Universiteit
Leiden
The Netherlands

Tracing inclusivity: Contribution of the Dutch private sector to inclusive development in Kenya. Case study of Unilever Tea Kenya Ltd., the flower sector and Lake Turkana Wind Power project

Kazimierczuk, A.H.

Citation
Kazimierczuk, A. H. (2020, October 22). *Tracing inclusivity: Contribution of the Dutch private sector to inclusive development in Kenya. Case study of Unilever Tea Kenya Ltd., the flower sector and Lake Turkana Wind Power project*. Retrieved from https://hdl.handle.net/1887/137215

Version:	Publisher's Version
License:	Licence agreement concerning inclusion of doctoral thesis in the Institutional Repository of the University of Leiden
Downloaded from:	https://hdl.handle.net/1887/137215

Note: To cite this publication please use the final published version (if applicable).

Cover Page

Universiteit Leiden

The handle http://hdl.handle.net/1887/137215 holds various files of this Leiden University dissertation.

Author: Kazimierczuk, A.H.
Title: Tracing inclusivity: Contribution of the Dutch private sector to inclusive development in Kenya. Case study of Unilever Tea Kenya Ltd., the flower sector and Lake Turkana Wind Power project
Issue date: 2020-10-22

Chapter 5. Lake Turkana Wind Power Project

5.1 Introduction

This chapter presents an in-depth case study of Lake Turkana Wind Power (LTWP) – Africa's biggest wind farm. It examines the process of project development over a nearly ten-year period, as well LTWP's contribution to inclusive development through employment creation and a Corporate Social Responsibility programme. This extensive case study illustrates that even for those companies that strive for both inclusive processes and inclusive outcomes from the outset of operations, it remains very difficult to accomplish both in practice. LTWP did achieve some inclusive outcomes[221] but the process that led to them has been long and was not necessarily inclusive. This process was affected by a number of external forces at a local and national level and, as a foreign investor, an additional international layer added to its complexity. This chapter describes both this process and the outcomes in more detail.

5.2 Methodology of the fieldwork in the project area

5.2.1 Literature review

Sub-chapter 5.3 provides a review of the latest status and policy framework for wind energy in Africa, taking Kenya as the main case study. It is based on an extensive literature review concerning the state of renewable energy (RE) and wind power in Africa and in Kenya. The literature review was also used to review the RE supporting policies on the continent and in Kenya, as well as to examine the history of the reforms that have occurred in the energy sector in Kenya.

The literature review is also used to describe the local context of the area where the LTWP project is located: the history of its marginalisation and a brief description of the complex local political and ethnic divisions.

Finally, throughout the chapter, a number of empirical findings are further triangulated with external sources found in available academic literature or media reports.

5.2.2 Interviews with founding fathers

Chapter 5.4 describes the process of establishing the Lake Turkana Wind Power project. It is based on an extensive literature review, as well as on a number of interviews with LTWP founding fathers, management, government representatives involved in the project development, and other stakeholders. The interviews were conducted from June through October 2016, in August 2017 and in January-February 2019. The information used is also drawn from a review of government and LTWP documents as well as media and internet sources when appropriate.

The most critical sources for Chapter 5.4, however, are the reiterated interviews conducted with two founding fathers. I met Willem Dolleman while he visited the wind park with his wife and some family members. I introduced myself over breakfast, explained the research project, partners and link to the Dutch Ministry of Foreign Affairs and Embassy in Nairobi. We had a brief conversation and exchanged contacts. When I was back in Nairobi, I contacted Dolleman and initially scheduled a short lunch meeting, which was later followed up by a more in-depth interview on another day. Dolleman further introduced me to and facilitated a meeting with Carlo van Wageningen. In total, over the course of three years, I conducted three (long) interview sessions with Willem Dolleman (during one, Dolleman's wife – Marie-Jose – was present and actively contributed as well); and three (long) interview sessions with

[221] The project is still in its initial stage, so more research must be done to assess whether the outcomes have been sustainable.

Carlo van Wageningen either in person or via phone/Skype. In addition to sharing their stories, the Dollemans provided me with additional documents, including 'Scoping and pre-identification study for the LTWP CSRP Report' from 2009, which was prepared at the start of the project development; Van Wageningen shared detailed financial data with me.

5.2.3 Fieldwork and its limitations

The fieldwork for this case study took place in two phases. In total, I spent three weeks (plus ±6 days for travels) in the LTWP camp and the surrounding villages in July/August 2016 and in September 2016. During my first stay, I focused on the company (official) side. I held interviews with company officials and Community Liaison Officers (CLOs) and had access to (local) employment official data. The purpose of the second visit was to interact with the communities in proximity to the project and along the road.[222] While on site, I stayed in the new LTWP camp, called 'The Village'.[223] While in the local communities, I stayed together with my (male) research assistant in a tented camp belonging to Civicon/LTWP in Illaut, in a lodge in South Horr and Loiyangalani, and in the house of my assistant's daughter in Mount Kulal.

During the first stay, I personally interviewed the company officials and CLOs, who all spoke English. During the second stage of the fieldwork, I interviewed people from the local communities. As I was interested in their perceptions of the impact of the employment provided by LTWP and its spill overs (including the new road), a decision was made to interview people the majority of whom had been hired at some point in time by LTWP or one of the contractors. This required the hiring of a local research assistant to facilitate those interviews. It was not that easy to find a competent, educated person with his own vehicle who would be knowledgeable about the area and the local customs as well as available for the job. I decided to hire a former teacher and retired Chief of Mount Kulal village, a senior Samburu. He was recommended by the LTWP Chief Operations Officer (COO) whom I asked for advice during my first stay. He used to work for Civicon during the road construction, yet more than a year had passed since his contract ended. It was a good choice, as the former Chief spoke most of the local dialects, except for Turkana.[224] Helpfully, he had his own car, which allowed me to maintain my position as a neutral academic researcher and not move around in a vehicle marked as LTWP.[225] Given his former chieftaincy position, he was known in the area and respected, and he also knew the current local Chiefs and had no problems contacting them in any of the visited villages.

It was hard to find someone in the study area who remained ambivalent towards LTWP. You are either for or against. My assistant can be categorised as a supporter of the project, although he was not entirely happy with it. He would have preferred to get another job with LTWP or at least lease his car to one of the companies.[226] Regardless, it should be said that my assistant did a good job. He was a kind and knowledgeable man who also shared many interesting stories about the local history and traditions with me. He facilitated the interviews and I am convinced that the information I received from him reflected what the respondents really said. Naturally, there is always a possibility that my respondents talked to me in hopes of getting a new job with LTWP or the subcontractors (despite my initial assurance that I was neither linked to, nor capable of influencing LTWP in any way in this regard) so the narrative may

[222] For a detailed list of people interviewed, see Annex 9.
[223] LTWP offered to cover the costs of up to 14 nights in the new camp.
[224] During interviews with the group of Turkana of men from Sarima village, a Turkana person translated into Kiswahili and my assistant then translated that into English.
[225] Not many cars were available locally at that time, as LTWP and the contractors had already hired many of them. An alternative would have been to drive a car from Nairobi but the rental costs would have been similar or greater. LTWP generously supplied fuel for our car.
[226] In the course of our collaboration, he was trying to broker a deal with LTWP to lease his car to the company.

have been overly optimistic. This is a major limitation of my study that must be acknowledged and confirmation of the results may require further replication studies.

5.2.4 Methods and limitations

My fieldwork was guided by a research protocol developed in advance and openly discussed with the management of LTWP who gave permission for the study to be conducted. The research protocol included a guide for interviews with the management, CLOs, and local population, as well as information about other documents and stakeholders that I wished to consult during the course of my stay in Kenya. While on site, it was not difficult to schedule an interview with the management, CLOs and key personnel. In most cases, unless otherwise agreed, the meetings were recorded in order to back up the notes taken on the spot. The atmosphere was always very friendly and open, and except for two contractors (Vestas and Civicon), there was no problem with sharing employment data. LTWP was particularly transparent and shared their employment databases, grievance database, as well as stakeholder engagement database together with the available minutes from those meetings. I was given a lot of freedom and I was allowed to talk to everyone in the camp. I was only limited with regard to visiting Sarima village. I was warned not to go there alone and preferably not to go there at all (as many of the LTWP employees had had their lives threatened there and the situation was still tense at the time of my stay). Despite being an independent academic researcher, I was perceived by many as a guest of LTWP. In order to avoid any complications and not to risk my relationship with the management, I decided not to go to this village (or Kijiji as it is commonly referred to) but instead invited the Sarima elders to the camp for the interviews. I am aware that methodologically, this decision weakens my case, as I thus allowed LTWP to pick the sample from this important (and controversial) village. Theoretically, there is a chance that the people who came for the interview were more favourable towards the project and did not necessarily represent the general views of their community. After considering the pros and cons, I made the decision to adopt this exceptional compromise.

The protocol for the other villages that I visited with my assistant was as follows. My assistant first contacted the Chief of the village who, having granted us permission to conduct our research in the area, called for people who would fit our sample. In the meantime, we found a convenient spot where we could sit and receive our respondents. It varied from the shade of a tree in Namarey to a little hut in a guesthouse where we stayed in South Horr and Loiyangalani. We started with an interview with the Chief and later moved on to (former) employees. Where possible, we also interviewed the LTWP CLO for a given village. We visited Illaut, Namarey, Ngurnit, Loiyangalani, South Horr, Gatab (Mt. Kulal) and talked to representatives of Sarima village. The aim was to interview ten people per village. In total, together with my assistant, we interviewed 58 members of these seven local communities. The only place where we encountered a problem was Ngurnit, where the Chief was not available to meet us, despite having set up a meeting, and he had failed to organise a group of people that we could talk to. He reportedly went away to be with his animals. Through the word of mouth, we managed to identify and interview only two people in Ngurnit who were available and fitted our sample criteria. According to one of the interviewees, a few people from the village went back to school after working with LTWP; hence they were out of town. As for the Turkana from Sarima who were invited for the interview, half had not been employed during the construction period. Importantly though, they were native Turkana Elders from the village who could tell me more about the changes and impact of the project on the area. The key personnel of LTWP and people familiar with the area argued that Sarima village had been taken over by 'newcomers' who came in search of work during the construction period. Consequently, many of the original inhabitants rent out their (new) manyattas and went away with their animals in search of better pasture. Some of the newcomers were also the major force behind troubles reported in the village and the source of negative information about LTWP that was used by Danwatch (Danwatch, 2016) or other detractors of the project. It was therefore important to talk to the village Elders who were born in the area and who had lived in proximity to the project area for most of their lives.

5.2.5 The Respondents

The sample was heavily male-dominated (see Table 9), also because the majority of employees during the construction period were men (see the analysis of the employment data in the Chapter 5.6). The majority of respondents were Samburu, mostly from Mt. Kulal and South Horr (Table 10). It should be noted here that most of the towns we visited can be classified as "Samburu towns" with the exception of Namarey (Rendille), Loiyangalani ("cosmopolitan", although predominantly Turkana) and Sarima (Turkana).[227] In most places, we talked to the local Chief (or his Assistant). In Ngurnit, as mentioned earlier, the Chief was not available; for Sarima, we talked to the Chairman of the village as, administratively, Sarima is a sub-location of Mount Kulal, yet, due to its predominantly Turkana inhabitants, it prefers to be considered a part of (also Turkana-dominated) Loiyangalani Ward (and thus falls under the Loiyangalani Chief). Unsurprisingly, the majority of the respondents were hired by Civicon and SECO (Table 11) and only eight people were hired by more than one company (14%[228]). The period of employment of the respondents varied from two weeks to two years. On average, the contract lasted 7.7 months.

Table 9. Gender division of the local respondents

	Total
Female	7
Male	51
Grand Total	**58**

Source: own elaboration based on fieldwork data

Table 10. Ethnic and location division of the local respondents

	Samburu	Rendille	Turkana	El Molo	Kikuyu	Total
Gatab (Mt. Kulal)	12					12
South Horr	11				1	12
Loiyangalani	2	4	1	3		10
Namarey		9				9
Ilaut	7					7
Sirima			6			6
Ngurnit	2					2
Grand Total	**34**	**13**	**7**	**3**	**1**	**58**

Source: own elaboration based on fieldwork data

[227] Illaut and Ngurnit are towns inhabited by both Samburu and Rendille, with a majority being Samburus.
[228] That is also the approximate rate used for the further analysis to correct the employment data and eliminate double counting of people who worked for more than one company.

Table 11. Local respondents divided by the company that hired them and location of recruitment

	Mt. Kulal	South Horr	Loiyangalani	Namarey	Ilaut	Sirima	Ngurnit	Total
Chief	1	1		1	1			4
Assistant Chief			1					1
Civicon	2	4		7	4		2	19
SECO	6	3	1					10
Siemens	2	2	2					6
Centurion (Siemens)	1		2					3
LTWP					1	2		3
No prior employment						3		3
AES		1	1					2
EGMF			2					2
G4S		1	1					2
Vestas				1	1			2
KETRACO						1		1
Grand Total	**12**	**12**	**10**	**9**	**7**	**6**	**2**	**58**

Source: own elaboration based on fieldwork data

5.2.6 The analysis

5.2.6.1 The company data

In order to assess the impact of the LTWP on employment, and particularly local employment, the employment data were compiled from three major sources: the LTWP local employment masterfile (with a list of names and employment details per local employee until August 2016); LTWP monthly overviews of local employment per contractor per community (compiled by LTWP local HR office from contractors on monthly basis; data available for a period between April 2015 and July 2017); and lists of employment per contractor for the month of July 2016 provided individually by EGMF, SECO, Siemens, RXPE, G4S and Worley Parsons (WP). Such information was not provided by Civicon, Vestas and other contractors that were no longer on site (TAI, ATL and AES). This information was instead compiled from internal documents provided by LTWP. SECO, EGMF, RXPE, G4S and sub-contractors of Siemens also disclosed the salary ranges per type of employment. Each dataset was further analysed and adjusted to harmonise and simplify the analysis. The information was categorised are as follows:

- Gender of an employee
- Position
- Category of employment
    - Non-skilled
    - Semi-skilled
    - Skilled
    - Expert
- Location detail
- Location category
    - Local (recruited from the catchment area, including Marsabit County)
    - National (Kenyan national from beyond the catchment area and Marsabit County)
    - Expat (from outside of Kenya)
- Salary range (where available)
- Sub-contractor (if applicable)

Categories of employment were further classified with the help of the Kenya National Occupational Classification Standard (KNOCS) (KNOCS, 2000), which had to be further adjusted to reflect the skill availability level in Northern Kenya. KNOCS recognises five skill-level occupational groups based on the Kenyan education/training system. The first KNOCS skill level has been defined as primary education that is followed by a period of on-the-job training. The second KNOCS skill level has been defined as post-primary education that lasts about two years and leads to artisan-level certificates and is followed by vocational training. The third KNOCS skill level is achieved when successful graduation from the secondary education is followed up by a period of on-the-job training. The fourth KNOCS skill level can be achieved after three years of post-secondary education that leads to an award of Certificate or Diploma but is not equivalent to a first university degree. Finally, the fifth KNOCS skill level is reached with a university or postgraduate university degree or the equivalent. As the analysis reveals, it became clear that the KNOCS classification would have to be adjusted for the context of Northern Kenya if it were to be used. The major problem was that already the first KNOCS skill level requires accomplishing the primary education level while most of the local population hired during the construction period from around the catchment area did not finish or even attend the primary school and were trained to do the work on-the-job. It was then decided to loosely use the guidance of the KNOCS classification and adjust the skill-level groups to accommodate the local context. As a result, four groups were distinguished that include the following categorisation of employment levels):

Table 12. Category of employment used in the analysis, based on adjusted KNOCS classification further adjusted to the local context

Analysis group	Non-skilled	Semi-skilled	Skilled	Expert
KNOCS skill group	Zero or 1st	2nd	3rd and 4th	5th
Examples of employment*	• Cleaners • Launderers • Domestic workers • Garbage collector, waste management • Watchman, security guards gatekeeper, • Labourer for roads/building construction[229] • Stone or root picker • Flagman/flaglady • Chainman • Traffic marshals, • "Odd-jobs men", etc.	• Carpenter • Plumber • Welder • Mason • Cook • Waiter • Steel fixer • Painter • Tile fitter • Fuel attendant • G4S Commander • KPR • Community educator • Storekeeper • Road Safety Educator, etc.	• CLOs • Mechanic • Electrician • Driver • Machinery operator • Lab • Administration Assistants • Chef • Nurse • Store manager • Supervisors, etc.	• Management • HSE Manager and Officer • ICT • Engineer • Medic • Surveyor • Technician • Coordinator • Manager • Technical specialist • Accountant • Lab (supervisor) • Data analyst, etc.

*Full list of positions per employment category can be found in Annex 10

Source: own elaboration based on (KNOCS 2000) and fieldwork data

The analysis of the three databases posed a number of challenges. Firstly, it was not possible to determine the exact number of employees (local, national and expatriates), as the numbers in the three datasets differed. For example, in July 2016, the LTWP monthly overview of local employment per contractor per community indicates in total 36 local employees. This is more than the total taken from

[229] Performs simple and routine tasks in connection with various aspects of building construction work (including building demolition). Such tasks include clearing various obstructions as instructed and carrying stones, bricks and mortar to the mason or bricklayer on construction site (KNOC 2000, p. 261).

the lists provided directly by the contractors,[230] with SECO and RXPE showing the biggest discrepancies between the two databases. For SECO, the LTWP monthly dataset shows 41% more employment in comparison to the dataset provided by SECO directly, while for RXPE, the employment captured by the LTWP monthly statistics are 27% less compared to the dataset provided by the contractor directly. The overall difference in the total number of people in local employment is 7% (36), which objectively is not that high and can be the result of either inconsistent administration (quite common and linked to limited computer literacy among the personnel), or purposeful manipulation of employment data (either inflating or deflating the numbers) by the contractors to accommodate the requirement for local staff (also quite common in construction work). In either case, the inconsistencies between the datasets should be acknowledged and kept in mind as a limitation for the analysis.

Secondly, despite efforts by the LTWP HR office, the LTWP Masterfile did not appear to be fully complete either. The database had not been developed at the very start of construction, but rather a couple of months into the project when LTWP took over from ATL. Consequently, there is a chance that not all local employees were registered, especially at the beginning of the project. Some information was missing for registered local employees, such as the starting date of employment or the community from where the person was recruited. By crosschecking the names with additional documents provided on site where available, it was possible to determine the communities for a number of local staff but not for all. For those, the category "Unknown" was introduced. Some information, such as ethnic group was collected inconsistently, thus cannot be included in the analyses. Furthermore, it can be noted that, at some point, there was some confusion about what the local HR office should have recorded in their Masterfile and consequently a number of national employees were listed as 'local' by one of the sub-contractors. For the purpose of this analysis, they were excluded from the dataset in order to extract information regarding only local employment. Lastly, it appeared that the database was incomplete as, during the fieldwork, some local employees hired by the contractors were interviewed but their names did not appear in the LTWP Masterfile (i.e. some of the contractors' Community Liaison Officers). Again, this might be a result of inconsistent administration (the names were known to the HR office) or miscommunication between LTWP and the contractors. These names were not added to the Masterfile in order to keep the analysis as close as possible to the official information provided by the companies.

Finally, in some cases, some of the databases provided by the individual contractors did not include names or detailed information about the community from where a person was recruited (i.e. just information local/national/expat). This information was supplemented with other datasets where possible, yet it was not possible to determine this information for all. Moreover, for some contractors, especially those no longer present on site, it was not always possible to determine the position of the employees. In both cases, when it was not possible to determine the necessary details, a category "Unknown" was introduced. Lastly, the dataset that supposedly gave the best overview of the overall employment (including national and expatriate employees) was composed of information provided by individual contractors and the LTWP Masterfile (for local employment only) for companies that did not provide such information. As a result, the timeline for employment became more fluid. Consequently, there was a chance that an overlap between some staff and companies was introduced. To tackle the issue, a total number of employments per community was diminished by 14% – a factor calculated based on the interviews from the second phase, where 14% of the respondents worked for more than one company. The 14% correction was also used when compiling the monthly employment statistics provided by the contractors to LTWP per community for the period April 2015 – July 2017.

5.2.6.2 The interviews with the former employees

The interviews with the local population were reviewed and summarised per theme: historical events, development of the area (incl. CSR provided by LTWP); changes; employment; and community

[230] For the contractors that provided the lists.

engagement. To analyse the perception of positive and negative changes in the project area, an exercise from PADev methodology was loosely adapted, mostly for the style of reporting (Dietz et al., 2013, Kazimierczuk, 2009, 2010). Per village, the changes were organised according to six 'domains' adapted by PADev from Bebbington (1999). These domains are as follows:

1. Natural (related to land, soil, water, animals, forest, plants and crops, and population growth);
2. Physical (related to roads and buildings, buildings' structures, dams, wells and boreholes, farm tools, telecommunication and electricity);
3. Human (related to knowledge, education level, skills, enrolment, health and hygiene, security);
4. Economic (related to women in farming and trading, access to money, access to banks and credits, market structures, shops and kiosks, transport, paid jobs and remittances);
5. Socio-Political (related to family relations, political parties, NGOs, various associations, leadership and land tenure);
6. Cultural (related to Christianity and Islam, ethnicity, languages, music and dance, clothes, food, appropriate behaviour, migration, tradition and ritual performances) (Dietz et al., 2013).

As a qualitative method, while this exercise depicts well the changes that took place in the area, it has its limitations. Firstly, it is important to acknowledge that, as is always the case with people's perceptions, the image may not necessarily align with the reality, but rather how people perceive it. The timing is also important. The perceptions assessed are valid for the specific period in time that the interview took place. Secondly, different actors, depending on their location and the degree of impact, may perceive the same change differently. Moreover, regardless of my efforts to present myself as independent researcher, my interviewees may have seen me as a representative of the company. That may have also influenced the responses to some extent, for instance, they may have been more positive towards the changes attributed to LTWP. Finally, it is always difficult to attribute a change to a specific agent. For instance, the same change was attributed to general change, the presence of LTWP, or the new road, making analysis more complicated. Finally, it is advisable to conduct a follow-up study to further assess how perceptions have changed and evolved over time (especially considering that the construction period is over now and less local employment is therefore available in the area).

5.3 Wind energy in Kenya. A status and policy framework review[231]

5.3.1 Introduction

Facilitating a transition to sustainable energy systems is required to mitigate climate change (Arent, Arndt, Miller, Tarp, & Zinaman, 2017). A clean energy transition occurs when the share of renewable energy (RE) in the power mix is growing faster than those of other energy sources (Isoaho, Goritz, & Schulz, 2017). Typically, the contemporary energy transition is strongly shaped by economic development, technological innovation and policy changes (Cherp, Vinichenko, Jewell, Brutschin, & Sovacool, 2018). However, it appears that supporting policies as well as effective institutions are among the most prominent factors shaping energy transition processes (Jacobsson & Lauber, 2006). Globally, most countries have committed to do more to achieve a clean energy transition in order to fulfil the ambitions of the Sustainable Development Goals (SDG) agenda regarding SDG 7 (energy and energy access) and SDG 13 (climate change), as well as the commitments made during the 21st Conference of the Parties (COP21) to the United Nations Framework Convention on Climate Change (UNFCCC) in Paris in 2015. The analysis of energy transitions of developed countries has been well documented (see e.g. Cherp et al., 2018; Cherp, Vinichenko, Jewell, Suzuki, & Antal, 2017; Foxon, 2013; Haas et al., 2011; Hultman, Malone, Runci, Carlock, & Anderson, 2012; Jacobsson & Lauber, 2006), but less attention has been given to the analysis of such transitions in developing countries, particularly on the African continent.

Africa faces a serious challenge in fulfilling the above-mentioned global commitments. The continent's rapid growth trajectories imply a higher volume of emissions and it is highly unlikely that it will shelve its developmental aspirations in favour of climate change mitigation objectives. A recent wave of oil and gas discoveries in African countries, and the enthusiasm that it created, is only one example supporting this argument (IEA, 2014). With over 588 million Africans still lacking access to electricity (IEA, 2017), the deficit of energy is easily supplemented with diesel generators (Akinyoade & Uche, 2017). However, Africa's energy sector has a unique feature: a major portion of African energy currently comes from renewable energy resources, primarily from unreliable hydropower. With great sun, wind, geothermal, and hydropower potential, the continent has an inherent advantage in terms of clean energy (Bugaje, 2006; Sambo, 2015a; Van Kooten & Wong, 2010). Therefore, the clean energy transition in the African context should be understood not as a transition per se, but rather as clean energy modernisation and expansion (Arent et al., 2017; Mandelli, Barbieri, Mattarolo, & Colombo, 2014).

A number of initiatives have emerged to address Africa's energy challenges and to support the necessary expansion and modernisation, notably programmes such as Sustainable Energy for All, the African Union's Programme of Infrastructure Development in Africa (PIDA), Power Africa, the Africa-EU Energy Partnership, the African Clean Energy Corridor, as well as numerous bilateral, civil society and community efforts. Finally, in 2015, the African Union, supported by the G7 countries, officially launched the Africa Renewable Energy Initiative (AREI) at COP 21 in Paris. AREI objectives, aligned with the African Regional Flagship Programme (ARFP) on Sustainable Energy, include strengthening policy, regulatory support and incentive frameworks of African countries to develop their energy sector and achieve a sustainable energy mix, with priority given to, among others, the promotion of wind energy (AREI, 2015).

Wind energy is the world's fastest growing renewable energy technology (Aliyu, Modu, & Tan, 2018; Archer & Jacobson, 2005; Saidur, Islam, Rahim, & Solangi, 2010). It costs very little to maintain and, to date, it has proven to be one of the cheapest resources per unit of generated electricity (Aliyu et al., 2018). Proponents of wind energy argue that "[i]ncreased use of wind energy […] will spur economic growth, create job opportunit[ies], enhance national security, protect consumers from price spikes or supply shortages associated with global fuel markets and dramatically reduce the pollutant that is warming the planet which causes greenhouse effect" (Saidur et al., 2010): 1745). Wind energy has been the fastest-growing energy technology since the 1990s, but the growth of wind energy in terms of

[231] This sub-chapter is adapted from a published peer-reviewed article (Kazimierczuk, 2019).

installed capacity is not evenly distributed around the world. 85% of the total wind capacity is installed in ten countries in Asia, North America, Europe and Latin America (GWEC, 2018). With only 4,370 MW, Africa is lagging behind, constituting only 0.81% of the globally installed wind capacity in 2017. However, Africa's indicative potential for wind power is 109,000 MW (Castellano, Kendall, Nikomarov, & Swemmer, 2015; GWEC, 2018). Therefore, it is important to investigate why, currently, only a very small portion of such considerable potential is used, while the total primary energy demand on the continent continues to increase.

Kenya has one of the highest potentials for wind generation in Africa. The present contribution of wind to the total energy mix is marginal; however, it is expected to increase substantially in the coming years. Kenya has been particularly successful at attracting renewable and wind energy investments (Eberhard, Gratwick, Morella, & Antmann, 2016; Osiolo, Pueyo, & Gachanja, 2017), including the 310 MW Lake Turkana Wind Power (LTWP) project, the largest wind farm on the continent. LTWP is also the largest private investment in the country and is located on the south-east side of Lake Turkana in Marsabit County – a remote and so far, neglected part of Kenya. Additionally, a number of other large-scale wind power projects are under development, including Kipeto (100 MW), Isiolo (100 MW), Meru (60 MW), Ngong (51 MW) and the Baharini Electra Wind Farm project in Lamu (90 MW) (Edwards, Dent, & Wade, 2017; U. E. Hansen, Gregersen, Lema, Samoita, & Wandera, 2018; Ministry of Energy, 2016). Since the 1990s, Kenya has reformed its legal and institutional frameworks to accelerate the energy expansion process. Therefore, by taking Kenya as the main case study, the objective of this sub-chapter is to investigate the changes in regulatory, institutional and policy framework supporting the wind energy sector in Africa, specifically in Kenya. This can be seen as a starting point for understanding and critically reflecting on the process of clean energy transition in the African context.

To analyse energy transition in the wind energy sector, this sub-chapter builds on the work of Saidur et al. (Saidur et al., 2010) and Mukasa et al. (Mukasa, Mutambatsere, Arvanitis, & Triki, 2017), who previously conducted research into the global and African wind energy sector, respectively. Furthermore, the general framework for the analysis of energy transition developed by Cherp et al. (Cherp et al., 2018) will be loosely adopted, but the focus will be limited to the role of policy changes in the Kenyan energy system. Information used is drawn from an extensive review of the literature on energy transition (with the primary focus on Africa), African governments' documents, as well as media and internet sources. The review is supplemented with a number of interviews with government representatives from the Kenyan Ministry of Energy and developers of a major wind energy project in Kenya. The interviews were conducted from June 2016 through October 2016 and in August 2017.

