An unjust transition

longreads.tni.org/an-unjust-transition

November 10, 2021

Energy, colonialism and extractivism in occupied Western Sahara

Joanna Allan, Hamza Lakhal and Mahmoud Lemaadel

Read in Arabic – اقرأ باللغة العربية

The multiple ecological crises provoked by human activities are linked to and exacerbate the other political, social and economic challenges currently faced by North Africa.[1] In Western Sahara, these challenges and crises are shaped by its continued condition as a colony. This report aims to contribute to conversations on a just transition – that is, a transition to 'thriving economies that provide dignified, productive and ecologically sustainable livelihoods; democratic governance and ecological resilience' – in Western Sahara.[2] The authors do this by highlighting how extractivism currently operates in the part of Western Sahara currently occupied by Morocco. The bulk of the analysis focuses on renewable energy developments, because Morocco is widely celebrated on the international stage for its commitments to the so-called 'green energy transition'.[3] The story told here, which aims to highlight the voices of the Saharawi population that is indigenous to Western Sahara, is different. Precisely because renewable energy developments undermine Saharawi self-determination and further (perceived and actual) inequalities between Indigenous Saharawis and Moroccans, such developments undermine a just transition.

Below, after giving a brief history of the Western Sahara conflict, the authors firstly identify forms of extractivism in occupied Western Sahara and map who contributes to, and profits from, extractive industries there. While the primary focus of the report is on energy developments, it also shines a light on related forms of extractivism, including phosphate extraction, fishing, and sand and agricultural industries. The authors situate their research on extractivism in occupied Western Sahara in wider academic and activist conversations on energy and colonialism globally. The report also makes the case for why renewable developments in the occupied territory should be considered forms of extractivism.

Secondly, the authors go on to argue that energy (potentially) produced in occupied Western Sahara contributes to the diplomacy of the Moroccan regime abroad, furthering its colonial hold on occupied Western Sahara.

Finally, the report asks what a Saharawi just transition would look like. For inspiration, the authors turn to the Saharawi refugee camps and state-in-exile located near Tindouf, Algeria. A small sample of Saharawi initiatives there are analysed in terms of how they might relate to, or inform, a just transition.

A brief history of the Western Sahara conflict

The Spanish colonization of Western Sahara started in 1884, after the Berlin Conference, in which the European states divided up Africa among themselves, with Western Sahara becoming a Spanish possession. At first, the Spanish presence in so-called 'Spanish Sahara' was limited to fishing the coastal waters and trading with Saharawi tribes. However, the discovery of phosphates, oil and other mineral deposits in the 1940s encouraged Spain to extend its hold over the territory politically, socially and economically.[4]

At the start of the 1960s, a new era of decolonization began, with the Declaration on the Granting of Independence to Colonial Countries and Peoples adopted by the United Nations General Assembly in 1960.[5] Spanish Sahara (Western Sahara) was included in the United Nations list of non-self-governing territories to be decolonized in 1963. Around this time, organized mass movements for Saharawi independence emerged, the first of which was the Vanguard Organization for the Liberation of the Sahara, which was formed in 1968 by Mohamed Sidi Brahim Bassiri. Later, after Spain disappeared Bassiri[6], a group of young students and members of the Vanguard Organization formed the Popular Front for the Liberation of Saguia El Hamra and Río de Oro (POLISARIO) in 1973. In the same year, they launched an armed struggle against the Spanish.[7]

Since its independence in 1956, and with expansionist ambitions, the Moroccan regime has expressed its dream of a 'Greater Morocco', which would encompass Western Sahara, Mauritania and parts of Algeria and Mali.[8] Thus, when Spain signalled its plan to hold a self-determination referendum for Saharawis in 1974, Morocco and Mauritania again expressed their own cases for territorial sovereignty over Western Sahara. The two states' claims – that ahead of Spain's colonization, Western Sahara had belonged to Greater Morocco and Greater Mauritania – were heard by the International Court of Justice. The latter rejected these claims in an advisory opinion and urged the application of United Nations Resolution 1514 (XV), allowing for the self-determination of Indigenous Saharawis.[9] Spain, however, signed an illegal tripartite agreement with Morocco and Mauritania, which divided Western Sahara between the two African countries and gave Spain a 35 per cent share of profits from Western Sahara's phosphates reserves, as well as continued access to Western Sahara's fisheries.[10]

In October 1975, Morocco and Mauritania invaded Western Sahara.[11] Tens of thousands of Saharawis fled to refugee camps in neighbouring Algeria, some of them being bombed with napalm en route.[12] In 1976, POLISARIO, based in the camps, declared the establishment of the Saharawi Arab Democratic Republic (SADR) in exile. This would be the headquarters of POLISARIO's armed struggle against Morocco and Mauritania until a United Nations-brokered ceasefire in 1991, which was agreed based on the promise that a self-determination referendum on independence for the Saharawis would be held. This referendum never took place, resulting in a stagnant diplomatic process that stretched on until November 2020 (see below).

