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Climate justice in transforming land-use systems for food and renewable energy

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Abstract

With the growing global awareness of the climate crisis and the need for transition to renewable energy, governments and investors – including many in Europe – have recognised that the tropical drylands are highly suitable for generating wind and solar power. Many project planners regard these areas as "empty wastelands", reflecting a prejudice since colonial times that the drylands are marginal to the economy. Yet these areas are important livelihood assets for diverse groups of pastoralists, hunter-gatherers and crop farmers who have long used the land as a common pool resource to produce and/or harvest food for their families and the market. Large-scale land acquisition for energy projects is expanding in the rush to produce not only wind and solar power but also green hydrogen – a trend that intensified with the war in Ukraine.

The energy projects in the drylands are displacing local people from their land, disadvantaging particularly pastoralists by blocking access to pastures and hindering movement between them. This reduces pastoralists' ability to be resilient to climate change through herd mobility. Because most governments do not recognise communal tenure as a legitimate form of land ownership, the local landusers' rights are ignored during project planning, They are not sufficiently informed about the plans and cannot defend their rights or negotiate adequate compensation. They did not cause the energy crisis but they – and their food systems – have fallen victim to climate injustice.

This paper focuses on a study of land acquisition in the Kenyan drylands for investment in green energy. The study explored how some pastoralist groups are defending their community rights to their land. It identified the type of research that can help local people gain evidence about the value of their food-production systems and their contribution to the economy and ecosystem services, putting them in a better position to negotiate sharing of the land and the benefits from energy generation. In the necessary transition to renewable energy worldwide, the challenge is to find synergies between producing green energy and producing food to sustain local livelihoods.

Keywords: Drylands, food production, land acquisition, pastoralism, renewable energy

Introduction

With the global climate crisis and urgent need for transition to green energy, there is a rush to acquire land to generate this energy in tropical drylands[†]. Governments and development planners used to regard the drylands as marginal and low-potential areas. Now, the drylands are

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[†] Drylands are characterised by water scarcity; they typically have an Aridity Index below 0.65 and comprise hyper-arid (desert), arid, semi-arid and dry subhumid areas (Davies 2017).

seen as "empty" frontiers for investment in solar- and wind-power generation. The danger, however, is that these investments ignore the local inhabitants, mainly pastoralist livestock keepers who have long used the land as a common pool resource to produce food (milk and meat) for their families and the market and who also have strong cultural and identity links to the land.

The Heinrich Böll Foundation and Bread for the World, two German non-governmental organisations that are investigating the potential impacts of the "green" hydrogen technology on local people, therefore commissioned a desk study into the impact of large-scale renewable-energy (LSRE) projects on pastoralists in drylands (Waters-Bayer & Wario 2022).

The present paper is based on the findings from this study as well as from deeper-going on-the-ground research in Kenya within the project "Just transitions? Pastoralism, energy and net zero" funded by the University of Leicester in the UK. The focus is this paper is on LSRE projects for wind power in Kenya, where the "Just transitions" project allowed the Centre for Research and Development in Drylands (CRDD) to review legal documents related to wind-power projects and to conduct key-informant interviews.

Current trends in energy sector and impact on pastoralists

The desk study outlined the current trends in the energy sector. There is a rapid expansion of solar- and wind-power projects to meet the increasing demand for carbon-free energy. Many countries, including Kenya, target 100% green energy by 2030; Germany targets this for 2035. The German quest for green hydrogen to reduce dependency on fossil fuels was intensified after the war in Ukraine and the associated gas shortages. Among governments and investors in the Global North and the global South, there is an increasing awareness that the drylands – especially in the tropics – are excellent for generating solar and wind power.

The study revealed that, worldwide, most governments, development planners and investors have little understanding of pastoral systems and their value, and they do not recognise the communal land rights systems that are needed for flexible and mobile pastoral use. They have largely ignored the impact of the LSRE projects on pastoralist communities. Large-scale land acquisition in the drylands has dispossessed pastoralists of their traditional grazing areas, reduced herd mobility over diverse landscapes that is essential for sustainable use of the drylands, and blocked access to key seasonal resources for pastoralism – thus making pastoralism less viable.

The local land users were not sufficiently informed about the plans and, in most cases, could not defend their rights or negotiate adequate compensation. They did not cause the energy crisis, but they – and their food systems – have become victims of climate injustice.

Case study in Kenya's drylands

The drylands – known as the arid and semi-arid lands (ASALs) – cover over 80% of Kenya's land surface. These areas support primarily pastoralist livelihoods and some rainfed crop farming. Because of decades of marginalisation of the ASALs, they have low levels of development. More recently, however, road and communication infrastructure has been improved, which has led to increased investment interest. One form of investment is in "green" energy, and large-scale land acquisition has been underway in to set up large-scale projects to generate solar and wind power, also with financial support from Germany and other European countries.

The two largest wind-power projects in Kenya are the Lake Turkana Wind Power (LTWP) project in northern Kenya and the Kipeto Wind Power Project in southern Kenya, both constructed in areas that had been inhabited and used by pastoralists.

Lake Turkana Wind Power (LTWP) project

The LTWP project was sited up on the land of Turkana, Samburu, Rendille and El Molo pastoralists near Masabit in northern Kenya. In 2009, a group of investor acquired 60,700 ha of land from the Kenyan Government on a long-term land lease that had been made – according to local land users – without their knowledge. Construction of the wind turbines began in 2014 and, by 2019, energy from 365 turbines was ready to be fed into the national grid.

The local pastoralist groups became aware of the project in 2014 (when construction began) and tried to resist it. Their main points of contention were:

- Lack of adequate community consultation during the land-acquisition process
- Illegal process of transferring communal land to investors
- No compensation for land lost for pastoral production
- Of 60,700 ha acquired by project, only 16,187 ha are used for turbines; at least the land without turbines should be available for grazing.