The sub-chapter starts with a literature review concerning the state of RE and wind power in Africa, as well as a review of the supporting policies. Section 5.3.3 examines the energy transition taking Kenya as the main case study. It takes a historical approach to the reforms that have occurred in the energy sector more broadly and analyses the current energy mix. Finally, wind energy, supporting policies, as well as challenges to the expansion of wind projects in Kenya are discussed. The main conclusions are given in Section 5.3.6.

5.3.2 Wind energy in Africa: Literature review

Since 2002, sub-Saharan Africa (SSA) has gained increasing attention in scholarly work related to the energy situation on the continent (Trotter, McManus, & Maconachie, 2017), with Mandelli (Mandelli et al., 2014) providing the most comprehensive review of African (renewable) energy status, policies and literature to date. An increased number of detailed case studies focusing on the renewable energy policies of particular African countries have also been published (for example: (Bugaje, 2006) for South Africa, Egypt, Nigeria and Mali, (Sakah, Diawuo, Katzenbach, & Gyamfi, 2017) for Ghana, (Kousksou et al., 2015) for Morocco, or (Aliyu et al., 2018) for South Africa, Egypt and Nigeria). Nevertheless, less attention has been given to the status and policies supporting wind energy development as such, despite wind energy being considered one of the most cost-effective options among renewable energy

sources (Davidson, Kahrl, & Karplus, 2017), but also needing particularly strong government policy for development (Mohammed, Mustafa, & Bashir, 2013). With only 0.81% of global wind capacity installed in Africa in 2017 (GWEC, 2018), reviews concentrating solely on the African region and an incentive system for its further integration and development are scarce (Mukasa et al., 2017; Saidur et al., 2010).

In their review of global wind energy policy, Saidur et al. (Saidur et al., 2010) include only two North African countries (Egypt and Algeria) and do not take into consideration sub-Saharan Africa. This gap was closed by Mukasa et al. (Mukasa et al., 2017), who provided the first comprehensive overview of the total region's wind energy sector (including both Northern Africa and SSA) up until 2010. Both Saidur et al. (Saidur et al., 2010) and Mukasa et al. (Mukasa et al., 2017), as well as other scholars analysing energy transition, conclude that in order to guarantee the energy transition and development of the wind energy sector, two factors in particular are considered crucial on the global level, namely: adequate infrastructure and a supportive national legal framework (Cherp et al., 2018; Jacobsson & Lauber, 2006; Mukasa et al., 2017; Saidur et al., 2010; The World Bank, 2017b). Regarding the necessary infrastructure, it has been proven that systems with pre-existing hydropower can accommodate irregular wind power more easily (IEA, 2014). However, to encourage higher usage of wind energy in Africa, there is a major need to provide further extensions to grid infrastructure (AfDB, 2012; Osiolo et al., 2017; The World Bank, 2017b; Van Kooten & Wong, 2010). Regarding the supportive energy policies, the study of the global wind champions[232] showed that the existence of wind energy policies contributed significantly to the increase in wind power generation (Saidur et al., 2010).[233] The question thus remains whether the same applies in the case of Africa.

The indicative potential for wind power in Africa is 109,000 MW (Castellano et al., 2015), with the best wind being found in the coastal regions (Mukasa et al., 2017). The Horn of Africa, eastern Kenya, parts of West and Central Africa bordering on the Sahara and parts of Southern Africa also show high quality wind resources (Archer & Jacobson, 2005; Mukasa et al., 2017). Somalia is considered to have the highest onshore potential, followed by Sudan, Libya, Mauritania, Egypt, Madagascar and Kenya (Buys, Deichmann, Meisner, That, & Wheeler, 2007), while the offshore wind energy potential is optimal off the coast of Madagascar, Mozambique, Tanzania, Angola and South Africa. By 2016, almost half of African countries (26 countries) have set ambitious wind energy targets (Table 14), and some are ranked among the highest in the world (REN21, 2016). Although the installed wind capacity is expected to quadruple within the coming five years (GWEC, 2017a), the current low speed of adding capacity indicates that it is unlikely that this goal will be achieved in the assumed timeframe.

In 2017, only 4,370 MW – a tiny fraction of the total potential – was being exploited in Africa (Table 13). This wind energy was produced by only 16 African nations, and was concentrated predominantly within three of them, namely South Africa, Egypt and Morocco, which together held 84% of the continent's total installed wind capacity (Table 13). Most of the wind development was located onshore (IEA, 2014) and there was no installed wind capacity offshore on the continent (GWEC, 2018). Although the amount of installed wind capacity in Africa has nearly quadrupled within the last five years (Table 13), and a total of 140 wind farms with a cumulated capacity of 21,000 MW are expected to be operational in Africa by 2020 (IRENA, 2015), the installed wind capacity remains low and far from reaching the continent's ambitious targets.

[232] The study of USA, Canada, Denmark, Germany, Turkey, Australia, China, Japan and South Korea.
[233] Although another study (Jenner, Groba, & Indvik, 2013) showed that in some EU countries policies didn't have a strong effect on wind power development.

Table 13. Wind energy installed capacity (MW) in Africa 1995-2017

	1995	1999	2001	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	%
South Africa				3	3	3	8	8	10	10	10	10	570	1,053	1,471	2,085	47.7%
Egypt	5	15	125	145	230	310	365	430	550	550	550	550	610	810	810	810	18.5%
Morocco			54	64	124	124	134	253	286	291	291	291	787	787	787	787	18.0%
Ethiopia									30	30	52	171	171	324	324	324	7.4%
Tunisia				20	20	20	54	54	104	104	104	104	245	245	245	245	5.6%
Mauritania												4	4	34	34	34	0.8%
Kenya				0.4	0.4	0.4	0.4	0.4	5	5	5	5	5	26	26	26	0.6%
Cape Verde		3	3	3	3	3	3	12	24	24	24	24	24	24	24	24	0.5%
Mauritius								1	1	1	1	1	1	1	11	11	0.3%
Algeria													10	10	10	10	0.2%
Seychelles												6	6	6	6	6	0.1%
Somalia											2	2	2	3	3	3	0.1%
Nigeria				2	2	2	2	2	2	2	2	2	2	2	2	2	0.05%
Madagascar										1	1	1	1	1	1	1	0.02%
Chad															1	1	0.02%
Eritrea						1	1	1	1	1	1	1	1	1	1	1	0.02%
Total	**5**	**18**	**182**	**237**	**382**	**463**	**567**	**761**	**1,013**	**1,019**	**1,043**	**1,172**	**2,440**	**3,327**	**3,756**	**4,370**	**100%**

Source: (Ackermann & Söder, 2000, 2002; Aliyu et al., 2018; ECREEE Secretariat, 2011; GIZ, 2015; GWEC, 2007-2018; IRENA, 2017; KPLC, 2005-2017; Mandelli et al., 2014; Ministry of Energy & WinDForce, 2013; Mohammed et al., 2013; Praene et al., 2017; Sambo, 2015b; World Energy Council, 2016)

The main reason behind this may be the fact that established policies and regulations appear not to be the decisive factors for the development of wind farms in Africa (Mukasa et al., 2017). Table 14 indicates that five out of 16 African countries involved in wind energy production have no explicit wind energy policy or established targets. Simultaneously, 11 out of 23 countries[234] with established targets for wind energy production are currently not active producers of such energy. Such findings suggest that in the African context the presence of legislation is important, but, despite this, it remains insufficient in the energy transition process.

A number of countries around the world consider Feed-in-Tariffs (FiT), Renewable Portfolio Standard (RPS), production incentives, pricing law and quota requirements as key policies for increasing the use of RE (Saidur et al., 2010). The main advantage of the FiT scheme is its predictability, but it also eliminates price competition. Within Africa, the FiT scheme is not very popular, with only 13 countries adopting the scheme (and 11 of these schemes consider wind energy). The FiT rates also differ substantially from country to country, with the cheapest rates found in Algeria (10 US cent per kWh) and the highest rate of 16.5 US cent per kWh in Tanzania.[235] The average FiT rate across African countries is 12.6 US cent per kWh.[236] Among the top three wind-producing countries, only Egypt has an active FiT scheme, while all of them engage in competitive tendering processes. Competitive bidding is currently the most popular form of tendering for RE and is also considered a more effective method for driving the prices of RE down (Eberhard & Kåberger, 2016; Mukasa et al., 2017). The example of South Africa shows that since the introduction of this process, competitive tenders have attracted new and substantial private investments, while bid prices for electricity production from wind and solar PV power fell by 46% and 71%, respectively, in nominal terms (Eberhard & Kåberger, 2016). RPS and tradeable Renewable Energy Certificates (REC) are much less popular on the continent, with the latter being adopted only by Ghana. What appears to count more than a strong regulatory framework are fiscal incentives and public financing. The majority of countries that generate electricity from wind, including those without an explicit wind energy policy or established targets, do offer reductions in sales or taxes, and/or provide public loans, grants, capital subsidies or rebates (Table 14).

It is argued that a clear regulatory framework will attract new investors, but in the African context it is not a prerequisite. What appears to be more important is creating a conducive environment to attract wind and other RE projects. Kenya is the only country on the continent that has not only implemented major reforms to its energy sector and introduced a range of fiscal incentives and public financing possibilities (Table 14), but has also been particularly successful in attracting renewable and wind energy investments in recent years (Osiolo et al., 2017). It is therefore worthwhile investigating what the process behind Kenya's energy transition was and the extent to which the adequate infrastructure and supportive national legal frameworks have addressed the energy demand gap in the country.

[234] In total, 25 countries have established targets for wind energy production, however for Togo and Mali this target is set for zero MW.
[235] Mauritius' rate of 33 US cents per kWh is the highest, yet this rate applies to very small wind projects <50kW.
[236] Excluding Mauritius.

Table 14. Renewable Energy Support Policies, Targets for wind power per country in Africa (2016)

Country	All Renewable energy targets	Renewable energy in INDC or NDC	Wind energy targets (or a % of total energy mix)	Current wind energy production	Regulatory Policy									Fiscal Incentives and Public Financing		
					Feed-in tariff/premium	Feed-in tariff set payment for wind (US cents/kWh)	Electric utility quota obligation/RPS	Net metering	Transport obligation/mandat	e Heat obligation/mandat	e Tradable REC	Tendering	Investment or production tax credits	Reductions in sales, energy, VAT or other taxes	Energy production payment	Public investment, loans, grants, capital subsidies or rebates
Algeria	×	×	5,100 MW by 2030	10 MW	×	10						×			×	×
Angola	×	×	100 MW by 2025						×							×
Benin	×		10 MW by 2020		x*							×				
Botswana	×		30 MW by 2016											×		×
Burkina Faso	×	×										×	×	×	×	
Burundi	×	×	10 MW by 2020									×		×		
Cape Verde	×	×	76 MW by 2020	24 MW				×				×	×		×	
Cameroon	×	×												×		
Central African Republic (CAR)	×	×														
Chad				1 MW									×	×		
Comoros																
Côte d'Ivoire	×	×										×	×	×		
Democratic Republic of the Congo	×	×												×		
Djibouti	×															
Egypt	×	×	7,200 MW by 2020	810 MW	×	11.5		×				×		×		×
Equatorial Guinea																
Eritrea	×		5 MW (no date)	1 MW												
Eswatini (Swaziland)	×															
Ethiopia	×	×	7,000 MW by 2030	324 MW					×					×		×
Gabon	×															
Gambia	×	×												×		
Ghana	×	×			×	16	×	×	×		×			×		×
Guinea	×	×	2% by 2025											×		
Guinea-Bissau	×															
Kenya	×	×	2,036 MW by 2030	26 MW	×	11		×		×		×		×	×	×

Lesotho	X	X	6,000 MW by 2025					X			X	X			X	X
Liberia	X	X											X			
Libya	X		1,000 MW by 2025										X			
Madagascar	X	X	5% by 2030	1 MW									X			
Malawi	X	X			X	13				X	X		X			X
Mali	X	X	0						X				X			X
Mauritania	X			34 MW												
Mauritius	X	X	6% by 2020 & 8% by 2025	11 MW	X	33					X		X			X
Morocco	X	X	2,000 MW by 2020	787 MW				X			X		X			X
Mozambique	X	X	2,000 MW (no date)		X	13			X				X			X
Namibia	X	X			X	10.6				X						
Niger	X	X											X			
Nigeria	X	X	40 MW by 2025	2 MW	X	12.5	X		X		X		X			X
Republic of the Congo											X					
Rwanda	X	X			X**						X		X			X
Sao Tome and Principe	X															
Senegal	X	X					X	X			X		X			
Seychelles	X	X		6 MW				X				X	X			X
Sierra Leone	X		2 MW by 2030										X			
Somalia				3 MW									X			
South Africa	X	X	9,200 MW by 2030	2,085 MW			X		X	X	X		X			X
South Sudan	X															
Sudan	X	X	680 MW by 2031						X							
Tanzania	X	X	50-100 MW by 2030		X	16.5							X	X		X
Togo	X	X	0										X			
Tunisia	X	X	1,800 MW by 2030	245 MW				X					X			X
Uganda	X	X			X	12					X		X			X
Zambia	X	X									X		X			X
Zimbabwe		X							X				X			X

* For solar and biomass only ** For hydropower only

INCD - Intended Nationally Determined Contribution, NCD - Nationally Determined Contribution, RPS - Renewable portfolio standard(s), REC - Renewable Energy Certificates

Source: (ALER, 2017; Aliyu et al., 2018; Bundhoo, 2018; Climatescope 2017, 2917; ECREEE Secretariat, 2011; EWURA, 2016; IEA/IRENA, 2017; Praene et al., 2017; REN21, 2016, 2017; RISE, 2017; Sambo, 2015b; World Energy Council, 2016)

5.3.3 Case Study: Energy Transition in Kenya

5.3.3.1 The Energy Sector in Kenya

In 2017, Kenya's total installed energy capacity stood at 2,333 MW. The whole system generated 10,205 GWh, of which 74% came from the state-owned Kenya Electricity Generating Company and 24% from a number of Independent Power Producers (IPPs). The remaining 2% was imported from neighbouring countries, mostly from Uganda. Electricity currently reaches 55% of the population, which shows major progress with regards to the electrification of Kenya (in 2013 only 27% of the population had access to electricity) (Ford, 2017; KPLC, 2017). It is estimated that 77% of electricity is generated using renewable energy sources, which are predominantly hydro (33%) and geothermal (44%), while 21% comes from thermal plants, thus from fossil fuels (KPLC, 2017). The further expansion of other renewable energy sources, including wind, has been given a high priority in key national policies (Kenya Vision 2030, the Rural Electrification Master Plan) (GoK, 2007; Rural Electrification Authority, 2009).

5.3.3.1.1 Short history of Kenya's energy sector and first reforms

In 1906, Clement Hirtzel, an ambitious electrical engineer from Britain, established the Nairobi Electric Power and Lighting Syndicate, a company with the exclusive right to supply electric light and power to the town and district of Nairobi. In 1908, a wealthy merchant in Mombasa, Hassanali Esmailijee Jivanjee, bought the electricity generating plant from the Electric Company of Zanzibar, which was the first of its kind in Africa. This plant was sold to the newly formed Mombasa Electric Light and Power Company Limited. The two companies (Nairobi Electric Power and Lighting Syndicate and Mombasa Electric Light and Power Company Limited) merged in 1922 to become the East African Power and Lighting Company (EAP&L). In 1983, the company was renamed Kenya Power and Lighting Company Limited (KPLC) and then again as Kenya Power in 2011, however the acronym KPLC is still in use today (GoK, 2014a; KPLC, 2011).

For a long time, Kenya has relied heavily on hydropower plants for its electricity generation capacity. However, the droughts in the 1990s, which resulted in severe power shortages and crippled the formal economy, forced the government to initiate a number of policies and reforms (CEPA, 2015). Moreover, in the mid-1990s, as the country emerged from an aid embargo, the reforms in Kenya's electricity supply sector were critical, as the country intended to attract much-needed private sector investments to complement limited public sector funding (Eberhard et al., 2016; Newell & Phillips, 2016). Consequently, following the Electric Power Act of 1997, it was decided to split KPLC's core functions into two entities: the Kenya Electricity Generating Company (entirely state-owned KenGen; responsible for power generation) and KPLC (responsible for the transmission and distribution of power). The Electric Power Act of 1997 also stipulated that the government's primary function, through the Ministry of Energy and Petroleum (MoEP), is policy formulation, thus devolving its regulatory authority to a newly established Electricity Regulatory Board (ERB) that became functional in 1998. Despite the reforms, electricity in Kenya remained unreliable and beyond the reach of most of its citizens. In 2004, further reforms were instituted through the National Energy Policy (Sessional Paper No. 12 of 2004) and the subsequent enactment of the Energy Act of 2006. These reforms reorganised the sector again by, among others, the establishment of the Rural Electrification Authority (REA) and restructuring of the Electricity Regulatory Board (ERB) to the Energy Regulatory Commission (ERC), whose mandate was expanded to encompass the entire energy sector. Additionally, the Geothermal Development Company (GDC) and the Kenya Electricity Transmission Company (KETRACO) were created to promote geothermal development and facilitate transmission network expansion, respectively. The government also committed to facilitating the development of a competitive market structure for the generation, distribution and supply of electricity (CEPA, 2015; Eberhard et al., 2016; GoK, 2014a; KPLC, 2011).

5.3.3.2 Reforms towards market liberalisation and current institutional set-up

Further reform efforts and strategic targets followed. In 2008, Kenya's 2030 Vision set a new generation target of 23,000 MW by 2030. This ambitious target represents a ten-fold increase from the country energy capacity in 2008 and it is planned to be achieved through a mix of hydropower, geothermal, wind, coal, liquefied natural gas and imported power (Bryan Cave Leighton Paisner (BLP), 2017). To realise the high growth rates assumed in the Vision 2030, the government emphasised the importance of enabling private sector participation in the process, which led to the development of a subsequent comprehensive investment framework for Public-Private Partnerships (PPPs). The First Medium Term Plan (2008 – 2012) provided the basis for improving the institutional and regulatory framework for PPPs, while the final policy was formalised with the passing of the PPP Act in 2013. Meanwhile, at the generation level, the ERC stated that "electricity generation in Kenya is liberalised," with Independent Power Producers (IPPs) given an opportunity to enter the sector and compete alongside the state incumbent KenGen (Energy Regulatory Commission, 2017). A competitive market structure became a goal and the proposed National Energy and Petroleum Policy and Energy Bill 2015 suggested further reforms to legal and institutional frameworks to facilitate a competitive wholesale market structure in the country. Despite market liberalisation, and a growing number of IPPs present in the sector, KenGen and the KPLC remain the dominant players (CEPA, 2015; Eberhard et al., 2016). Below, Table 15 gives an overview of the key institutions and their current functions in the power sector in Kenya, while Figure 26 visualises the relations between different actors in Kenya's Electricity Sector.

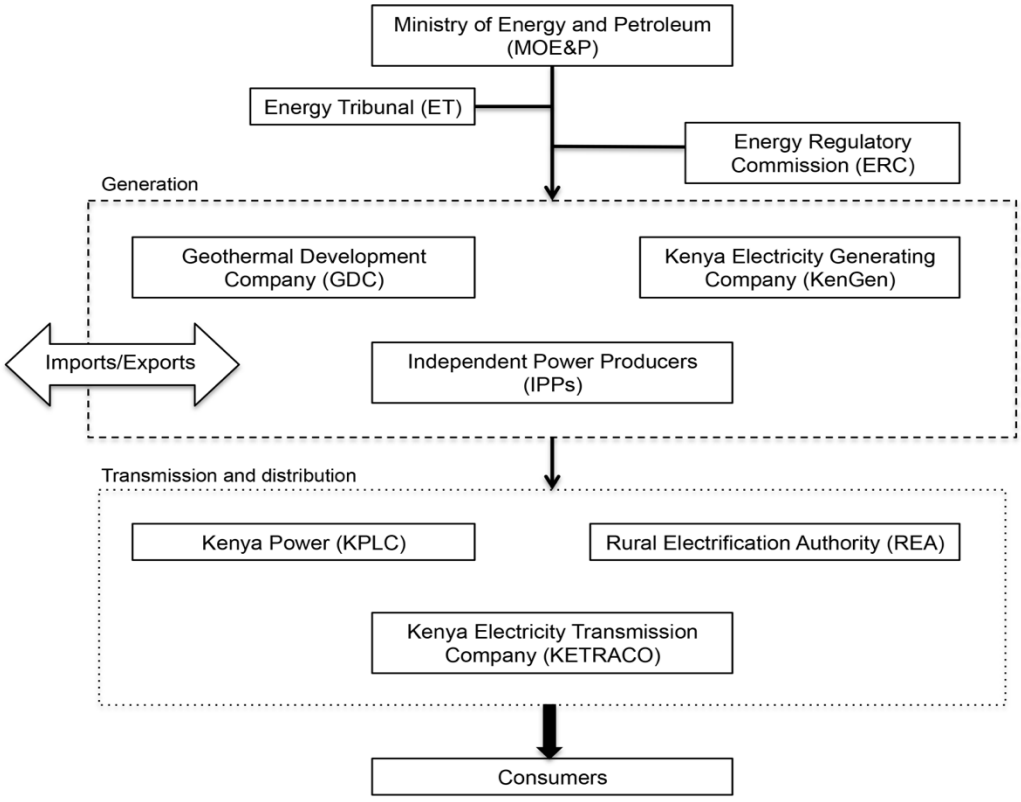
Table 15. Key Institutions and Their Functions in the Power Sector in Kenya

Key institution	Functions
Ministry of Energy and Petroleum (MOE&P)	In charge of making and articulating energy policies to create an enabling environment for efficient operation and growth of the sector.
Energy Regulatory Commission (ERC)	Responsible for regulation of the energy sector. Its functions include licencing, retail and bulk tariff setting and oversight, coordination of the development of Indicative Energy Plans, monitoring and enforcement of sector regulations.
Energy Tribunal (ET)	An independent legal entity, established to arbitrate disputes in the sector.
Kenya Electricity Generating Company (KenGen)	The main player in electricity generation, with installed power system of 7,513 MW (2017). It is listed at the Nairobi Stock Exchange with 70% shareholding by the Government of Kenya and 30% by private investors. The company accounts for about 74% of the installed capacity from various power generation sources that include hydropower, thermal, geothermal and wind.
Geothermal Development Company (GDC)	A fully government-owned Special Purpose Vehicle (SPV) intended to undertake surface exploration of geothermal fields, conduct exploratory, appraisal and production drilling and manage proven steam fields as well as enter into steam sales agreements with potential investors.
Independent Power Producers (IPPs)	Private investors in the power sector involved in generation either on a large scale, or for the development of renewable energy under the Feed-in-Tariff Policy. Current players are: IberAfrica; Tsavo; Or-power; Rabai; Imenti; Mumias; Thika Gikira; Triumph; Gulf; Biojule and Regen-Terem. Collectively, they account for about 24% of the country's installed capacity from thermal, geothermal, hydro, biomass and biogas.
Rural Electrification Authority (REA)	Established in 2007 with a mandate to implement the Rural Electrification Programme
Kenya Power (KPLC)	The off-taker in the power market buying power from all power generators based on negotiated Power Purchase Agreements for onward transmission, distribution and supply to consumers. It is governed by the State Corporations Act and is responsible for existing transmission and distribution systems in Kenya. KPLC is a listed company on the Nairobi Stock Exchange with the ownership structure

	being 50.1% by the National Social Security Fund (NSSF) and the GoK and 49.9% owned by private shareholders.
Kenya Electricity Transmission Company (KETRACO)	Incorporated in December 2008 as a State Corporation, 100% owned by the Government of Kenya. The Mandate of KETRACO is to plan, design, construct, own, operate and maintain new high voltage (132kV and above) electricity transmission infrastructure.

Source: (GoK, 2014a; KPLC, 2016)

Figure 26. Overview of Kenya's Electricity Sector



Source: adopted from (GoK, 2014a)

5.3.3.3 Private participation in power generation on a big scale

The introduction of the Feed-in-Tariffs (FiT) policy in 2008 was a specific intervention designed to truly accelerate the energy expansion process and encourage more investors in the RE sector. The first iteration of this policy, however, failed to attract many investors and tariffs were subsequently reviewed in January 2010 (Ministry of Energy, 2012). A second FiT regime was introduced two years later (Table 16). While the FiT policy has increased investor confidence to some extent, it is generally held that rates have not yet reached a cost-reflecting level (Eberhard et al., 2016; Owino et al., 2016).

Table 16. FiT regime in Kenya

	Duration	Installed Capacity (MW)	Standard FiT (USD$/kWh)	Max Capacity (MW)
FIT FOR PROJECTS LESS THAN 10MW				
Wind	20 Years	0.5 - 10	0.11	10
Hydropower		0.5	0.105	10
		10	0.0825	
Biomass		0.5 - 10	0.10	10
Biogas		0.2 - 10	0.10	10
Solar (grid)		0.5 - 10	0.12	10
Solar (off-grid)		0.5 - 10	0.20	1
FIT FOR PROJECTS MORE THAN 10MW				
Wind	20 Years	10.1 - 50	0.11	500
Geothermal		35 - 70	0.088	500
Hydropower		10.1 - 20	0.0825	200
Biomass		10.1 - 40	0.10	200
Solar (grid)		10.1 - 40	0.12	100

Source: (Ministry of Energy, 2012)

In 2009, the ERC established a multi-stakeholder Least Cost Power Development Planning Committee (LCPDP). In 2013, the 5,000+ MW capacity and expansion programme was launched with the goal of deploying 5,000 MW within 40 months. The programme was presented by the Government of Kenya as the means to transform the country, by providing adequate generation capacity at a competitive rate (Kenya Ministry of Energy and Petroleum, 2013). The 2013–33 LCPDP was further modified to support the 5,000+ MW programme and to champion the development of indigenous resources, including geothermal power, wind power, coal and, potentially, gas. While KenGen was to be the anchor investor in most of the projects, the plan relied heavily on independent power producers, with the latter expected to develop 70% of the new installed capacity (Eberhard et al., 2016). However, nearly two years from its inception in 2013, the 5,000+ MW programme was scaled back. Lack of adequate (transmission and distribution) infrastructure proved to be a major obstacle to adequately absorbing and handling the envisioned rapid capacity additions. The roll-out and subsequent scaling back of the 5,000+ MW programme sheds light on how planning and procurement are handled in the nation: when KenGen is unable to finance new investments, the private sector is invited to participate (Eberhard et al., 2016).

Typically, bids for IPPs are requested by the KPLC, and winners are selected via a competitive process, although in some cases (such as for the emergency thermal generators required in 2000 and 2011, and tenders for large LNG and coal plants in 2014) procurement has been handled by the government, either directly or through its appointed agent – KenGen. The government, through the Ministry of Energy and Petroleum, may also consider unsolicited bids. The majority of current IPPs were procured through competitive bidding or direct negotiations with the government. Most IPP capacity is supplied by diesel generators (75%), followed by a geothermal installation (20%), and biomass, a small hydro and biogas installation (altogether 5%). Only two wind farms are a result of the FiT scheme, and the construction of one of these was later cancelled (Eberhard et al., 2016). The percentage of IPP capacity has grown considerably since 2005 (see Table 17), however the share of renewable energy sources other than geothermal has so far been very limited (Eberhard et al., 2016).

Private participation in power generation is not new to Kenya; what is new, however, is the anticipated scale. For instance, of the capacity envisioned in the 5,000+ MW programme, the majority (70%) would

be through the private sector. In 2017, Kenyan IPPs[237] accounted for approximately 30% of the installed capacity in Kenya (691 MW). What is noticeable is the importance and involvement of international actors in the Kenyan energy sector. The budget of the Ministry of Energy is for two thirds offset through appropriations in aid (National Treasury, 2012-2016). Furthermore, the majority of companies behind current IPPs, are international investors, mostly from Europe and the USA, with international and multilateral funding. Private Kenyan companies are also present but their involvement is limited to two heavy fuel oil emergency power plants and 20% stake in one of the wind energy projects (Table 18). LTWP, when commissioned in late 2018, will add 13% of capacity to the national grid (Kazimierczuk, 2017). That will mean that 43% of Kenyan energy will be in private, mostly international, hands. That may have a major implication for the country's energy security in the future.

[237] In addition to Kenyan IPP, approximately 184 MW was purchased via regional IPPs (Uganda Electricity Transmission Company Limited and Ethiopia Electricity Power Company) in 2017 (KPLC, 2017).

