatic means to challenge the prevailing power politics of divide and rule, transcending some of the sectarian hostilities evident in the Middle East's theatres of war.

The imprint of social ecology is evident, though less forcefully present than in the 2005 "Declaration of Democratic Confederalism," in the 2014 "Charter of the Social Contract in Rojava." There is a firm commitment to "ecological balance," pluralism and a multi-ethnic approach from the outset. Explicit mention of "democratic confederalism," however, is absent. The "Charter" outlines a provisional mini-state, in part an expediency demanded by the requirement to create a

form of representation acceptable to international political bodies and NGOs. Paradoxically, articles confirming the institution of private property (Art. 41) sit alongside those designating natural resources as public wealth and setting out commitments to democratic land management, participatory economy, sustainability and environmental protection (Art. 39, 40, 42 and 90). It remains to be seen whether the "Charter" constitutes a version of conventional social democracy and a rapprochement with capitalist society, or whether it is conceived as a structure for a transitionary phase of dual power, with the energised popular assemblies retaining the impetus to transform the conditions of daily life and promote ecological well-being.

I shall now turn to the Mesopotamian Ecology Movement, since its declarations express the most direct exposition of social ecology within the framework of democratic confederalism, as practiced by the ecological councils set up under its auspices.

### The Mesopotamian Ecology Movement

The MEM's origins lie in the impetus to complement direct campaigns against environmental destruction with strategic bodies that would promote policies within democratic confederalism for a more sustainable, ecologically aware society. This represents an ambitious task for a network with a lower level of participation than other initiatives of the Kurdish freedom movement. In this regard the MEM currently lacks the capacity to act as effective check on the vast scale of environmental destruction that is occurring throughout Kurdistan. Nevertheless, the emergence of the MEM is an impressive and encouraging development, which has a vital role to play in raising awareness of the struggle's ecological dimension. If the points in its declarations and policy documents are actualised and followed, the MEM has the potential to significantly inform and improve sustainability in the region.

The MEM has developed from a loose network of environmental activists to a point where, in keeping with Bookchin's model of participatory democracy, its ecological bodies have become integrated into the broader structure of popular assemblies. It first emerged from the Ecology Forum and the Mesopotamian Social Forum, both held in Diyarbakir/Amed in 2011 (TATORT Kurdistan 2013, 147). The MEM's initial function was to coordinate single-issue campaigns, for example against dam construction or fossil fuels, thus enabling protesters to share ideas and network more effectively.

I interviewed founding and prominent MEM activist Ercan Ayboğa (18 August 2017) to assess the strength and structure of the MEM and the ecology councils. Since early 2015 MEM delegates have been instrumental in creating an impressive 12 ecological councils out of the 18 provinces with predominantly Kurdish populations in *Bakûr*, participating in decision-making and policy formulation. Council meetings, with male and female co-chairs, are open assemblies at which all attendees have a single vote. They are constituted to reflect the processes, gender-equal composition and power structures of the wider project to implement democratic confederalism. At their height in 2015, Ayboğa estimates that several hundred people were involved in the MEM, that around 200 of them were participating in Amed and that "400, maybe 500 were connected" to the ecology councils which met at least every six months. Members of wider civil society,

including the women's and youth movements, unions, municipalities, neighbourhood councils and NGOs, would also participate in the ecology councils.

Ayboğa reports (Skype interview with the author, 18 August 2017) that the MEM has achieved some significant positive outcomes. Opposition within the municipalities, for example, thwarted an investment project deemed to threaten the ancient Hevsel Gardens at Sur. The Gardens were subsequently designated with UNESCO World Heritage status. The replacement of a potentially destructive proposal for development at Lake Wan/Van with a more ecologically benign project represented a further notable success.

All major municipal projects must now undergo an ecological and social impact assessment. Currently there are also attempts to create additional administrative bodies to promote ecological approaches at the district level. MEM delegates participate in the ecology commissions, working parties which produce policy documents focusing on issues such as agriculture, eco-cities and the communal economy. The state of emergency has, however, curtailed the ecology councils' progress, especially since the attempted coup in Turkey (July 2016). Many MEM members, those employed in education and the municipalities in particular, have been fired, with some key activists even imprisoned. Nevertheless, new projects have emerged since 2016, including coordinated opposition to hydraulic fracturing ("fracking").

