

7 Mega-infrastructure projects in drylands

From enchantments to disenchantments

Tobias Haller, Andrea Pase, Jeroen Warner, Nurit Hashimshony-Yaffe, Angela Kronenburg García, and Marina Bertoincin

Introduction

In several dryland areas, especially in the Sahel, people have lost their land since colonial times owing to investments and conservation initiatives (see Chapter 5 on large-scale agrarian investments and Chapter 8 on conservation, this volume). With the planning and realization of mega-infrastructure projects (MIPs), local groups are facing an additional threat of losing their land and land-related resources. However, another dynamic of a different magnitude comes into play: wider planning at a national or international scale is leading to an acceleration of the land rush, driven by persuasive developmentalist arguments. In Kenya and Tanzania, as well as in several dryland areas in Central Asia, new territorial designs combine large-scale infrastructure projects for transport, energy, and agricultural production that will connect Africa and Asia with Europe and the Americas on a much larger scale than ever before. Ports, railways, and highways, as well as pipelines, will reduce time and costs for the transportation of goods, people, and energy around the globe. Linked to these are green old and new energy projects (dams for hydropower, large-scale turbines for wind, and large-scale solar installations), new urban centres, and large-scale green mega-agricultural projects with related infrastructure for sustainable food and energy production and greening of landscapes. Significant examples are the Lamu Port, South Sudan, Ethiopia Transport Corridor (LAPSSET) in Kenya; the Southern Agricultural Growth Corridor of Tanzania (SAGCOT) development areas for so-called ‘sustainable agriculture production’ in Tanzania; the Great Green Wall (GGW) initiative in the Sahel; many new dam projects in drylands; and the Chinese Belt and Road Initiative (BRI) in Central Asia and the Middle East. On the one hand, these plans promise a new level of economic growth and freedom of circulation, said to be in line with the Sustainable Development Goals (SDGs). On the other hand, these mega-plans will lead to an extension of land-rush processes, which outnumber previous land-grabbing operations in terms of scale and size. The increase in the value of the land and resources adjacent to already operative infrastructures, or ones in the planning stages, attracts the interest of powerful economic actors. In

addition, mega-infrastructures come with technological advancements and new 'green development' promises. This green development package hides the *de facto* exclusion of local land and resources owners without creating substantial alternatives for work and livelihoods. We show in seven cases set in African and Central Asian dryland contexts (the Sahel area, Tanzania, Kenya, Morocco, Turkey, and Pakistan) that local users (mainly pastoralists but also fishermen and farmers) do not have only their lands and resources challenged, but also their ways of life: these dynamics cause local political, social, and economic fragmentation and lead to a kind of rural gentrification (exclusion of rural people from land and resources) and the spread of accumulation by dispossession.

Our view on MIPs

As a starting point to theorize MIPs in dryland areas, we critically engage with the notion of frontiers. Frontiers have been described as spaces where the global capitalist system creates and recreates new waves of expansion and accumulation as new resources are (re-)discovered or invented (Rasmussen and Lund 2018). In this process, local conditions are reshuffled and institutional orders reconfigured. While drylands can be seen as new frontiers of investment and MIPs as constitutive of such a process, we propose to move beyond these insights and take a closer institutional and historical look at the land and resource tenure changes, the implications of frontier making for dryland populations, and the differentiated process of attraction of the development discourse that underlies MIPs.

MIPs play a double role in frontier processes. On the one hand, mega-infrastructure investors may be drawn to new areas because resources have been assigned new value owing to changes in relative prices (e.g. wind in northern Kenya; see later in this chapter). On the other hand, infrastructural projects may function as catalysts for new frontiers (e.g. Pacheco 2005), as they make previously inaccessible land and resources accessible and interesting for investment and increase the value of land and land-related resources for other actors. MIPs unfold in areas with a longer history of state building and *de facto* grabbing of land and common-pool resources previously under communal rights, even before the emergence of frontier processes. Frontier-making processes thus do not simply 'reshuffle' local conditions and institutions but, from the point of view of dryland populations, *add* new challenges of legal pluralism to their land and resources and increase the options for institution shopping (Haller 2019).¹

MIPs may lead to 'enchantment' because of the promise of fast transportation, better connectivity between urban and rural areas, and new jobs (Harvey and Knox 2012). At the same time, MIPs act as a 'desiring machine', especially for development (de Vries 2007). For drylands specifically, MIPs' enchantment and desiring machine promise to reduce space in difficult terrain via velocity and connectivity, open up the possibility to explore new resources through the use of new technologies, and render viable what initially looks very unviable. But what happens if these desires and promises are not fulfilled because the more powerful

state and company actors do not behave as planned? Aside from the fact that anticipated benefits at the local level often fail to emerge, previous resource use systems also come under severe stress because MIPs facilitate commons grabbing and restrict access to resources in drylands. Thus, MIPs may also turn out not to be desiring machines. In fact, they may rather be seen as what Ferguson (1994) has called an ‘anti-politics machine’ when he referred to state-enforced development projects as hiding the local power relations that had created the development problems that those projects intended to solve in the first place. MIPs are thus installed with the promise of local development, yet local land and resources are removed without offering real tangible alternatives to most local groups, as these groups do not have the power to define what development means and how costs and benefits should be distributed.