Table 17. List of Kenyan Independent Power Producers (IPPS) and their energy generated between 2005-2017

Kenyan Independent Power Producers (IPPs)	Type	Capacity (MW) as at 30.06.2016		Energy Purchased in GWh												
		Installed	Effective	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
OrPower 4 – Geothermal I, II, III & IV*	Geothermal	139	139	115	117	112	98	276	400	372	392	503	851	955	1,066	1,172
Iberafrica I&II Power	Heavy fuel oil	108.5	108.5	330	408	321	306	344	621	722	705	592	550	198	128	252
Tsavo Power	Heavy fuel oil	74	74	508	569	547	556	566	495	368	283	178	152	83	39	121
Mumias – Cogeneration	Biomass	26	21.5	-	9	4	9	4	99	87	100	71	57	14	-	-
Rabai Power	Heavy fuel oil	90	90					-	318	394	338	443	633	609	536	606
Imenti Tea Factory hydro	Hydro	0.3	0.3					-	0,3	0,4	0,8	0,7	0,1	0,5	0,7	0.3
Thika Power	Heavy fuel oil	87	87					-	-	-	-	-	454	233	70	168
Gikira small-hydro	Hydro	0.514	0.514					-	-	-	-	-	0,4	1,6	1,9	1
Triumph Power	Heavy fuel oil	83	83											4,8	82	83
Gulf Power	Heavy fuel oil	80.32	80.32											60	8	61
Biojule Kenya Limited	Biogas	2	2											-	0,3	0.7
Westmont Power Kenya Ltd.	Kerosene	-	-	3												-
Regen-Terem	Hydro	5	5													1
IPP Total		**696**	**691**	**956**	**1,103**	**984**	**969**	**1,190**	**1,933**	**1,943**	**1,819**	**1,788**	**2,698**	**2,159**	**1,932**	**2,466**

*OrPower 4 -Geothermal IV (29 MW) became operational as of 2016

Source: (KPLC, 2006-2017)

Table 18. Independent Power Project Sponsors and Debt Holders in Kenya

Project	Type	Equity partners (country, % of equity held)	Debt provider
Westmont*	Kerosene	Westmond (Malaysia, 100%)	Equity financed
OrPower4	Geothermal	Ormat (Israel/USA, 100%) since 1998	Equity financed until 2009, European DFIs $105mln loan in 2009, then OPIC loan of $310mln drawn down in 2012-13
Mumias	Biomass	Mumias Sugar Company Ltd (Kenya, 100%)	Not available
Iberafrica	Heavy fuel oil	Union Fenosa (Spain, 80%), Kenya Power Pension Fund (Kenya, 20%) since 1997	Union Fenosa ($12,7mln in direct loans and guaranteed $20mln); Kenya Power Pension Fund ($9,4mln in direct loans and guaranteed $5mln through local Kenyan bank)
Tsavo	Heavy fuel oil	Cinergy (USA) and IPS (Int'l) jointly owned 49,9%; Cinergy sold to Duke Energy (USA) in 2005, CDC/Globeleq (UK, 30%), Wartsila (Finland, 15%), IFC (Int'l, 5%) retain remaining shares since 2000	IFC own account ($16,5 mln), IFC syndicated ($23,5 mln), CDC own account ($13 mln), DEG own account (€11 mln), DEG syndicated (€2 mln)
Rabai	Heavy fuel oil	Aldwych International (Netherlands/UK, 34,5%), BWSC (Danish, but owned by Mitsui of Japan, 25,5%), FMO (Netherlands, 20%), IFU (Danish bilateral lender, 20%)	FMO ($126 mln), Proparco (25%), EAIF (25%), DEG (15%), European Financing Partners (10%)
Thika	Heavy fuel oil	Melec PowerGen (part of Matelec Group) (Lebanon, 90%)	AfDB (€28 mln), IFC (€28 mln), Absa Capital (€28 mln)
Triumph	Heavy fuel oil	Broad Holding (Kenya), Interpel Investments (Kenya), Tecaflex (Kenya), Southern Inter-trade (Kenya)	Industrial and Commercial Bank of China (ICBC) ($80mln), Kenya's CFC Stanbic Bank ($28mln) (of which Standard Bank is the parent, in which ICBC has 20% stake)
Gulf	Heavy fuel oil	Consortium of Gulf Energy Ltd. (Kenya) and Noora Power Ltd. (Kenya)	$76mln in long-term debt financing (IFC A Loan, and commercial lending through IFC B Loan and OPEC Fund for International Development)
Kipeto Wind Power Project	Wind	AIIF 2 (South Africa/Mauritius, 55%), Craftskills Wind Energy International (Kenya, 20%), IFC (Int', 20%) The Kipeto Community Trust (Local community, 5%)	Overseas Private Investment Corp (OPIC) ($232.6mln/€208.8mln)
Kinangop**	Wind	AIIF2 (South Africa/Mauritius, 81%), Norfund (Norway, 19%)	Kenyan CFC Stanbic

Lake Turkana Wind Power	Wind	Aldwych International (UK, 30.2%), KP&P Africa B.V. (Netherlands, 26.5%), Norfund (Norway, 12,3%), FinnFund (Finland, 12,3%), Vestas (Denmark, 12,3%), IFU (Denmark, 6.1%), Sandpiper (Mauritius, 0,2%)	EIB (€200mln), AfDB (€135mln), FMO (€35mln), ICCF (€30mln), Proparco (€20mln), PTA Bank (€10mln), Triodos (€5,5mln); [Mezzanine: DEG (€20mln), PTA Bank (€10mln), EADB (€5mln), AfDB (€5mln)] [Preference shares: EU-AITF (€25 mln)]

Notes: AfDB = African Development Bank, AIIF = African Infrastructure Investment Fund, BWSC = Danish Engineering company owned by Mitsui; CDC=Commonwealth Development Corporation, DEG=German Investment and Development Corporation, DFI =development finance institution; EADB=East-African Development Bank; EAIF = Emerging Africa Infrastructure Fund; EIB = European Investment Bank; EU-AITF = EU-Africa Infrastructure Trust Fund; FinnFund = Finnish Fund for Industrial Cooperation Ltd; FMO = Netherlands Development Finance Company; ICCF= Interact Climate Change Facility; IFC =International Finance Corporation; IFU= Danish Investment Fund for Developing Countries; Norfund =Norwegian Investment Fund for Developing Countries; OPIC =Overseas Private Investment Corporation; OPEC =Organisation of the Petroleum Exporting Countries.
* Westmont did not renew its contract in 2004 after it failed to agree on tariff levels.
**Project stalled.
Source: (Eberhard et al., 2016; Kipeto Energy Ltd., 2017)

5.3.4 Wind energy in Kenya

The potential for wind generation in Kenya is among the highest in Africa with a total of 346 W/m2, which, theoretically, could fulfil power requirements for the whole country (Ministry of Energy & WinDForce, 2013; Oludhe, 2013). Geographically, Kenya has a number of specific areas with significant wind resources throughout the year, as a result of its complex topographical features and varying nature of surfaces in various regions (Barasa & Aganda, 2016). Generally, the North West of the country (Marsabit and Turkana districts), the edges of the Rift Valley as well as the coastal area enjoy fairly good wind speeds and have the potential to be successfully exploited (KEREA, 2017; Ministry of Energy & WinDForce, 2013).

Wind energy in Kenya was introduced at the turn of the 20th century by European settlers and it was one of the earliest forms of industrial energy introduced into the country (Oludhe, 2013; Theuri, 2008). The first windmills were imported from Europe and used for agricultural water-lifting purposes. They were later replaced by diesel and petrol engines (O'Keefe, Raskin, & Bernow, 1984). A number of wind projects started in the late 1970s and early 1980s, but most of them were abandoned because of inadequate feasibility assessments, poor planning and lack of funding (Tigabu et al., 2017). Non-subsidized wind energy production in Kenya became competitive only after a substantial increase in the price of oil in 2005. The contribution of wind as a source of energy in 2017 was very small – only 1.09%. It came from the only wind project connected to the grid installed near Nairobi on Ngong Hills (25.5 MW).[238] It is, however, expected to jump upwards significantly in the next years. In 2016, four wind IPPs with a combined capacity of 221 MW were licenced under the FiT scheme; another six with a total capacity of 390 MW were in the queue to obtain licences, and nine envisioned projects were conducting feasibility studies (Ministry of Energy, 2016). Finally, the LTWP (310MW) wind park is ready and awaiting official launch in late 2018 (REVE, 2018).

Regarding supportive wind energy development policies, Kenya's new constitution does not explicitly provide for the right to access energy. Nevertheless, it commits to sustainable development, which requires access to energy, preferably renewables, as stipulated in subsequent documents (Muigua, 2013). Kenya Vision 2030 and the updated LCPDP set a target of 2,036 MW of wind power, or 9% of the

[238] The first two wind turbines (already retired) were commissioned in 1993 from Belgian TPF-Econoler SA (TPFE). This further expanded to six windmills, the wind power plant was generating 5.1 MW of clean electricity and it was upgraded again in 2015 to 25.5 MW capacity. The wind farm is owned by KenGen. Ngong Wind Phase II is planned and the total potential for annual energy yield is estimated to be 14.9 GWh, which represents almost 3,000 full-load hours (Lahmeyer International, 2016).

expected total maximum generation capacity to be developed by 2030 (Tigabu et al., 2017; Triple E, 2014). With other planned wind power project development efforts, Kenya expects to reach almost 2,500 MW by 2035. Furthermore, the FiT scheme allows a private investor to sell wind electric power to the national grid at a fixed tariff of US Cents 11.0 per kilowatt-hour for 20 years (for IPPs between 500 kW and 100 MW – see Table 16 above). This rate remains one of the cheapest on the continent. The Ministry of Energy is currently considering introducing energy auctions (following the example of South Africa) and net metering (to encourage citizens to invest in RE). The Government has also put in place a zero-rated import duty for wind energy equipment. Similarly, it has removed VAT on imported renewable energy equipment and accessories (Ministry of Energy & WinDForce, 2013). Finally, the Energy Act of 2006, National Climate Change Response Strategy of 2010 and the LCPDP Committee all emphasise the facilitation of wind energy development to meet Kenya's long-term energy ambitions.

5.3.5 Challenges to the wind power expansion in Kenya

Kenya is a growing economy with highly ambitious energy targets set out in the Kenya Vision 2030. If Kenya wants to achieve these targets, it must build over 80% of the additional wind energy capacity by 2030.[239] A number of large-scale wind power projects are under development, including Lake Turkana Wind Power project (310 MW), Kipeto (100 MW), Isiolo (100 MW), Meru (60 MW), Ngong (51 MW) and the Baharini Electra Wind Farm project in Lamu (90 MW) (Edwards et al., 2017; U. E. Hansen et al., 2018; Ministry of Energy, 2016). This presents an attractive investment opportunity in the area of wind power generation, including transmission and distribution in the years to come. Nevertheless, investors report a number of challenges linked to national wind energy development.

The main problem is obtaining and finalising a a Purchasing Power Agreement (PPA) in a reasonable time period and the fact that the PPAs are not indexed. Consequently, the tariff set in the PPA will apply for many years and will not be adjusted to inflation or the consumer price index. Such PPAs may be sufficient for now to mitigate the risks of potential investors; however, such a solution will not be sufficient in the long-term, as the price of wind energy will need to reduce further. A PPA inflation adjustment would help Kenya to protect the real value of renewable energy project revenues against changes in the broader economy and further reduce investors' risks (Brugman, 2013; Triple E, 2014). Moreover, the FiT scheme is applicable only for wind power projects with a generation capacity of up to 50 MW, while most of the ongoing projects are above this capacity. Both Kipeto (100 MW) and Kinangop (60 MW) were commissioned through the FiT scheme, but tariffs for LTWP (310 MW) were negotiated directly with KPLC. This demonstrates an inconsistency in the government's handling of wind projects above 50 MW.

Secondly, developers contend that the wind energy tariff would only be viable on sites with constant high wind speeds (Eberhard et al., 2016; Owino et al., 2016). That means that projects must be stretched to their limits to become profitable. For example, LTWP installed capacity of 310 MW was necessary to ensure the financial viability of the project in their remote location. The wind farm also had to be big enough to justify and capitalise on two associated, major infrastructure investments that accompany the wind park, namely the construction of a local road and transmission lines.

Thirdly, land and community issues remain problematic for the wind projects that, per definition, require space to operate. Kinangop, Kenya's first FiT wind project, is a prominent example of a wind power project that was halted due to exactly these issues. The wind park was already in development and had the necessary agreements with the local community, while some local landowners made additional claims. A series of protests ensued (in 2015), resulting in the death of one citizen. Following unsuccessful mediation between the company and the local community by the Kenyan government, the project was halted in late 2015 and ultimately cancelled in 2016 (Eberhard et al., 2016).

[239] Assuming that LTWP is already fully operational in 2018.

A final issue with installing wind projects in Kenya is linked to the current grid infrastructure. For wind energy, the issue of transmission and integration are particularly important, as the intermittent character of wind power can potentially increase grid instability. The Kenyan grid has been recently upgraded to absorb the additional high amount of planned energy, including energy to be produced by the LTWP. Nevertheless, the ready wind park was awaiting connection to the grid for over a year as the transmission line construction has been severely delayed. KETRACO, responsible for the grid extension, was faced with a number of challenges regarding how to connect the remote LTWP with the main substation near Nairobi. Among other challenges, the process of land acquisition for the line has been very lengthy and more expensive than initially anticipated. Furthermore, KETRACO has been accused of being ineffective due to their business model and having an inefficient internal structure, which does not encourage a quick finalisation of the lines' construction. This example shows that the Kenyan government should consider investing more in connecting other remote areas in the North, which have the highest potential for wind energy generation, with the existing network. The example of LTWP and a similar case, the Tarfaya wind farm in Morocco (301 MW), imply that an additional developmental effect could be created by transforming the currently neglected parts of the African continent into a productive producer of green energy by becoming a major contributor to the continent's energy security (Dietz, 2016).

5.3.6 Conclusions

The presence and enforcement of well-designed national supportive policies and incentives to guide development and use of renewable energy resources is vital, although not sufficient to promote wind energy development in Africa. Following numerous bilateral and multilateral efforts, by 2016, the majority of African countries had defined RE supporting policies, with nearly half also having defined their wind energy targets. However, among those 23 countries, 11 are currently not active producers of such energy. In contrast, a third of 16 African countries involved in wind energy production have no explicit wind energy policy or established targets. Fiscal incentives and public financing provided by the government appear to be very important for potential investors, as is the possibility of negotiating the terms directly with governments. With such inconsistency and lack of transparency, it is, therefore, much more challenging to ensure that African countries are and will be capitalising on their inherent advantage in terms of clean energy where it exists.

The example of Kenya shows that supportive policies and fiscal incentives have indeed stimulated the energy transition, through the modernisation and some expansion of the sector. However, the energy demand gap persists, while the country's high wind energy potential remains untapped. Therefore, the public sector should continue to invest in further sectorial development by improving the capacity and effectiveness of the sector's institutions, conducting feasibility studies as well as investing in grid expansion and upgrades. This is especially important if the government wants to stimulate the development of wind power projects in remote and currently neglected parts of their country, with a view to such projects having an additional developmental impact on the local and national level.

The example of Kenya also indicates that international private participation in the generation and expansion of renewable energy is critical for an African country to meet the global SDG 7, SDG 13 and COP 21 commitments. Private participation is also expected to increase. For two decades, private and public power projects in Kenya have been developed in parallel. Private developers have been essential in mobilising funding to meet the nation's demand for electricity, and their involvement has gradually expanded to complement publicly owned projects. They appear to be a driving force for national policy, grid adjustment and upgrades rather than a result of it. This can, however, seriously challenge and even compromise the function and responsibilities of the national accounting mechanism. The fact that predominantly international Independent Power Producers, including the forthcoming Lake Turkana Wind Power project, will soon account for 43% of the country's energy generation demonstrates just how big the role of the international private sector is in Kenya's energy security. It should be noted that this is not only symptomatic to Kenya, but also to other African countries and it will clearly influence the continent's ongoing energy transition.

5.4 The African Wind-mine: The process to establish the largest wind farm in Africa

5.4.1 LTWP Development and challenges in the context of actors and institutions

The previous sub-chapter indicates that the presence and enforcement of well-designed national policies and incentives to support the development and use of renewable energy resources is vital, although not sufficient to promote wind energy development in Africa. Furthermore, fiscal incentives and public financing provided by the government appear to be crucial for potential investors, as is the possibility of negotiating the terms directly with governments. In Kenya, private developers have been essential in mobilising funding to meet the nation's demand for electricity, and their involvement has gradually expanded to complement publicly owned projects.

This is well illustrated by the case study of the Lake Turkana Wind Power (LTWP). Completed in April 2017,[240] it is Africa's biggest wind farm capable of delivering ±15% of steady and clean energy to the national grid of Kenya. As briefly mentioned in the introduction, the investment was accompanied by a number of infrastructure investments, with the two most prominent being the construction and upgrade of the local road and construction of 438 km of transmission lines. In its nearly ten-year development process, LTWP faced many challenges, starting with a lack of adequate political and institutional framework in Kenya at the initial stages of project development, through to the lack of necessary infrastructure, the withdrawal of a main donor, and technical challenges related to timely construction of the transmission lines. This international private investor appears to be a driving force for national policy and grid adjustments and upgrades. The analysis of the process to establish this largest wind farm in Africa therefore confirms the importance of direct relations between business and politics in Kenya.

5.4.2 A Wind-mine

The idea to build a wind farm on the east shore of Lake Turkana came to Willem Dolleman – a Dutch entrepreneur[241] based in Kenya – many years ago. He has been visiting the lake site on family trips since the early 1980s. The story of the project's origins is that Dolleman had the idea after experiencing difficulties caused by strong winds while fishing and trying to put up a tent on the lake's shore. The wind was so strong that his small children had to be tied to their beds at night in order not to be blown away. Arguably, many people who visited the site before Dolleman experienced similar problems and likely had similar thoughts about the strong winds and their untapped potential. Nevertheless, nobody else was as determined, skilful, persuasive and resourceful as him in actually making the project a reality.

Initial inquiries about the feasibility of a wind farm in such a remote location had already taken place in the 1980s. Dolleman was turned down by any potential investor because of a lack of necessary infrastructure in place, especially the transmission lines. In the 1990s, Dolleman was in talks with a Dutch power company, Nuon, but they were not interested in investing in Africa at this stage. Nevertheless, the Managing Director of Nuon was fascinated by the story of the very windy place and continued talking

[240] The construction of the wind farm was completed in April 2017. The project only became operational, however, in October 2018 due to a delay in the construction of the transmission lines executed by the state-owned KETRACO company.

[241] Dolleman is a Dutch entrepreneur and agriculture professional who came to Kenya in 1983 to work for a Dutch seed house, Pop Vriend. He fell in love with the country and decided to stay. In 1989, Dolleman and his wife – Marie-Jose – started their own business, AVM K Ltd., drying flowers and fruit for decorative purposes for export to Europe. Later, in 1994, together with Gordon Murray – a "white Kenyan" and a son of a British settler and farmer on the Highlands around Mount Kenya – and Vitacress Salads, he founded Vitacress. The business was growing and packing vegetables on their farm in Tamau (Mt. Kenya) for export to European retailers. Dolleman was also instrumental in setting up a practical training school for the Kenyan horticulture industry in Thika. He now owns AgriFresh – a horticulture company based in Nairobi and Nanyuki (Mt. Kenya), which grows French beans and now potatoes for export (KP&P Africa BV, 2014; Molteno Family, n.d.; I. Mwangi, 2013).

about it with Dolleman. His personal enthusiasm for the project gave Dolleman even more confidence and he decided not to abandon the idea just yet.

In 2004, Dolleman approached Harry Wassenaar and Kasper Paardekooper – two Dutch wind power specialists who have been active in this sector since 1991 and 1999 respectively. Both were initially sceptical about the idea, but a casual trip to the site changed their minds. Wassenaar, a former neighbour of Dolleman in the Netherlands, is an independent entrepreneur in the wind energy industry and a co-owner and a board member of several wind energy projects (77 MW in total), while Paardekooper is an expert in energy legislation, involved in the development of approximately 35 wind projects in the Netherlands and a board member of both PAWEX (Association for Dutch wind turbine owners) and NWEA (Dutch Wind Energy Association). With the help of Henk Hutting, another Dutch veteran of wind power and Ed Schieke, an experienced and qualified Dutch electrical engineer, they confirmed the reliability of the wind flow in the Lake Turkana area. It was time to find and involve a project developer.

Anset Africa – a project management and development company led by Dolleman's friend Carlo Van Wageningen[242] was consequently asked to consider the idea of developing a wind farm on the site of Lake Turkana. It again took some time, as non-subsidised wind energy production in Kenya became competitive only after 2005 when global oil prices rose above £50 per barrel. Anset Africa started developing the project with Van Wageningen at the helm together with Christopher Staubo as the Anset Regional Representative and John Thiong'o Mwangi, a partner in Anset Africa Ltd and a well-known and well-connected businessman in Kenya with long experience in the steel pipe manufacturing industry. Consequently, the group of six "founding fathers" set up KP&P Africa B.V. in 2006, which further established the project company Lake Turkana Wind Power (LTWP) Ltd. and started the development of the Lake Turkana Wind Power project (KP&P Africa BV, 2014).

The first wind measurements started in April 2006 after KP&P received executive permission from the Ministry of Energy to study the wind resources in the area (SGS Climate Change Programme, 2011), followed by a letter of intent that was sent to the district office to lease the land. In October 2007, LTWP and the Council of Marsabit District signed a lease agreement (the first step towards procuring a title deed), which was followed up by a gazette notice setting the land apart in January 2008 through the Marsabit District Council. With no objections at that time, the Office of the President confirmed the allocation of land to LTWP in February 2008. Of the 150,000 acres, only 40,000 are for the actual project infrastructure while 110,000 acres is a buffer zone to allow the wind to reach the turbines and for a potential expansion of the wind farm (Muchui, 2014). The first wind mast was installed one kilometre south of Loiyangalani town, near Lake Turkana. A 90-metre-tall mast was measuring and recording wind speed every ten minutes at different heights of 43, 62, 81, and 83 metres above the ground (AfDB, 2011b). The results were sent for further analysis on a monthly basis. The experts taking the initial wind measurements on site – a German company DEWI – thought that there was a fault in their equipment because the winds were so strong and steady. After rebooting the system and still receiving the same wind readings, Dolleman received a phone call from DEWI informing him that he had found a "wind-mine".

The wind near the lake, however, was too strong to locate wind turbines. Hutting studied the topography of the area and conducted a number of flyovers in a small plane. He discovered that the wind that they are dealing with is a low-level jet as the wind was changing its direction beyond 1,500 m. By flagging GPS coordinates while in the air, supplemented by additional studies, he was able to identify a more optimal location for the wind farm. The location of the wind farm is unique. It is affected by two

[242] Carlo van Wageningen was born in Rome to a Dutch family. In 1988, he came to Kenya as a director for Africa of an Italian FATA European Group. In 1993, he set up his own business in the Kenyan manufacturing industry and continues to invest in Kenya to this day. Today, Van Wageningen's investments in Kenya vary from a major shareholding in a private bank (Chase Bank Kenya Ltd.), owner of a chemical indent company (Anset International), and shareholder of a project management and development company (Anset Africa Ltd.) (KP&P Africa BV, 2014).

opposing, low-level seasonal winds in East Africa: the Kaskazi and the Kuzi, which run for six months from north east to south west and for six months in a south east to north west direction. Split in one case by the mountains of Kilimanjaro and Kenya and in the other by the Ethiopian plateau, in both cases some of the wind is directed northwards, up the Turkana corridor, by the constant low pressure of the Sahara. Accelerated by the venturi effect of the hills to the north of Meru, the unidirectional wind to the south east of the lake averages 12 metres per second (Finnfund, 2014; O'Hanlon, 2015).

Since 2008, research into wind capacity, together with additional studies into existing grid infrastructure, has intensified. In this case, an Environmental and Social Impact Assessment (ESIA) study was conducted.[243] What was crucial at this stage for a private investor such as LTWP was a guarantee that, as an independent power producer, they would be able to sell the energy produced to the national power distributor – Kenya Power (KPLC) – at a pre-determined tariff for a given period of time, thus ensuring the viability and return of their investments. As described in the previous chapter, the necessary Feed-in-Tariff (FiT) policy was only proposed by the Ministry of Energy in a Position Paper in FY 2007/08 for electricity generated from renewable energy sources, including wind and further developed at the beginning of 2008 (Ministry of Energy, 2012). Nevertheless, at that point, the FiT was only applicable for wind power projects with a generation capacity of up to 50MW. Because the LTWP project generation capacity was 310 MW,[244] the FiT was not applicable and a tariff needed to be negotiated directly with KPLC (CDM, 2011).

In October 2009, official negotiations of a Purchasing Power Agreement (PPA) between LTWP and KPLC started. A PPA is a contract between the investor and the Government of Kenya (GoK) for the sale of generated power based on an agreed rate and on the condition that the investor delivers the energy metered in an agreed way at the point of production and at the point of entry to the grid. The LTWP was not part of the Least Cost Power Development Planning Committee (LCPDP) of 2009 at that point. Instead, the project was initiated as an unsolicited bid directly with the government of Kenya at a time when the government was actively promoting renewable energy, but before it had formulated the FiT policy and later the Public Private Partnership Act. Also, the Energy Regulatory Commission (ERC) was not involved at the time the project was initiated (Eberhard et al., 2016). The final negotiated rates, agreed in November 2009 – relatively quickly, within one month from the beginning of the talks – appear to be competitive with the present FiT wind tariff of $0,11/kWh[245] (Ministry of Energy, 2012). The remaining negotiations took an additional 24 months, not least because it was the first wind PPA in Kenya. One of the major problems that had to be solved while negotiating the PPA was related to the commissioning of the wind farm, which is significantly different from commissioning a 'traditional' plant where the amount of energy produced can easily be determined. In the case of a wind farm, each turbine constitutes a separate plant, so in terms of LTWP, 310MW is produced by 365 separate power plants. Commissioning of the wind farms is done differently and it is based on the theoretical power curve of a turbine. The power curve determines the amount of energy produced by a wind turbine at a given wind speed and, based on this reading, a decision is taken on whether it is commissioned or not. This global method of commissioning was initially very difficult for KPLC to accept. At this point, KPLC had to enhance their knowledge of wind energy global standards. Independent engineers were consequently contracted by LTWP to work for KPLC to train and advise them about global wind energy standards. This included study trips to Denmark, the Netherlands and Spain to show how they work in practice.

[243] The first ESIA was conducted by Prof. Francis M. Muthuri (Environmentalist), Ms. Pauline Ikumi (Socialist) and Mr. Frank Msafiri (Resource Assessment Expert and Botanist) and published in 2009 (LTWP, 2011b). The updated ESIA was published in 2011 (LTWP, 2011b).

[244] The installed capacity of 310 MW was necessary for LTWP to assure the financial viability of the project in such a remote location. The wind farm also had to be big enough to justify and capitalise on two major infrastructure investments, namely local roads and the transmission lines.

[245] Although, the load factor assumed for the LTWP is ±55%, which is significantly higher than that for the FiTs, which makes the comparison less accurate (Eberhard et al., 2016).

The 187-page PPA was finally signed in 2011. It contained a Take-or-Pay provision, meaning that KPLC is obliged to buy all energy produced by LTWP at an agreed fixed rate: up to 1,445,400 MWh/year for 7.52€ cent/KWh and 50% of this base tariff for energy exceeding this threshold. These calculations were based on the assumed load factor of 62%. What does it mean? A modern wind turbine produces electricity 80-98% of the time, but it generates different outputs depending on the wind speed. This contract therefore assumed that, for one year, the wind turbines would generate 62% of their theoretical maximum output for 50% of the time. Typically, an average global load factor of wind turbines is about 24% onshore (41% offshore), while conventional power stations reach 50-80% (Wind Europe, 2018). Meanwhile, the necessary Letters of No Objections from the National Environment and Management Authority (NEMA) were obtained for the project and the transmission line. In 2009, the route surveys started[246] and were carried out by SDV Transami and Civicon following approval of a road upgrade by the Ministry of Roads. In September 2010, a Letter of No Objection was issued by the Marsabit Council for the construction plans on site. KP&P now had to obtain the necessary equity to move forward (CDM, 2011; Eberhard et al., 2016).

5.4.3 Financial challenges

The project budget was estimated at €625 mln. In order to reach such financial viability, KP&P needed to bring more equity partners on board. Major global investors initially approached KP&P but were more interested in buying the project cheaply rather than investing the requested share. In 2009, LTWP brought on-board Aldwych International – a leading expert on the power industry in Africa.[247] Aldwych had no experience of establishing a wind farm but it did have experience in managing power generation plants[248] and delivering energy in Kenya based on a PPA. It was also a strategic move, as KP&P's consortium needed a 'known' strategic partner with a good reputation in the sector to increase its credibility with potential lenders. Furthermore, KP&P approached the Norwegian Investment Fund for Developing Countries Norfund, the Danish Investment Fund for Developing Countries (IFU) and the Danish wind turbine manufacturer Vestas. Vestas would not only deliver the necessary technology but would also be involved in the turbines' maintenance. Moreover, Vestas already had relations with the IFU. The Finnish Fund for Industrial Cooperation (FinnFund) was the last partner to join the consortium, mainly because of its link with the Scandinavian neighbours. Finally, a minority shareholder Sandipaper was added to the group.