The MEM has made further progress through its integration into the overarching structure of the Democratic Society Congress (DTK), the Kurdish freedom movement's main coordinating body (Ayboğa 2015). The MEM also held its first major conference in Wan/Van in April 2016, with 170 Kurdish and international participants ("Final Declaration," see 2016a). It has, therefore, consolidated its role in promoting ecological ideas within the wider project of advancing democratic confederalism in the region. No councils dedicated exclusively to ecological matters have been established in Rojava to date, although 2015 saw the foundation of the first Ecology Academy in Cizîrê (Knapp et al. 2016, 220).

The MEM has adopted several strategies to promote its vision of social ecology. It has cultivated links with the wider regional and international environmental movement. Other groups, from mainstream conservation organisations such as Doĝa Derneĝi to radical groups including the Istanbul-based Patika ecological collective (Corporate Watch 2015), have joined the struggle to resist dam building and campaigned against environmental destruction. The MEM also cooperates with ecology campaigners within the borders of Iran and Iraq, including in areas controlled by the Kurdish Regional Government in Northern Iraq (Ayboğa via Skype, 18 August 2017). With the development of structures for addressing ecological matters MEM activists endeavour to adjust from the mindset of social movements, geared primarily towards protest campaigns, to that of participatory ecology councils of a kind that have few precursors. To this end—to ensure that the organisation does not consist of ecological activists talking to themselves—it is envisaged that stronger links will be made with professional engineers and architects to have their expertise inform decision-making processes (TATORT Kurdistan 2013, 152). The MEM also recognises that, for broader and longer-term progress to be achieved, it is essential that practical and theoretical

ecology be present in educational curricula so that ecological awareness and philosophy are integrated within Kurdistan's schools and academies of learning. In this respect the schools set up by the MST (the Brazilian landless workers' movement), with their support for agroecology, have been an inspiration (MEM 2016c). Above all, according to unnamed MEM activists interviewed by TATORT Kurdistan (2013, 150) in Amed, the MEM aims at "the transformation of people's consciousness."

The MEM's shortcomings should be recognised. Ayboĝa (2015), a prominent spokesperson and critical advocate, is realistic about some of the difficulties and dilemmas the movement faces. He acknowledges that the MEM has a lower level of participation and representation than initiatives concerned with women, youth and language. Furthermore, while integration into the DTK represents a significant advance, ecological issues are infrequently discussed at this level. In this context there is a risk that the ecological agenda remains a third priority within democratic confederalism, receiving less emphasis than participatory democracy and gender equality, with progress consequently deferred during the ongoing emergency situation. Additionally, the ecological councils share logistical challenges common to other councils. If the assemblies are held only in provincial centres, they may unintentionally exclude participants living in outlying rural settlements. Above all, perhaps, the task of more sufficiently theorising what might constitute an ecological society in the specific context of Kurdistan is formidable. As *Öcalan writes in Democratic Nation*:

I defined eco-industrial communities as communities in which the eco-industrial society, the agricultural society of villages, and the industrial society of the cities nurture each other and are strictly aligned with ecology. (2016, 64)

It is challenging for sympathetic municipal councils to translate this overarching definition into the policies and practical measures required to create a solidarity economy compatible with ecological wellbeing. In practice, Ayboĝa (2015) suggests, the HDP (People's Democratic Party) have on occasion supported the Turkish government's "destructive-exploitative investment projects" because they were "simply uncritically assuming that investments would create jobs." Consequently, it is seen as imperative that the ecological councils formulate alternatives to the wage system and economic growth based on increased resource consumption if they are to successfully transcend such shortcomings.

Notwithstanding the foregoing concerns, the Kurdish freedom movement has some advantages in its approach to ecological matters. Although awareness of ecological campaigns may be low, this should be weighed against the lived experience of rural Kurds in this predominantly agricultural region. Despite Ba'athist policies of deliberate under-development and exploitation of Kurdish areas through the gradual imposition of monocultural production from the late 1960s and 1970s, some traditional animal husbandry and crop diversity in mountainous areas survived, while older workers retain traditional horticultural knowledge (Zana 2017). Kurds have for the most part lived low-impact lifestyles of necessity, with minimal consumer culture. In recognising some of the environmental problems inherent in capitalist industrialism at a relatively early stage, possibilities

are opened for alternative models of development as the movement experiments with a needs-based, low-impact solidarity economy (TATORT Kurdistan 2013, 147-148).