We therefore ask: what is planned and by whom; how is it implemented; and how is it legitimized? Furthermore, we are interested in understanding by whom and based on which interests MIPs are set in motion, how do they change local power constellations regarding land tenure institutions (rules) of use, access and ownership, and visions for development, and how all this is legitimated. Such an analysis also looks at how perceived and real benefits and costs are distributed (impact assessments) and how this leads to differentiated reactions by the actors involved and affected. MIPs often lead to large contrasts between an enchantment discourse and a subsequent disenchantment process when mobility for all, jobs, and connectivity do not materialize, while local resources and land are lost. If local bargaining power is rather weak, subtle local resistance reactions—Scott’s (1985) ‘weapons of the weak’—may manifest. But if local bargaining power increases, a process of dismantling the anti-politics machine and a disenchantment process over time may lead to open resistance and to what could be called ‘politics machines’. We also argue that this is linked to the overall labelling of people in drylands as ‘marginal’, especially in dryland areas perceived as idle, unused lands. This view enables the argument that MIPs bring development to these ‘wastelands’, while making it easier to depict dryland populations as a hindrance to the progress that agricultural, infrastructural, and green energy development brings—while simultaneously denying these populations’ tenure of land and resources. In addition, in these cases that we have selected, governments and investors label MIPs as a form of ‘green development’, and this labelling provides options for a selection of institutions (rules) in an institutional plural setting: governments and investors are able to legitimize MIPs by linking them to the SDGs and Agenda 2030, as well as to green international development programmes (of the EU, World Bank, and others) that demand they implement green policies (Larsen et al. 2022). In this way, institution shopping is possible and legitimates these organizations’ interests with the help of green discourses that legitimate investments. At the same time, this legitimacy acts as an anti-politics machine of green development that hides power asymmetries between governments and investors on the one side and local communities on the other behind green ideologies.

Our present view on dryland MIPs, therefore, benefits from insights from four strands of scholarship:

- New institutionalism as power-sensitive rule-making (North 1990)
- Critical political ecology of development—that is, the political economy of environmental change and dispossession (Bryant and Bailey 1997)
- Lacanian perspectives of desire and enchantment in development (e.g. Lennon 2010)
- Foucauldian accounts of depoliticization in development (Ferguson 1994).

Our view captures MIPs as ‘machines’: desiring machines, anti-politics machines, fundraising and consensus-building machines (see the case of the GGW below), and politics machines. Indeed, the metaphor of ‘machine’ lends itself well to the description of the development ‘apparatus’ (Foucault 1994; Agamben 2009), both in describing the characteristics of development and in showing how it works. MIPs share all these elements: they are hybrids of knowledge, techniques, and objects (Latour 1991); they are complex—they have many components and many cogs that can jam; they require massive infrastructural interventions (Gellert and Lynch 2003); they want to move the future of the intervention area in directions other than the current trajectories (Bauman 2002). ‘Skilled drivers’ are therefore needed to manoeuvre these machines. MIPs deceive and mislead, seduce and betray: they envisage the escape from a gloomy destiny of backwardness and conceal that the lands they cross contain common-pool resources, knowledge, and cultures; and they use many means to persuade (compensation, new infrastructures, and new services—and perhaps corruption) and then often leave little on the ground, which mostly ends up in the hands of the elites. They activate and move flows of people, goods, water, and energy. In the drylands, machines advance over land that is considered ‘empty’ and ‘useless’; they do not ask for permission, except formally, and they flatten what they encounter (Haller 2019). In fact, as they advance, they tear up a delicate web of relationships between actors, resources, and spaces. They become traps that capture resources, people, and knowledge (Bertoncin and Pase 2017), reducing resilience to accelerated environmental and anthropogenic transformations (Eriksen 2016; Haller et al. 2020). These machines rarely deliver on their promises, and enchantment can quickly turn into disenchantment. Disappointment is often proportional to the expectation that had been created.

This chapter looks at the various ways in which MIPs are planned and set up in drylands and the local reactions in response to these initiatives. The next section presents MIP cases related to agriculture and forestry: the GGW in the Sahel (an infrastructure of trees, a ‘wall’ of trees) and the SAGCOT corridor in Tanzania. The subsequent section presents cases related to transport and mobility: LAPSET in Kenya and the China–Pakistan Economic Corridor (CPEC) in Pakistan. Then in the next section, the focus will be on energy infrastructure as a basis for further MIP development: The Turkish Southeast Anatolia Project (Güneydogu Anatolia Projesi, GAP) project, the Noor Solar Energy Project in Morocco, and the Lake Turkana Wind Power (LTWP) project in Kenya. The conclusion will pick up again on the new capitalist frontier discussion and provide a constructivist (enchantment, desiring) and a structural power-specific institutional analysis.