KPA&A was the principle developer and Aldwych the co-developer. All equity partners developed and signed a Joint Development Agreement (JDA), in which they committed to buying a certain percentage of the project and to nominate a representative to sit in joint development meetings in order to keep up-to-date on various stages of the project development. The development costs were to be borne by all equity partners in accordance with the percentage of each parties' pledge on the equity.[249] Per JDA, as the initiator of the project, KP&P were given a 'free carry' on 18% of the shares. This means that as KP&P owns 26.5% of the company, they had to pay for equity shares only above 18%. The 18% of the 'free carry' was covered by other equity partners who thus paid a premium for becoming a part of the project. The right to the 'free carry' was performance based, however. KP&P had to guarantee all equity

[246] For the road upgrade and construction from Laisamis town to the project site. The existing road at that time was in a very poor condition and not suitable for transporting wind turbines.

[247] They later established Aldwych Turkana Limited, which in 2018 was owned by Anergi, an African power company established through the joint and Harith General Partners of South Africa (Nairobi Business Monthly, 2018).

[248] Another IPP: Rabai thermal plant (Eberhard et al., 2016)

[249] However, Aldwych and KP&P spend nearly $5.7 mln before bringing other equity partners, so they all agreed that for a period of time, the new equity partners would take on their portion of costs until they caught up to their initial spending of $5.7 mln. Once it was reached, it became *pari passu,* meaning that from that time on, all equity partners were sharing the costs of development.

partners 18% of IRR (internal rate of return) on the final financial model, otherwise the free carry would be brought down. The collected shareholder contribution constituted only 20% of the required funds. Therefore, LTWP was now obliged to approach lenders to secure the remaining amount in loans. Table 19 below summarises the final equity distribution between the consortium partners.

Table 19. Equity distribution between the LTWP consortium partners

Nature of financing	Institution	Country of origin	Financing provided (€ mln)	%
Equity	Aldwych Int.*	UK	37.7	30.2%
	KP&P BV Africa	Netherlands	33.0	26.5%
	Norwegian Investment Fund for Developing Countries (Norfund)	Norway	15.3	12.3%
	Finnish Fund for Industrial Cooperation Ltd (FinnFund)	Finland	15.3	12.3%
	Vestas Wind Power AS	Denmark	15.3	12.3%
	Danish Investment Fund for Developing Countries (IFU)	Denmark	7.7	6.1%
	Sandpiper Limited	Mauritius	0.3	0.2%
Total Equity			**124.6**	

* Through Aldwych Turkana Limited
Source: Own elaboration based on fieldwork data.

The main obstacle to overcome in order to secure the funding for a project of this size and that relates to a single customer – the government-owned KPLC, as well as a separate project providing the transmission lines necessary to evacuate power to the grid – was obtaining a partial risk guarantee from the lender. A partial risk guarantee (PRG) covers any potential political and economic risks of the project, which in the case of LTWP were substantial. As such a letter of credit in favour of the lender that mitigates such risks was hard to procure at that time, a more creative financial structure was needed to convince the lenders.

In terms of lenders, the newly formed consortium first engaged in talks with the World Bank (WB) in order to gain financial guarantees for the project. The official WB document states: "Following a Government of Kenya (GoK) request, the World Bank Group (WBG) intends to provide risk guarantees that will enable the realization of the Lake Turkana Wind Project (…)" (WB, 2011 :1). However, during the research interviews, the founding fathers stated that the collaboration with the World Bank was imposed on them by the Kenyan government. One said that the World Bank "used their political power to force themselves in [the project]". According to the interviewee, Joseph Kinyua – then Permanent Secretary in Treasury (in then the Ministry of Finance who was later the Chief of Staff of the President & Head of Public Service) called Van Wageningen with the information that the World Bank was offering to cover the Partial Risk Guarantee (PRG) for the project. Van Wageningen was sceptical as, firstly, the matter of the PRG had already been resolved between LTWP and the Government of Kenya, who initially agreed to provide it; secondly, he considered the WB an inefficient institution and not innovative enough to be involved in this project. Nevertheless, "the World Bank has a lot of power in the country", said the founding father, "over 50% of Kenyan international debt sits with IMF and WB, thus the Permanent Secretary could not refuse their offer". At that point though, there was no alternative to the WB for the PRG and so the investors reluctantly agreed.

The due diligence process conducted by the WB proved to be cumbersome, lengthy (22 months) and expensive (it cost LTWP $5mln). The investors were losing their patience and asked the Kenyan

government to put some pressure on the WB to finally decide about their involvement in the project. In 2012, the World Bank officially withdrew its support for the project citing a number of concerns, in particular regarding energy demands, a delay in transmission line construction and the Kenyan grid's inability to absorb all the electricity produced by LTWP (Nairobi Business Monthly, 2018). The withdrawal of the WB was reportedly welcomed by the founding fathers, who claimed that the WB was intentionally stalling the process due to political reasons. They explained that, at that time, the World Bank was co-financing the development of transmission lines from Gibe III dam in Ethiopia[250] and two thermal plants (thus no-green-energy projects[251] in Thika (Thika Power, 87 MW) and Athi River (Triumph Power, 80 MW) (Kyendo, 2012; Odaro, 2012; The World Bank, 2012, 2015). Both thermal power plants have been operating as independent power producers (IPP) and are used to plugging the gaps in the country's energy demand. The thermal power plants operate on heavy fuel and have been used in Kenya as back-up energy providers for many years. In the last decade alone, the number of thermal plants operational as IPPs has tripled (see Chapter 5.3). It is a reliable but costly and non-environmentally friendly source of energy. Within all IPPs operational in 2017, thermal plants generated 75% of energy purchased from Kenyan IPPs, costing the country 13.7bln KES (55% of all costs paid to Kenyan IPPs, excluding fuel costs). Moreover, most of the additional fuel costs necessary to run such power plants are passed to the consumers (KPLC, 2017). The founding fathers also stated that the withdrawal of the WB was welcomed by the government. It was said that the solution suggested by the WB (to start with a 100 MW project and add capacity over the years) would cost Kenya an additional $580mln due to the increased FiT necessary to make the smaller wind farm financially viable. The final meeting between LTWP, the Government of Kenya and the WB took place in the presence of Prime Minster Odinga, who, after the official WB withdrawal, reassured LTWP of the GoK's full support for the project. There is no proof that the WB's involvement in the thermal plants projects and the transmission line construction in Ethiopia influenced their decision not to fund the LTWP. Nevertheless, a project like LTWP with its capacity to inject ±15% of new and cheap (green) energy into the grid could potentially threaten the established (expensive) thermal IPPs and the need to import power from Ethiopia, thus possibly diminishing the importance of some projects supported in the region by the World Bank.[252]

The same day that the WB pulled out of the deal, the African Development Bank (AfDB) stepped in, seeing an opportunity to 'compete' with the WB in providing Partial Risk Guarantees (PRG) in low-income countries.[253] Furthermore, AfDB had identified infrastructure as one of the main priorities for development of the African continent and tried to promote more private investments in this sector. As Kenya was slowly opening up to more private participation in the energy sector by adjusting its laws (see Chapter 5.3), AfDB saw an opportunity to support Kenyan efforts in this regard with the vision that it may lead the way for similar projects in the future. LTWP was a risky but also a very visible and viable project for the AfDB to support. The bank's experts confirmed the wind viability for energy production, the risk was more in meeting the logistical challenges and working in a remote area. In exchange for becoming the lead arranger, AfDB stepped in and through the Africa Development Fund deposited €20

[250] Gibe III dam is a controversial project that was said to threaten the livelihoods of the local population living in the southern part of the Omo River valley as well as the ecosystem of Lake Turkana. Part of the energy produced by the Gibe III dam was supposed to be sold to Kenya.

[251] A thermal power plant is a power station in which heat energy is converted to electric power through a steam turbine that is running on fossil fuels such as diesel, heavy fuel oil (HFO) or natural gas. Both Thika Power and Athi River plant are running on heavy fuel oil.

[252] WB was not reachable for an interview.

[253] Since 2004, the AfDB has provided PRGs for private investment in middle-income countries. With the introduction of the African Development Fund's Partial Risk Guarantees (ADF PRG) in 2011, the instrument was made available to ADF low-income countries (AfDB, 2013). It should also be pointed out that the a lot of the funds invested by the ADF are controlled by donor countries, with similar top donors as these of the WB (R. M. Nelson, 2015). A profound analysis of these relations goes, however, beyond the scope of this thesis.

million into an escrow account[254] of €90 million for the project. This was sufficient to secure the off-taker's PPA payment obligations for the first six months, once the project starts to generate power. Kenya's government has provided the other €70 million and issued a letter of support to cover political risk. The Partial Risk Guarantee played a pivotal role in the financial closure of this project. This is because it covered the delay risk for the construction of a 438-kilometre[255] publicly owned transmission line between substations needed to connect the project to the national grid (IRENA, 2016).

To mobilise the necessary finance took an additional two years. Among the lenders, there were the African Development Bank (AfDB) as the lead arranger, the European Investment Bank (EIB), Proparco, FMO, the Interact Climate Change Facility[256] (ICCF), PTA Bank[257] and Triodos. A part of AfDB and EIB loans were covered by the Denmark's Export Credit Agency (EKF) guarantee. For the EIB commercial bank loan, Standard Bank UK and Nedbank of South Africa were the co-arrangers for the commercial debt portion being offered through the EKF and provided bank guarantees of €50mln each. Moreover, German Investment and Development Corporation (DEG), PTA Bank, East African Development Bank, AfDB provided mezzanine finance.[258] Finally, the EU-Africa Infrastructure Trust Fund (EU-AITF) financial instrument was added in the form of a cumulative redeemable preference share, which is part of the share capital of the project company (OECD, 2016b). Table 20 below summarises the debt financing for LTWP.

[254] An escrow account is a temporary pass through account held by a third party (usually a law firm) during the process of a transaction between two parties. This is a temporary account as it operates until the completion of a transaction process, which is implemented after all the conditions between the buyer and the seller are settled (http://economictimes.indiatimes.com/definition/escrow-account).

[255] In the initial plans, the transmission line measured 428 km. After the line was completed, the measurement was adjusted to 438 km.

[256] The Interact Climate Change Facility (ICCF) finances renewable energy and energy efficiency projects in the private sector in developing countries and emerging economies. It is funded by the French Development Agency (AFD), the European Investment Bank (EIB) and several EDFI members, including the Belgian Investment Company for Developing Countries, the United Kingdom's Commonwealth Development Corporation, the Spanish Development Finance Company (COFIDES), Germany's German Investment and Development Corporation (DEG), the Finnish Fund for Industrial Cooperation, the Netherlands Development Finance Company (FMO), the Norwegian Investment Fund for Developing Countries, the Development Bank of Austria (OeEB), France's PROPARCO, the Swiss Investment Fund for Emerging Markets and Sweden's Swedfund (OECD, 2016b).

[257] A number of private banks were at that stage interested in investing in the wind farm. The consortium envisioned that a substantial component will be covered through commercial loans. Building on the interest, LTWP decided to organise an auction in London for lenders with a long list of their wishes. Offers from commercial banks that came closest to the wish list were further asked to join the consortium.

[258]Mezzanine financing is a hybrid of debt and equity financing that gives the lender the rights to convert to an ownership or equity interest in the company in case of default, after venture capital companies and other senior lenders are paid (http://www.investopedia.com/terms/m/mezzaninefinancing.asp#ixzz4vOzbcteY). In practice, it is about the sequence of money being spent by the investor. When an investor starts making payments for (in this case) a construction projects, first the equity money is used. In finance, although being a debt, Mezzanine financing is treated like equity on a company's balance sheet, thus it takes the same risk as equity and that means it is paid out first with equity. Once equity and mezzanine are exhausted, the payments are done using the loan.

Table 20. Debt and mezzanine distribution between the LTWP lenders

Nature of financing	Institution		Country of origin	Financing provided (€ mln)	%
Debt	Tranche A - AfDB Facility		Multilateral	115.0	28.4%
	Tranche B - AfDB ECA facility*		Multilateral	20.0	
	EIB senior Loan C**		EU	100.0	42.1%
	EIB Senior Loan A		EU	50.0	
	EIB Senior Loan B		EU	50.0	
	Tranche C - DFI Facilities				
		FMO	NL	35.0	7.4%
		Proparco	France	20.00	4.2%
		ICCF	EU	30.00	6.3%
		PTA Bank	Financial arm of COMESA	10.0	2.1%
		Triodos	NL	5.5	1.2%
	Mezzanine funding				
		German Investment and Development Corporation (DEG)	Germany	20.0	4.2%
		PTA Bank	Financial arm of COMESA	10.0	2.1%
		East-African Development Bank	EAC	5.0	1.1%
		AfDB	Multilateral	5.0	1.1%
	EIB EU-Africa Infrastructure Trust Fund (EU-AITF) Preference Shares***		EU	25	
Total Debt				**500.5**	

Notes: AfDB = African Development Bank, EU=European Union, EAC=East African Community, ICCF = Interact Climate Change Facility

* Covered by Denmark's Export Credit Agency (EKF) guarantee.

** Covered by an EKF guarantee. Standard Bank UK and Nedbank of South Africa are the co-arrangers for the commercial debt portion being offered through the EKF and provided bank guarantees of €50 mln each for the EIB commercial bank loan.

*** This financing is a preference share, therefore regarded as junior to other subordinated debt in the financial structure

Source: Own elaboration based on fieldwork data

It took a considerable amount of time to develop and reach financial closure for LTWP, which also required a lot of patience for many lenders. As one of the risks was related to logistic challenges and working in a remote area, lenders requested from KP&P to source a construction project management company who will guarantee the project timing. Contracting a company that would be willing to take such risk at that time would explode the budget. The developers wanted to take this task on themselves. In order to convince the lenders of being capable of doing it, they created an extremely detailed project planning with over 200 interphases over 32 months of the construction period and a detailed plan how to address them and create enough buffer between the interphases. Once the plan was done, the developers would hire the well-known Australian engineering company WorleyParsons Limited (WP, with its brunch in South Africa) to manage the interphase schedule. That meant that LTWP would have overall control of the project, while WP would act as project management contractor, reporting to the LTWP. That was an acceptable solution for the lenders and affordable option for the developers.

The preliminary loan agreement was signed in March 2014. This preliminary document came with many condition precedents (CPs) that needed to be addressed by the developers. In practice, the loan can be released only once all the CPs are closed. For LTWP, all CPs were completed in November 2014 and the final financial closure was reached in December 2014. Reaching financial closure was also a condition in JDA to release equity and transfer shares to the partners that was done through an escrow agent in early September 2014. That was done before closing all CPs, showing the determination but also the confidence of the investors and the partners. Normally, without the final loan agreement in place, the investors would not start any costs but in this case, the developers wanted to start the project as soon as possible. Therefore, they kick started some of the contracts already in October 2014 using the equity money. The priority was given to the road[259] and the housing units' construction. Once the loans were released, the consortium reimbursed themselves for paid costs and refilled the equity money.

The financial closure highlights the importance of guarantees to secure financing from particular lenders due to their risk profiles, as well as the importance of networks and involvement of certain actors. The involvement of Nedbank and Standard Bank was primarily driven by the PRG provided by AfDB for the risk of the transmission line not being completed. Moreover, the financial closure was a result of countless meetings, hours of negotiations and tenacity of two main people dealing with finances: Carlo van Wageningen and Rizwan Fazal, a Kenyan project finance manager with an in-depth knowledge and ample experience in African banking sector. The participation of the IFU was linked to the involvement of Vestas, a Danish wind turbine company, which was awarded the maintenance contract and is also providing equity to the project. Aldwych had already established working relations with FMO, IFU and Proparco during establishing the Rabai plant in Kenya, and Carlo van Wageningen had access to DEG as they are both major shareholders in the Chase Bank Kenya. Moreover, an agreement with KPLC that they would receive (part of) the carbon credit revenue in return for a higher guaranteed tariff enabled the project to offer an acceptable return to potential investors and make the project financially viable. (Aldwych, 2014; CDM, 2011; CEPA, 2015).

Reaching the financial closure on the project was a major accomplishment, considering that the initial people behind the idea, Dolleman and Van Wageningen, were not established wind experts. They were, however, able to convince and bring on-board people and companies considered the best in their respective fields. That was necessary for the consortium to build their credibility and provide comfort to the lenders. Almost ten years of project development amounted to 40,000 pages of documents and cost the founding fathers €27mln. All preparations paid off. The project was on time (even one week ahead of schedule) and on budget (with over expenditure of less than 1%). This is a major achievement for a project of this size, complexity and location. The founding fathers highlighted the level of details that they went into during the project development period, the importance of rigid contract designs with all contractors,[260] as well as the passion that all of the people involved shared – the passion and the desire to prove the project's disbelievers wrong.

5.4.4 Political challenges: The importance of the 'A-factor'

The founding fathers and people involved in the initial setting up of the project have over 30 years of experience of working on the continent and they are very familiar with how business is done in Kenya. The structure of doing business in Africa is different than it is in the developed world (Kgomoeswana, 2015; Leke, 2018; Leke et al., 2018; Van Beemen, 2019) and, according to Van Wageningen, this should be acknowledged by (potential) foreign investors. Africa is not transactional like the United States or Europe, rather it is "a relationship continent" (Leke, 2018). It is very important to be on the ground to

[259] The Government of the Netherlands, through the African Development Bank (AfDB), has offered a grant of €10 million and the balance of €12.5 million was provided by LTWP from their investment budget (LTWP, 2013).

[260] All contracts were FIDIC Silver Book-based construction contracts. Such type of contract put LTWP in the position of control over the contractors and ultimately did not accepted any delays in payments.

understand the working environment and to be patient. It takes time to build trust and relationships, so people would sense that "you're there to help them [personally] as much as they're there to help you" (Leke, 2018). For a new foreign investor, it is important to have a trusted 'local guide' with enough experience and connections. Someone who can explain and help you to understand the local *savoir-faire*: knowing when you can raise your voice and when to keep quiet, as well as how to move around in the given context. In a country like Kenya, business and politics goes hand in hand and the environment is prone to corruption. Some scholars refer to this as 'crony capitalism' (Booth et al., 2014; Harvey, 2007), Van Wageningen called it 'the A-factor'.

According to Van Wageningen, 'the A-factor', is a profound understanding of the local context. It means acknowledging that you are dealing with corruption and a corrupt system. It means acknowledging that the laws are there but their enforcement is weak (unless they are to be used against you). It means acknowledging that, politically, things can change overnight and although you signed a contract with an institution, a shift in the ministerial position could mean that the new minister does not necessary recognise agreements signed by his/her predecessor. It means acknowledging that, as an outsider – if you don't follow the law and cut corners – you become vulnerable and eventually get yourself into trouble. And the learning curve is usually very expensive.

If the environment is prone to corruption, then the investor must know how to operate without being affected by this. It is not easy. It often takes longer to get things done, but people who have been working in this environment for a long time know how to navigate it. "If you drive on the same road every day, you know where the potholes are and find ways to avoid them", said Van Wageningen. For instance, try scheduling meetings only in formal places or, if you can't avoid an informal meeting, don't go alone. If you receive 'an indecent proposal', be intelligent and friendly about it. Empathise and try to understand the reason behind such behaviour instead of taking a patronising approach. It is possible to refuse paying a bribe but it should be explained in a credible way that does not offend the other person. If that happens, think strategically, anticipate next moves and consequences. Working with big institutions, like EIB or AfDB in such cases can be helpful for mitigating such political risks, also because people working for these institutions are often senior officials with high-level contacts in the country – something that is truly invaluable in Kenya.

Having a local network is the key in Kenya. An investor should devote considerable time to building relationships with relevant people. Initially, this is done with the help of 'local guides' and later through time and on a person-to-person basis, like putting in a "good word", helping to arrange an internship or a job for a relative or providing a reference letter for an international university application. In this way, and with time, you establish your network, build trust and create a *rapport* with people, which is a critical element of project development in Kenya. Is it inclusive? No, as everyone should have equal right to access in particular government officials, but at this stage it is the reality on the ground and it will take time and a serious commitment from the government's side to change it.

In the response to 'the A-Factor' on the institutional level, a potential investor should be persistent, patient and always follow the law, even if that means the project development taking more time. They must make sure that the negotiated contracts are solid and without any loose ends. Working with a very good law firm that is well aware of the local context is important. Finally, it is advisable to remain apolitical. By picking one political side, you become "married" to their political influence. If power shifts, your project may lose this support and very likely become obsolete. Looking at the LTWP, which went through three different governments, the political instability of 2007/2008 that was marked by political violence, a new Constitution and the country's devolution, one can say that the founding fathers did indeed embrace the 'A-factor' and knew exactly how to co-exist with it. Indeed, the example of the LTWP development is a perfect illustration of this 'A-factor'.

The crucial element in the successful closure of the LTWP financial agreement was, without doubt, the fact that LTWP had the support of the government of Kenya from the outset (Picture 1). In order to get the Kenyan government on board, the consortium had to, firstly, have enough connections to get access

to it and, secondly, it had to prove their case, as at that point Kenya had practically no previous experience with wind power.[261] Another challenge at that time was that Kenya had only ±945MW installed energy capacity.[262] That made this a very risky venture for both sides: for LTWP having a single client was very risky and for the Government of Kenya it meant that a third of their energy production would be in foreign private hands. Consequently, the case became highly political.

The local networks built over the years by the founding fathers proved to a critical factor in the project's success. For example, at the start, Carlo van Wageningen was introduced to (then) Permanent Secretary of Energy Patrick Nyoike by a mutual friend who the latter respected very much. During this first meeting, Van Wageningen asked the Ministry of Energy for two letters: the first was a letter of intent from the government indicating a preliminary interest in buying the 310 MW from LTWP at a competitive price (if possible to generate it). The second letter asked for the exclusive rights to the area for three years in order to carry out feasibility studies. Out of respect to their mutual friend, Nyoike agreed to provide the letters despite his own scepticism about the feasibility of such an ambitious endeavour. Three years later, in 2008, LTWP came back to the Ministry of Energy with figures that were favourable. With evidence that LTWP could save €120mln each year in oil imports, earn ±€10mln a year from the carbon credits, contribute €22.7mln a year in taxes, reduce the dependence on unreliable hydropower and contribute to local economy development by bringing an additional ±18% energy to the grid, Nyoike was enthusiastic. Nyoike saw the potential benefits of such a pioneering project for the country (it will put Kenya on the world wind energy map) and the project area (so neglected to date) and consequently he changed his mind. In fact, he became a crucial supporter and liaison for the project within the government. An endorsement of the project by a person in his position, with his network and respect opened many doors for LTWP within the Kenyan government and it also generated a lot of internal and international 'good press' for the project.

Picture 1. The Chairman of Lake Turkana Wind Power Project Carlo Van Wageningen, Kenya Power CEO Ben Chumo, African Development Bank, Regional Director Gabriel Negatu, former PS Patrick Nyoike and Energy Principal Secretary Eng Joseph Njoroge exchange notes during the signing of the Financing Agreements for the Project at a Nairobi hotel.

Source: Photo by Andrew Kirui (http://kenyanewsagency.go.ke/en/turkana-wind-powerr-deal-sealed/ (6.11.17))

In October 2012, LTWP was endorsed by the Vision 2030 Delivery Board and LTWP became one of the so called "flagship projects" for achieving goals included in this blueprint for long-term development in Kenya. At the same time, LTWP became an important element in achieving the "5,000+ MW" programme as well as a part of the Least Cost Development Power Plan, as one of the least cost power generation options available in the country along with geothermal power and at even less cost than the feed-in-tariff for other wind projects. Consequently, completing the LTWP project became of strategic national importance. The Director General of the Kenya Vision 2030 Delivery Secretariat[263] at that time was Mugo Kibati – Massachusetts Institute of Technology (MIT) and Oxford educated Kenyan businessman. Prior to joining the government, Mr Kibati was Group Managing Director and Chief

[261] Except for a few wind turbines on the Ngong Hills near Nairobi.
[262] In 2007 (KPLC, 2007).
[263] Kenya Vision 2030 Delivery Secretariat was then under the direct responsibility of the Prime Minister Raila Odinga.

Executive Officer of East African Cables (2004-2008) and he is credited with key successes and regional expansion of the firm. His past experience includes marketing and engineering roles in the cement and petroleum sector as well as high-level board positions in the Federation of Kenya Employers, Kenya Association of Manufacturers and Kenya Private Sector Alliance. After leaving the Vision 2030 DG, he became a Group Chief Executive Officer of Pan Africa Insurance Holdings (now Sanlam Kenya), an insurance and investments company based in Kenya. He also sits on several corporate boards, such as M-KOPA (as chairman), I&M Bank and the Apollo Group. In 2014, Mr Kibati was appointed new Chairman of the LTWP board, following the financial closure and the resignation of the chairmanship of Carlo Van Wageningen.[264] Finally, President Uhuru Kenyatta has personally broken the ground for the construction of the Lake Turkana Wind Power project in July 2015 (Kenya Vision 2030, 2012; Kibati, n.d.; Kisero, 2009; LTWP, 2014b; M-KOPA Corporate, n.d.; Sambu, 2012).

5.4.5 Technical challenges

After the political challenges were addressed, the project experienced some technical challenges during the development phase. The first technical challenge was linked to the capacity of the national grid to absorb the new high amount of (intermittent[265]) power produced. The consortium had to lobby the government to invest in the grid upgrade. With the ambitious energy increase plans of the GoK, an improvement of the weak segments of the grid (especially some substations and old transmission lines) was necessary anyhow. With a project like LTWP in development, this process could, however, be accelerated. This work was skilfully done by a Dutch energy consulting company KEMA[266] contracted by LTWP.

Another problem on the technical side was a static synchronous compensator (STATCOM). Essentially, with wind being an uncontrollable resource and the nature of distributed wind induction generators, integrating a large-scale wind-farm into a power system poses challenges, particularly in a weak power system. STATCOM is a regulating device that adjusts the fluctuations of the power flow by adding static power to improve stability on power grids (Han et al., 2006). STATCOM would have been a big cost for LTWP and there was a 30% chance that it would not work, as Kenya was lacking static power. The biggest company in the world that designs and installs STATCOMs refused to take this risk. This decision left the founding fathers doubting whether the project could succeed for a brief time. The only other company that was capable of this task is a Chinese company RXPE. RXPE was working with a newer technology that had been already tested on two (larger than LTWP) wind farms in China. KEMA was asked to visit RXPE to assess the quality and suitability of their technology. Their opinion was positive and the project was back on track.

A major technical issue was linked to the construction of the transmission line. Initially, LTWP was granted a concession contract for the construction of new electric power transmission lines for the project. In 2008, in line with this assumption, LTWP commissioned Schicon to undertake a power integration and economics study and to evaluate the optimal routing of the transmission line. Six options were studied and the preferred option was a line from Suswa, northwest of Nairobi, to the Lake Turkana Wind Power site near Loiyangalani, via Naivasha, Gilgil, Nyahururu, Rumuruti, Maralal and Baragoi, a distance of 438 km (LTWP, 2011b). In the concession document, the GoK reserved a 'step-in right', meaning that at any time they could 'step-in' and take over the development of the T-Line from LTWP. During the negotiation process, LTWP agreed on the step-in right under one major condition: in case of the execution of this right, the GoK would take over the project in the state it was developed by LTWP

[264] After the financial closure, the board agreed that the Chairman should be an independent non-shareholder. They wanted someone who was Kenyan and ideally not political. After Kibati's episode in government, he decided to go back to the private sector and leave his political ambitions behind. In practice, with their institutional knowledge, Carlo Van Wageningen and Rizwan Fazan remain highly involved on the board.

[265] The wind power is intermittent.

[266] Meanwhile, KEMA was bought by a Norwegian company DNV GL.

at that date and that it would move forward with the previously agreed planning. The GoK agreed to this condition. As the take-over of the project by the government was a plausible scenario, LTWP decided to involve Kenyan officials in the development of the T-Line from the start. Strategically, they created a task-force managed by a representative of LTWP, comprised of a Senior Engineer from the Ministry of Energy, a Senior Engineer from Kenya Power (KPLC), a Senior Engineer from KETRACO and invited KPMG to be the watchdog ensuring compliance with the procedure and laws. It was also security for LTWP in a situation where the T-Line had to be transferred to GoK (to KETRACO more precisely). These parties were involved in the decision-making process from the outset and were not in a position to cancel the project or start over again, which would cause substantial delays.