Mauritania withdrew from the war in 1979, when it signed a peace treaty with POLISARIO. Morocco, on the other hand, remains the occupying power of Western Sahara. The United Nations General Assembly has 'urge[d] Morocco to join in the peace process and terminate the occupation of the territory of Western Sahara'.[13] POLISARIO currently controls approximately a quarter of the territory of Western Sahara, lying eastwards of the Moroccan-built berm, which is considered the 'largest functional military barrier in the world'.[14]

Today, some 180,000 Sahrawi refugees live on international humanitarian aid in the refugee camps in Algeria, while Morocco continues to pursue settler colonial policies in occupied Western Sahara. Such policies range from forced disappearance and the torture of prisoners of conscience[15] to moving a sizeable Moroccan settler

population into the territory (there is no reliable data on the exact proportion of settlers to Indigenous Saharawis, but the consensus is that the former today greatly outnumber the latter), as well as cultural appropriation.[16]

The United Nations-brokered ceasefire between POLISARIO and Morocco which began in 1991 lasted for 29 years but ended on 13 November 2020 after a violent incident. Saharawi civilians had mounted a roadblock at a breach in the military wall near the village of Guerguerat, which is located by the Mauritanian border in a demilitarized buffer zone. Abdelhay Larachi, a Saharawi who helped mount the roadblock, explained: 'our purpose was to close down the illegal breach at Guerguerat […][it's] a gate through which Morocco passes our plundered natural resources to Mauritania and other countries'.[17] Morocco fired on protesters at the site, and POLISARIO, declaring the ceasefire broken, fired back.

It is no coincidence that the new war was provoked by the Saharawi blocking of the so-called 'plunder corridor' at Guerguerat (through which produce from the occupied territory passes on its way to the port of Nouadhibou, from which it is exported globally): extractivism is at the heart of conflict and colonialism in Western Sahara.

Extractivism in occupied Western Sahara

Extractivism is a capitalist mode of accumulation through which some regions, usually in the Global North, extract the natural resources of other regions, primarily for export.[18] Extractivism has characterized Europe's relationship with the Americas, Africa and Asia since the era of conquest and colonization.[19] Today, in North Africa, extractivism continues in a neocolonial guise.[20] Resources that are extracted range from oil and gas, to precious ore, fish and agricultural goods.[21] Tourism and cultural appropriation are today also widely understood as forms of neocolonial extraction, in that Global Southern or Indigenous resources, including intellectual or artistic resources, are exploited for the benefit of Global Northern populations.[22]

In recent years, it has become increasingly clear that renewable energy projects can also perpetuate or strengthen extractivism. For example, the failed Desertec Industrial Initiative, which aimed to meet approximately 20 per cent of Europe's energy needs by 2050 via solar and wind farms built across the Middle East and North Africa, was understood by local activists as a neocolonial capitalist endeavour. Desertec raised concerns about the possible plunder of already scarce water resources, the export of energy to Europe without meeting local energy needs, and the colonial language it used to describe the Sahara desert. The initiative eventually collapsed for financial reasons.[23] Likewise, drawing on research among Indigenous communities in Mexico, Alexander Dunlap describes industrial-scale renewable developments as 'fossil fuel+', on the basis that such large-scale, corporate-led developments renew and expand the exploitative, capitalist, colonial order of the fossil fuel industry.[24] Renewable energy developments in occupied Western Sahara can be understood as extractivist because they further capitalist modes of accumulation, as well as colonialism and military occupation, and because they use resources in ways that do not benefit or recognize the human rights of local communities.

Apart from one privately-owned wind farm that powers a cement factory, wind energy developments in occupied Western Sahara are all part of the portfolio of a wind energy company called Nareva, which belongs to the Moroccan monarchy's own holding company, Al Mada.[25] Nareva has worked in partnership with German multi-national energy company Siemens (and later Spanish Siemens Gamesa) on all the wind farms that it has developed in occupied Western Sahara. The 200 megawatt (MW) Aftissat farm generates power for industrial users, including the Moroccan state-owned company OCP Group (formerly known as Office Chérifien des Phosphates).[26] The 50MW Foum el Oued farm provides 95 per cent of the energy needed for running OCP's phosphates mine at Bou Craa.[27] Several more windfarms are planned for occupied Western Sahara, with a combined capacity of over 1000MW. There are also plans to to expand two existing solar farms in occupied Western Sahara, and to build a third solar farm. Studies exploring the occupied country's geothermal potential are also underway.[28]

While this article focuses on renewable energy developments, it is worth contextualizing such developments within the wider context of extractivism in occupied Western Sahara. Phosphates from the Bou Craa mine are transported around the world for use in agricultural fertilizers.[29] Industrial-sized greenhouses produce fruits and vegetables for the European Union (EU) market, which involves the draining of precious underground wells.[30] Western Sahara's rich fisheries are also exploited by trawlers from several countries and regions, not least the EU and Russia, using practices that are unsustainable.[31] Locally, several fishing licences have been granted to high-profile figures within the Moroccan makhzen (the ruling elite).[32]

Many legal scholars question the legality of such activities, since the resources of an occupied territory cannot legally be exploited without the consent of the people of that territory.[33] In this respect, several international courts have judged claims raised by the government of SADR and by Saharawi solidarity groups.[34]

Powering the occupation: how energy does diplomatic work for the Moroccan regime

Energy developments are used to create new forms of dependency outside Morocco on energy that is at least partially sourced in Western Sahara. This arguably creates a diplomatic incentive for other countries to support the occupation. Western Sahara is connected to Morocco's electricity grid via an interconnection in its capital El Aaiun. A 400 kilovolt (kV) interconnection is now being set up between El Aaiun and Dakhla, a city in the south of Western Sahara:[35] Morocco hopes to connect its grid to the Mauritanian one via Dakhla, with the eventual aim of exporting energy to the West African market.[36] Similarly, at the COP22 climate talks in Marrakech in 2016, Morocco signed a workplan to eventually establish energy exports to the European internal market.[37] These plans and agreements represent serious additional obstacles to the self-determination of the Saharawi people. If these interconnections are established, Morocco could create a partial European and West African dependency on energy generated in Western Sahara.