MIPs in agriculture and forestry: dryland imaginaries and realities*The Great Green Wall in the Sahel²*

'There have been ups and downs but the Great Green Wall is part of the solutions to provide a sustainable future for the populations of the Sahel', said Emmanuel Macron on 11 January 2021, on the occasion of the One Planet Summit conference organized by France, the United Nations, and the World Bank in Paris (Le Monde, 12 January 2021). The idea of the GGW was first launched in 2005 by three African heads of state (O. Obasanjo from Nigeria, A. Wade from Senegal, and M. al-Qaddhafi from Libya) and approved by the African Union in 2007. The initial idea was to reforest a belt of 7,000 km long and 15 km wide, from Senegal in Western Africa to Djibouti in the Horn of Africa in the east of the continent, which has isohyets of between 100 and 400 mm rain per year. The 'wall' was to stop the 'advance' of the desert, which, according to a narrative initiated or at least reinforced by the great Sahelian droughts of the 1970s and 1980s, risked submerging the adjoining regions of the Sahara (Morel 2006; Cherlet et al. 2018). The plant barrier was to stop this 'conquest'. The Sahelian countries promoting the GGW wanted to seize a new opportunity to 'design development' (and, above all, guide it) in alignment with the new dictates of environmental sustainability, after the long decades of structural adjustment and related withdrawal of the state (Mugéle 2018). The image of the 'green wall' has had a great evocative power, effectively mobilizing and rallying donor countries and large international institutions for support. This is an image linked to other reforestation projects, such as those attempted in Algeria in the 1970s (Green Dam), the green belts around Niamey in Niger and Nouakchott in Mauritania, or President Thomas Sankara's dream of the 'three struggles' against *'feux de brousse'* (bush fires), deforestation and desertification in Burkina Faso (Goffner et al. 2019).

In the press, the GGW has often been described as 'pharaonic'. Indeed, this is a massive project that, although using mass reforestation rather than physical infrastructures, intends to bring improvements to an area of enormous extension, with impressive objectives ('100 million hectares of land restored, 250 million tons of carbon sequestered and 10 million jobs created') by 2030 (United Nations 2020).

The GGW fits into a larger history of dreamlike projects for the desert and the neighbouring regions since the colonial age (Henry et al. 2011). E. Roudaire, a French military engineer, in the second half of the 19th century proposed to create a sea inside the Sahara Desert, by digging a channel of 240 km that would bring the waters of the Mediterranean to flood the depressions between Tunisia and Algeria (Roudaire 1874). This new sea would change the climate of the region, bringing humidity and rain to the heart of the desert. At the end of the 20th century, it was proposed to construct a system of dams, pumping, pipelines, and canals capable of transferring water from the Congo Basin to the Chadian Basin, and there is still talk of it. The declared aim was to 'save' the 'disappearing' Lake Chad and thus to prevent its devastating effects on the populations of the region (Bertoncin and Pase 2012). This very expensive project, with a potentially

high environmental impact, fails to take into account the high variability of the lake, whose waters have in more recent decades returned to growth, following the drastic reduction during the great Sahelian droughts (Magrin and Mugel  2020).

In reality, the results of the GGW have been disappointing. The UN 2020 report declares that after 15 years only 4 million ha of land are under restoration in the intervention zones rather than the 100 million targeted. Only Senegal has demonstrated continuous commitment to the project, so much so that we can perhaps speak of '*Grande muraille s n galaise*' (Great Wall of Senegal) (Magrin and Mugel  2020). Many of the other countries have in the meantime been affected by disruptive political instability and social violence: this is the case for the Lake Chad region with Boko Haram and other radical Islamist organizations, the civil war in Mali, and the violence affecting the area of the three borders separating Mali, Niger, and Burkina Faso, partly a result of the wave of regional destabilization linked to the fall of the al-Qaddhafi regime in Libya (2011). Western intervention, in particular by French with the Barkhane operation (an ongoing anti-insurgent campaign started in 2014 against Islamist groups in the Sahel), struggles to help the governments involved. In the background, there is the European fear of more and more migrants crossing the desert and the Mediterranean Sea on fragile boats. The reaction has been to try to 'relocate' the border of 'Fortress Europe' to the Sahel. Here is where the GGW is given a second chance.

In the meantime, however, the GGW has changed its objectives and methods of implementation:

instead of a 'wall of trees', it is now conceived as a mosaic, comprised of diverse, landscape-scale actions that are designed to provide long-term solutions for improving environmental and socio-economic conditions in the zone.

(Goffner et al. 2019)

Each state chooses where and how to act within the general framework of the GGW, often understood as a 'fundraising and consensus-building machine'. If to 'enhance resilience in Sahelian landscapes and livelihoods' could be the new redefinition of the GGW goal, one wonders whether what it will consolidate will rather be the resilience of 'big projects' and the state elites who control them.

*The SAGCOT Corridor in Tanzania*³

The SAGCOT Corridor is a large-scale agricultural development and green MIP that covers an area of 350,000 ha, ranging from 150 km north and south of the capital of Dar es Salaam in the east, up to an area west of Lake Tanganyika in the north, and Lake Malawi in the south (Sulle 2020). SAGCOT is full of enchantment promises (economic development, opportunity, jobs, connectivity, prosperity, farming techniques, etc.) propagated by state and international actors as well as by private donors and business actors. Initially following a socialist approach to agricultural policy after independence, Tanzania's agricultural sector later moved

in the opposite direction, enabling the introduction of a large number of public–private investment partnerships since the 2000s.