The tender for the T-Line construction was released by LTWP. Of 38 proposals, 11 were shortlisted in the first of a two-stage process. In the meantime, the Government of Kenya managed to secure funding from the Spanish Government for the T-Line construction and, through KETRACO, decided to execute its step-in right. KETRACO highlighted the importance of the T-Line, as it was projected to evacuate power from the future power plants to be located in the geothermal fields along the Rift Valley and other wind farms in the Northern Kenya. Furthermore, the line would be important for Kenya's plan for better regional integration into both the Eastern and Southern Africa Energy pool. Consequently, the transmission line development became an "associated" project, as the wind farm still depended on these lines to deliver the power produced to the national grid, yet it became a separate infrastructure project to the wind farm.

The takeover by the government was welcome, as the potential lenders to LTWP also expressed their preference for two separate projects as a way to spread the already high risks. LTWP handed over the chairing of the taskforce to the government but did not fully lose its oversight as they were invited to stay on board. By taking over the T-Line tender, KETRACO took on the entire risk related to the construction. Consequently, the Government of Kenya took on financial obligations towards LTWP in case of a delayed delivery of the T-Line. To ensure minimum delays, LTWP paid the lawyers to assist KETRACO in negotiating a FIDIC Silver Book-based construction contract[267] with the selected Spanish company - Isolux Corsan S.A. FIDIC Silver Book Engineering Procurement and Construction (EPC) contracts are used in complex engineering facilities, such as process or power plants, where a high degree of certainty related to cost, time and performance is required, often because of 'bankability' issues in funding the project. This type of contract bestows wider responsibilities on the contractor, which restricts the contractor in terms of time extensions or additional payment. The concept is that the Employer obtains a fully functioning facility, capable of operating immediately to guaranteed standards of performance, i.e. ready at the 'turn of a key' (Ilter, Alp, Akturk, & Yagci, 2014). Despite the rigid contract and the 10-month head start, the T-Line construction experienced severe delays. A lack of adequate legislation, a lengthy process of land acquisition along the line and a problem with the contractor were three main reasons behind the delay and ultimately caused a contract breach.

It took until 2014 for the Kenyan Parliament to pass clarifications to its Public Finance Management Act to allow commercial loans (ostensibly as part of government-to-government funding) to be paid to contractors directly. It was only in late summer 2014, therefore, that funding for Isolux Corsan S.A. was secured. Furthermore, the process of land acquisition for the T-Line was lengthy and prevented Isolux from starting their work. On one side, KETRACO has been accused of inefficiency due to its bad business model and poor internal structure. According to some interviewees, KETRACO staff were receiving high per diems for every day spent in the field. Such a structure does not encourage staff to finalize their fieldwork fast and efficiently, rather it encourages the opposite and results in delays. On the other side, landowners along the T-Line stalled the process by demanding extremely high compensation for their

[267] This is also the type of contract that LTWP used for their contractors.

land.[268] Closer to the site, too, there were cases of manyattas (nomadic semi-permanent huts) mushrooming overnight in the way of the T-Line, with owners hoping for compensation. This process exposed a serious problem in Kenya with respect to way leaves. A final blow came when Isolux encountered debt and liquidity challenges in early 2017, which ultimately led to the termination of the contract a few months later.[269]

As the wind farm was ready to use on 15 May 2017[270] but the transmission infrastructure was not in place, LTWP was entitled to financial compensation for the energy it was producing, amounting to ± €11,083 a month. The risk of delay to the transmission line construction was considerable and acknowledged during the development stage of the project. There were two mechanisms that were supposed to minimize this risk: a Partial Risk Guarantee facility provided by the African Development Bank and the introduction of a penalty called a 'deemed generated energy payment'. This meant that per PPA, GoK was committed to pay for the energy generated by the wind farm, despite the KPLC's inability to use this energy due to the lack of transmission lines.

After much deliberation and having accepted the delay (inherent to the 'A-factor'), the LTWP Board agreed to delay invoicing the government for the deemed energy and also not invoke the African Development Bank's PRG, as such a move would surely undermine confidence in the capacity of Africa to support similar large projects in the near future. LTWP had another suggestion. Initially, KETRACO predicted the completion of the T-Line for 31 May 2018, which equated to a full year of deemed generated energy (equivalent of approximately €133mln). During this year, LTWP was expected to pay back two instalments of their loan. The fact that the construction of the project was on time and on budget allowed LTWP to make use of their reserves to partly service the loans, although it was not enough. They requested the government to pay them the (then) €48 mln (out of €133 mln) that was necessary to service the loan and the operations, while the remaining €85 mln would be paid back over six years through a slight increase on the tariff. Consequently, both sides agreed that an additional sum of 0.8 on each eurocent per KWh would be added to the current tariff to recover this 'debt' for the next six years, after which the tariffs would return to the rates originally agreed on. The PPA was amended accordingly. This arrangement meant a delayed dividend for investors but LTWP could not delay this and payment of other costs beyond 31 May 2018. As of June 2018, they started to invoice GoK for the deemed generated energy on monthly basis.

The PPA contract stated that deemed generated energy can be claimed based on readings confirmed by the Supervisory Control and Data Acquisition (SCADA) system. SCADA is software that digitally confirms the wind reading data from the turbine. Such a reading can also be done, however, by either using the wind turbine theoretical curve or by using a simple anemometer (a device used for measuring wind speed) fitted to each wind turbine. Because of the lack of a transmission line, LTWP was not able to use a digital meter to check how much (deemed) power they were producing. Instead of using SCADA, they used readings from anemometers. Consequently, the Ministry of Energy and Petroleum, KETRACO and KPLC have all disputed LTWP's invoice on the basis that the wind farm did not provided a technical report showing the project's output as required in the power purchase agreement (PPA). The matter was debatable and open for legal interpretation. In order not to lose any more time, LTWP suggested a compromise: they would energise their internal grid (connecting all turbines with the substation to reach SCADA) for one month and then compare the SCADA readings with the anemometer readings. If they could prove that the anemometers are as accurate as SCADA, the government would accept to pay

[268] Some interviewees argued that the land was specifically acquired by some politically connected people with a view to selling it later to KETRACO at inflated prices. Others argue that some people from within KETRACO were colluding with the landowners also to inflate the price of land for future personal financial gain.

[269] The company subsequently filed for bankruptcy. KETRACO claimed that the Isolux's financial problems started only after they were awarded the Kenyan contract and were due to their rapid expansion in other countries. Based on the due diligence conducted at the time the contract was awarded, KETRACO could have not predicted Isolux's subsequent financial difficulties.

[270] After additional testing, the wind farm was fully ready for commercial operations in July 2017.

the costs of deemed generated energy based on such readings. This was a rather expensive and logistically complicated exercise for LTWP, as they had to bring 5MW of generators, provide fuel to use them for a month, as well as start up the turbines. Ultimately, LTWP proved that anemometer readings were no different from the SCADA readings and the Kenyan side reluctantly agreed to pay their invoices. Some people have argued that it was a way for the GoK to buy time to complete the transmission line without paying the compensation set out in the PPA.

Following the termination of a contract with Spanish Isolux in 2017, in February 2018, KETRACO awarded a KES 9.6 billion ($98 million) contract to a Chinese consortium consisting of the NARI Group Corporation and Power China Guizhou Engineering Company. The firms committed to paying a fine of KES 1.3 billion ($10 million) per month should they fail to meet the new agreed deadline: 31 August 2018 (ESI Africa, 2018). By that time, approximately 90% of all pylon foundations were ready, 60% of pylons were erected but not all had cables installed. Ultimately, the Chinese firms, working mostly with Chinese staff, achieved the agreed deadline (although it was debatable whether the T-Line was truly ready by the end of August or by the end of September). LTWP was able to start the plant operation tests and commissioning of the wind farm in late September 2018. The commissioning was done in a scheduled and modular way by adding ten turbines a day, gradually adding their power to the system. The full capacity was finally achieved in mid-January 2019. After positive plant commercial operational tests, the wind park was officially certified and in full commercial operation on 6 March 2019 (LTWP, 2019b).

5.4.6 Conclusions

This sub-chapter examined the process of establishing the Lake Turkana Wind Power project, the biggest wind farm in Africa. It aimed at investigating the financial, political and technical challenges confronted during the development phase of the Lake Turkana Wind Power project. The LTWP case study illustrates that it was the determination and resourcefulness of the international private investor that was a driving force for national policy and grid adjustments and upgrades in order to service and make their investment operational. Furthermore, it also confirms the argument posited by Hochstetler (2011), Newell et al. (2014), Geels (2014) and Scoones, Leach, & Newell (2015) that political factors and networks are important, if not the most crucial drivers of energy decision-making in developing countries – and certainly in the case of Kenya.

The role of the LTWP 'founding fathers' must not, therefore, be underestimated. It was their resourcefulness, excellent connections established through their earlier work in the country as well as their awareness of the national political dynamics (the so-called 'A-factor') that was the main ingredient for the project's success. Their strong relations with (some) key government officials and consequently official political endorsement were vital in ensuring that the project could run and that a suitable and sustainable power purchasing agreement was negotiated. The founding fathers see themselves as "serious investors fully aware of the local context" and highlight that the project was a good opportunity for the investors but also a good opportunity for Kenya. The investors should reach a return on their investment after 11 years of operations, while Kenya has been put on the map as the leading promoter of renewable energy production in Africa. In this case, Kenya can be considered "lucky" to some extent. Social ties and networks were "used" to promote renewable energy sources but, as the history of the energy sector in Kenya shows, similar tactics may be used to promote not-so-clean energy development in the country.

Finally, the founding fathers must be credited with the ability to attract excellent and passionate people. Everyone involved in the project shares a great enthusiasm and are proud to be a part of it. One of the key stakeholders interviewed said that if it were not for this particular mix of people, the wind farm would most likely never have become a reality.

5.5 Location of the project, history and local ethnic politics

The objective of this sub-chapter is to introduce and focus on the specific area where the LTWP project is located: the history of its marginalisation and a brief description of the complex local political and ethnic divisions. A profound knowledge and understanding of the national and local context and dynamics is critical for the private investor, as the case study of the LTWP has shown, and as will be clear from the subsequent chapters.

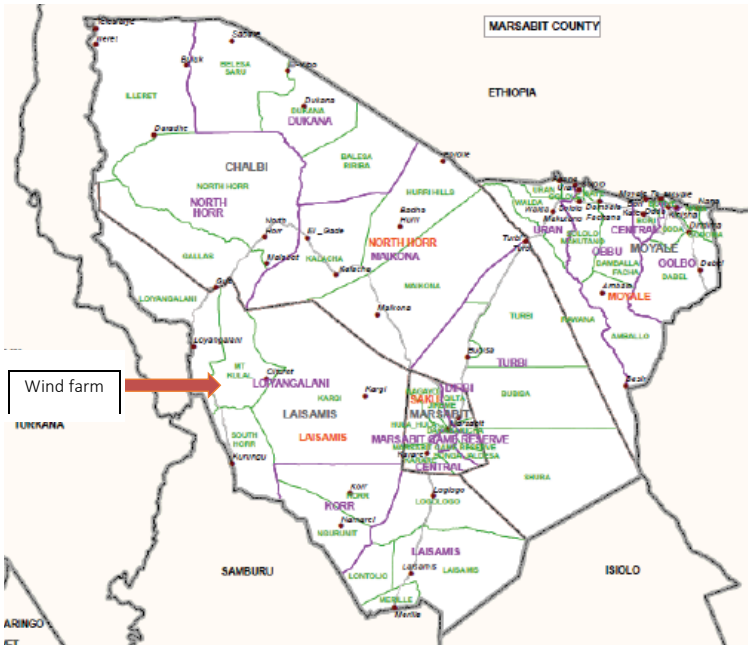
5.5.1 Location of the project

The wind project is located in Marsabit County (former Eastern Province), Laisamis Constituency, a ward of Loiyangalani, in the wider region called Sarima, near a village also called Sarima (Figure 27 and Figure 28). The location can be defined as pastoral margins (Catley, Lind, & Sconnes, 2016); one of the most remote, underdeveloped and poorest regions of Kenya composed of mostly arid and semi-arid lands. It is characterised by harsh climate conditions, widespread poverty, mistrust towards foreigners/outsiders and tribalism. About 80% of the population of the region are pastoralists and derive their livelihood from livestock-based industries. The area generally has low arable, agricultural potential and the people living there have long experienced economic and political marginalisation (African Union, 2010; LTWP, 2014a).

Figure 27. Location of the LTWP wind farm

Source: (Mutiga & Smith, 2015)

Figure 28. Administrative and political units of Marsabit County



Source: (County Government of Marsabit, 2013)

Marsabit County is the biggest County in Kenya (total land area of 70,961.2 sq km) and at the same time the least densely populated (County Government of Marsabit, 2013). Its total population is 364,249 in 2017 (Kenya Election Database, 2017a). Marsabit County is divided into four constituencies: Moyale; North Horr; Saku; and Laisamis (Table 21). Laisamis Constituency, where the Wind Project is located, is further divided into five wards: Loiyangalani; Kargi/South Horr; Korr/Ngurunit; Loglogo; and Laisamis (Kenya Election Database, 2017b). In 2017, its total population was estimated to be between 82,152 (Table 21) and 84,381 (Table 22).

Table 21. Laisamis constituency facts

Constituency	Area km2	Population 2009*	Population projected 2012	Population projected 2015	Population projected 2017
Moyale	9,370.7	103,799	112,726	123,708	129,853
North Horr	3,9248	75,196	81,662	89,619	94,07
Saku	2,052	46,502	50,501	55,421	58,174
Laisamis	20,290.5	65,669	71,317	78,264	82,152
Total		**291,166**	**316,206**	**347,012**	**364,249**

Source: (County Government of Marsabit, 2013, 2015; Kenya Election Database, 2017b; KNBS, 2015a)

*Census year

Table 22. Laisamis wards – summary

Ward	Population (2009)	Population (LTWP analysis*)	Area in m^2
Loiyangalani	16,358	16,868	4,202.50
Kargi/South Horr	9,753	9,753	7,528.00
Korr/Ngurunit	21,305	29,308	2,780.90
Loglogo	5,144	5,144	1,893.90
Laisamis	13,109	23,308	3,885.20
Total	**65,669**	**84,381**	**20,290.50**

Source: KE Election DB 2017, LTWP internal document

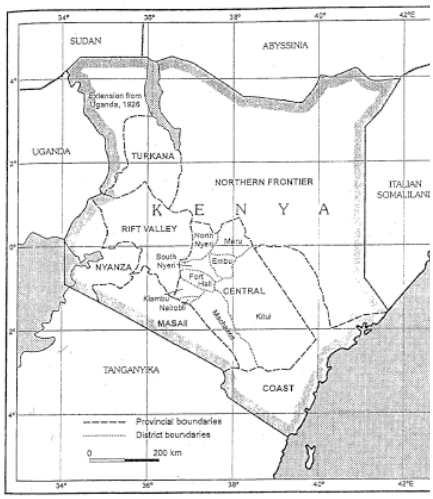
* LTWP internal population calculations based on the census and local knowledge. The number is higher than official predictions by KNBS (in Table 21).

5.5.2 The short history of marginalisation

The whole of Northern Kenya had been largely ignored during the early years of Kenya's colonisation by Great Britain and there are no sources reporting any permanent settlements in the region before 1909[271] (Brown, 1989; Witsenburg & Roba, 2004). Only after drawing a border with Ethiopia to stop Menelik's expansion further south, did the British decide to create the 'Northern Frontier District (NFD)' in 1909. This was an area of approx. 265,000 square kilometres that stretched roughly along a line from Lake Turkana (then Rudolph) in the west to the Tana River in the east and from Isiolo in the south to Moyale in the north (Figure 29) (Adam & Maende, 2009; Hogg, 1986). In reality, the NFD consisted of six Administrative Districts (Lewis, 1963) and in 1947 the colonial authority combined the NFD with Turkana District to form Northern Kenya (Figure 30). The southern border of the NFD marked the contrast between the fertile and arable land of the southern part of Kenya and its mostly arid and dry land of the north (Lewis, 1963).

[271] The arrival of the first European explorers, Count Teleki and Lieutenant von Höhnel, is estimated as 1888 (Brown, 1989).

Figure 29. Northern Frontier District of Kenya

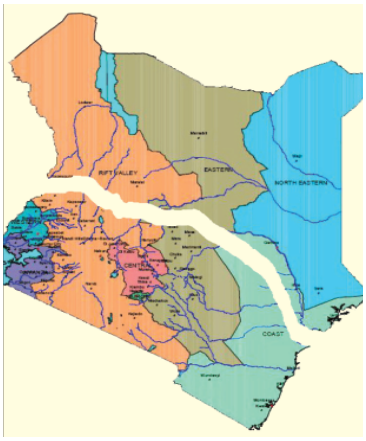


Source: (J. Hansen, 2015)

Figure 30. A map depicting administrative districts that constituted the Northern Frontier District and the Northern Kenya (after including the Turkana District).

Source: (Hogg, 1986)

Figure 31. A Map depicting Kenya divided into the North and the South as per provinces introduced in 1962.



Source: (Adam & Maende, 2009)

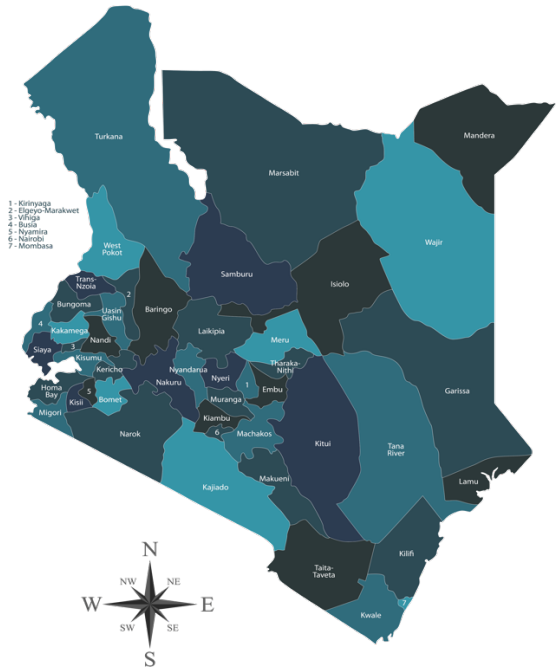
The NFD was supposed to act as a buffer between (Italy and) Ethiopia and the (British) 'high potential' land for farming in central Kenya (Adam & Maende, 2009; Carrier & Kochore, 2014; Elliott, 2016; J. Hansen, 2015; Kochore, 2016). The passing of the Outlying District Ordinance (1902), the Closed District Ordinance (1926) and the Special District Administration Act (1934) by the British restricted movements in, out and within the area; entry and exit to and from the region was only possible for bearers of a special pass. At the point of independence, Kenya was effectively divided in two - the North and the South (Figure 31) (Adam & Maende, 2009; Hogg, 1986; Whittaker, 2015b).

In 1962, the Eastern Province was created from parts of the colonial Northern Province, Central Province and Southern Province (Figure 32). It was the second most populous province (out of eight) and also the second largest in land area. After Kenya gained independence in December 1963, the status of the Eastern Province did not improve substantially. The northern part remained marginalised through laws and administrative practices. For instance, Tom Mboya, the Minister for Economic Planning and Development and the co-author of the "Sessional Paper No. 10 of 1965 on African socialism and its application to planning in Kenya" (GoK, 1965), divided Kenya into 'higher' potential areas – the Kenya Highlands – and 'wastelands' of little economic potential – among others, the dry lands of the former NFD – hence not worthy of serious investment. Consequently, the newly established Kenyan government continued to neglect the region in terms of resource allocation and infrastructural development (Adam & Maende, 2009; Kochore, 2016).

Figure 32. Kenya administrative division after 1962

Source: Adobe Stock

Figure 33. Administrative map of Kenya after 2010



Source: Adobe Stock

Administratively,[272] the Province was led by Provincial Commissioners (PCs) of Eastern Province (see Table 23 for the list of PCs between 1992-2019). The PCs were supported by District Commissioners (DCs), who ruled over districts, District Officers (DO) over divisions, Chiefs over locations and Assistant Chiefs over sub-locations. PCs, DCs and DOs were centrally appointed and hardly ever came from the District. Being appointed by the President made them 'agents' of the central government across the country. In return, they were expected to loyally serve and not question the decisions taken in Nairobi (Steeves, 2015) and implement decisions as instructed. As post-colonial Kenya was highly centralised, decisions regarding Districts were made either at provincial headquarters (Embu for the Eastern Province), or directly in Nairobi (Czuba, 2017). Eight provinces ceased to exist with promulgation of the new Constitution on 27 August 2010, which devolved the country into 47 Counties that roughly correspond to the 46 administrative districts that existed as of 1992, along with Nairobi County (D'Arcy & Cornell, 2016). Eastern Province was further devolved into eight counties – Marsabit, Isiolo, Meru, Tharaka-Nithi, Embu, Kitui, Machakos and Makueni (Figure 33) (GoK, 2010: 117 'First Schedule').

Table 23. List of Provincial Commissioners of Eastern Province since 1992

Years in the office	Provincial Commissioner's Name
1992- 1994	Antony Oyier
1994-1996	Zachary Ogongo
1996	Ishmael Chelang'a*
1996-1999	Nicholas Mberia
1999-2002	Philomenah Koech
2002-2006	John Nandasaba
2006	Patrick Osare**

[272] It should be kept in mind that traditional governance structures, such as Council of Elders, were also present in the area. Although not formalised from a legal point of view, it is a highly respected body on the local level that has a say on decisions taken at the community level. The Provincial (and later County) Administration typically recognise their role and collaborate with them (Muchena et al., 2009).

2006-2009	David Jakaiti
Since 2010 as Eastern Regional coordinator	
2009-2014	Claire Omolo
2014-2019	Wycliffe Ogallo
2019-now	Isaiah Nakoru

* Died in a helicopter crash in Marsabit in 1995.
** One of survivors of the plane crash in Marsabit in 2006.

Source: Aggregate data collected by the author from Kenyan newspapers and websites

Before devolution, a very weak 'local government structure' existed alongside the very strong Central Government presence and influence. After devolution, many more governance functions became the decision-making area of (elected) County politicians (Table 24), although national government kept jurisdiction over security, energy, education and health policy, as well as most of the taxes, including income and value-added tax. Practically all other government functions were devolved to the County level, including agriculture, health services, transport and infrastructure, trade development and regulation, planning and development, public works and services, disaster management and local governance among others (GoK, 2010: 122 'Fourth Schedule'). Importantly, the County governments also control public and community land rights (Steeves, 2015). Powers were fully transferred to County governments in August 2013. Consequently, the County level administration became a very attractive ground for politicians seeking a post and the new administrative structures offer an increased number of such possibilities (Table 25).

Table 24. Comparison of number of posts in national administration before and after the devolution

Unit	Administrator	No in 1992	Administrator / Unit	Comment	No in 2013
National	President	1	President		1
National	National Assembly	200	National Assembly	Elected MPs from constituencies	290
National			National Assembly	Elected Women Member to the National Assembly	47
National			National Assembly	Nominated representatives	12
National			Senate	Elected Senators from counties	47
Province	Provincial commissioner (PC)	8	Region	Nominated Regional Coordinators	8
District	District commissioner (DC)	47	County	Nominated County Commissioners	47
			County	Elected Governors	47
			County	Elected Members of County Assembly	1,450
Division	District officer (DO)	236			
Location	Chief	1,325			
Sublocation	Assistant chief	3,945			

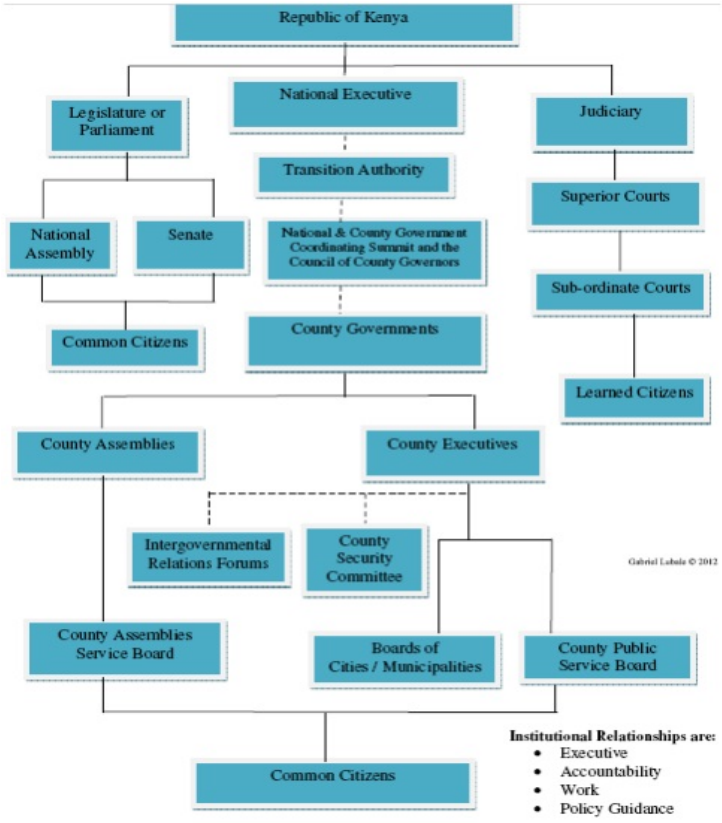
Source: (Hassan & Sheely, 2017; IEBC, 2013; Kivuva, 2011; Wafula, 2014)

Table 25. Number of elected posts in Eastern Province in 1997 vs. number of elected posts in devolved Eastern Province in 2013

	1997	2013							
	Eastern Province	Marsabit County	Isiolo County	Meru County	Tharaka-Nithi County	Embu County	Kitui County	Machakos County	Makueni County
Elected MPs	33	4	2	9	3	4	8	8	6
Elected County Women Representative to the National Assembly	-	1	1	1	1	1	1	1	1
Total Elected National Assembly	**33**	**52**							
Elected Senators	-	1	1	1	1	1	1	1	1
Elected Governors	-	1	1	1	1	1	1	1	1
Elected Members of County Assembly (Ward representatives)	-	20	10	45	15	20	41	40	30

Source: (Hassan & Sheely, 2017; IEBC, 2013; Kivuva, 2011; Wafula, 2014)

Figure 34. The Kenya County Governments Devolved Structure



Source: (Lubale, 2014)

New political positions at the County and national levels are either elected for a five-year term during general elections or are nominated by the central government (Figure 34). Among the elected positions, there are County Governors, County-based Senators, Members of Parliament (MPs, based on local constituencies; a few per County), and Members of the County Assembly (MCAs; based on wards) (Cheeseman, Lynch, & Willis, 2016; Czuba, 2017; Steeves, 2015). The governors serve as the political head of government and work with the local team consisting of a Deputy Governor and a Women Representative (Cheeseman et al., 2016; Czuba, 2017; Steeves, 2015). A governor is responsible for appointing the County Executive Council consisting of administrators at the ward and sub-county and village levels, managing the funds transferred from central to county governments and development planning.[273] The initial idea was that governors were supposed to be the technocrats who preferably have not been previously involved in politics, yet in practice the majority of the winning candidates (in 2013, and again in 2017) were previously involved in state jobs and have a track record of delivering patronage (Cheeseman et al., 2016; D'Arcy & Cornell, 2016). Senators represent the county in the Senate. The Senate, as created by the Kenya's 2010 Constitution, is a second chamber of the parliament that is designed to represent county interests and help craft bills affecting the counties. The Senate also has the power to impeach the President, Deputy President, Governor and Deputy Governors (Cheeseman et al., 2016). Members of Parliament (MPs) represent the constituency level of each county in the central government in Nairobi. MPs have responsibility for their constituencies, including control over the Constituency Development Fund (Steeves, 2015). Finally, the Members of the County Assembly (MCAs) operate at the county level and are the representatives elected from single member constituencies known as wards. Consequently, MCAs are seen as the representatives of "local people", even more so than MPs who are elected to represent a larger constituency (Cheeseman et al., 2016; Czuba, 2017; Steeves, 2015). With the introduction of the posts of County Governor, Senator and MCAs, the status of MPs has diminished (Steeves, 2015). Simultaneously, County Governors have become the real centre of power at the county level (Carrier & Kochore, 2014; Czuba, 2017; Steeves, 2015).