The Moroccan regime also uses the promise of energy to enhance its 'soft power' referring to the power to persuade or coerce other states to pursue certain policies or take certain actions) on the continent.[38] For instance, the Nigeria-Morocco Gas Pipeline (NMGP) is a planned onshore and offshore project that aims to deliver Nigerian gas to West and North Africa, with the potential to supply Europe. NMGP is a huge energy project that has equally huge political implications: while the Nigerian regime has traditionally been a strong supporter of POLISARIO, its diplomatic stance on the Western Sahara conflict has softened because of this project.[39] This can be seen as a form of energy diplomacy: Morocco implicates powerful actors in the occupation and creates alliances for its colonial project through its planned energy system developments.

It is also possible to read Morocco's renewable energy developments in occupied Western Sahara through the lens of greenwashing. To 'greenwash' is to deceptively promote a product, policy or action as environmentally-friendly. Morocco currently markets itself as '[t]he African leader in the development of renewable energy in Africa'.[40] In doing so, it greenwashes its occupation of Western Sahara. The environmental impact of a huge military deployment, of the wall that bisects the country, of phosphate exploitation and of draining freshwater wells to irrigate industrial-sized greenhouses is hidden behind the Moroccan regime's carefully-curated 'green' image.

Energy developments in occupied Western Sahara simultaneously bolster a false energy 'sovereignty' for Morocco (false because Morocco is not legally the sovereign power of Western Sahara): they make Morocco 'energy independent' from other countries in the region, through the expropriation of Western Sahara's resources. As at autumn 2021, Morocco is allegedly attempting to hasten the NMGP project, due to Algeria's refusal to continue gas cooperation with Morocco, after cutting diplomatic relations with the kingdom, due in no small part to the Western Sahara conflict.[41] Indeed, in a situation in which the kingdom produces only marginal amounts of its own oil and gas, Morocco's renewable energy plans are designed to end its reliance on foreign imports of energy. Western Sahara Resource Watch (WSRW) reports that 'the energy produced from wind in occupied Western Sahara could constitute 47.20 per cent of Morocco's total wind capacity by the year 2030. By that same year, the share of solar power generated in the territory could be between 9.70 per

cent and 32.64 per cent of Morocco's total solar capacity – likely towards the higher end of that range.'[42] Morocco is thus seeking to alleviate the energy supply issues it faces through its colonial exploitation of Western Sahara's resources.

Powering oppression: Saharawi perspectives of the energy system in occupied Western Sahara

The authors gathered data on Saharawi perceptions of the energy system in occupied Western Sahara through participant observation (2015), two focus groups (2019), and 20 in-depth, semi-structured interviews (2019-2020). The research participants, whose names have been changed here, were Saharawis living in occupied El Aaiun or Boujdour, who self-identified as non-activists or as low-profile activists (on the issues of independence, environmentalism and/or human rights).[43] By 'energy system', we refer to energy developments, infrastructure, transmission, use and imaginaries (that is, understandings of energy and the meanings attached to energy in any given community). This covers both fossil fuel-powered systems and renewable ones.

The research participants described power outages as 'frequent' and gave several explanations as to why this was the case. Dadi said: '[a black out] happens for political reasons, for example because of late-night demonstrations'.[44] Similarly, Hartan explained: 'when there is a homecoming of Saharawi political detainees, Moroccan occupying authorities intentionally cut [the power] off in order to screw up the event … I was personally able to see the suffering of media activists and this was when we were trapped during popular demonstrations in conjunction with UN envoy Christopher Ross' visit to occupied El Aaiun … I noticed how their camera batteries had run out so they couldn't monitor the violations…'.[45] Mahmoud reported: '[the energy providers] say [power outages] are due to problems in the grid, but we know that they sometimes cut the power on purpose when they want to bring secret things to the city, or when the young people protest in the streets'.[46] As for the 'secret things' mentioned by Mahmoud, Fadel reported: 'sometimes they cut [the power] if they bring more soldiers and arms from the airport to the desert, to the berm, they don't want people or activists to know how many arms, tanks, and soldiers are entering'.[47]

Who is the 'they' referred to by Fadel? Is it both the energy provider and the Moroccan state? Or just the latter? The need to ask this question reflects the frequent conflation of the two – energy providers and the Moroccan state – by the research participants. Such a conflation is common in (neo)colonial contexts and has wide implications for how states are viewed by their citizens. As Idalina Baptista argues, when service providers are perceived as closely associated with a state, the provider–customer relationship becomes understood as a proxy for the state–society relationship.[48] Similarly, Charlotte Lemanski argues that a people's access to public infrastructure shapes their identity as citizens, and their relationship to the state.[49] In Western Sahara, the research participants' experiences of the energy systems deepened the antagonism they felt towards the Moroccan state.

The research participants felt that districts with higher proportions of ethnic Saharawis, such as Maatalla district in El Aaiun city, were prone to more power outages. Some participants were also keen to highlight that the same was true for running water. For example, 31-year-old Ali told us: 'these cuts are usual in Maatalla and the other Saharawi suburbs but you can bet the settlers still have their showers'.[50] He understood infrastructure – both water and energy in this case – as a tool that is wielded by the colonizer in order to differentiate the settlers from the natives. As in other colonial situations, historic and actual, energy infrastructure mediates ethnic segregation.[51] The gendered dimensions of power outages should also be taken into account. In Saharawi society, the burden (or pleasure) of childcare and looking after the home falls disproportionately on women and girls. The impact of domestic power outages is therefore gendered. In Mahmoud's words, '[a]s a nomad [a power cut] doesn't affect me, I'm familiar with it. But sometimes we are really in need of electricity, and my wife and kids especially'.[52]

All research participants that were connected to the grid felt that their energy bills were 'expensive', and in most cases the expense caused significant anxiety. Salka told the authors that she spent over half of her monthly income on energy bills.[53] The research participants also reported that there were several families,

especially in the slums of east El Aaiun, who had no electricity at all. Zrug's words are worth quoting extensively, as they reveal the sense of injustice linked to the expensive nature of energy, the importance of popular sovereignty over energy resources, and the wider political issue of natural resource exploitation:

'We are in 2019 and in a few days, we will be in 2020. I know many who do not have electricity at home. A lot of companies have launched big projects of energy power and, not far from these projects, people in El Aaiun are living without electricity … There was a protest in Al Matar neighbourhood concerning the energy and water outages … Wind farms and so on are making the poor poorer and the rich richer. Green energy is being exported out of Western Sahara to other places in Africa and elsewhere. Although this is illegal because it is done by the Moroccan occupation, I feel proud as many elsewhere will be able to use electricity for lighting and other activities. They need electricity, just as I do. I am in favour of benefits for people everywhere and I can compromise my rights for them to produce light for poor people, but under one condition: it has to be for free and not for sale.'[54]

Several participants said that energy providers had mischarged them. For example, Mahmoud stated: 'they sometimes send us invoices with the wrong amounts. In our house we haven't a lot of machines, so we know how much energy we use'.[55] Such mistrust of providers among the research participants was also reflected in the latter's perceptions of who manages and owns energy in occupied Western Sahara. Nguia understood the energy developers to be 'foreign companies' with 'no humanity'.[56] She stated: 'the occupying power is letting other countries invest here as a way of getting them to recognize Moroccan sovereignty over Western Sahara'.[57] Dadi commented: 'these companies contribute to Moroccan colonization and endlessly support its presence'.[58] Salka reported: 'all profits go to the Moroccan occupation and foreign companies'.[59]

All of the research participants voiced a desire to (further) protest energy developments, but some were too scared to act on this desire. Those that had attended protests against energy developments in the past reported that they had been beaten by police, and/or had suffered other forms of retribution, including having their social security benefits and/or employment terminated, and/or receiving threats to their relatives and travel bans. While Saharawi-led non-governmental organizations (NGOs) are mostly prohibited from officially registering their existence in occupied Western Sahara, there are two unregistered Saharawi NGOs that have focused their work on campaigning against the exploitation of Western Sahara's natural resources, including in the realm of energy. One is the Saharawi League for Human Rights and Natural Resources, led by Sultana Khaya; the other is the Committee for the Protection of Natural Resources in Western Sahara (CSPRON), whose President is Sidahmed Lemjeyid. Both individuals have suffered serious human rights abuses at the hands of the Moroccan state due to their work: Lemjeyid is currently serving a life sentence in a Moroccan prison[60], while Khaya is currently under house arrest, having also lost an eye during police torture.[61] Police have recently attempted to rape her; they also raped her sister in the Khaya family home, in retribution for Sultana's activism.[62] This follows a wider, entrenched pattern of gendered repercussions against Saharawi activists: the Moroccan state has used gendered forms of torture against Saharawi political prisoners since 1975, including sexual assault, sexual humiliation and forced sex between prisoners.[63] The energy system in occupied Western Sahara is thus clearly linked to grave and gendered human rights abuses.

What would a Saharawi-led 'just transition' look like? Inspiration and questions from the camps

High-level debates on the future of energy systems often fail to engage with Indigenous voices.[64] In this section, the authors wish to highlight a handful of Saharawi initiatives that illuminate what a Saharawi just transition might look like. These include low-tech hydroponics for sustainable food production, homes made from re-used plastic, and plans for future renewable-powered towns in a free Western Sahara. Nevertheless, we must be aware that such 'good practice' cases from the camps are not in themselves a guarantee that the government of an independent Western Sahara would realize a truly just transition in the event of decolonization. Although self-determination is, as we have seen in the previous section, a fundamental component of a Saharawi just transition, it would not guarantee a just transition in and of itself. In this section, then, the authors therefore also wish to highlight questions that would need to be addressed in a future independent Western Sahara in order to ensure a transition away from extractivism towards a just, equitable and regenerative system.

Engineer Taleb Brahim has developed innovative low-tech hydroponics to allow refugee-citizens to grow their own fruits and vegetables, and fodder for their animals. Hydroponics is a type of horticulture that involves growing plants without soil. 'Low-tech' here refers to technologies that, according to Brahim, refugee-citizens have access to and can afford. This method is designed to be accessible to all, so that even the poorest families can reasonably have access to self-produced, healthy, nutritious food. The hydroponic units recycle water and use naturally-produced fertilizers. As Brahim points out: 'if you insist that pesticides and artificial fertilizers are necessary for agriculture, then you will rely on multinationals'.[65] Brahim explained that he is driven by an ethic of 'sustainability, self-sufficiency and independence for Saharawis'.[66] According to Brahim, as far as he knows he is the first person globally to have developed low-tech hydroponics in conditions that are widely considered to be 'extreme' in terms of climate and availability of resources. The World Food Programme is now trialling his model in seven other countries with refugee populations, and 1,200 Saharawis in the camps have received the training necessary to allow them to replicate his innovation.[67]

Engineer Tateh Lehbib has created a new construction method that leads to lower household temperatures and higher resistance to winds and floods (traditional houses are made using adobe, which crumbles in the rain). His method relies on cheap materials – recycled water bottles – and can be easily replicated by anyone. The curved dome shape of these buildings keeps interior temperatures lower than in traditional square homes. Especially vulnerable refugees, including the elderly and those with long-term health conditions, have been the first to benefit from Lehbib's new form of housing.[68]

While Brahim and Lehbib have spearheaded innovations that make life in the camps more sustainable, comfortable and healthy, other refugee-citizens are looking to the future of the POLISARIO-controlled zone of Western Sahara. Architect and engineer Hartan Mohammed Salem Bechri has designed a future sustainable city, or, as he calls it, a 'durable, permanent habitat' for humans and their non-human companions (camels and goats), with the POLISARIO-controlled zone in mind. His design includes areas to house sedentary citizens, as well as zones with amenities for visiting nomads and non-human animals. The city would be run fully on renewable energy.[69]