The SAGCOT Corridor encompasses roads, railways, factories, warehouses, storage facilities, research hubs, water and energy supplies, and so on. This infrastructure lies in a multi-sectoral region called area (or cluster) that includes the establishment of commercial relationships between companies, smallholders, outgrowers, and other organizations. The economic development discourse underlying SAGCOT claims that local producers and their products will be connected via roads and railways to transport nodes, warehouses, farm blocks, markets, power plants, and international export channels. Contrary to these visions of development and connectivity, an international debate has recently evolved highlighting the dispossession and the undermining of fragile local communal resources and land rights by SAGCOT via the option of its formalized land-use planning (e.g. defining sections for agriculture, forestry, and conservation) (see Bergius et al. 2018; Bluwstein et al. 2018). Two processes have been identified leading to this situation: (a) all land and resources were consolidated under the ownership of the state (under control of the president; see Gmür 2020); and (b) land-use planning strategies made commons of local villages (pastures, forests) available for development projects and thus opened them up for grabbing by the state and other investors (see Bluwstein et al. 2018). These processes have undermined locally established resource management and coordination institutions between farmers and pastoralists and fuel conflicts between them (e.g. Maganga et al. 2016; Bergius et al. 2020). Furthermore, SAGCOT acts as a multi-sited ‘broker and catalyst’⁴ of numerous development programmes supported by the SDG-related discourse of resilient and sustainable development, and the enchantment of green modernization mainly by agrarian investors such as international agro-chemical European companies. It even has the potential for attracting donors such as pension funds to replace or complement state and international organizations (e.g. the World Bank), both of which eventually withdrew from funding the MIP (see Bergius and Buseth 2019). Such actions are based on the ‘*Agriculture First*’ (Kilimo Kwanza) strategy advancing various other national programmes and other initiatives (e.g. ‘Vision 2025’). In these, the World Bank, FAO, and governments of the G8 countries (including USAID, UKAID, and the Norwegian embassy as funders)⁵ and 122 private sector companies, commercial banks, (inter)national development, and in collaboration with farmer and government organizations, publicly joined as partners with the discourse to fight poverty and the food price crisis after 2008. However, research on specific investments shows that not only local land is grabbed but also land-related common-pool resources, which undermines local livelihoods and increases the pressure on marginal areas, while at the same time undermining local mobility and resilience in these drylands. In addition, large-scale plantations have led to chemical pollution (Gmür 2019).

Despite the option in Tanzania’s constitution that local communities can be given common property (see Gmür 2020), SAGCOT led to processes of local common-property institutions being ‘legislated out of existence’. This especially

disregards local religious views of the land and land-related resources as being in spiritual resource ownership and as depending on ritual activities important for coordination of resource governance. Furthermore, legal pluralism in Tanzania—for example, different legislations for different common-pool resources—allows for ‘territorialization from above’ (Bluwstein and Lund 2018; Bösch et al. forthcoming) by demarcating, for example, forests, pastures, areas for conservation, and investments. This allows the state to take hold of village land (Bluwstein et al. 2018) by institution shopping (Haller 2019).

Local reactions, however, are mixed and not always so visible. In some villages, district lawyers have filed complaints against the investors at local and national courts. However, the negotiations ended in favour of the investor, which further deepened the villagers’ distrust of state authorities (see Bösch et al. forthcoming).

MIPs of transport and mobility

Less visible but not less impactful are MIPs related to roads and mobility of goods, because transport facilities have the power to change the value of land and other resources; they not only make mobility faster for certain actors but may also increase the value of land adjacent to the road network and connected destinations.

The LAPSSET Corridor in Kenya⁶

The LAPSSET Corridor represents a large-scale transport project connecting Kenya with neighbouring countries South Sudan, Ethiopia, and Uganda, through a network of railways, oil pipelines, highways, resort cities, and especially a massive enlargement of the port in Lamu. Whereas most components of the project are yet to be constructed, some are already complete or at an advanced stage, such as the Isiolo Airport, the Isiolo–Marsabit Road, and the first berths of the Lamu Port. In addition to participating states, there are a number of key global investors from all over the world, including China—and among them oil companies. The interesting ideological aspect of this mega-project seems to be reflected in the strategy of the participating governments (especially of Kenya) to label LAPSSET as a great financial and sustainable development initiative, making clear reference to the SDGs and the Agenda 2030.

The LAPSSET Corridor will traverse seven counties mainly in the north of Kenya, where a large proportion of the population are nomadic and transhumant pastoralists, such as the Turkana, Somali, and Samburu, whose land ownership was in precolonial times organized along the lines of ethnic and subgroup common-property territories, regulated by common-property institutions that govern mobility, access to dry season pasture, rules of sharing cattle, and so on (McCabe 1990). In the Lamu Port area, communities such as Bajuni groups depend on fisheries as a common-pool resource owned in common property. Depending on the season, the high sea is inaccessible for fishing and then people use areas close to mangrove forests and coral reefs, which are also managed as commons. There are channels in which catching lobster, shrimp, prawns, eels, mullet, and so

on is possible; a set of informal rules regulates the use of technologies, and some areas are seasonally closed for regeneration purposes.