Among the centrally nominated posts, we distinguish the Regional Coordinators, County Commissioners and nominated members of the County Assembly. Regional Coordinators replaced the former Provincial Commissioners and from Nairobi, they are charged with the responsibility of coordinating selected clusters of counties (Leftie, 2015; Mutahi, 2018). County Commissioners replaced the former District Commissioners (DCs) and work together with Deputy County Commissioners, Assistant County Commissioners, Chiefs, and Assistant Chiefs (line public administration of the national government) in the order seniority. County Commissioners, also usually not locals, are the representatives of the President in the County and are responsible primarily for security but, in fact, they are in charge of all national government functions at the county level (see Table 26 for the list of Marsabit District and County Commissioners) (Leftie, 2015; Steeves, 2015; Wanzala, 2014). Some perceive the position of County Commissioners under the Office of the President as an attempt to undermine devolution by allowing the central government to retain its power at the county level (Mutahi, 2018). Hierarchically, the position of County Commissioner takes precedence over the Senator (Figure 34) but, to some extent, it is parallel to that of the Regional Coordinators and this inevitably causes tensions. It has been argued that the latter position should be abandoned as the County Commissioners are much more efficient at coordinating national government functions in the counties and do not need the coordinators, who are seen only "when the President visits the regions. Otherwise there is nothing substantial that they do" (Apollo, 2018).

Finally, at the County Assembly level, there are a number of nominated members to ensure that neither male, nor female members constitute more than two thirds of the assembly and an additional six nominated members represent marginalised groups (persons with disabilities, and the youth) (see Table 27 for the list of elected and nominated MCAs in the Laisamis Constituency) (Czuba, 2017; GoK, 2010; Lang'at, 2015; Ombati, 2013). The new administrative structure has introduced new political dynamics

[273] His agenda must be approved by the County Assembly (Cheeseman 2016).

into the country, but it also caused a number of tensions, especially in a complex and multi-ethnic environment, like Marsabit County.

Table 26. Marsabit District and County Commissioners

Marsabit District Commissioners				County Commissioner	
1994-1995	Paul Olando	2006-2007	Mutea Iringo	2012-2013	Isaiah Nakoru
1996-1997	Muli Malombe	2007-2008	Njenga Miiri	2013-2014	Christopher Kaima
1997-1998	Salim Ali	2008*-2009	Samuel Towett**	2014-2015	Peter Thuku
2000-2001	Joash Muyoma	2009-2010	Daniel O. Obolla***	2015-2016	Moffat Kangi
2003-2004	Joseph Otieno	2010-2011	Mburu Mwangi **	2016-2017	Magu Mutindika
2004-2005	KM Katee	2011-2012	Ruto Kipchumba^	2017-2018	Michael Mwangi Meru
2005-2006	Amos Gatheca			2018-now	Gilbert Kitiyo

* There was a period of 4 months without any DC in Marsabit.
** Acting DC for Marsabit North
*** DC Laisamis
^ DC for Marsabit Central
Source: Aggregate data collected by the author from Kenyan newspapers and websites

Table 27. Elected and nominated MCAs in the Laisamis Constituency

Ward	MCA 2017	MCA 2013
Loiyangalani/Mt. Kulal	Mark Napurdi Ekale (Turkana)	Mark Napurdi Ekale (Turkana)
Kargi/South Horr	Galgitele Assunta (Rendille)	Jitewa Issa Gambare (Rendille)
Korr/Ngurunit	Daud Tamagot Arakhole (Rendille)	Daud Tamagot Arakhole (Rendille)
Loglogo	Beranado Bata Leakono (Samburu)	Kochale Somo Jale (Rendille)
Laisamis	Daniel Ltinyilan Burcha (Rendille)	Mohamud Iltarakwa Kochale (Rendille)
Nominated (from Loiyangalani Ward)		Daniela Lenatiama (El Molo) Phabby Narumbe (Turkana)

Source: (GoK, 2017; IEBC, 2013; interviews)

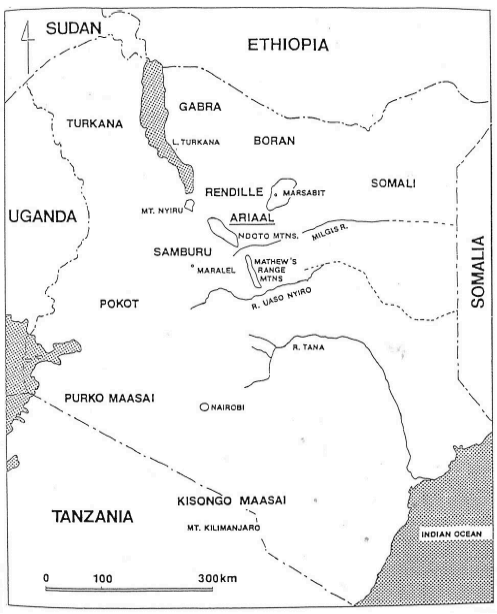
5.5.3 Ethnic composition of Marsabit County

Marsabit County has a diverse ethnical population composition, yet none of the local ethnic groups have an absolute majority. The area is known to be inhabited by pastoralists of different ethnic backgrounds, predominantly the Boran, Gabra, Rendille, Samburu, Somali and Turkana group (Figure 35). Each of these ethnic groups is made up of clans and sub-clans with different backgrounds (cf. Fratkin, 1994, 2001; Fratkin & Roth, 2004; Schlee, 1989; Spencer, 1973; Tablino, 1999, 2004). Initially nomadic, over time some of the groups succumbed to sedentarization around so-called famine-relief towns (Fratkin, 2001). The central and eastern part of Marsabit (including Marsabit Town), the "highlands", is predominantly inhabited by the Boran.[274] Long ago, the cattle-herding Boran came from Southern Ethiopia and are a part of the larger Oromo nation, which runs from central Ethiopia to the Tana river in south western Kenya. They speak an eastern Cushitic/Oromic language or Borana language, which is similar to the one used by the Gabras (Fratkin, 2001; J. Hansen, 2015; Witsenburg & Roba, 2004). The Burji, also a native group of Southern Ethiopia, is a minority ethnic group on the Marsabit Mountain that is considered the local elite. They are involved in trade, local businesses and farming, thus holding prime agricultural land on the mountain. They speak a Cushitic Burji language and use it among each other to

[274] It is also sometimes written as Borana or Booran (Witsenburg & Roba, 2004).

bargain for low animal prices on the livestock market (Carrier & Kochore, 2014; Witsenburg & Roba, 2004). The Marsabit "highlands" are also inhabited by a few Turkana and Somalis (Fratkin, 1994).

Figure 35. Some Pastoralist Groups in Kenya



Source: (Fratkin, 1994)

The lowlands of Marsabit District, the south western area closer to the LTWP project location, are inhabited by the Gabra, Rendille, Samburu and Turkana who are pastoralists relying on camels, cattle and small ruminants of sheep and goats. They live in either mobile manyattas or have partly settled in villages and their hamlets around water sources, such as Kargi, Korr, Illaut, Laisamis, Bubisa, or North-Horr among others. There is also an enclave of the smallest ethnic group in Kenya – the Elmolo – fisher folks around the shores of Lake Turkana (previously Lake Rudolf) who live near Loiyangalani town (Brown, 1989; Witsenburg & Roba, 2004). The Gabra[275] mostly live in the northern and north-western parts of the County. They speak a similar language as the Boran but their cloths, calendar, rituals and even some of their clan name resemble the Rendille and Somali (Schlee, 1989). The Gabra are also camel herders and have a similar age-grade system as the Rendille but the two groups have frequently been in conflict (J. Hansen, 2015; Schlee, 1989; Spencer, 1973; Tablino, 2004).

The Rendille live in the south-western part of Marsabit and have the "historical right" to the trust land where the LTWP is currently locate.[276] The Rendille appear to be of Somali origin, as their Cushitic/Hamitic language is closely linked to Somali (and the one used by the Gabras). The Rendille have very strong cultural ties and clearly defined identity boundaries. The ethnic group is made up of nine clans, who define themselves by camel herders and by participation in the 'Galgulame' ceremony - a ritual gathering that takes place every fourteen years and require co-operation of all the nine clans[277] (J. Hansen, 2015; Schlee, 1989; Spencer, 1973). Historically, the Rendille lived with their camels in large semi-nomadic settlements in the broad desert lowland below Mount Marsabit but following the droughts of 1968-73, many Rendille households settled near small trading towns and police posts in the district, including Laisamis, Loglogo and Marsabit town (Fratkin, 1998; Spencer, 1973). Those who settled in the highlands have engaged in arable agriculture but have experienced conflict and armed attacks from the Boran farmers. Those who stayed in the lowlands have faced attacks by the livestock-raiding neighbours Gabra and Turkana, and extensive raids by Somalis during the Shifta war[278] of late 1960s (Fratkin, 2001).

Rendille maintain close ties with the Samburu. The Samburu are cattle-keepers who have an ethnic relationship with the Nilo-Hamitic Maasai; they share a similar language (Maa), dress codes, traditional ceremonies and rituals (Brown, 1989; Spencer, 1973; Witsenburg & Roba, 2004). The majority of the Samburu live in Samburu County, south of Marsabit County but a small number also live in close alliance with the Rendille in the south-western section of Marsabit County (Spencer, 1973). The ethnic identities between these two groups are dynamic. As a result, many Rendille and Samburu are bilingual due to their close ties; they share resources, allow intermarriage and borrow from each other's traditions and social values. The blend of the Samburu and Rendille culture gave birth to 'the Ariaal', a pastoral group

[275] It is also sometimes written as Gabbra (Spencer, 1973; Witsenburg & Roba, 2004).
[276] About the debate regarding claims to this land and the changing interpretation of the local history, see Cormack & Kurewa (2016).
[277] The last 'Galgulame' ceremony was conducted on the LTWP concession site in 1953. The most recent such ceremony was conducted within Marsabit National Park, near crater Lake Paradise (Cormack & Kurewa, 2016).
[278] More on Shifta war can be found in, for example Whittaker (2015a).

keeping both camels and cattle who live south towards the Ndoto Mountains (Brown, 1989; Fratkin, 1994; Schlee, 1989; Spencer, 1973; Witsenburg & Roba, 2004).

Finally, the Turkana are a Nilotic ethnic group who originally came from South Sudan and Northeast Uganda and who settled in the arid land west of Lake Turkana. Although their original home is beyond the borders of Marsabit County they are an important group in the western part of the county. They initially came from the other side of the lake to assist the Rendille and some decided to stay. The archival records indicate that the Turkana were poor servants of the Rendille in the past (Cormack & Kurewa, 2016). They have been known as an aggressive group that frequently raids their neighbours, including Rendille (Brown, 1989; Tablino, 2004; Witsenburg & Roba, 2004). However, they also contributed to developing the county's infrastructure, as the British often employed Turkana labourers for heavy manual work, such as road-making, digging, construction, etc. (Witsenburg & Roba, 2004). Today, the Turkana are the dominant ethnic group in Loiyangalani Town[279] and inhabitants of Sarima Village, which is in close proximity to the LTWP wind farm. They also participate in local politics and secured two seats in the Marsabit County Assembly following the 2013 general elections and one during the 2017 election (Table 27).

5.5.4 Complex local political dynamics

There are two decisive factors behind a successful political campaign in Kenya: ethnicity and patronage[280] (Cheeseman et al., 2016; D'Arcy & Cornell, 2016). Consequently, election campaigns usually feature promises of local ethnic patronage and promotion of communal interests (Cheeseman et al., 2016). Furthermore, rent-seeking is one of the main motivations to venture into politics in the first place. The motivation for financial benefits and control over territory, resources, licenses and other properties linked to the elected office is so high that the candidates distribute gifts and money handouts during their rallies in a bid to win, or rather buy, the trust and support of local communities (Cheeseman et al., 2016; D'Arcy & Cornell, 2016). As a result, most local politicians, especially those aiming for the most powerful position of governor, come to power indebted both politically and financially. This subsequently incentivises the repayment of debts through corrupt means (Cheeseman et al., 2016; D'Arcy & Cornell, 2016) or to exploit ethnicity during their tenure thus dividing communities along ethnic lines and increasing personal benefits[281] (Cormack & Kurewa, 2016; Drew, 2018; Greiner, 2016).

Religion has played a political role to some extent. In Marsabit County, Islam and Christianity are the main 'introduced' religions but many pastoralists keep their traditional religions (or practice both at the same time) (Fratkin, 2001). Religious divisions often cross ethnic, clan and family boundaries but are rarely a source of tension. For the pastoral communities, livestock is considered as a cultural and religious asset, with animals being central in rituals and ceremonies (Witsenburg & Roba, 2004; cf. Tablino, 1999; Zaal, 1998). Nevertheless, in towns and villages churches and mosques can be found near to each other. The Bible Churchmen's Missionary Society (BCMS), the African Inland Church (AIC) and the Roman Catholic Mission (Consolata) were among the most important religious missions in the North of Kenya (J. Hansen, 2015; Witsenburg & Roba, 2004). Historically, such missions provided education and health services in the area and assisted the government with emergency relief distribution in case of droughts. BCMS missionaries were the only missionaries allowed to work in all of the Northern Frontier District. Starting in 1931, BCMS initiated the formation of the first Christian communities,

[279] An acronym ELMOSARETU is often used to describe the ethnic groups that inhabit Loiyangalani. It stands for El Molo, Samburu, Rendille and Turkana. In addition, a few Meru and Somali people can be found in town where they run most of the businesses (Friends of Lake Turkana, 2011).

[280] Patronage is understood as a form of clientelism where public jobs and other public resources are traded in exchange for political support (D'Arcy & Cornell, 2016).

[281] This is even further intensified in the context of large local investments (Cormack & Kurewa, 2016; Drew, 2018; Greiner, 2016).

created the first primary school and medical facility but their overall contributions to the development of Marsabit and the NFD as a whole is considered limited. As of the 1960s, the Consolata and Africa Inland Mission joined the previously unreachable region.[282] Particularly, the case of AIM is interesting to mention. AIM was an interdenominational and evangelical faith mission founded in the United States and one of the earliest Protestant missions in East Africa. Their aim was the conversion of non-Christians but they also wanted to focus on educational and medical work. Consequently, their responses to pastoralists of Northern Kenya were characterized by pragmatism rather than evangelical ideology. In the late 1960s and 1970s, AIM missionaries in the region, relying on their technical expertise, became involved in resettling pastoralists and conserving grasslands and forests, as ad hoc responses to the famine camps that developed around mission stations. In this way, they supported the sedentarization among the pastoral groups and spread evangelisation through their medical and education work. The AIM missionaries, especially Paul and Betty Lou Teasdale,[283] expressed concerns about the effects of modernization on the pastoralist communities, which partly destroyed the local traditions, brought alcohol abuse and family neglect. They called for building a good moral backbone of this society to cushion the unintended effects of modernisation (J. Hansen, 2015). The missionaries continued their work in the region by building new roads, boreholes, schools, and health clinics and providing teachers and doctors throughout Marsabit District. Their role has increased with time as a result of the central government neglect of this politically declared "unproductive" area. Therefore, although not political per se, the missionaries can be considered an important stakeholder at the local level.

In the case of Marsabit County, political ethnic dynamics also have a long history. Saku and Moyale[284] are ethnically diverse but dominated by the Boran: both constituencies have always elected Boran MPs (for the full list of MPs in Marsabit constituency see Table 28) (Carrier & Kochore, 2014). Most of North Horr and Laisamis have been ethnically homogenous, populated predominantly by the Gabra and Rendille,[285] respectively, as reflected in their choice of MPs (Czuba, 2017). Until devolution, MPs were regarded as agents of the central government with very little sovereignty and power, as they had to obey the decisions taken by the centralized system. Nevertheless, with the absence of another administrative structure, the position of the MP was the best available option for any political influence and was a gateway to obtain otherwise unreachable resources (Czuba, 2017). In the case of Marsabit, the contest for parliamentary seats had mainly been between the Gabra and Boran (Table 28) (Carrier & Kochore, 2014; Czuba, 2017).

[282] From 1970 to 1980, many organisations cooperated in establishing settlement schemes in the area. They were mainly targeted on helping impoverished pastoralists and refugees from Ethiopia. In 1973, the National Council of Churches of Kenya (NCCK) started a settlement scheme on the Marsabit mountain for impoverished pastoralists from Laisamis in Songa, Nasikakwe (Karare) and Kituruni, where the AIC missionary Anderson was mainly involved in the practical implementation (cf. Witsenburg & Roba, 2004).

[283] Paul and Betty Lou Teasdale directed the AIC work around Marsabit since the mid-1960s (J. Hansen, 2015).

[284] Moyale was added to Marsabit County in 2010.

[285] Within Laisamis Constituency, the Rendille and Samburu are perceived to be the majority with the former believed to be slightly more in numbers, followed by Turkana, Boran and Gabra in that order (Muchena et al., 2009).

Table 28. Members of Parliament in Marsabit County (District)

Year	Marsabit South Constituency/Laisamis Constituency (since 1988)	Marsabit-Moyale Constituency		
1963	Elisha Daniel Godana (Burji)	Galgallo Godana (Gabra)		
		Marsabit North Constituency		Moyale Constituency
1966	Philip Kurungu (Rendille)	Galgallo Godana (Gabra)		Sora Ali Galgallo (Boran)
1969	Mohamed Kholkholle Adichareh (Rendille)	Alex Isako Umuro (Gabra)		Abajillo Osman Araru (Boran)
1974	Mohamed Kholkholle Adichareh (Rendille)	Elisha Daniel Godana (Burji)		Mohamed Osman Said (Barawani)
1979	Mohamed Kholkholle Adichareh (Rendille)	Alex Isako Umuro (Gabra)*		Guyo Halake Liban (Boran)
1983	Mohamed Kholkholle Adichareh (Rendille)	Abdikadir Yatani (Gabra)		Mohamed Malicha Galgallo (Boran)
		North Horr Constituency	Saku Constituency[286]	
1988	Samuel Ntontoi Bulyaar (Rendille)	Bonaya Adhi Godana (Gabra)	Jillo Jarso (J. J.) Falana (Boran)	Philip Galma Godana (Boran)
1992	Robert Iltaramatwa Kochalle (Rendille)	Bonaya Adhi Godana (Gabra)	Jillo Jarso (J.J.) Falana (Boran)	Mohamed Malicha Galgallo (Boran)
1997	Robert Iltaramatwa Kochalle (Rendille)	Bonaya Adhi Godana (Gabra)	Abdi Tari Sasura (Boran)	Guracha Boru Galgallo (Boran)
2002	Titus Ngoyoni** (Rendille)	Bonaya Adhi Godana** (Gabra)	Abdi Tari Sasura** (Boran)	Guracha Boru Galgallo** (Boran)
2007	Joseph Lamasolai Lekuton (Ariaal)	Francis Chachu Ganya (Gabra)	Hussein Sasura (Boran)	Mohammed Mahmud Ali^ (Boran)
2013	Joseph Lamasolai Lekuton (Ariaal)	Francis Chachu Ganya (Gabra)	Ali Rasso Dido (Boran)	Roba Sharu Duba (Boran)
2017	Marselino Malimo Arbelle (Rendille)	Francis Chachu Ganya (Gabra)	Ali Rasso Dido (Boran)	Qalicha Gufu Wario (Boran)

* Killed in 1982

**Died in the plane crash in Marsabit on April 2006

^ Known as Abshiro.

Source: Combined by (Czuba, 2017), updated from (GoK, 2017)

The relations between the Boran and Gabra have deteriorated, exacerbated by the so-called Turbi massacre in 2005.[287] The then Boran MPs Abdi Tari Sasura and Guracha Galgallo, and Gabra MP Bonaya Godana, traded accusations over who incited the violence. Moreover, MP Godana was seen as a supporter of a distinct Gabra political and cultural identity that was against the perceived Boran 'hegemony' (Carrier & Kochore, 2014). Devolution intensified ethnic rivalry in the county, as the Boran and Gabra had to compete with other ethnic groups (including minorities, such as the Burji) for the County's MPs but also other elective positions (Carrier & Kochore, 2014; Czuba, 2017).

After devolution, the specific ethnic composition of Marsabit's population "forced" local politicians in the county to form inter-ethnic alliances to challenge the Boran and Gabra dominance in county politics. In the 2013 elections, the Rendille-Gabra-Burjis created a political entity known as ReGaBu and won all key elected seats. The winning team consisted of Rendille Senator Abubakar Godana Hargura, Gabra Governor Ukur Yatani (former MP for North Horr), Burji Deputy Governor Omar Abdi Ali and Women

[286] Marsabit town, the biggest urban centre and the capital of the county, is located in Saku constituency.

[287] In 2005, bandits raided Turbi village killing about 95 people, 23 of whom were children (Carrier 2014).

Representative Nasra Ibrahim Ibren from a minority group Garre. It was a major blow for the Boran and led to a rivalry between the Gabra governor and one of the local MPs in 2014, which consequently led to an outbreak of violence and threats by the Deputy President to dissolve the county government (Carrier & Kochore, 2014; Cheeseman et al., 2016; Wanzala, 2014; cf. Carrier & Kochore, 2014; Czuba, 2017). The 2017 general elections reconfirmed the importance of the inter-ethnic alliance. This time the alliance consisted of the re-election of Rendille Senator Hargura and the new Burji Deputy Governor but brought the Boran back to the front seat of the local politics with Mohamud Mohamed Ali taking over the Governor's position (Table 29). Finally, in the Laisamis constituency, the Ariaal MP Joseph Lekuton who held the position the previous two terms was not re-elected. Lekuton, a Harvard educated teacher, has been recognised as a highly skilled politician but a close ally of Ukur Yatani, the first County Governor and was alienated from the popular Senator Hargura. Consequently, he was replaced by a new Rendille MP, Malimo Arbelle[288] (Czuba, 2017).

Table 29. Marsabit's Senators, and Governors and their teams

	Senator	Governor	Deputy Governor	Women Representative
2013	Abubakar Godana Hargura (Rendille)	Ukur Yatani (Gabra)	Omar Abdi Ali (Burji)	Nasra Ibrahim Ibren (Garre)
2017	Abubakar Godana Hargura (Rendille)	Mohamud Mohamed Ali (Boran)	Solomon Gubo Riwe, (Burji)	Safia Sheikh Adan- Buko (Boran)

Source: (Czuba, 2017; Mbaka, 2017)

5.5.5 LTWP and local politics

LTWP has always claimed to be apolitical project, yet being the biggest private investment in the country and a flagship project of Kenya Vision 2030 gave it a lot of visibility. From the start, LTWP has had a strong support from the central government (see Chapter 5.4) and locally, it had the backing of the AIC mission. Furthermore, its prominence and scale provided a perfect opportunity for the local politicians to use it for their political and personal benefit. The local MPs have been (indirectly) lobbying in the National Parliament in favour of LTWP since 2004. Firstly, the North Horr MP Bonaya Adhi Godana tried to convince the chamber to invest further in renewable energy sources in the region, including wind (Hansard, 2004), as did the MP for Laisamis Joseph Lekuton in 2009 (Hansard, 2009). At that time though, MPs had to follow the directives of the central government.

Locally, Senator Hargura has been in the project's opposition, while both MP Lekuton and Governor Yatani have been known to be supporters of the project (PSCU, 2015). It was alleged they both personally profited from the LTWP 'land deal' (Czuba, 2017). Officially, LTWP and the County Council of

[288] Ukur Yatani, after losing the Governor's seat in the 2017 elections, received a Presidential nomination for the post of Labour Cabinet Secretary in January 2018. During the election campaign, President Kenyatta promised a position in the national government to a defeated Governor of Marsabit County to reduce the ethnic tensions that escalated during the governors' campaigns (Czuba, 2017). This nomination was opposed by the leadership of Marsabit County (a group that can be considered a fraction supporting new Boran Governor Mohamed Ali). A petition highlighted the involvement of Yatani in misallocation of public funds and pictured him as morally unfit for such a high post (Marsabit Times, 2018; Nation Team, 2018; Oruta, 2018). Yatani was indeed investigated by the national Ethics and Anti-Corruption Commission in 2015 (and Czuba [2017]) reports on Yatani's ethnic favouritisms towards the Gabras and general dissatisfaction with his performance as the governor among his ReGaBu allies). Consequently, Rendille and Burji decided to team up with the Boran in the 2017 elections and Yatani lost the governor's seat (Czuba, 2017). Yatani in his reaction to the petition against his nomination as Labour Cabinet Secretary accused his rival Mohamud Ali of political provocation (Marsabit Times, 2018). The petition did not have an effect and the nomination of Yatani as a Cabinet Secretary by the President was vetted and appointed by the National Assembly (Nation Team, 2018).

Marsabit (then a District) signed a land lease agreement for 150,000 acres[289] in October 2007. It was the first step towards procuring a title deed, which was followed up by a Gazette Notice of setting the land apart in January 2008 through the Marsabit County Council (Kenya Gazette, 2008). With meeting no objections at that time, the Office of the President confirmed the allocation of land to LTWP in February 2008 (LTWP, 2011b). When in 2014, the construction activities intensified, so did the tensions between rivalry pastoralist groups over the leased land[290] and potential for rent-seeking, which led to both cultural and political conflict (Cormack & Kurewa, 2016; Drew, 2018). The Turkana, Samburu and Rendille all claimed to have rights to the leased land and more importantly – to the benefits that the project will bring.[291] The Turkana claim the right to land based on rights through occupation (as they have been living in the area for over 50 years). The Rendille claimed their benefits based on ancestral rights and the fact that their camel corridor is passing through the area. Moreover, the shores of Lake Turkana have been used by the Rendille for their cultural practices (particularly for the age-set ceremony of 'galgulame'). Finally, the Samburu claimed the rights to land based on their ancestral rights and occupation, with particular ties to one of the clans who have a strong association with water points in Sarima (Cormack & Kurewa, 2016; Drew, 2018). Some members of the local communities claimed not to be properly consulted in the process back in 2007 and consequently they have never received appropriate compensation for the land leased to LTWP by the central government (who then had the power over District land under Trust Land laws) (Danwatch, 2016; Vos, 2015). Lekuton's involvement and support of the LTWP project, as well as his alleged personal benefits from a number of County government contracts distributed under the supervision of his alley Yatani, damaged his relationship with his constituency and consequently, he lost the MP seat in the 2017 elections (Czuba, 2017; GoK, 2017). According to some interviewees, the newly elected MP for Laisamis did privately benefit from the LTWP presence through a contract with Civicon that hired his earth moving equipment during the road construction. He therefore can be viewed as a project supporter for the time being, yet time will show his position in the long-term.

Another example of using LTWP to obtain political advantages by the local politicians follows up on the land acquisition case. In October 2014, residents from Laisamis Constituency and Karare Ward (Saku Constituency) filed a lawsuit against LTWP for illegal land acquisition. LTWP denied the allegation and claimed that the land lease was obtained through a due legal process[292] and they held numerous local consultations and stakeholder meetings since April 2006.[293] The project has received assurances of

[289] The entire concession area leased from Marsabit County to the LTWP consortium for a term of 33 years with an option to extend twice up to 99 years is 150,000 acres. However, the actual project site required for the wind power project covers a total of 40,000 acres (162 km²). 99.8% of this area is currently being used as a funnel in which the wind streams accelerate to high speeds. LTWP's permanent structures, which include 365 wind turbines, a substation and workers' accommodation, occupy less than 87.5 acres (3.5 km²). Two of these structures are fenced and have a restricted access: the substation (for health and safety purposes), and the workers' accommodation (for security reasons). The rest of the land is open to the public and continues to be used by the local population for settlement, grazing of livestock, and access to water points (LTWP, 2019a).

[290] The area is also known to be Gatab, - a site of frequent clashes between the rivalling pastoralist groups, especially between Boran and Samburu cattle herders (J. Hansen, 2015).

[291] The tensions between the groups led to a violent attack on Sarima village in May 2015 by Samburu men, and subsequent retaliatory attacks by Turkana on Rendille/Samuru that caused one more retaliation of the latter group. Framed as livestock raid and a revenge to killing of a (Samburu) woman, Drew (2018) argues that the attack was politically motivated and sponsored, as no livestock were stolen. He argues that the attack was "incited by leaders (…) in order to exclusively claim land and Wind Power benefits." (Drew, 2018: 35 of chapter 7).

[292] It must be considered that between the granting of the project site and its financial closure, Kenya underwent two major changes to its laws affecting land rights: In 2009, a National Land Policy was approved by parliament. The following year, land policy was embedded in a new constitution; and in in April 2012: new Land Act, the Land Registration Act and the National Land Commission Act was agreed on (Manji, 2015).

[293] According to CDM (2011), the first official consultation took place on 26 May 2007 in a meeting with community Elders at Loiyangalani town but the minutes of the meeting are not available. The first available minutes are from

support from all the local communities surrounding the project site (CDM, 2011; LTWP, 2016c). The lawsuit can be considered political, as the plaintiffs are MCAs from Laisamis, Kargi/South Horr, Loglogo and Korr/Ngurnit,[294] villages that are not in the close proximity of the project site, nor directly affected by the project. It can be therefore argued that the local politicians behind the court case wanted to use the lawsuit to gain political support ahead of 2017 elections and hopefully gain financially in case any financial compensation would be enforced. The case still rests with the High Court of Kenya in Meru[295] (Abdi & Mutembei, 2014; Aboo, 2015; Critical Resource, 2016; Daily Nation, 2015; Danwatch, 2016; Muchui, 2014; Sena, 2015). Looking at the composition of the County Assembly after the 2017 elections, one can argue that the lawsuit had the adverse political consequences for the MCAs involved. Three out of four implicated MCAs were not re-elected in 2017. While the MCA for Loiyangalani/Mt.Kulal, who has been a supporter of the project, did gain a place for his second term. With the exception of Senator Hargura, such situation may allude towards local communities' support of LTWP as they appear to vote for local politicians who are rather in favour of this big investment.