Bechri, Lehbib and Brahim's innovations speak to a just transition in several ways. A just transition requires an equitable redistribution of resources.[70] Lehbib and Brahim's innovations reveal a concern for affordability and self-sufficiency. The two engineers have developed ways to ensure the poorest families have access to shelter and healthy food, without reliance on multinationals for raw materials, with their innovations aiming to be economically sustainable (for the families themselves) and environmentally sustainable. Lehbib's designs, although they are just plans at this stage, take into account more than just humans in his vision for a Saharawi future in an independent Western Sahara. Most frameworks for a just transition emphasize the importance of caring for 'more-than-human nature', as well as for human communities. In the Saharawi case, this is in line with nomadic traditions. Traditional ecologically-aware and environmentally-conscious Saharawi practices have been documented back to the eighteenth century at least,[71] while the traditional centrality of, and care for, camels is also well-evidenced.[72] SADR's forthcoming indicative Nationally Determined Contribution (NDC) to the Paris Climate Agreements further illustrates its government's intention to contribute to wider, global conversations on addressing the climate crisis and to sustaining these traditional ecologically-aware practices.[73]

More immediately, SADR's Energy Department has plans for rolling out renewable energy in the area of Western Sahara controlled by SADR. The roll-out would incentivize a return of refugees to Western Sahara. The Department has carried out a scoping study and is looking for funding to pilot some recommendations of the study, which calculates the solar and wind infrastructure that would be needed to power essential public infrastructure, such as hospitals, and takes stock of existing infrastructure, such as communal wells, currently powered by wind turbines, which are used by nomads. The study also looks at options for residential energy. Electrical engineer and co-author of the scoping study, Daddy Mohammed Ali, together with his team, has discussed the option of large-scale solar farms. However, they wonder if such a model would be 'adaptable enough' for nomadic lifestyles. The team has therefore scoped the possibility of providing every Saharawi family with its own portable, independent solar technology. Mohammed Ali explains: 'We find that families in

the liberated zone often travel, so it's good if they have their independent panel, that they can transport, have their own independent network if you like'.[74] Such concern for sustaining non-sedentary lifestyles would be a vital part of a Saharawi just transition, ensuring inclusionary spaces for nomadic practices.

The recent plans for a renewable future set out by the SADR government's Energy Department depart drastically from older plans by the government's Petroleum and Mines Authority (the PMA). Through licensing rounds that began in 2005, SADR entered into assurance agreements with four international companies over oil exploration rights in a future independent Western Sahara.[75] The PMA claims to have consulted extensively with civil society ahead of launching its licensing round;[76] however, research among Saharawi youth activists found both civil society groups that were supportive of such agreements (on the basis that they challenged Morocco's efforts to exploit petroleum) and those that were critical of such plans on the basis that solar energy is far preferable for environmental reasons.[77] This raises the question of popular sovereignty – integral to any just transition – and how energy-related decisions would be made in a free Western Sahara. Would oil be exploited despite the climate crisis and its disproportionate impact on communities living in hot climates like the Saharawis? Would existing wind and solar farms in occupied Western Sahara be nationalized? A just transition, as well as moving away from fossil fuels extraction, requires democratic, participative decision-making over, and equitable benefit from, energy resources.

On the other hand, there are reassuring aspects in the SADR government's existing energy policy in the camps. For example, when limited opportunities for solar-powered electricity arrived in the camps in the late 1980s (largely via funding from Swiss and Spanish NGOs), the government prioritized three public institutions for electrification: hospitals and pharmacies, primary schools, and women's education and training centres.[78] Arguably, such prioritization reflects SADR's professed dedication to gender equality.[79] As the authors have argued in the previous section, the current energy model in occupied Western Sahara has disproportionately negative impacts on women and girls, due to the frequent power outages and the gendered oppression of those who oppose the extractivist energy model. A Saharawi just transition, as in other contexts, should therefore by a feminist one.[80]

Conclusion

The energy system in occupied Western Sahara physically connects Morocco and Western Sahara through transmission lines and cables. As well as providing Morocco with opportunities to greenwash its occupation, Morocco's renewable energy developments in occupied Western Sahara provide it with a false energy 'sovereignty', which decreases its energy dependency on neighbours such as Algeria. Furthermore, these developments are used to create new forms of dependency outside Morocco on energy that is at least partially sourced in Western Sahara. These energy developments arguably create a diplomatic incentive for other countries to support the occupation.

For Saharawis, the present energy system in occupied Western Sahara is an oppressive, colonial tool. For Saharawis living in the occupied territory, energy justice is inextricably linked with independence and decolonization. This is also true of Saharawis living in the state-in-exile and refugee camps in Algeria, where innovations based on sustainability, self-sufficiency and self-determination have been trialled. Nevertheless, questions over energy policy in a future free and independent Western Sahara remain. While an end to the Moroccan occupation and full decolonization are integral to a Saharawi just transition, the SADR government's ability to ensure popular sovereignty over Western Sahara's energy resources will also be of fundamental importance.

ABOUT THE AUTHORS

Joanna Allan is an academic in the department of Geography and Environmental Sciences at Northumbria University. She is also an activist with Western Sahara Campaign UK and Western Sahara Resource Watch.

Mahmoud Lemaadel is an independent researcher and media activist. He is also the co-founder of the local media and human rights platform; Nushatta Foundation for Media and Human Rights that operates in the Moroccan-occupied Western Sahara and the Sahrawi refugee camps in south-west of Algeria.

Hamza Lakhal is a PHD student in Anthropology at Durham University. He is a Sahrawi poet and pro-Western Sahara independence activist.