Generally, communal fisheries and pasture rights have been undermined by state property and state regulations. These today define new ownership rules that land and related pastures are held in trust by the government and districts, and fisheries are the property of the state, which also defines closed seasons, landing rights, and size restrictions on nets. Werthmüller's (2020) anthropological research on the local impact of the Lamu Port reveals that the first working phase already destroyed the most vital commons for the Lamu communities, such as fishery areas in the reefs and the mangrove forests. Furthermore, there is heavy water pollution from the project, leading to the destruction of fishing grounds and a reduction in the previous gains from tourism. Werthmüller (2020) also shows that what has been described as a 'desiring machine' for development turns into a false promise, as the state cannot compensate for the described losses. As a local reaction, an NGO 'Save Lamu' was established by local actors, which is trying to inform people about LAPSSET activities and organizes collective actions in order to reduce ecological destruction and avail of compensation claims via legal steps. In a similar way, Turkana groups further north fear the impact of the oil industry, and local community members together with a number of civil society organizations have highlighted both the real and anticipated effects of the projects: disposal of hazardous waste, cutting down of trees, loss of grazing plains, blockage of migratory corridors, and pollution of water. Furthermore, road and oil pipeline construction activities for the LAPSSET projects in Turkana have not yet started, while ongoing attempts to acquire land for the project in the region have led to considerable concern among many Turkana regarding their land rights, increased land speculation, poor compensation for land, and reduction of mobility patterns—the railway, pipeline, and road networks cut through many communal pasture areas and transhumance routes (Werthmüller 2020; Kalika and Schubiger forthcoming). While conservation organizations can voice and address their concerns, pastoralists cannot (see Enns 2019; Enns and Bersaglio 2020). The LAPSSET Corridor has also set its sights beyond Africa, aiming for global connectivity through China's BRI, although this is not always visible (see Anthony 2020).

The CPEC in Pakistan⁷

CPEC is the flagship project for the new Chinese vision of its BRI (Shah 2018) and exhibits problematic issues similar to those of the LAPSSET Corridor. The various stakeholders in CPEC have deployed at least 62 billion USD for a quick realization of this vision (Casarini 2016; Kanwal et al. 2019). This incredible amount of resources indicates the importance given to this ambitious undertaking by both China and Pakistan. The Pakistani province of Balochistan is home to the first completed element of CPEC, the Gwadar Port. Alleged benefits of the project are tirelessly advocated by both Chinese and Pakistani officials, who say that the benefits of CPEC will be transferred to the local Pakistani communities

based on development promises (Kanwal et al. 2019). This ‘enchantment’ around positive development seems to be following the usual narrative of MIPs. BRI and CPEC are framed as inclusive win–win projects (Arase 2015), but how the local population will profit and how the benefits will be shared inside Pakistan remains largely unclear, while the impacts do not seem too promising for the local subsistence-oriented population. The nomadic pastoralists and fishery groups on the coastline of the Arabian Sea, who collectively own land and water resources under common-property institutions regulating access to these resources, are under pressure by elites of an authoritarian state who welcome the MIP.

CPEC was first announced during President Xi Jinping’s state visit to Islamabad in April 2015 and is China’s largest overseas investment project to date. It consists of extensive investments in Pakistan’s transport, telecommunications, and energy infrastructure, which eventually will link the port of Gwadar in Balochistan Province to the city of Kashgar in China’s Xinjiang Province (Casarini 2016). It parallels the existing Karakorum Highway, which today connects China, through Pakistan, to the Arabian Sea (Arase 2015). The benefits of CPEC are said to include a better standard of living, a better income, millions of new jobs, business promotion and opportunity, a better quality of education, and better connectivity for the rural communities to the large cities (Kanwal et al. 2019). This official discourse neglects the ethnic tensions: Baluchis fear that central Pakistani groups will use CPEC to outnumber them and attract only foreign investors (Kanwal et al. 2019). The already constructed port of Gwadar illustrates that while it is becoming a modern trade and tourist hub like Shenzhen or Dubai, Baloch fishermen have been evicted from the port and excluded from their common-pool resources, without being provided other livelihood options in return. The same is true for the various local nomadic groups, whose transhumance patterns will be destroyed.

However, the issue of losing access to the commons is not the only critical one. Local groups who are not enchanted by the MIP development promises are under strong pressure and are characterized as anti-CPEC insurgents or even terrorists. Local political parties reported human rights violations to the Human Rights Council in Geneva, and a UN Special Rapporteur for Pakistan was requested. Unfortunately, there is very little research regarding the human rights situation in the area. What is clear is that CPEC not only concerns new infrastructure but also will provide easy access to mining of the rich deposits of limestone, granite, marble, sandstone, gold, copper, iron, chromium, barium, magnesium, aluminium, and onyx for China (Farooqui and Aftab 2018).

Energy infrastructure as a basis for MIP development

MIPs in transport and mobility tend to stimulate the exploitation of minerals and other resources, which is also reflected in the rising demand for several forms of energy generation. These can range from dam construction to other renewable energies, such as wind and solar. We will describe three cases, one each of these energy-providing techniques, in MIPs and their impact on drylands.