The MEM Declaration of 2016, with its accompanying resolutions, sets out a radical ecology agenda for the 21st century that reflects and demands continuing resourcefulness and resilience. This agenda is asserted in the face of extraordinary obstacles in the form of rapid industrialisation and ongoing conflict. There is a sense of confidence, direction and purpose in the proclamation that is often lacking in current American and western European movements for political ecology, demoralised by elements of anti-environmental backlash in "populist" ultraconservatism and divided by statist/non-statist, radical/eco-pragmatist approaches. Part of the MEM's struggle will be to represent and articulate the ecological dimension so that it is meaningful, comprehensible and achievable within Kurdistan. Since there are no comparable historical or existing counterparts for the kind of regional ecological councils recently created in the region, Ayboĝa (2015) finds there is a lack of similar experience to draw upon. This exacerbates the current difficulties. Finally, the state of emergency has impacted on the prospects of ecology initiatives. Zaher Baher (e-mail to author, 18 January 2017) found that when he visited Bakûr in May 2015 "people were seriously talking about ecology, especially in Wan and Jolamerg," and that Wan/Van would be a pilot for driving forward ecological structures and policies. Unfortunately, he now reports that the resumption of hostilities between the PKK and the Turkish state (in July 2015) means that progress in furthering the ecological initiatives has since been impeded. Ayboĝa (via Skype, 18 August 2017) corroborates this, reporting that "now the organisational structure [of the ecology councils] is quite weak" due to the intensified repression. Nevertheless, if the tenacious MEM is successful in advancing its objectives, there will be wider implications, beyond Kurdistan, for the international ecology movement.

#### **Ecological Destruction and Resilience**

Climate change, biodiversity loss and other forms of environmental degradation are significant considerations throughout Kurdistan, impacting upon the outlook for Rojava in particular. Factors such as water security, dependence upon oil and uncertain agricultural production constitute major logistical challenges to the prospects of the cantons and must be urgently addressed if the alternative political experiment is to be viable.

The most bitterly contested environmental controversy in Turkey's majority Kurdish areas is the colossal dam development scheme in Bakûr. Major infrastructure projects, such as the high-profile Ilisu Dam, are not only having a detrimental impact upon the natural environment, but are purposively reconfiguring the homeland of local people. Consequently, large hydroelectric schemes are embroiled in the conflicts concerning cultural identity that have become an inextricable part of debates about energy and water policy. Substantial loss of biodiversity has also been a consequence of this activity. Rare and endangered species have suffered from ongoing habitat destruction and disruption of ecosystems, due not only to the impact of dam construction but to the accompanying infrastructure of roads, powerlines and military installations (Hommes et al. 2016, 15; Şekercioğlu et al. 2011, 2758). Concerns that benefits from improved agricultural

irrigation within Turkey's borders may be coming at the expense of diminished water supplies downstream in Syria and Iraq are further exacerbating wider riparian tensions.

Such schemes are also eroding the region's archaeological heritage, including, most notoriously, the ancient town of Hasankeyf, which is scheduled to be submerged. Prominent among campaigns against the Ilisu Dam is the Initiative to Keep Hasankeyf Alive. Renowned Hasankeyf is cherished for its ancient cave houses and for having been settled for at least 12,000 years (Yalcin and Tigrek 2016, 247). At the time of writing the town is threatened with inundation to make way for the dam. Such deliberate destruction is a significant loss since Hasankeyf constitutes a unique part of Kurdish, Arab and Armenian, and indeed global cultural heritage.

Both sympathetic observers and more critical commentators believe water security challenges threaten Rojava's social and economic well-being (Knapp et al. 2016, 214-217; Balanche 2016). Knapp et al. (2016, 216) identify several reasons why water is in short supply in Rojava. For one, climate change is thought to have limited the amount of precipitation in the region (see also Slow Food International 2016a). Over time, aquifers are becoming depleted due to demand for domestic and agricultural production. There are additional fears that contamination from inadequate sewage and waste management threatens groundwater (Knapp et al. 2016, 218). Turkish hydro-electric and irrigation projects affecting the headwaters of the Euphrates and Tigris also determine the quantity and quality of water supply in downstream areas, including in Rojava (Janet Biehl in e-mail to author, 3 February 2017). Finally, conflict has disrupted water supplies, with damage to infrastructure a consequence, for example, of battles between Kurdish militias and IS forces in war-torn Kobanî, and Turkish security forces' allegedly deliberate destruction of a water treatment site in the predominately Kurdish border city of *Nisêbîn*/Nusaybin (Knapp et al. 2016, 214).