Notes

Notes

[1] Aly, B. (10 January 2019) '5 key security challenges for North Africa in 2019'. *Africa Portal*. Available at: https://www.africaportal.org/features/5-key-security-challenges-north-africa-2019/# (retrieved 28 September 2021).

[2] We use the Climate Justice Alliance's definition of a 'just transition'. See https://climatejusticealliance.org/just-transition/ [retrieved 30 September 2021].

[3] See for example a recent article published by the International Renewable Energy Agency (IRENA), which characterizes Morocco as a 'pioneer' in the green energy transition: IRENA (2021) 'Morocco and IRENA partner to boost renewables and green hydrogen development'. Available at: https://www.irena.org/newsroom/pressreleases/2021/Jun/Morocco-and-IRENA-Partner-to-Boost-Renewables-and-Green-Hydrogen-Development [retrieved 30 September 2021].

[4] For more on the Spanish history of resource exploitation in Western Sahara, see Martínez-Milán, J. (2017) 'La larga puesta en escena de los fosfatos del Sahara Occidental, 1947–1969', *Revista de historia industrial* 26 (69): 177–205.

[5] United Nations General Assembly, *Declaration on the Granting of Independence to Colonial Countries and Peoples*, 14 December 1960, A/RES/1514(XV), available at: https://www.refworld.org/docid/3b00f06e2f.html [retrieved 28 September 2021].

[6] Hodges, T. (1983) 'The origins of Saharawi nationalism', *Third World Quarterly* 5: 28–57. p. 49.

[7] For more on the history of Saharawi nationalism see San Martín, P. (2010) *Western Sahara: The refugee nation*. Cardiff: University of Wales Press.

[8] San Martin (2010) *Western Sahara*. p. 66.

[9] International Court of Justice (1975) *Western Sahara: Advisory opinion of 16 October 1975*. Available at https://www.icj-cij.org/en/case/61 [retrieved 30 September 2021].

[10] For more on the Tripartite Agreement, see Chapter 1 of Zunes, S. and Mundy, J. (2010) *Western Sahara: War, nationalism and conflict irresolution*. New York: Syracuse University Press.

[11] Hassan II's so-called 'Green March', in which some 350,000 Moroccan citizens descended on Spanish Sahara armed only with Qurans, is often described as 'peaceful'. Nevertheless, Moroccan troops had been crossing into Spanish Sahara since the preceding summer, and by October 1975 Morocco had launched a 'full-scale military invasion that involved several thousand regular troops'(San Martin 2010: 104). As Stephen Zunes and Jacob Mundy note, several reputable human rights groups published detailed accounts of extensive attacks against civilian populations and systematic violations of the Geneva Conventions and other laws of war (Zunes and Mundy 2010: 114).

[12] The Moroccan air force bombed civilian refugee encampments at Guelta Zemmour and Um Draiga (both in Western Sahara) in February 1976, using napalm on four known occasions (Zunes and Munday 2010: 114).

[13] See United Nations General Assembly, *Question of Western Sahara.*, 21 November 1979, A/RES/34/37. Available at: https://www.refworld.org/docid/3b00f1aa8.html [retrieved 29 September 2021]. The vast majority of legal scholars working on the case of Western Sahara also understand Morocco to be the 'occupying power'. See Allan, J. and Ojeda, R. (2021) 'Natural resource exploitation in Western

Sahara: new research directions', *Journal of North African Studies*. pp. 4–13. Print issue forthcoming. Published online at: https://www.tandfonline.com/doi/full/10.1080/13629387.2021.1917120 [retrieved 24 September 2021].

[14] Jensen, G., and Lovelace, D. C. (2013) *War and Insurgency in the Western Sahara*. Strategic Studies Institute and U.S. Army War College. p. 10.

[15] See especially Amnesty International (1996) 'Human rights violations in Western Sahara', MDE/29/04/96. Available at https://www.amnesty.org/en/documents/MDE29/004/1996/en/ [retrieved 30 September 2021].

[16] Cornell Law School and Université de Caen Basse-Normandie (2015) 'Report on the Kingdom of Morocco's violations of the International Covenant on Economic Social and Cultural Rights in the Western Sahara'. Available at: https://tbinternet.ohchr.org/Treaties/CESCR/Shared%20Documents/MAR/INT_CESCR_CSS_MAR_21582_E.pdf [retrieved October 2021].

[17] Telephone interview with Abdelhay Larachi, 19 November 2020.

[18] Acosta, A. (2013) 'Extractivism and neoextractivism: two sides of the same curse', in M. Lang and D. Mokrani (eds.) *Beyond Development: Alternative visions from Latin America*. Quito and Amsterdam: Rosa Luxemburg Foundation and Transnational Institute. p. 62.

[19] *Ibid.* p. 62

[20] Hamouchene, H. (2019). 'Extractivism and resistance in North Africa'. Amsterdam: Transnational Institute.

[21] *Ibid*. p. 4.

[22] On tourism see Hamouchene (2019: 4). On cultural appropriation, see Juhn, S. and Ratté, E. (2018) 'Intellectual extractivism: The dispossession of Maya weaving'. *Intercontinental Cry*. Available at: https://intercontinentalcry.org/intellectual-extractivism-the-dispossession-of-maya-weaving/

[23] Hamouchene, H. (2015) 'Desertec: The renewable energy grab?' *New Internationalist*. Available at: https://newint.org/features/2015/03/01/desertec-long [retrieved 21 September 2021].

[24] Dunlap, A. (2019) *Renewing Destruction: Wind energy development, conflict, and resistance in a Latin American context*. London: Rowman and Littlefield.