*The GAP project in Turkey*⁸

Since its start in the 1970s, the GAP project has evolved from a hydraulic project into a transformative regional development programme for Turkey's south-east. Still centred on 22 dam projects and 19 hydropower stations for food and energy production, it became a multi-sectoral \$32-billion investment, including road infrastructure projects for education, women's empowerment, entrepreneurship, and settlement of nomads. The MIP became the 'primary way of delivering government services to the region' (Oguz 2021).

Turkey took great pains promoting the project as a nation-building and peace-making effort, with international dividends such as downstream flood control—utilizing plentiful water to overcome class differences and cement national integration—as well as eroding the base of the Marxist-Leninist Kurdish Workers Party (Partiya Karkeren Kurdistanê, PKK). Curbing Kurdish secessionism served the goal of safeguarding territorial integrity, while elevating the region from backwardness was intended to undercut their support base (Warner 2008).

Many in this predominantly Kurdish- and Arab-speaking area see the programme as Turkish state extension into the hinterland (Bilgen 2019; Akinci et al. 2020), trying to push the unifying Turkish hydraulic development imaginary. This attempted to oppose local and international NGOs presenting an idealized picture of the mountainous region as an age-old crossroads of nomadic civilizations and of Kurdish self-perception as the heart of the Middle East they long for.

In 1984, attacks on engineers and structures involved in building the Atatürk Dam, GAP's physical and symbolic centrepiece, established the PKK on the map as the militant voice of Kurdish identity. PKK has continued to focus on dam projects, including targeting cement trucks and power lines for the GAP's closing piece, the Ilisu Dam. This brought a security rationale into the development discourse (Warner 2008). The dams, then, also came to serve a strategic defence purpose, cutting off the 'routes PKK used' and obliging travellers to take 'military-run ferries across dam lakes' (Oguz 2021).

The enormous Ilisu Reservoir on the Tigris floods an area the size of Malta, 313 sq km in area, and according to the amended Resettlement Action Plan of 2006, it would displace some 61,000 people in 199 settlements in and around the town of Hasankeyf—a global heritage site where not only Kurds but also Armenians, Ara- means, and Arabs live—and cut the transhumance routes of ten nomadic tribes. Designated resettlement areas seem poorly suited for agriculture (Oguz 2021). But the flooding of Hasankeyf also meant the destruction of historical caves and canyons that could serve as terrorist shelters. In a region so full of history that it is called 'an open-air museum' (Minister of Culture, cited in Shoup 2006), political leaders and water managers, however, found it difficult to understand why this was such an issue and gave little time and budget to excavations. The caves, nevertheless, became symbolic of cultural dispossession of the south-east region by the state's unstoppable MIP and thus also touch on core issues of identity to serve as a source of mobilization against the dam.

*The Noor Solar Energy Project in Morocco*⁹

The question of local identity, which is contrasted to a MIP solar project as a form of green modernity, is also an issue in one of the world's largest solar energy projects in Morocco, the 'Noor Ouarzazate' (the light of Ouarzazate) (Figure 7.1). This project can also be seen as an example of how a state uses green energy MIPs to extend its control over an area labelled as being 'a wasteland'. The project, covering an area of 3,000 ha, is led by King Mohammed of Morocco and operated by the parastatal company Moroccan Agency for Sustainable Energy (MASEN), which involves considerable EU technological investments, mainly from Germany. It is situated in the arid and semi-arid Anti-Atlas area, containing lowlands and several rivers important for water use. The land and land-related commons were a former common property of the Berber sub-clan Aït Ougrou (belonging to the Imghrane clan), with wet season pastures and veld products such as different plants used for animal fodder. These common-pool pastoral resources were vital for marginal groups and women, as well as for herders from neighbouring communities. Councils of elders rule in the local villages, and reciprocal arrangements of resource use with neighbouring herders are part of the institutional design.

Before European control, the monarchy of Morocco exerted little control over the Anti-Atlas area. Since colonial times the area has experienced several land investments, such as the construction of dams. In addition, French colonial



Figure 7.1 Solar panels on common land by the Solar Project Noor II in Ouarzazate, Morocco. Photo was taken by Tobias Haller in 2014.

authorities, and later also the king, attempted to introduce infrastructure and acquire control over this area by establishing a state administration of different levels (from sub-areas down to the village level). The solar energy investment is thus not the first state-driven project in the area. What is new, however, is that the area is labelled as 'wasteland', justifying the extremely low payments for the loss of the commons. The state's energy company Office National de l'Electricité et de l'Eau Potable (ONEE) expropriated the common land of five local groups and then transferred the land to MASEN because land in common property cannot be sold directly. The five village communities, represented by their leaders, were invited to sign the contract. The price was fixed by the state's arguing that it was a fair price for a desert 'wasteland'. In addition, the state and MASEN legitimated their investment by using a green development discourse: this sustainable energy project will bring development to a marginal area (jobs, activities in cooperatives, sanitation, alphabetization campaigns, and new infrastructure), generating also a positive gendered outcome.