The complexities of fossil fuel usage also challenge Rojavans. Currently the cantons rely heavily upon poorly refined diesel for transport, electricity generation and fighting IS. This, in turn, leads to a substantial problem of air pollution, with further implications for public health and environmental damage. Janet Biehl (e-mail to author, 3 February 2017) also observes that lack of public transport causes increasing reliance upon private cars. In a war economy oil revenue is urgently needed. This presents several difficulties, however. Rojava has plentiful supplies of crude oil within its boundaries, centred in Cizîrê canton, but it has limited capacity to refine the commodity (Lebsky 2017). Biehl (2014) attributes the lack of refineries to Ba'ath Regime policy, noting that the Rojavans have "improvised two new oil refineries." Embargoes are an obstacle to export and to realising full value for producers. Leading political spokesperson for Cizîrê, Akram Hesso, also states that currently the policy of Rojava is to refuse to export oil until the revenue can be democratically controlled by all of the Syrian people (cited in Lebsky 2017). Even if substantial amounts were to be sold in future, this could potentially undermine the cantons' egalitarian foundations, while intensive exploitation of oil would also conflict with commitments to ecological sustainability and combatting climate change.

Oil production creates different but equally serious considerations in several cities where it is the dominant industry in Bakûr. Interviewed by TATORT Kurdistan (2013, 156-157), ecology

activists claimed that "Turkey is the state that, since the 1992 Rio Summit, has had the highest increase in greenhouse gas emissions." Kurdish populations believe that they gain little benefit from the massive industrial production and consumption that blights their environment. As interviewees from the Ecology Assembly in Êlih/Batman (the regional centre for the oil industry) explain, the refining process takes place in western Turkey, thus depriving their municipality of substantial tax revenues (interviewed in Egret and Anderson 2016, 178). The Kurdish ecology movement has also extended its activity to campaigns against fracking, which threatens to damage the land and atmosphere further by initiating a new era of fossil-fuel extraction (Ayboğa 2015; interview with activists from Êlih/Batman Ecology Assembly; Egret and Anderson 2016, 178).

There are longstanding allegations that the Turkish military deliberately start forest fires as a strategy to eradicate what it regards as refuges for PKK guerrilla forces. Members of the Cilo-Der Nature Association claim that "forty percent of the forested lands in Şemzinan and Şirnex have been denuded by arson" (TATORT Kurdistan 2013, 161). Consequently, in July 2016 the MEM (2016b) called for an international delegation to document deforestation.

While the Kurdish ecological activists face daunting obstacles, populations in the affected areas are resilient and there are many practical initiatives to bring about the ecological society they desire. The successful battle to liberate Kobanî from IS has not merely motivated the returning population to start the reconstruction process but also to symbolically reimagine the city as a citadel of freedom, art and sustainability. The destruction of physical infrastructure has opened a space to implement a uniquely progressive détournement of the neoliberal notion of "shock doctrine" from the fallow ground of devastation. Despite the residents' fortitude, however, this appears a Sisyphean task, since embargos prevent the import of even the most basic humanitarian aid into Rojava (Anderson and Egret 2016). The liberated Kobanî, forged in military struggle, now faces a mighty logistical battle. Nevertheless, the Kurdish freedom movement aspires to build the city anew using environmentally friendly methods, with Heval Dostar of the Kobanî Reconstruction Board appealing for "architects that can help design the city to make it more ecological" (Anderson and Egret 2016, par. 23). Again, according to Batman Ecology Assembly delegates (interviewed in Egret and Anderson 2016, 178), the MEM too is trying to support such aspirations to ensure that Kobanî is rebuilt in "an ecological way," prioritising an "ecological hospital" but also planning for "ecological houses and power and water supplies."

Across the border in Kurdish regions of Turkey, Rafael Taylor reports the creation of several "peace villages," including one in Wan/Van where an "'ecological women's village' is being built to shelter victims of domestic violence, supplying itself 'with all or almost all the necessary energy'" (Taylor 2014). In 2017 these are now being joined by "JINWAR," the "village of free women" in Cizîrê canton, Rojava. Such initiatives reflect an impassioned determination to turn the aftermath of trauma and ruination to good account, venturing to forge a new and positive cultural superstructure in the process of replacing lost infrastructure.