[25] For more on the links between the Moroccan royal family and energy developments in occupied Western Sahara, see WSRW (2021) 'Greenwashing the occupation: How Morocco's renewable energy projects in Western Sahara prolong the conflict over the last colony in Africa'. Brussels: WSRW. p. 25. Available at https://vest-sahara.s3.amazonaws.com/wsrw/feature-images/File/405/616014d0c1f1d_Greenwashing-occupation_web.pdf [retrieved 12 October 2021].

[26] WSRW (2020) 'Dirty green energy on occupied land'. Available at: https://wsrw.org/en/news/renewable-energy [retrieved 22 September 2021].

[27] *Ibid.*

[28] WSRW (2020) 'Dirty green energy on occupied land'. For the most recent, detailed information on renewable energy developments in occupied Western Sahara, see WSRW (2021), Greenwashing occupation: how Morocco's renewable energy projects in Western Sahara prolong the conflict over the last colony in Africa'. Brussels: WSRW. Available at https://wsrw.org/en/news/report-morocco-uses-green-energy-to-embellish-its-occupation [retrieved 12 October 2021].

[29] WSRW (2021) 'P for plunder: Morocco's exports of phosphates from occupied Western Sahara'. Brussels: WSRW. Available at: https://vest-sahara.s3.amazonaws.com/wsrw/feature-images/File/157/6081d8e0f3bcb_Pforplunder2021_Web.pdf [retrieved 23 September 2021].

[30] WSRW (2012) ‘Label and liability’. Stockholm: WSRW and Emmaus Stockholm. Available at: https://wsrw.org/files/dated/2012-06-17/wsrw_labelliability_2012.pdf [retrieved 23 September 2021].

[31] Saharawi Campaign Against the Plunder (SCAP) (2013) ‘Saharawis: Poor people in a rich country’. Tindouf: SCAP. Available at: http://www.hlrn.org/img/documents/snrw_report_eng2013.pdf [retrieved 23 September 2021].

[32] Observatorio de Derechos Humanos y Empresas en el Mediterráneo (ODHE) (2019) ‘Los tentáculos de la ocupación’. Barcelona: ODHE. Available at: http://www.odhe.cat/es/los-tentaculos-de-la-ocupacion/ [retrieved 23 September 2021].

[33] See the legal section within Allan and Ojeda (2021) ‘Natural resource exploitation in Western Sahara’.

[34] Allan and Ojeda (2021) ‘Natural resource exploitation in Western Sahara’.

[35] RES4MED (2018) ‘Country Profile: Morocco 2018’. Renewable Energy Solutions for the Mediterranean and Africa. p. 4. Available at: https://www.res4med.org/wp-content/uploads/2018/06/Country-profile-Marocco-2.pdf (retrieved 4 October 2021).

[36] Office National de l’Electricité et de l’Eau Potable (2016) ‘ONEE au Maroc et en Afrique: Activité électricité’. Available at: http://www.one.org.ma/FR/pdf/Brochure_ONEE_Africa_VF_COP22_V2.pdf (retrieved 4 October 2021).

[37] Germany, France, Spain, Portugal and Morocco (2016). Joint declaration on the establishment of a roadmap for sustainable electricity trade between Morocco and the European internal energy market. Available at: https://ec.europa.eu/energy/sites/ener/files/documents/2016_11_13_set_roadmap_joint_declaration-vf.pdf (retrieved 2 November 2021).

[38] Bennis, A. (2019) ‘Morocco’s contemporary diplomacy as a middle power’, *Journal of International Affairs.* Available at: https://jia.sipa.columbia.edu/online-articles/moroccos-contemporary-diplomacy-middle-power (retrieved 4 October 2021); North Africa Post (2019) ‘Morocco reaps diplomatic gains of soft power in Africa’. Available at: https://northafricapost.com/29771-morocco-reaps-diplomatic-gains-of-soft-power-in-africa.html (retrieved 4 October 2021).

[39] North Africa Post (2019) ‘Morocco reaps diplomatic gains of soft power in Africa’.

[40] Ngounou, B. (20 December 2018) ‘Morocco: Sharing experience in renewable energy with Africa’. *Afrik 21.* Available at: https://www.afrik21.africa/en/morocco-sharing-experience-in-renewable-energy-with-africa/ (retrieved 4 October 2021).

[41] Ediallo, P. (5 September 2021). ‘Morocco-Algeria dispute: a challenge for the kingdom’s energy supply’. *Africa Logistics Magazine*. Available at: https://www.africalogisticsmagazine.com/?q=en/content/morocco-algeria-dispute-challenge-kingdoms-gas-supply [retrieved 4 October 2021]; Zoubir, Y. (12 September 2021) ‘Why Algeria cut diplomatic ties with Morocco: and implications for the future’. *The Conversation*. Available at: https://theconversation.com/why-algeria-cut-diplomatic-ties-with-morocco-and-implications-for-the-future-167313 [retrieved 4 October 2021].

[42] WSRW (2021) ‘Greenwashing Occupation.’p. 3.

[43] The detailed results of this fieldwork have been published in Allan, J., Lemaadel, M., and Lakhal, H. (2021) ‘Oppressive energopolitics in Africa’s last colony: energy, subjectivities, and resistance’. *Antipode*. Published online (print version forthcoming). Available at: https://onlinelibrary.wiley.com/doi/full/10.1111/anti.12765 [retrieved 26 September 2021].

[44] Dadi, quoted in Allan *et al*. (2021) ‘Oppressive energopolitics’.

[45] Hartan, quoted in Allan *et al*. (2021) ‘Oppressive energopolitics’.

[46] Mahmoud, quoted in Allan *et al*. (2021) 'Oppressive energopolitics'.

[47] Fadel, quoted in Allan *et al*. (2021) 'Oppressive energopolitics'.