A set of projects emerged from the land sale proceeds, which did not go to the communities but was paid to a state-controlled fund managed by the Directorate of Rural Affairs (DAR). Communities were told that they could submit projects to the DAR, which would then be assessed and potentially financed. In addition, MASEN set up a series of very different projects based on its Corporate Social Responsibility (CSR) policies. These include, among other projects, the provision of mobile sanitary infrastructure (e.g. a mobile hospital stationed for two days once a year in the principal village Ghessate), school buses, girls' dormitories, stables for sheep and goats, courses in aluminium welding, sponsorship of a local marathon, holiday trips for children, and funds allocated to NGOs focussing on rural agricultural development.

Several problematic issues arise from this gendered and green development discourse and the poverty alleviation narrative. First, the area is not a 'wasteland' but provides pastures as well as fodder for goats owned by women, who earned cash in this way, and it was used seasonally by neighbouring pastoral groups. Second, the price of the land was unilaterally decided by the state and could not be negotiated, and many were excluded from the deal. Third, the projects that could be proposed by local communities in order to be financed by the funds from the compensation payments did not materialize: when local people demanded their projects, they were told that funding was no longer available. Fourth, the project led to commons grabbing, strongly impacting local women's livelihoods and with no tangible compensation, while CSR projects from the company do not provide the promised direct benefits and are not accessible to all people in the area (Ryser 2019).

Generally, the process is perceived as unfair by local actors (with the exception of the elites), who realize that they have lost the commons, which is now fenced and no longer available, reducing their resilience. Because it is a project involving the king, there is not much resistance at the moment; however, local actors clearly state that for them the project did not create gains but rather a loss of the commons (Ryser 2019).

*The Lake Turkana Wind Power project in Kenya*¹⁰

The LTWP project shows similar features to those of the Noor Solar Energy Project. The wind power station is located close to Loiyangalani, a small town that serves as an economic hub to the surrounding population and as a tourist stopover on the shores of Lake Turkana. With 365 wind turbines—covering 162 sq km of land, with an extra 1,100 sq km of land retained as a buffer zone around the turbines—300 km of paved roads, and 428 km of electric cables from the power station to Suswa in the south of the country, where power is fed into the national grid, LTWP is one of the largest MIPs in the form of a wind park in Africa. LTWP is located in a remote area of northern Kenya inhabited mainly by Turkana, Samburu, and Rendille pastoralists. The three groups practise different levels of nomadism and semi-nomadism on their commons, herding camels and goats as their primary source of livelihood (Fratkin 2001).

LTWP is part of Kenya's commitment to change its energy mix and decarbonize the national energy sector by adding 310 megawatts to Kenya's national electric system, hence aligning Kenya's development discourse with that of international SDGs. In 2009, the land for the wind farm was leased by LTWP for 33 years with a renewable option of 99 years. With an overall investment of 76 billion Kenyan shilling (equivalent to 623 million Euro, 865 million US dollars), it is among the most significant private international investments in Kenya.¹¹

Locating LTWP in a remote dryland area populated by pastoral communities raises questions about local benefits, compared with the cost of losing communal pastures and other common-pool resources and assets. The village of Sirima can serve as an illustration of the zero gain from the eviction process. Inhabited by Turkana people on former so-called trust land, the village would supposedly have 'become congested with traffic, construction activities and associated dust, noise, health and safety impacts', as the Environmental Impact Assessment stated, and thus it had to be relocated without its local people being asked for their opinion (Cormack 2019).

Community discussions, which were part of a so-called public participation process that was not perceived as such by local actors (see Achiba 2019), ended with recommendations regarding employment, welfare services (health, education, water), and individual and communal compensation. The Full Resettlement report stated that there were no land tenure issues at stake by the relocation. An impact assessment report from 2009 noted some potentially negative impacts on 'cultural contamination' of the local population (Njoroge 2010). But none of the mentioned impacts concern cultural heritage, livelihood, or communal land rights; on the contrary, the Environmental and Social Management System (ESMS) argued that a good agreement had been reached with the local communities and 'finally satisfactory agreements were reached with all affected households' (European Investment Bank (EIB) 2020: 3).

The Sirima village relocation plan, although accompanied by CSR policies and compensation mechanisms, assessment reports, and other monitoring activities, exhibits several flaws. First, local pastoralists' rights—which should have formed

the basis for their ability to decide on the location of the wind farm on communal land—were not recognized.¹² Second, development promises were made on the basis of CSR projects, which are either unfulfilled or are not developed in a participatory manner, and most of these projects are rather narrow-scale initiatives. Winds of Change is an NGO established by the consortium to execute CSR. It acts as a ‘green-washing of dispossession’ (Achiba 2019). Third, the project led to social unrest and contestations over land rights, as well cleavages within and between local communities over compensations and over notions of development that can potentially take on an ethnic dimension (*ibid.*). Securing some gains for themselves, elites often follow the project discourse that idle or unutilized land is now put to green use, but this discourse neglects to mention that evictions from pastoral areas take place and that pastoral culture and adaptation are undermined. Fourth, there was considerable lack of community consultation. Last, but not least, the wind farm also led to environmental changes, due to changing micro-habitats via the wind turbines decreasing the potential for future innovative husbandry (*ibid.*), which is likely to affect future adaptation strategies among the pastoralists of the area.