Finally, the role of LTWP Community Liaison Officers (CLOs) became somewhat political as well. CLOs are people recruited locally who speak the local languages and are knowledgeable on the local ethnic dynamics.[296] CLOs are employed by LTWP (and subcontractors) and as a result, they are seen as representatives of the company's interest. However, there were cases when some CLOs were not very loyal towards their employer and cases of CLOs dividing and inciting the communities to claim more financial benefits from LTWP were reported.[297] Furthermore, some CLOs reportedly used their position for personal benefit. The position was "used" mostly to build political power, and support, but cases of theft of community money have also been registered. Consequently, many CLOs who have been working for the project throughout the process have been laid off, thus rotations on the positions were common.

5.5.6 Concluding remarks

Despite ongoing efforts, LTWP could not escape the claims of being political in the highly sensitive and ethnical context of Marsabit County. High visibility and scale of the project became a sudden opportunity for complicated and competitive local politics that continued being motivated by personal rent-seeking behaviour and ethnic patronage. Balancing these dynamics is undoubtedly not an easy

---

a meeting that took place on 15 November 2007 on the Environmental and Social Impact Assessment (ESIA) Study of the wind farm (LTWP, 2011b). According to an LTWP internal document, 137 official meetings with stakeholders in the area took place between November 2007 and June 2016 (and a number of informal meetings since 2005 that have not been captured in the official file). In addition, the company has been engaging with local stakeholders through a number of informal consultations either on site or during frequent visits of the LTWP team or via their dedicated Community Liaison Officers (CLOs) (CDM, 2011; LTWP, 2016c). During the fieldwork, a number of respondents confirmed that the consultations were taking place since 2006, yet it was highlighted that it could have still not be enough. In addition, as majority of the local pastoralists are nomads, it is possible that they were not present in the area during the official meetings. Furthermore, Drew (2018) points out that the initial consultation took place with only selected committees of elders who were more inclined to lease the land to the company than the wider community that they supposedly represent.

[294] The remaining two plaintiffs are a teacher from Mount Kulal who currently lives in Nanyuki and a former politician from Korr who lives in Nairobi (GoK, 2014b).

[295] LTWP did try to mediate with the plaintiffs but was unsuccessful, so the case is again in full trial. In the meantime, though, one of the plaintiffs pulled out of the lawsuit after the 2017 elections (Fieldwork).

[296] There have been 3 CLOs for the LTWP and 1 CLO for each of the seven contractors engaged in the construction of the wind farm. Particularly one of the LTWP CLO has been with the project since the wind measurements started back in 2006. Another key person on the ground has been the former LTWP Chief Operations Officer (COO). Together they have been playing a key role in addressing communities and managing the arising tensions.

[297] Similar problems with CLOs was reported by Lind (2018) in case of Tullow Oil in Turkana County, on the other side of the lake.

task, as nobody in the area can be considered truly 'neutral' or objective to the merits of having the project there. It also means that pragmatically, the company has to side with those in favour of the project if they want to move forward and hope these people will be paid and “cared for” enough to keep the community sufficiently calm in the interim. It is a truly complex situation as both sides are trying to push their own, often political, agenda. These political dynamics can have major ramifications for the existence and successful operations of the project, and thus had to be taken into consideration in analysing the local impact of the project.

5.7 Local impact of the Lake Turkana Wind Power project: The company view

This sub-chapter will examine the contribution of the LTWP to the local (inclusive) development by assessing the impact of local employment creation, road construction and impact on the society (through the WoC foundation activities) based on the company's official records. It should be noted that the project is operating in the context of pastoral margins – the most remote, underdeveloped and poorest region of Kenya with a predominantly pastoralist population who have long experienced economic and political marginalisation (African Union, 2010; LTWP, 2014a). The attempt is made to address potential trade-offs that had to be made on the community level during the process of project development and implementation in order to reach inclusive outcomes and promote renewable energy investment in Kenya.

5.7.1 Infrastructure update

Figure 36. The landscape at the project site

Source: Photo by A. Kazimierczuk

The arrival of LTWP to this remote part of Kenya brought many changes. The 'founding fathers'[298] of the project often refer to the area as "moon-like". In their interviews we hear that "There was nothing there", "…just stones".[299] Indeed, the region is arid and sparsely populated. The desert-like area is mainly covered with rocks and sand, with only a few acacias, sporadic desert rose and some thorny bushes interrupting the arid landscape (Figure 36). For this previously untouched area, the major change has been the developed and upgraded infrastructure. In order to make the project functional, everything had to be built from scratch: the wind farm, 150 housing units for the staff (called "The Village"), administration offices, a fully equipped turbine maintenance workshop, the substation to connect the wind farm with the national grid, 438-km of high voltage transmission lines, and finally the construction and upgrade of the road from the A2 highway at Laisamis to the project site (O'Hanlon, 2015). The changes in the landscape can be seen on the satellite images of the area between 2010 and 2017 below (Picture 2 and Picture 3). The upgraded road, "The Village", substation and some of the wind turbines' rows are clearly visible from the air on the Picture 3. Both pictures illustrate the scale and level of interference in the natural landscape of the project.

[298] Willem Dolleman, Carlo Van Wageningen, Christopher Staubo, Harry Wassenaar, Kasper Paardekooper and John Thiong'o Mwangi are referring to each other as the 'founding fathers' of the project (KP&P Africa BV, 2014). For more information about the 'founding fathers' and LTWP initial developments see Chapter 5.4.

[299] See for example COP19: Carlo Van Wageningen, Chairman, Lake Turkana, https://www.youtube.com/watch?v=yOoTLs4fAUI

Picture 2. LTWP area, 2010

Source: Google Earth 2019

Picture 3. LTWP area 2017

Source: Google Earth 2019

"The Village" is the permanent camp that was built from scratch to house the staff for the duration of the project (see Pictures). It is expected that the project will have a long-term presence in the area (20 years according to the Power Purchase Agreement), thus 150 housing units were complemented with administration offices and a fully equipped turbine maintenance workshop.[300] "The Village" has already become 'a local legend', as an oasis of modern lifestyle and comfort constructed in the middle of the desert. Indeed, the camp constructed by SECO is noteworthy. It is a fully self-sustaining camp. There is a canteen that serves three meals a day, a water purification station, a little shop, clinic, recreation area, incineration plant, waste water system, petrol station, IT unit, a small vegetable garden and necessary office units. The air-conditioned houses are fully equipped with comfortable beds, TVs, showers with running water, toilets, mini-fridges and high-speed internet is available in the entire camp.[301] A large 6 mln-litre water tank is located on the hill above the camp and is supplying "The Village" with the necessary water under excellent pressure. Employees can enjoy a bar, swimming pool (which in practice is a fire emergency water tank), squash and tennis courts, gym and a football pitch. In September 2016, the camp was still running on four generators but has since been connected to the substation and is powered by the plant.

Picture 4. A model of "The Village" and maintenance workshop

Source: Cocoon studio (ND)

[300] With the 62% load factor and working in a particularly dusty and remote area, the turbines will have to be maintained frequently and locally.

[301] Despite providing a very high standard of living conditions within "The Village" (especially realising that it was constructed in the middle of a desert), the management of the camp received a number of complaints from the (vastly international) workers. Slow Wi-Fi, weak TV reception and monotone menu in the canteen were among the most common complaints.

Picture 5. The Village under construction, approx. March 2015

Source: Kenyan Facts

Picture 6. Bird's-eye view of the completed Village

Source: Photo by A. Kazimierczuk 2016

The second major infrastructure investment was the construction of 438 kms of high voltage transmission line that also carries communication data.[302] The Spanish government supported the Kenyan government and Kenya Electricity Transmission Company (KETRACO) to fund its construction to also facilitate further electrification of the country and the region. The construction of the transmission lines has been classed as an 'associated' contract and was overseen by KETRACO (see also section 5.4.5 in Chapter 5.4). However, the project was of critical importance for LTWP, as without the transmission line it would be unable to evacuate the power to the national grid[303] (O'Hanlon, 2015).

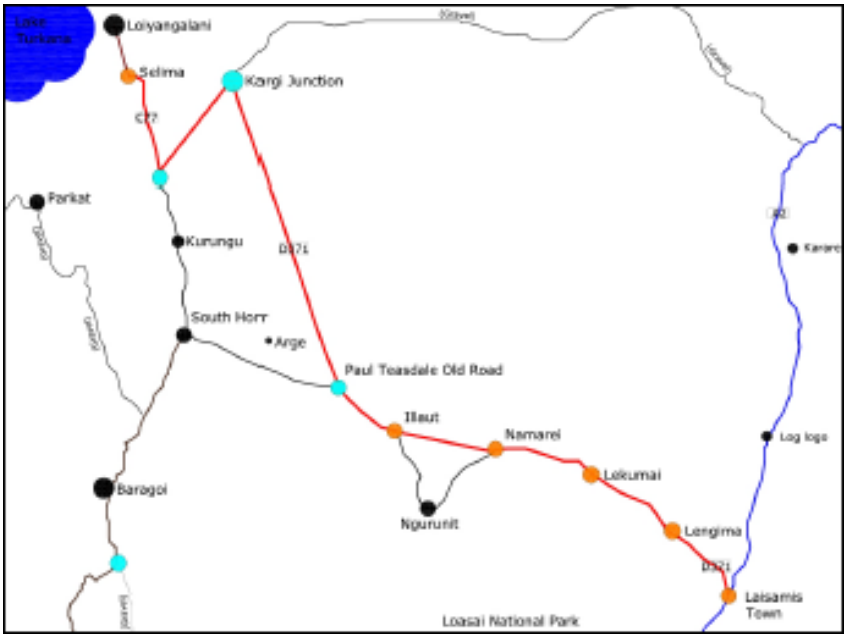
Finally, the road – an integrated part of the LTWP project – was executed under their supervision. The main purpose of the road upgrade was to transport the wind turbines and necessary goods to the site. In total, there was a need to transport 365 wind turbines by road over a distance of 1,200 km to the project site from the port of Mombasa where they were received by sea freight from Vestas' factory in China (LTWP, 2016a). While the part between Mombasa – Nairobi – Nanyuki - Isiolo – Laisamis (see Figure 37 and Figure 38) is an 'A-Class' road of bitumen construction, the last 208 km leg of the journey between Laisamis and the project site was a gravel and murram road in a very poor condition that was unsuitable for carrying the heavy and delicate cargo (AfDB, n.d.). Consequently, the 208 km road had to be partly upgraded and partly constructed (Figure 38), together with three flood bridges and an access road network in and around the construction site for the total cost of €22.5 million. The Government of the Netherlands, through the African Development Bank (AfDB), has offered a grant of €10 million and the balance of €12.5 million was provided by LTWP from their investment budget (LTWP, 2013). Although the road upgrade was primarily to allow for the wind turbines to reach the site, the road was expected to have additional major impacts on the local communities by opening the area for further developments and improve accessibility to and for all the local communities. The road was officially opened in February 2016 (LTWP, 2019b).

[302] The new transmission lines will also carry fibre-optic cables that will carry communications data.
[303] The construction of the transmission lines has been severely delayed – see section 5.4.5 in Chapter 5.4 for more details on this topic.

Figure 37. Transportation route for the Vestas turbines

Source: (AfDB, n.d.)

Figure 38. Upgraded and newly constructed read from Laisamis to the wind farm project site



Source: (LTWP, 2011b)

5.7.2 Construction of the wind farm

There were five major contractors for the project: Vestas for the wind turbines; Siemens for the collection grid and sub-station; SECO for the permanent accommodation; Civicon for the on- and off-side roads; and RXPE for the STATCOM (a device that is used on alternating electricity transmission networks and to reduce voltage fluctuations) connecting of the sub-station to the national grid. Finally, G4S should be acknowledged as well, as they have been providing security on site. Many of the main contractors further sub-contracted additional companies, involving in total over 20 companies[304] (Table 30). Half of those were Kenyan companies, with SECO and Civicon being awarded two out of three largest contracts. During the construction period, each contractor established a temporary construction camp on site with its own canteen and housing facilities, although often less sophisticated than "The Village". Each contractor was responsible for establishing and managing their own camps. Although all the camps met the national and international required standards,[305] the conditions provided varied per camp.

Table 30. List and roles of the LTWP contractors and sub-contractors

Contractor | Subcontractor	Country	Role in the project
LTWP	Kenya	Principal, wind farm construction
ATL	UK/Kenya	Project management, replaced by Worley Parsons
Worley Parsons	Australia/ South Africa	Project management, taken over from ATL
CEDIM-Marsabit	Kenya	Implement HIV/AIDS and Road Safety training, CSR programme on behalf of Winds of Change
Africa Eco Services (AES)	Kenya	(Partial) Construction of 'Camp Mbali'
SECO	Kenya	Construction and servicing of the permanent accommodation
Civicon	Kenya	Construction of the on- and off-side roads
TAI Enterprise	Kenya	Hire equipment and road construction services
RXPE	China	STATCOM connecting of the sub-station to the national grid
G4S	USA	Security
Siemens	France	Collection grid and sub-station
Polyphase	Kenya	Electrical and civil work
HBS	Kenya	Electrical and civil work
Aqua Scope	Kenya	Lines and drilling
Ultimate Engineering	Kenya	Lines and drilling
Centurion	Kenya	Civil work
Vestas	Denmark	Wind turbines (but produced in China)
Droplex	USA/Kenya	Quality check of nacelles
EGMF	Belgium	Turbines' foundations
Anipsotiki	Greece	Turbine's installations
Bollore	France	Transport of turbines from Mombasa to the project site
Olive	UAE	Additional security to the convoy from Laisamis to the project site

Source: own elaboration based on fieldwork data

[304] The list is most likely not exhaustive, as many of the sub-contractors also further sub-contracted other companies for tasks such as car maintenance, HR matters, admin, etc. Therefore, it was decided to mention only the companies that were physically present on the project site at some point in time.

[305] Performance against IFC/EBRD accommodation guidelines was audited every three months by an external party, working on behalf the Project's Lenders.

5.7.3 Research Findings

5.7.3.1 Employment

In the exploitation of natural resources, wind in this case, unmet community expectations, particularly regarding employment, can be identified as the key conflict driver (Schilling, Locham, & Scheffran, 2018). Given the complexity of the context of the project location and high expectations from the community in terms of obtaining employment, LTWP had to manage this project very carefully and in a sensitive and culturally appropriate manner.

LTWP's recruitment policy during the construction phase was "to employ as many local people as possible, i.e. people from Laisamis Constituency and/or wider Marsabit County. Where a local suitable candidate was unavailable, the Project would seek to employ a Kenyan national. If a suitable candidate was unavailable in Kenya, then LTWP and its contractors would seek to find a candidate internationally" (LTWP, 2017). In its initial plans, LTWP declared that it would create 2,000 jobs for the local population (Finnfund, 2014; Kahungu, 2011; Kenya Vision 2030, 2012). This declaration was subsequently revised and diminished to 600 local jobs during the peak construction and 150 in the operational phase (LTWP, 2011b). Until August 2016, LTWP has created approximately 1,491 jobs for local, national and expatriate employees[306] (Table 31). The majority of the positions (57%) was created locally and 39% of the positions were filled by Kenyans from beyond the county and the catchment area. About 4% of all the positions were given to expatriates (Figure 39). This indicates that the Africa's largest wind farm was built predominantly by the Kenyans.[307] This could be considered a major achievement and inclusive outcome of the project, and was possible because of the dedicated policies that LTWP put in place to prioritize local and national recruitment.

Table 31. Total employment until August 2016, divided by the source of data

	Total employment Combined	Total employment Combined**	LTWP Masterfile	Peak employment from monthly statistics*,**
Expat	69	59		
National	672	578		
Local	993	854	858	1,079^
Total	**1,734**	**1,491**		

*Peak until and incl. July 2016

** Total sum corrected for a possible company overlap (14%)

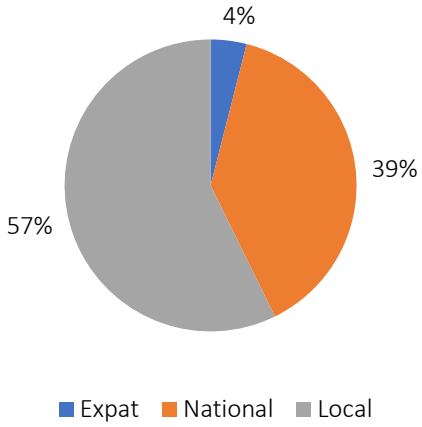
^ A sum of the peaks of employment per individual contractor up until July 2016. The sum of the peak employment per individual contractor until and incl. July 2017 is calculated as 1,102.

Source: Own calculations based on internal documents obtained during fieldwork.

[306] Despite much effort, it was not possible to obtain a full picture of national employment created. It was also not possible to obtain a complete list of employment for Vestas and Civicon. The number therefore may be higher.

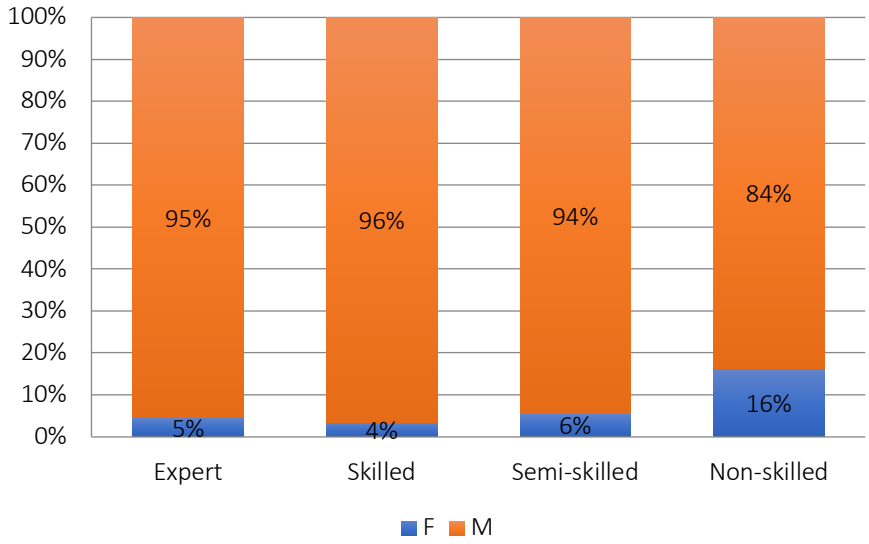
[307] During the entire construction phase, which ended in June 2017, the Project employed an overall total of over 2,500 people (of whom about 75% came from Marsabit County) (LTWP, 2017). In December 2018, the Project employed 455 people, of whom 73% were from Marsabit County, 24% were from other parts of Kenya and 4% were expatriates. Going forward, during operations, the total number of employees is forecasted to fluctuate between 320 - 350 people.

Figure 39. Number of jobs created by LTWP until August 2016



Source: Own calculations based on combined Masterfile.

Figure 40. Gender division of work places divided by category of employment



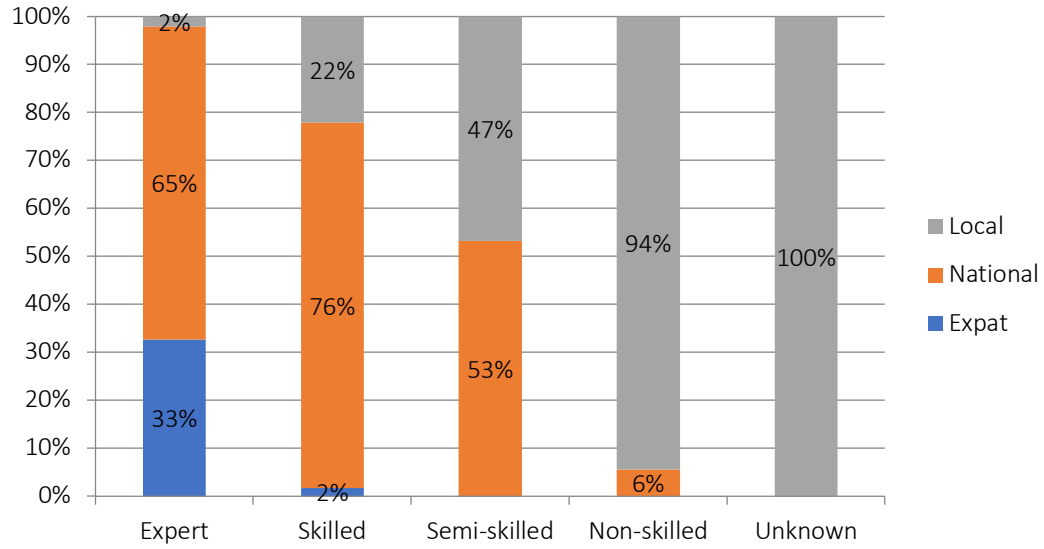
Source: Own calculations based on combined Masterfile.

The construction of the biggest wind farm in Africa is a complicated undertaking that requires highly specialised manpower. Such work is known for being predominantly a male-dominated field of work and the LTWP case was not different (Figure 40).[308] Wind energy is still an upcoming industry in Kenya, which can explain the constraints in finding locally and nationally all necessary technical expertise. Figure 41 below shows how the available positions were redistributed between local, national and international employees according to their set of skills. It is noticeable that the majority of experts and skilled workers were nationals (although rarely local) or expatriates, while the majority of non-skilled labour came from local communities around the project. Interestingly, some of the national experts and

[308] The Project had few female construction workers (i.e. surveyors, timekeepers, a backhoe operator), while the majority of women were employed as cleaners, housekeepers and administrators. Some women were also employed as HSE Officers or in other more senior roles (LTWP, 2017).

skilled personnel interviewed had previously worked on the other side of Lake Turkana on the projects related to the activities of Tullow Oil in Turkana County. Among the experts, the positions of accountant, HR manager and HSE Officers were filled in locally. Community Liaison Officers (CLOs), drivers, chefs, supervisors and various assistants were among those functions categorised as skilled and supplied locally. In the semi-skilled category, the division is quite balanced with cooks, some plumbers and carpenters[309] coming both from inside and outside of the catchment area while security commanders and Kenya Reserve Police (KPRs) were all supplied locally. According to some interviewees, LTWP or the contractors hired practically every local person (in an expert/skilled/semi-skilled position) if he or she was educated to some degree or had pre-obtained skills. Among the local population, a majority found a job as casual labour or guards, with a number of unskilled local women being hired as housekeepers, cleaners or providing laundry services

Figure 41. LTWP work places divided by category of employment and location



* From the data provided by the contractors, LTWP and WP, it was not possible to account for the employment category of 120 positions (practically all local). As it was not possible to determine the category of employment for this group, the Unknown category was created. However, it is expected that the large majority of these people (and probably all could be classified as non-skilled.

** Second challenge was to establish the exact number of national employees (Kenyans coming from outside the County and the catchment area). Therefore, some of the calculations for the national staff are estimates based on a number of documents provided by LTWP and others.

Source: Own calculations based on combined Masterfile.

During the construction phase (incl. the road construction), there was a very high demand for non-skilled local employees, with 584 people hired only in this category (until August 2016), and some of these jobs (guards/security and housekeeping) continued past the construction phase. Within the structure, there were also chances to be promoted. Some local men were trained on-the-job by the nationals in masonry, carpentry, and vehicle operation while starting as casual labour. Other examples showed that some female employees started as cleaners but were further promoted to assist in the canteen or at the reception when their skills and abilities were noticed. On the other hand, the

[309] The majority of the experienced carpenters and plumbers came from the other parts of Kenya and were expected to train the local labour on the job. Some local people admitted to learning the "modern" way of constructing while on the job with one of the contractors of LTWP.

communities continuously put pressure on LTWP to hire more local staff despite not having the necessary skills for the vacant positions. Managing these high expectations about obtaining employment was not an easy task, especially because some local communities engaged in coercive methods, such as protests, roadblocks, or even vandalism or destruction of the company's property. In response, the company often agreed to create some additional non-skilled positions or accommodate more people in the existing ones. To some extent, it was a compromise that the company had to make to assure the fragile peaceful coexistence necessary to advance the work.

A common problem with casual construction workers is that their work is only needed during the construction period, meaning that the majority of this type of employment was short-term. After September 2016, the decline in local employment can be noted (Figure 42), as the main construction works (road and camp) reached completion. Figure 43 indicates that LTWP, SECO and G4S have been among the most stable employers for the local population. They are also there to stay. The offered jobs related to housekeeping and maintenance of the workers camp (canteen, waste management, gardener, etc), as well as to security (security guards, KPRs). Regarding the possibilities for the skilled/expert jobs supplied locally, Vestas committed to train and employ a number of local staff to maintain the turbines. As for January 2019, LTWP had an engineering team of 20 people to looked after the substation and wind farm, all of them were Kenyans, although so far just a few were from the Marsabit County.

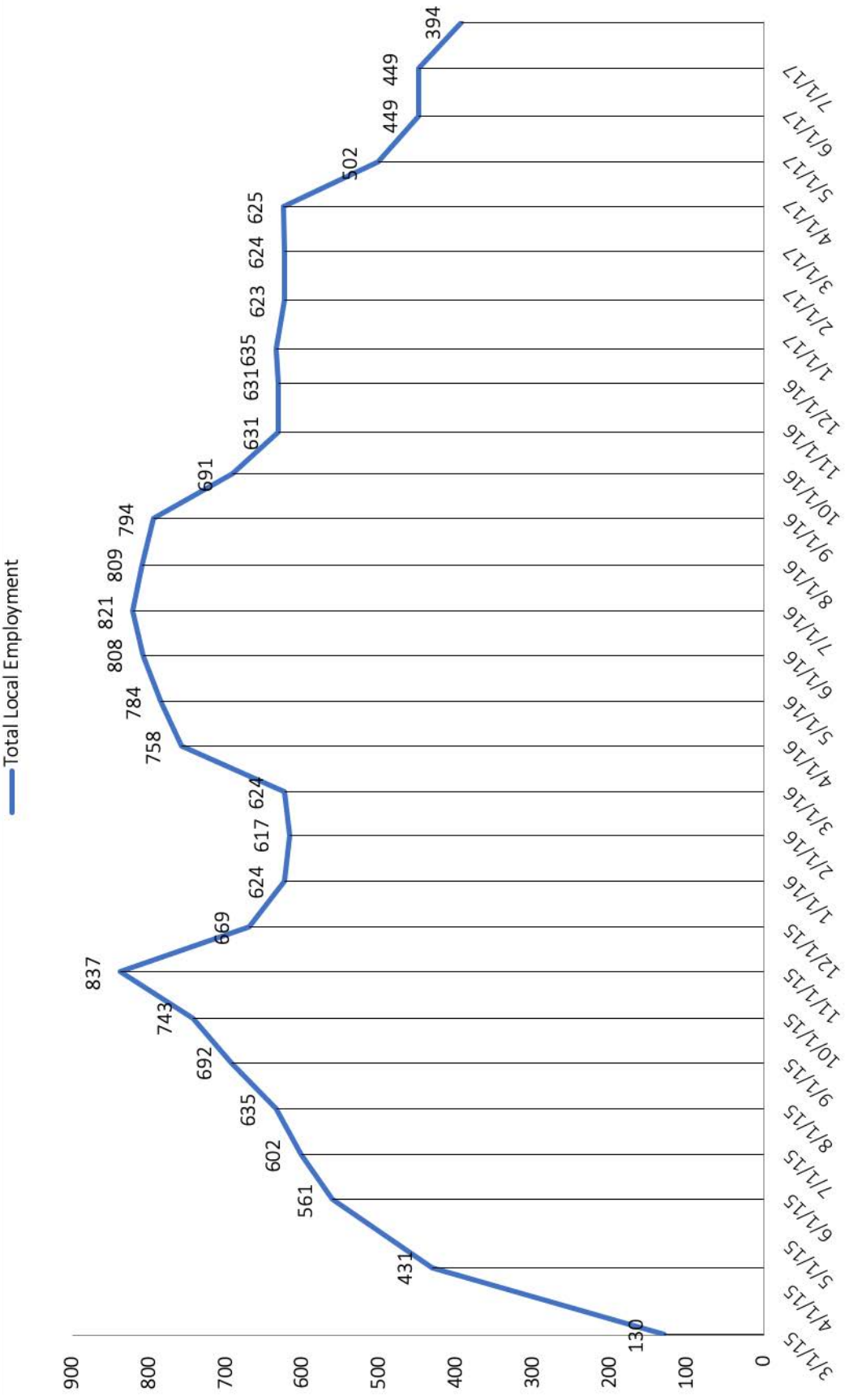


Figure 42. Total local employment (for the period March 2015 – July 2017).