The nature of the exercise of power and control in the reconstruction process is a central consideration. Activists are wary of aid from Western governments and corporations, since such

support will inevitably be tied to investment projects which will impose neoliberal forms of development. The MEM seeks to harness "clean energy technology" to avoid negative effects of industry on the ecosystem. They are insistent, however, that even renewable energies such as wind and solar need to be controlled by the communities they supply, not by corporations (TATORT Kurdistan 2013, 148-149). This is in keeping with a call that Bookchin made as far back as 1965 for a distinctive "liberatory technology" facilitating profound social change. Bookchin was building upon ideas put forward by Lewis Mumford in *Technics and Civilization* (1934) and on the work of the radical German decentralist, E.A. Gutkind, who coined the term "social ecology." Bookchin's ideal technology would diminish the drudgery and toil of hard labour yet also reduce alienation by making possible a more harmonious relationship with the natural world. "Liberatory technology" would be human-scale and in control of the local communities it served while forging closer links between peoples because it would "function as the sinews of confederation" (Bookchin 1974, 135). Whatever forms the technology might take—Bookchin considered developments in cybernetics and solar energy—democratic control and ecological balance were key criteria to evaluate when considering whether a particular technological development might be "liberatory":

We would be free to ask how the machine, the factory and the mine could be used to foster human solidarity and create a balanced relationship with nature and a truly organic ecocommunity. (1974, 105-106)

There are several initiatives contributing towards food security in Rojava. While Lebsky (2017) does not provide data to support his estimate that agriculture accounts for 70% of Rojava's economy, its food production nonetheless is significant. The present situation challenging the cantons bears comparison to the Cuban experience at the end of the Cold War, when, during the early 1990s, imports from the Soviet Bloc ended while the US economic blockade continued (prompting a community-gardening response celebrated in Faith Morgan's 2006 film *The Power of Community*). It is in the area of agricultural policy in particular that aspirations for a solidarity economy, integral to the political project of the MEM and wider Kurdish freedom movement, are most evident. Under coordination by Movement for a Democratic Society's (TEV-DEM) there has been momentum to secure the cooperative control of agricultural commons with democratic economic planning and decision-making processes that demand a central role for women. Collectivised "land and production units" (Stanchev 2016) have already taken over much agricultural production, and a boom in community gardening has been a necessary and heartening response to the lack of chemical fertilisers. Agricultural cooperatives are expanding the production of organic fertilisers, aiming to widen crop diversity and boost self-sufficiency.

To these ends the MEM's unpublished document "Policies on Ecological Economy" sets out principles that prioritise the needs of the community at large above individual profit by establishing an economy that meets "basic societal needs." This is in keeping with the Rojavan "Charter" (2014) that aims to meet "humanitarian needs and ensure a decent standard of living for all citizens" (art. 42). The MEM's "Policies" advocates the replacement of private monopolies and

Unpublished policy document shared with the author by Ercan Ayboga.

encourages respect for the commons through community-owned property and control of the means of production, supported by an expansion of non-market modes of exchange such as gifting and sharing (see also Öcalan 2017, 85). The MEM's Agriculture Policy (2016c) sets out a positive determination to embrace a vision that is avowedly "ecological," expressing a motivation to achieve a "dialectical connection" with the natural environment, beyond conventional anthropocentrism. It also rejects the drive to impose genetically-modified organisms as an attempt to gain hegemonic control of the food-supply chain. Following their visit to Rojava in 2014, Knapp et al. (2016, 217) suggest that the water crisis could be ameliorated by growing crops that require less water to flourish and raising awareness of water usage among the population as a whole. A report about a project, supported by Slow Food, to involve local schools in re-cultivating land around Kobanî, indicates that both strategies are already being implemented, since low-irrigation crops are being grown as a part of children's ecological education (Slow Food International 2016b).

Rojava has also seen a widespread desire to create recreational and therapeutic green spaces (Baher 2014, 12; Knapp et al. 2016, 213). Freedom parks and memorial parks have started to spring up and flourish as a response to the trauma of war. These are in keeping with the tradition of those gardens planted as conscious sites of memory and liberation celebrated in Kenneth Helphand's *Defiant Gardens* (2006) and George McKay's *Radical Gardening* (2011). Parks and gardens are intended not only to green the urban environment, produce food and instill agricultural skills in children, but to have a significant cultural role as sites of remembrance and resurgence. To make reclaimed terrain productive and colourful is both a practical necessity and a powerful act of defiance against IS. The great symbolic, aesthetic and physical value placed upon parks became clear in Turkey in 2013, when a struggle to save Istanbul's Gezi Park became the site of the most prominent confrontation between Erdoğan's government and civil society. Environmentalists were first to confront Turkish state forces during the protests when, Akça et al. reported (2014, 49-50), "activists from the ecology and urban movements bravely stood in front of the bulldozers, remaining in the park for days in spite of attacks and other harassment by the police."