[48] Baptista, I. (2016) 'Maputo: Fluid flows of power and electricity – prepayment as mediator of state-society relationships', in A. Luque-Ayala and J. Silver (eds.) *Energy, Power, and Protest on the Urban Grid: Geographies of the electric city*. London: Routledge. pp. 112– 132.

[49] Lemanski, C. (2020) 'Infrastructural citizenship: the everyday citizenships of adapting and/or destroying public infrastructure in Cape Town, South Africa', *Transactions of the British Institute of Geographers* 45(3): 589–605.

[50] Ali, quoted in Allan *et al*. (2021) 'Oppressive energopolitics'.

[51] For example, on the use of electrical infrastructure to institutionalize white supremacy in the North American southern states, see Harrison, C. (2016) 'The American South: electricity and race in Rocky Mount, North Carolina, 1900–1935', in A. Luque-Ayala and J. Silver (eds.) *Energy, Power, and Protest on the Urban Grid: geographies of the electric city.* London: Routledge. pp. 21– 44. Or, on race-based unequal access to energy in Europe's colonies, see Baptista (2016) 'Maputo: Fluid flows of power and electricity'.

[52] Interview with Mahmoud (pseudonym), El Aaiun, occupied Western Sahara, 27 May 2019.

[53] Salka quoted in Allan *et al*. (2021) 'Oppressive energopolitics'.

[54] Zrug quoted in Allan *et al*. (2021) 'Oppressive energopolitics'.

[55] Mahmoud quoted in Allan *et al*. (2021) 'Oppressive energopolitics'.

[56] Nguia quoted in Allan *et al*. (2021) 'Oppressive energopolitics'.

[57] Nguia quoted in Allan *et al*. (2021) 'Oppressive energopolitics'.

[58] Dadi quoted in Allan *et al*. (2021) 'Oppressive energopolitics'.

[59] Salka quoted in Allan *et al*. (2021) 'Oppressive energopolitics'.

[60] For more on Lemjeyid's case, see Moe, T. S. (2017) 'Observer report: the 2017 trial against political prisoners from Western Sahara'. Available at: https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3050803 (retrieved 28 June 2021).

[61] Allan, J. (2016) 'Natural resources and intifada: oil, phosphates, and resistance to colonialism in Western Sahara', *Journal of North African Studies* 21(4): 645– 666 (p. 656).

[62] Amnesty International (2021) 'Saharawi activist at risk of further assault', MDE 29/4198/2021. Available at: https://www.amnesty.org/en/wp-content/uploads/2021/05/MDE2941982021ENGLISH.pdf [retrieved 12 October 2021].

[63] See Chapter 5 in Allan, J. (2019). Silenced resistance: women, dictatorships, and genderwashing in Western Sahara and Equatorial Guinea. Madison: Wisconsin University Press.

[64] Loloum, T., Abram, S. and Ortar, N. (2021) 'Politicising energy anthropology', in T. Loloum, S. Abram and N. Ortar (eds.) *Ethnographies of Power: a political anthropology of energy.* New York: Berghahn. pp. 1–23.

[65] Interview with Taleb Brahim, Smara camp, 11 October 2019.

[66] *Ibid.*

[67] *Ibid.*

[68] *Ibid.*

[69] Bechri, H.M.S. (2017) *Towards a Nature-Friendly Durable Permanent Habitat in Western Sahara*. Master's dissertation, Hadj Lakhdar University; Joanna Allan interview with Harten Mohammed Salem Bechri, Aaiun camp, 15 October 2019.

[70] We use the Climate Justice Alliance's definition of a just transition. See: https://climatejusticealliance.org/just-transition/ [retrieved 30 September 2021].

[71] The oldest written documentation that the authors have found is Saugnier, F. and Brisson, P. (1792) *Voyages to the Coast of Africa by Mess. Saugnier and Brisson, Containing an Account of their Shipwreck on Board Different Vessels, and Subsequent Slavery, and Interesting Details of the Manners of the Arabs of the Desert*. London: G.G.J. and J. Robinson. p. 35. Shipwrecked Mr Saugnier, 'abducted' at Boujdour (modern day Western Sahara) by 'wandering Arabs', marvels at the Saharawis' ecologically-aware practices, such as their insistence on only using dead wood for kindling and never any live shrubs.

[72] See for example Volpato, G. and Howard, P. (2014) 'The material and cultural recovery of camels and camel husbandry among Sahrawi refugees of Western Sahara', *Pastoralism* 4(7). Available at: https://pastoralismjournal.springeropen.com/articles/10.1186/s13570-014-0007-4 [retrieved 13 October 2021].

[73] This is expected to be launched at COP26, November 2021.

[74] Interview with Daddy Mohammed Ali, 9 October 2019.

[75] Kamal, F. (2015) 'The role of natural resources in the building of an independent Western Sahara', *Global Change, Peace & Security* 27(3): 345–359.

[76] Irwin, R. (2019) *Derivative States: Property rights and claims-making in a non-self-governing territory.* Thesis, Doctor of Philosophy, the New School for Social Research. p. 79.

[77] *Ibid*. p. 79.

[78] Focus group with director and several civil servants of the SADR Energy Department, Rabouni camp, Tindouf, 7 October 2019.

[79] For more on official Saharawi nationalist discourses on gender equality, see Allan, J. (2010) 'Imagining Saharawi women: the question of gender in POLISARIO discourse', *Journal of North African Studies* 15(2): 189–202.

[80] For more on the need for a just transition to be feminist, see Steinfort, L. (2018) 'Ecofeminism: fueling the journey to energy democracy'. Available at: https://www.tni.org/en/article/ecofeminism-fueling-the-journey-to-energy-democracy [retrieved13 October 2021].