Even after completion of the wind park, the communities in the county where it is located did not benefit from connection to the power produced. Most rural households have no access to power and the town centres in the county have only an erratic electricity supply from diesel generators.

The pastoralists felt robbed of the land they and their forebears had used to derive a livelihood from grazing livestock. In 2014, the pastoralist groups brought their case to the district court in Meru. In 2021, after seven years of litigation, the Court ruled that the land-acquisition process had indeed been illegal, but by then the wind park was in full operation. The court recommended that the land acquisition be "regularised" within a period of one year, but the LTWP did not take action. In 2023, the Kenya High Court upheld the 2021 court ruling. The LTWP will either have to return land to the pastoralist communities or find some way to compensate them.

The desk study revealed that most LSRE projects in the drylands have led to similar lose–lose situations. The pastoralist communities suffer because of blocked access to pasture, water and energy (in the form of firewood that they used to collect from the area, yet the local people normally are not given access to the renewable energy generated on their land). The LSRE projects interrupted herd migration routes and generally decreased the resilience of pastoralists to adapt their land-management and grazing systems in the face of climate change. At the same time, the energy companies suffer because of the conflict with local communities, which has led to damaged infrastructure and construction delays, which mean higher costs, also for court cases. In some cases – also in Kenya – the investors have even had to abandon their energy projects (Cormack & Kurewa 2018, Danwatch 2026 – for further references, see the desk-study report).

Kipeto Wind Power (KWP) project

The KWP project was initiated in 1993 to be constructed in an area about 50 km from Nairobi. In this part of Kenya, the land was already owned and managed as group ranches and – in the Kipeto area – the group ranch had been subdivided among the Maasai families in the group. The Maasai demanded compensation for their land and their loss of pastoral livelihood opportunities, should the wind-power project be built. The land in the footprint area of the project is owned by 60 Maasai families, including ten women household heads. After lengthy consultation very costly for the investors, a win–win agreement was finally reached. The 100 MW wind park could be built and it went into operation in 2021 – almost two decades after it started.

The key benefits gained by the Maasai during the negotiations were:

- The pastoralist community members can graze their herds on the wind farm;
- The owners of land where turbines were erected receive annual lease payments plus 1.4% of gross revenue from each turbine;
- 5% revenue share goes to the community through a Community Trust Fund for local projects;
- The KWP provided several Corporate Social Responsibility (CSR) projects for the local community and Kajiado County, such as renovation of the local health clinic (Sena 2017 – for further references, see the desk-study report).

How to facilitate a just transition to green energy in the drylands

Several recommendations came out of the research, directed at different stakeholder groups. The recommendations directed at policymakers, energy companies and investment banks are detailed in the desk-study report and will not be listed here, but the main one is that green energy – also green hydrogen – should be accepted only from projects that meet global human-rights standards.

The recommendations for civil-society organisations and researchers were made with a view to protecting pastoralists' rights and strengthening their position to negotiate with energy projects.

The main recommendations for civil-society organisations are:

- Become aware of existing international standards and codes of business conduct and demand compliance with them;
- Strengthen pastoralists' capacities to know and defend their rights, e.g. in claiming community rights to common land and in accessing legal advice about human rights;
- Facilitate pastoralist involvement in multistakeholder planning for multipurpose land use for energy production, pastoralism and nature conservation.

The main recommendations for researchers are:

- Fill knowledge gaps on the value of pastoral food-production systems and their contribution to the economy and ecosystem services;
- Fill knowledge gaps on the socio-economic consequences of LSRE projects in drylands;
- Conduct participatory action research (PAR) with pastoralists on ways to integrate green energy, grazing & nature conservation.

Participatory research can help local people gain evidence about the value of their food-production systems and their contribution to the economy and ecosystem services, putting them in a better position to negotiate sharing of the land and the benefits from energy generation.

Conclusion

The global energy transition is necessary, and LSRE projects will expand further in the tropical drylands. It is important to seek synergies between producing green energy and producing food to sustain local livelihoods. Win–win situations are possible if pastoralists' voice and agency are strengthened. Only if governments manage the transition to renewable energy in open and inclusive discussion with well-informed pastoralists can a just transition be made.

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References

Cormack Z & Kurewa A. 2018. The changing value of land in Northern Kenya: the case of Lake Turkana Wind Power. Critical African Studies 10(1) (http://dx.doi.org/10.1080/21681392.2018.1470017).

Danwatch. 2016. A people in the way of progress: prostitution, alcoholism and a lawsuit on illegal land acquisition in the Lake Turkana Wind Power project. Copenhagen: Danwatch (https://old.danwatch.dk/en/undersogelse/a-people-in-the-way-of-progress).

Davies J. 2017. The land in drylands: thriving in uncertainty through diversity. UNCCD Working Paper. https://www.unccd.int/sites/default/files/2018-06/15.%20The%2BLand%2Bin%2BDrylands__J_Davies.pdf).

Sena K. 2017. Best practice in community engagement in energy projects: case studies from Kenya, Tanzania and Haiti. New York, NY: American Jewish World Service (https://www.business-humanrights.org/en/latest-news/best-practice-in-community-engagement-in-energy-projects-case-studies-from-kenya-tanzania-haiti).

Waters-Bayer A & Wario HT. 2022. Pastoralism and large-scale REnewable energy and green hydrogen projects: potential & threats. Berlin: Heinrich Böll Foundation / Bread for the World (https://www.boell.de/sites/default/files/2022-05/Pastoralism-and-large-scale-REnewable-energy-and-green-hydrogen-projects.pdf).