The projects underway in Kurdistan, therefore, comprise the building blocks and green shoots of a daring political experiment that, not content with reconstruction, food security and conservation measures, seeks a new paradigm in its social organisation and relationship with the living world. As Federico Venturini (2015, [2]) observes, if a coherent and robust alternative grounded in social ecology is to be achieved, Bookchin's "reconstructive vision" needs to be critically evaluated and expanded beyond its Eurocentric roots, so that it can make a philosophical contribution in non-Western contexts. There is also an immediate need for political and practical aid from sympathisers beyond the region. Successful agroecology, for example, would benefit from supplies of good quality seed and the development of seed banks, requiring not only the provision of varieties able to propagate well and produce good yields but also botanical expertise (Slow Food International 2016a; Sabio 2015, 91). In the aftermath of the Hurricane Katrina disaster the grassroots organisation Common Ground Collective insisted that the occasion demanded "Solidarity not Charity," a principle of reciprocity that, one would hope, would illuminate relations between Kurdistan and its international sympathisers.

#### Conclusion

"My hope is that the Kurdish people will one day be able to establish a free, rational society that will allow their brilliance once again to flourish."

(letter from Bookchin, 9 May 2004, in Ahmed 2015)

While the ecological dimension of democratic confederalism has hitherto received the least critical attention, it is inextricably connected to the accompanying principles of direct democracy and gender equality. It is, as Zaher Baher suggests, "the foundation for everything else" (e-mail to author, 29 January 2017). The positioning of ecology within the context of democratic confederalism proposes an exceptional response to ecological challenges. Also unparalleled is the extent to which Kurdish activists are striving to ecologise the polis in the Middle East. If the ecology forums emerging in Kurdish strongholds in Bakûr and Rojava endure, with their distinctive structure and ethos, they have the potential to be significant exemplars for the region and beyond. It is important to keep a watch on such practical expressions of the social-ecological approach and to monitor their shifting prospects in light of the immense challenges and setbacks that doubtless lie ahead.

The MEM seeks to address the insight from Bookchin that the destruction of the natural environment is a consequence of deep-seated conflicts within human relations. It understands that capitalism exacerbates this destruction and that this is further intensified under neoliberalism, but it also holds that the domination of the natural world indicates an even more profound problem of social hierarchy. In keeping with the principles of social ecology, the realisation of an ecological society would require a far-reaching social revolution, transforming public and private power relations, as well as the economy, to address human alienation from the greater living world. From the perspective of social ecology, ecological well-being and sustainability are fundamental markers of human progress, transcending narrow anthropocentric approaches that regard the living world as a mere storehouse of commodities to exploit for profit. In this way concepts of respect for plurality are extended beyond the human realm with the understanding that humanity is dependent on the multiplicity of living things embedded within ecosystems and cannot flourish if these are damaged. The MEM views the provision for primary need from a social-ecological perspective. To this end consumerism is rejected and efforts are underway to create an ecologically informed solidarity economy based on cooperatively run public enterprises and the determination to establish a needs-based system providing an "irreducible minimum" (Biehl 2012)—an idea derived from cultural anthropologist Paul Radin—for all citizens.

To be sure, these are ambitious hopes. Substantial environmental destruction is already taking place throughout Kurdistan, including dam construction, climate change, deforestation and the invasive extraction of oil and minerals. The challenges of delivering an ecologically benign economy while on a war footing, facing embargo and while many experts have fled the region, appear overwhelming. Furthermore, the uneasy tactical collaboration with the ideologically incompatible Trump administration may leave an incompliant Rojava vulnerable to the USA's

longer-term, strategic interests within NATO, following the territorial defeat of the common enemy, IS. Such external threats, however, doubtless also have a role in forging internal cohesion. In this regard the cessation of hostilities or the removal of embargoes would constitute a contrasting threat, as opportunities would emerge for entrepreneurs to profit from environmentally destructive behaviours and to engage in commerce that would enable them to gain control of the means of production and exchange. Efforts to retain democratic control through community ownership or measures such as the equitable allocation of essential goods and services to achieve an "irreducible minimum," would inevitably incur retaliation from multinational corporations, bolstered by colossal state power and keen to protect investments.