Conclusions

Despite obvious differences in the nature of the MIPs (agro-industrial visions, transportation facilities, and energy), the various cases of MIPs in drylands show striking similarities. The places where MIPs are rolled out are not just frontier areas at the edge of neoliberal change. The issue is rather that all these investments propose a betterment, adding utility to what was considered useless or not well used in the past (see Chapter 3 on dryland narratives, this volume). It is not that frontier areas reshuffle local contexts but rather that the new developments are based on several forms of anti-politics machines of development, hiding power constellations of commons grabbing and putting areas under new postcolonial state and company power. As most of the cases show, it is the desire of state elites to place the negatively labelled ‘idle’ land or ‘wasteland’ areas under state control, with the help of the private sector. Thus, in many cases, agro-industrial endeavours, as well as transportation and energy production, are considered to be more important than local common-property institutions of land and land-related resources. But in drylands, these local communal tenure systems provide flexibility, mobility, and resilience, and they maintain cultural landscapes (Haller et al. 2020). This resilience capacity is further undermined with a technological and territorial ‘new fix’ by providing a desiring machine of MIPs. However, while this desiring machine is pushed by governments and companies (e.g. through CSR projects), the machine is not shared by most of the local inhabitants. The former are trying to adopt modernity discourses so that they can be included in the new wealth-generating distribution process, while the latter—mostly pastoralists and, in two cases, fishing communities—lose out in the process of this new development, which in addition often leads to conflicts. In order to further legitimize these MIPs, governments and companies add a new green layer of discourse in the

process of legitimacy production. From the greening of the Sahel to sustainable or conservation agriculture in the SACGOT Corridor, to the SDG-related LAPS-SET Corridor in Kenya and the green energy production projects of solar and wind energy, the legitimacy of the new wave of MIPs addresses global sustainability concerns. Using this discourse, funding and international acceptance can be tapped. The second strategy of states consists in criminalizing inhabitants of the drylands and in this way legitimating military control and the implementation of MIPs (e.g. the Turkey and Pakistan cases).

The overview of the case studies (Table 7.1) indicates that in most instances local common-property institutions are not at all recognized. Second, there is a modernity discourse in combination with sustainability, a discourse that is used to label local people in a negative way (e.g. narratives of ‘backward groups’; see Chapter 3 on dryland narratives, this volume). The MIPs pushed by state and companies offer desiring machines to render these MIPs legitimate for the states in an international context. In addition, development is boosted by green projects, which add legitimacy in five out of seven cases, while calling on CSR in four of the seven cases discussed in this chapter. We argue that the green and CSR discourses render the MIPs even more legitimate, while still concealing underlying grabbing processes, pollution, and the exclusion of local actors from their

Table 7.1 Comparison of MIPs in drylands

<i>Comparative theoretical topics/case studies</i>	<i>State's undermining commons of labelled 'backward groups'</i>	<i>State's use of idle land with desiring machines</i>	<i>Extension of state control</i>	<i>Green anti-politics machines (SDGs)</i>	<i>CSR as green grab washing</i>	<i>Local disenchantment and conflicts</i>
The Great Green Wall in the Sahel	Yes	Yes	Yes	Yes	No	Yes
SAGCOT in Tanzania	Yes	Yes	Yes	Yes	No	Yes
LAPSSET in Kenya	Yes	Yes	Yes	Yes	Yes	Yes
CPEC in Pakistan	Yes	Yes	Yes	No	No	Yes
GAP project in Turkey	Yes	Yes	Yes	No	No	Yes
Noor Solar Energy Project in Morocco	Yes	Yes	Yes	Yes	Yes	Yes
Lake Turkana Wind Power in Kenya	Yes	Yes	Yes	Yes	Yes	Yes

commons in most cases. Furthermore, the case studies show that although most of the local previous commoners are disenchanted, there is a need to unpack the notion of ‘the local’: In all cases, the ‘local’ level consists of a mixed and heterogeneous group of people, with differences existing mainly between elites and non-elite commoners; and a danger is that cleavages between these people can be exacerbated by MIPs and may also take on an ethnic or religious form of mobilization (see Chapter 9 on extremism, this volume).

Notes

- 1 Institution shopping refers to the strategic selection of rules and regulations, depending on power constellations.
- 2 Section compiled by Andrea Pase, Marina Bertoncin, and Angela Kronenburg García.
- 3 Section prepared by Tobias Haller and stemming from Bösch et al. (forthcoming).
- 4 <http://sagcot.co.tz/index.php/who-we-are/> [Accessed 6 May 2020].
- 5 <http://sagcot.co.tz/> [Accessed 6 May 2020].
- 6 Section prepared by Tobias Haller and stemming from Werthmüller (2020).
- 7 Section prepared by Tobias Haller and stemming from Forster (forthcoming).
- 8 Section compiled by Jeroen Warner.
- 9 Section prepared by Tobias Haller and stemming from Ryser (2019).
- 10 Section prepared by Nurit Hashimshony-Yaffe.
- 11 https://www.afdb.org/fileadmin/uploads/afdb/Documents/Project-and-Operations/RAP_summary_Sirima_Village_Lake_Turkana__Wind_Power_Project.pdf [Accessed 15 February 2022].
- 12 A new court decision (2021) may change this for the future (Hashimshony, pers. com.)

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