Within the tragic and tumultuous history of Kurdish struggle, the years since the Revolution in Rojava have been marked by continuing and intense upheaval. That said, the survival of the experiment in democratic confederalism despite an existential and bloody conflict with IS, while also facing military threats from Turkey (NATO's second-largest army) and hostility from the Ba'athist regime, has defied predictions. Since 2016 Syrian Democratic Forces have achieved significant military victories over IS, leading to the declaration of democratic confederalism in liberated areas such as Manbij and Shengal.

The MEM considers its ecological objectives to be aspirations for the here and now and integral to their revolutionary experiment. Referring to the "Declaration of Democratic Confederalism in Kurdistan," Knapp et al. (2016, 211) point out that the "paradigm announced in 2005 emphasized ecology as much as democracy and gender equality." This demonstrates an understanding that ecology does not simply represent a number of unrelated and peripheral problems that need to be addressed as they arise, but is core to the philosophy underpinning democratic confederalism. Yet concerns remain that, while there are impressive efforts to instill principles of direct democracy and gender equality in the present, for compelling pragmatic and logistical reasons the ecological revolution is deferred to the future. The movement's grassroots, furthermore, may be less aware of ecology as a central principle and priority. There are forthright professions of political ecology in the MEM's "Final Declaration" and "Principles and Objectives," issued in 2016, advocating "ecological struggle" to "communalize our land, waters, and energy." The "Charter of the Social Contract in Rojava" states that "Wealth and natural resources are public wealth of the society and its investment and management and treating conditions are regulated by a law." The difference in emphasis and tone here reflects the fact that the former express the sentiments of a predominantly activist constituency, whereas the latter is an official proclamation intended to communicate to regional and world public opinion. While the policy may or may not indicate something similar, the article in the latter document would not be out of place in a conventional social democratic or liberal policy framework professing a mixed economy of nationalisation and capitalist enterprise.

If the MEM is able to pursue its intentions further, and carry the overarching DTK with it, there will indeed be a fascinating experiment in political ecology to consider, learn from and hopefully to inspire change. This should not be an isolated experiment, and cannot be if it is to prosper. To endure, the democratic confederal model must expand beyond its present heartlands

in Kurdistan. The progress of Kurdish ecology initiatives is not determined solely by the precarious political circumstances within  $Bak\hat{u}r$  and Rojava. The critical task of mobilising for awareness-raising and mutual aid, of transform and redefining current prospects, awaits external sympathisers, particularly the international Kurdish solidarity movement. If a space to explore a post-capitalist, ecological imaginary endures with its territorial base and provisional form of libertarian governance, there will be an opportunity to follow a trajectory currently unavailable to the West's left-wing environmentalists and Greens. These are constrained within the context of expansive capitalism (exacerbated by the Trump administration's anti-environmental policies), which Western environmentalists lack the capacity, and, in some cases, the mindset to confront.

The Kurdish ecology initiatives in Bakûr and Rojava are a progressive beacon offering an alternative way forward for political ecology. Attempts to integrate ecologically-informed structures and policies into the centre of the Kurdish freedom movement's political project in such circumstances are therefore an unexpected achievement. It is well, therefore, to conclude this survey of the prospects for the Kurdish ecology initiatives by observing some positives. Salvadore Zana (2017) notes that criticisms of the Revolution to the effect that "the economy has made almost no progress in becoming more ecological and sustainable," mostly due to the ongoing dependence of the cantons on industrial agriculture, are now being addressed by the creation of composting plants for ecological fertiliser, signifying an important boost for self-sufficiency. In addition to the MEM's successful interventions against environmentally destructive investment projects in Bakûr, Ayboğa reports greater optimism about the character and future of Rojava, following his extended visit to the cantons in 2017. He finds that ecological discussions are increasingly prevalent due to "theoretical developments" and, as a response to the "increasing impact of neoliberalism in Bakûr," have "brought the discussions to a new point" (interview, 18 August 2017). At the time of writing the greening of the Kurdish freedom movement, as improbable as it is profoundly hopeful, deserves our notice and critical solidarity more than ever.

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