Source: Own analysis based on monthly LTWP and contractors data

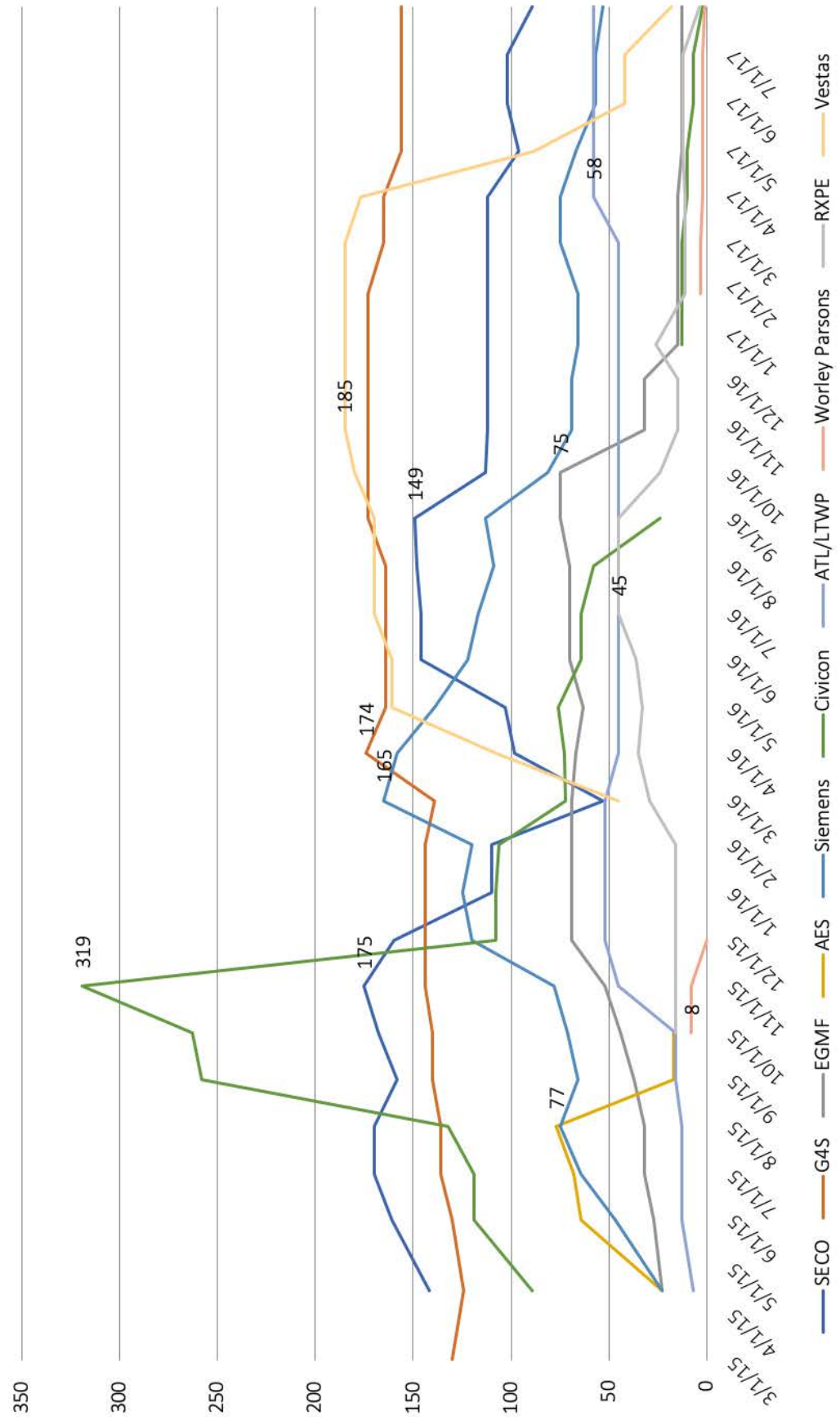


Figure 43. Total Local Employment per contractor (with indicated peak employment per contractor) (for the period March 2015 – July 2017).

Source: Own analysis based on monthly LTWP and contractors data

There were two employment strategies related to hiring local (unskilled) staff. The first one related to the road construction and the second to the wind farm construction. In case of the road works, Civicon was obliged to hire 100% of the local staff from the County with priority given to communities located directly on the new road (but not the primary catchment area[310]). The contractors working on the wind farm were, however, obliged to provide 70% of the local employment from the catchment area and 30% from the rest of the County.

At the initial stage of the project, the recruitment of the local staff took place via employment committees established in every village and coordinated by two LTWP employments offices in Kurungu (officially opened in November 2014) and Loiyangalani (officially opened in July 2015) (LTWP, 2017). In addition, the five LTWP CLOs often stationed at these offices to ensure close collaboration between them and their HR colleagues on all community and local labour matters. Despite these efforts, tensions arose between the Turkana and the Samburu over the distribution of the casual jobs among their respective ethnic groups. They argued that local politics and nepotism have played a role in job distribution.[311] LTWP firmly rejected these accusations by restating their apolitical stance, nevertheless, action had to be taken. As a result, local recruitment processes was adjusted and became centrally coordinated by the local human resources manager of LTWP who started to work regularly with the community Chiefs to ensure equitable distribution among the population in their respective areas. Every subcontractor was consequently obliged to pass by the HR office of LTWP to recruit local (mostly unskilled) employees.

In addition, it was decided to conduct the distribution based on communities and not based on ethnicity in order to minimalize risks of potential conflict. The difficult ethnic dynamics and connections between groups would make the job distribution along the ethnic lines not feasible and less desirable for the overall stability of the area. For example, members of the same Samburu clan live in both South Horr and Mount Kulal – both being large and important villages in the proximity of the project. In case of job selection based on ethnicity, it would not be possible to satisfy the residents of both villages due to such connotation. Another example can be Sarima, which officially is a sub-location of Mount Kulal, yet due to its predominantly Turkana inhabitants prefers to be considered a part of (also Turkana-dominated) Loiyangalani. In case Sarima would not be seen as a separate community but would fall under either Mount Kulal or Loiyangalani community for job distribution, it is very likely that less Sarima-locals would be selected in the recruitment process. In both cases, job distribution based on ethnicity would most likely cause more tensions in the area than ultimately implemented community-based job distribution. It has been reported that even the opponents of the projects did appreciate the new job division system, although it was not fully free of local political influence (Drew, 2018).

The procedure was followed although some malcontent among the communities remained, claiming that two key persons responsible for employment continued to favour their communities in the job distribution.[312] The employment data does not support this claim, although it also shows why such a perception could have persisted among some communities. In nominal terms, the majority of the employees came from South Horr and Mount Kulal – Samburu strongholds, while Turkana-dominated Loiyangalani and Sarima came only fourth and fifth, as a large number of local employment came from Rendille-dominated Laisamis, Korr, Illaut and Kargi, and other parts of the County (Figure 44). Nevertheless, if we compare the number of employed staff with the total population of the community,

[310] The catchment area comprises of main towns, villages, hamlets, or other settlements within 2km of the new and old road, stretching from the wind farm site to Laisamis, such as Mount Kulal, Sarima, South Horr, Kargi, Illaut, Korr, and includes Loiyangalani (Internal LTWP document).

[311] Similar observation regarding perceived job distribution along the ethnic lines was also made by Schilling et al. (2018).

[312] That resulted in a number of 'negative forums' within the communities that often led to roadblocks and demands for more jobs. Initially, the company did agree on hiring more casual labour, yet with time, the coercive methods were less tolerated.

it was the Turkana from Sarima who proportionally benefited the most from local employment,[313] followed by South Horr and Mount Kulal (Table 32).

If we look at the distribution among the communities for the maximum employment per contractor, the data unveils a rather fair picture in job distribution (Table 33), although this data capture only one particular month during the construction period. To confirm that, a monthly and total distribution of local employment per community was additionally analysed based on two data sources: the monthly LTWP and contractors data (Figure 45) as well as the masterfile compiled by the author (Figure 46). Both figures confirmed the rather equitable distribution between the communities (especially between South Horr, Mount Kulal, Loiyangalani and Sarima), with only a slight advantage noticed towards South Horr.

[313] Reportedly, in Sarima village, at least one person per manyatta was employed.

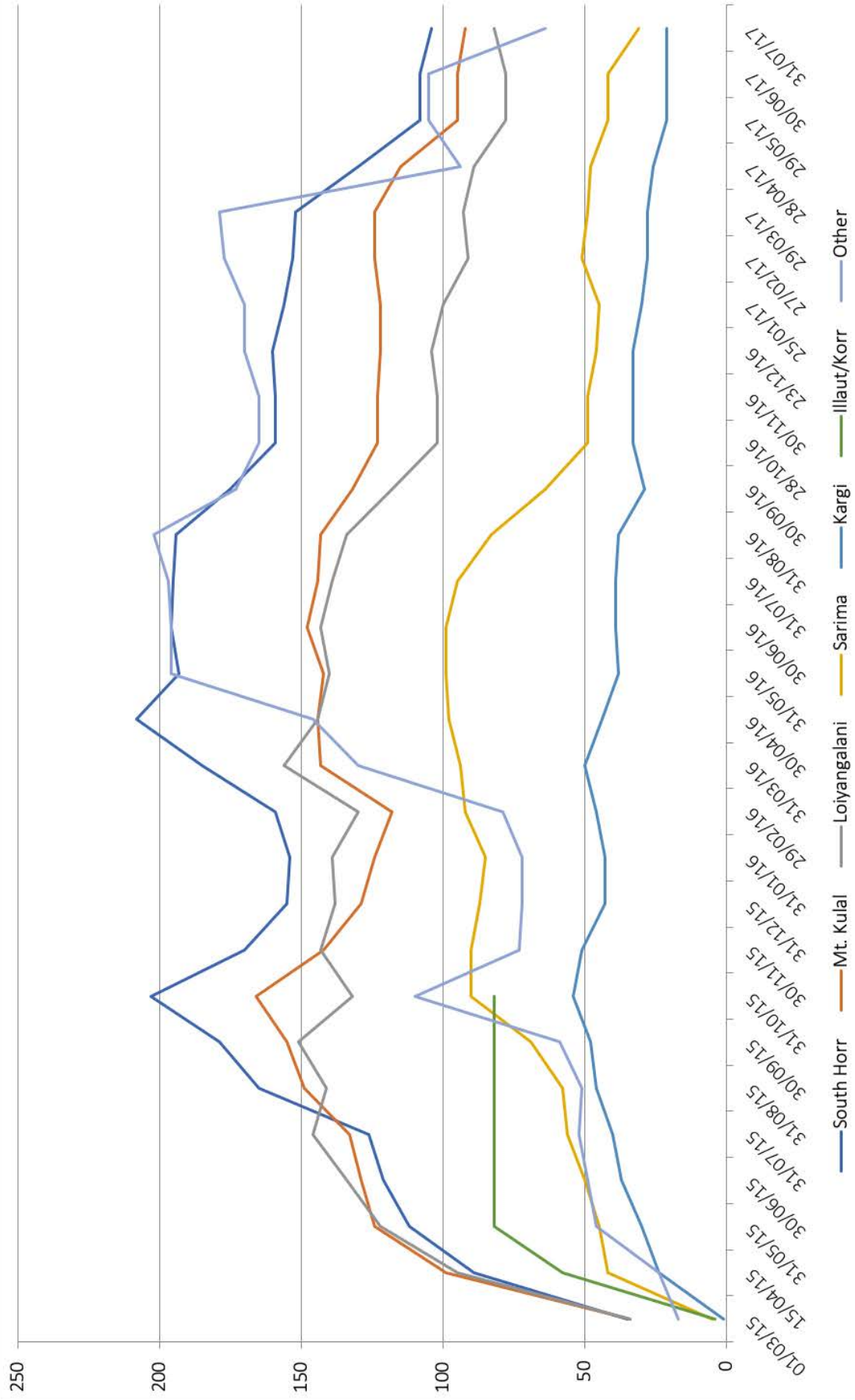


Figure 44. Total (local) employment per community

Source: Own analysis based on monthly LTWP and contractors data

Table 32. Proportion of the total local population hired per community during the peak employment per contractor (for the period March 2015 – July 2017).

Location	Population projected 2017^	Hired peak by LTWP	% of population
Sarima (*)	1.500	106	7,07%
South Horr (*)	8.000	257	3,21%
Mt. Kulal (*)	8.180	214	2,62%
Loiyagalani	12.079	176	1,46%
Other (predominantly Laisamis)''	19.135	200	1,05%
Kargi	6.058	62	1,02%
Ilaut (*)/Korr/Ngurunit''/Namarey (*)	44.063	87	0,20%

^Own calculations, based on the official prediction for the constituency or taken from LTWP ('') and Chiefs (*)
Source: Own analysis based on monthly LTWP and contractors' data

Table 33. Maximum number of (local) employment hired at once per community per month (for the period March 2015 – July 2017).

Company	South Horr	Mt. Kulal	Loiyangalani	Sarima	Kargi	Illaut/Korr	Other	Max
AES	7	14	21	5	6	19	6	21
ATL/LTWP	19	12	8	2	3	1	20	19
Civicon	44	33	28	24	12	82	129	129
EGMF	15	12	17	21	8	0	12	21
G4S	48	46	39	11	9	28	28	48
RXPE	16	8	6	9	3	1	8	16
SECO	39	39	48	15	16	19	66	66
Siemens	46	31	32	30	20	8	11	46
Vestas	45	27	16	6	6		85	85
Worley Parsons	1	1	2	5	0		1	5
Max	**48**	**46**	**48**	**30**	**20**	**82**	**129**	**129**

Source: Own analysis based on monthly LTWP and contractors data

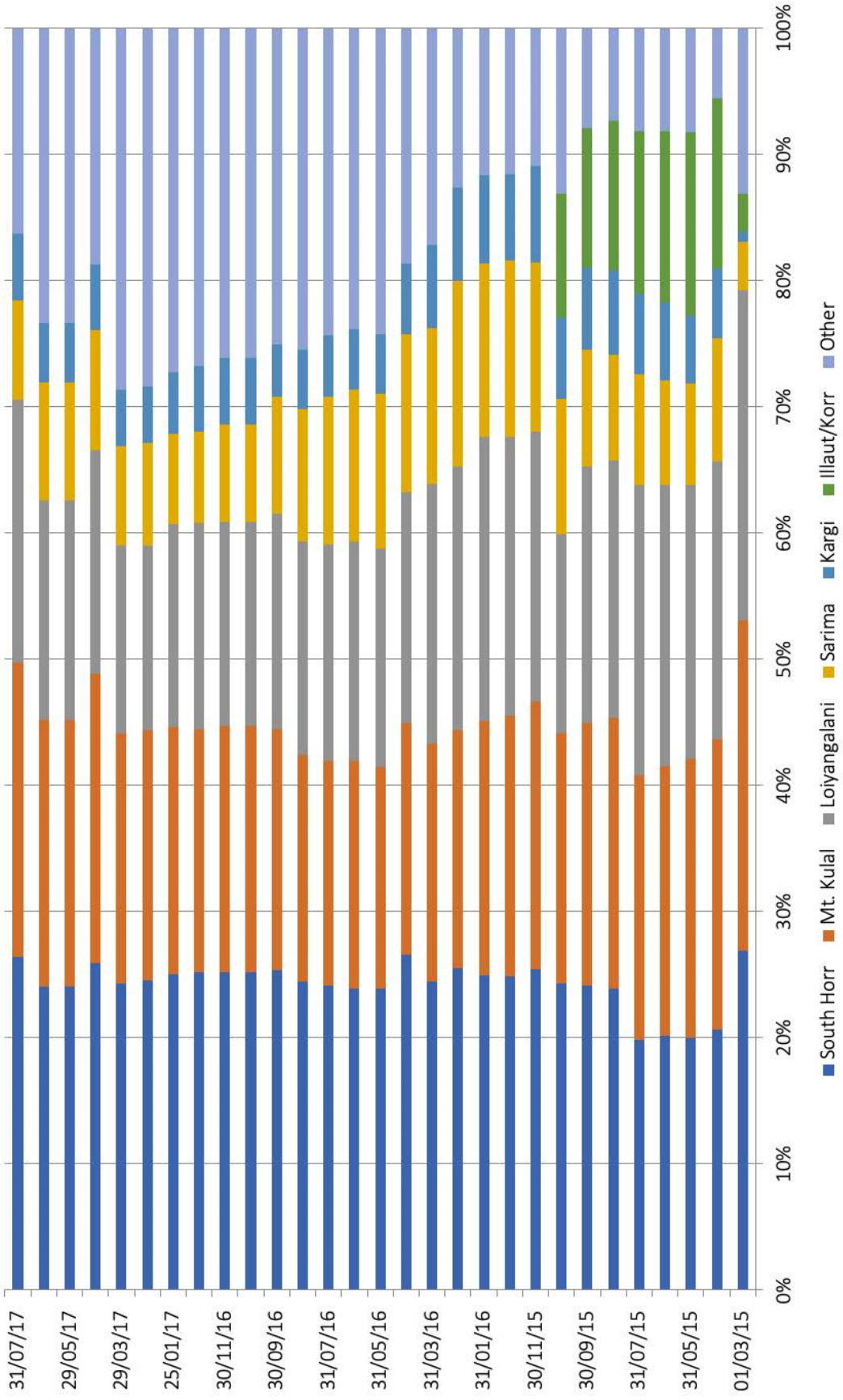


Figure 45. Proportional distribution of local employment per community per month (source LTWP)

Source: Own analysis based on monthly LTWP and contractors data

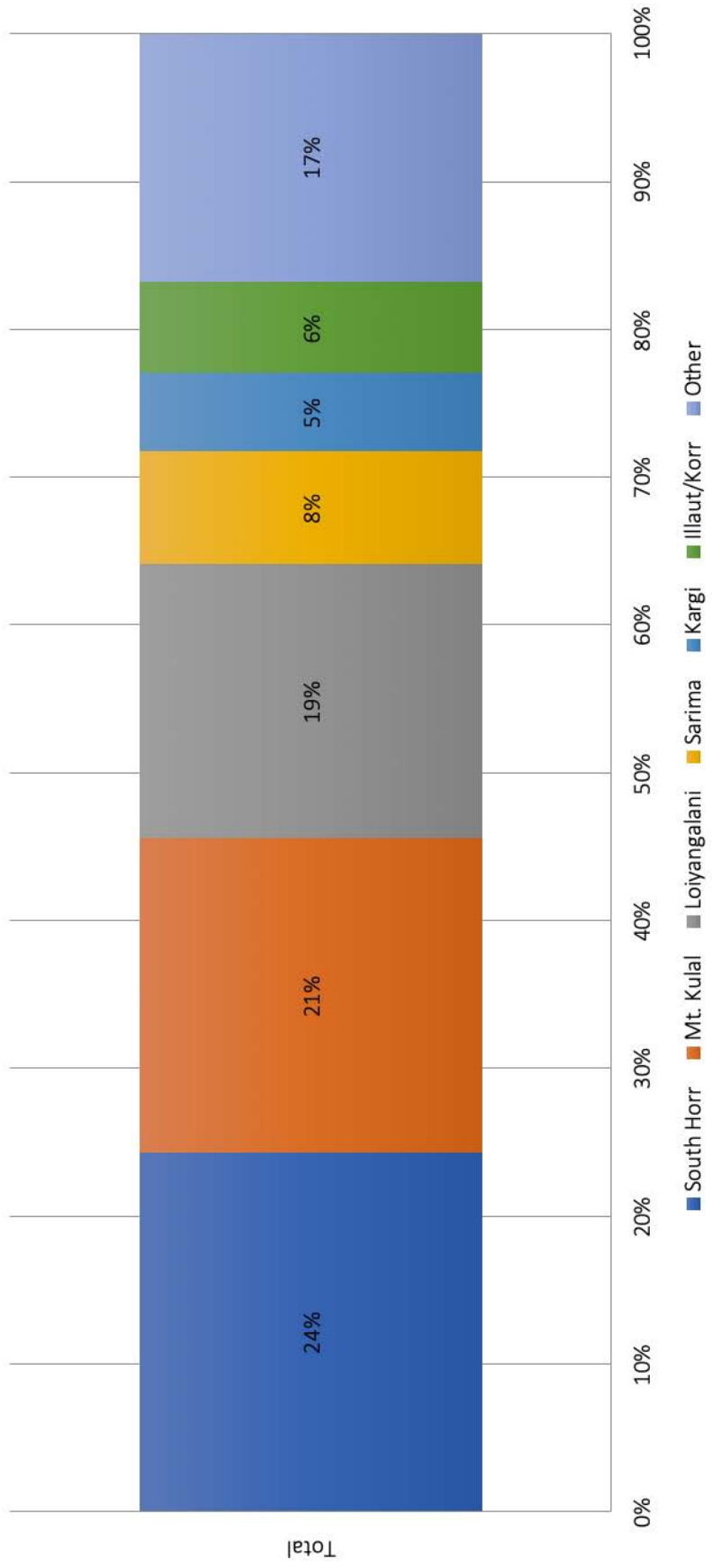


Figure 46. Proportional distribution of total local employment per community (source contractors)

Source: Own calculations based on combined Masterfile

5.7.3.2 Salaries

Regarding salaries, LTWP implemented unbiased measures that would prevent potential conflict by enforcing a minimum flat rate of KES ±520[314] net a day for non-skilled workers among all the subcontractors. Some subcontractors did offer a slightly higher minimum payment or additional hardship allowance, which was allowed as long as the rate did not fall under the agreed minimum. Officially, everyone had to be hired on contracts drafted according to Kenyan Law, with social security, health care and other compulsory contributions paid to the government; overtime payments, rights to holidays, housing (allowance), transport (allowance), on site daily meals, as well as sick leave, and maternity and paternity leave. Salaries were paid to personal bank accounts that the company helped to open for this purpose in the name of the employee. Additional training had to be provided to explain the logic behind obligatory salary deductions.

The minimum daily rate for the non-skilled personnel can be considered decent in the Kenyan and local context.[315] Accordingly, non-skilled employees gained on average min. KES 20,650 net (Table 34). In comparison, a kindergarten teacher's salary starts with KES 12,000 net a month. Due to its remote character, the north of Kenya can be considered expensive even compared to Nairobi.[316] Therefore, the living wage in the area has been estimated by the interviewees to be between KES 20,000 and KES 30,000 a month.

Table 34 illustrate average salary distribution among employees with different skill sets per subcontractor. Not all subcontractors provided salary information. Moreover, for those who did, salary information for experts and expatriate was hardly disclosed. It can be noted that the absolute minimum was paid by Kenyan and Chinese subcontractors, while security was being among the best-paid job in the unskilled category. The salary rates for unskilled labourers were also mostly below the estimated living wage rate, although they reached the estimated living wage limit already for the semi-skilled staff. On average, the salary rates increased proportionally along the skill sets, with semi-skilled personnel earning almost twice as much as the non-skilled, skilled three times more and experts four times the average of the non-skilled. For the two companies that provided long-term employment possibilities for the locals, namely SECO and G4S, the latter offered a better salary for the non-skilled workers compared to SECO, while SECO was more generous for their semi-skilled and skilled employees. In both cases, relatively high salaries offered to experts apply mostly to Kenyan nationals coming from outside of Marsabit County and not the local labourers.

Table 34. Average monthly salary per contractor per skill set (in KES)

	Expert*	Skilled	Semi-skilled	Non-skilled	Average
EGMF		74,483	57,143	20,345	56,653
G4S	250,000	53,750	30,000	25,000	28,869
RXPE		30,850	26,895	16,000	20,740
SECO	134,576	62,484	32,480	18,267	43,389
Siemens/Centurion	85,000	36,645	32,016	18,542	28,386
Siemens/HBS	41,667	23,974	24,633	15,529	23,885
Siemens/Ultimate	51,200	50,000	21,000	18,050	45,137
Average	**81,248**	**59,492**	**37,280**	**20,649**	**38,226**

*Salary information for many experts were not disclosed, and the information was available only for some national and local employees in this category.
Source: Own calculation based on combined Masterfile.

[314] KES 520 = ± $5.20; KES 520 = ± €4.16.
[315] Back in 2009, an estimated income per capita in the area was KES 260, excluding livestock value (LTWP 2009).
[316] A local car rental costs approximately $100 a day, excluding diesel, which is a substantial expense as well. The costs of diesel and petrol used to be 50% higher than in Nairobi.

5.7.3.3 Training programmes and capacity building

The subcontractors did not provide extensive and structured training programmes, although a number of local staff had a chance to learn on the job basics of some professions. This situation relates mostly to masons, carpenters, plumbers, some electricians and drivers, where some unskilled locals were employed to work alongside, and be trained by semi- and skilled national/international colleagues to develop their own capabilities. For other jobs that did not require much additional instructions, such as root or stone pickers, and other casual labour, training on Health and Safety and general training on "how to work" were conducted. It has been reported that, especially in the initial phase of the project, local staff had to be sensitised and schooled on general rules and regulations related to contracted paid work. They had to learn to be on their working post at a certain time and during an agreed amount of time a day, not to leave their posts without notice, fulfil the obligations as per management requests, and so on. The real challenge was, however, to learn how to put all local and national ethnic animosities aside and work together in a team. After some initial tensions and a number of community meetings, this problem was overcome to a large extent. As one of the respondents said: "We build history around here. I want to be a part of it."

5.7.3.4 Local content and Corporate Social Responsibility

The negative aspect of jobs provided during the construction phase was their short-term character for the majority of the local employees. That means that it could only generate short-term direct impact and rather act as a catalyst for spill over economic activities. LTWP assumed that the upgraded infrastructure and increased security that came with the project would contribute to conducive economic environment. Tendering opportunities for local suppliers to supply LTWP and subcontractors could be a great opportunity for local business development (Lind, 2018). The local content element of the project was one of the avenues for generating income for the local communities. The companies involved rented a number of local cars (with local drivers), earth moving equipment (from the local politician), purchased locally some alimentation, such as meat, vegetables and other foodstuff to feed staff. Subcontractors were buying water and sand from some villages (Ngurnit, Mt.Kulal). A local contractor was hired to upgrade and maintain LTWP roads, local Panel Beaters company hired to repair bodywork of damaged vehicles; and a local businessman from Mt. Kulal built 'Camp Joshua' in the vicinity of the project to house some project workers. Finally, a substantial number of local contractors have been hired for projects implemented in the frame of the LTWP's Corporate Social Responsibility (CSR) programme.

LTWP channels its CSR activities through the Winds of Change (WoC) Foundation. When fully in operation, a minimum amount of €500,000 will be dedicated each year[317] for community development projects for the next twenty years (the period which is covered by the current PPA). Willem Dolleman and his wife Marie-Jose Dolleman played an important role in setting up the Foundation and developing the CSR programme. They perceived it as a long-term partnership between the project and the beneficiary communities that had to take place from the very start of the initiative. Back in 2009, they commissioned the scoping and pre-identification study for the LTWP Corporate Social Responsibility Programme (Muchena, Okello, Onduru, & Otieno, 2009), which further constituted a base for the LTWP Corporate Social Responsibility Programme (LTWP, 2011a). Using participatory approaches, the study identified four priority areas for the Foundation, which are education, water, health and community development. The priorities appear to be well aligned with the needs of the local population also expressed during the fieldwork and show a good understanding of the local context.

The Foundation was supposed to become fully operational only after the wind farm is connected to the grid and generating income. Nevertheless, the CSR Programme from 2011 assumed the so-called "Fast

[317] These funds will be available once the wind farm is operational and generates revenue. Given that the associated transmission line was delayed, WoC had limited funds to invest in community projects.

track" implementation of CSR activities during the road and wind farm construction. The fast track CSR was established to fulfil the expectations of the local communities and enhance harmony between LTWP and the local people (Muchena et al., 2009). It initially focused on 'quick wins' in order to meet the most pressing needs of the communities. It was also internally decided to focus primarily on the directly affected communities first. In practice, the local complexity, low expectations towards the local government and very high hopes of all the local communities towards LTWP for more direct benefits forced the company to expand their CSR activities during the construction phase (and it continued until the transmission lines were ready). It was a challenging situation for the investor for two main reasons. Firstly, they did not factor in the additional funds for CSR in the initial construction budget, which forced them to look for funding elsewhere. Secondly, it put LTWP in a position where they felt the need to provide services and projects that normally should have been delivered by the state. They knew, however, that finding additional funds and providing these services in the short term would (to a large extent) assure a peaceful and least-problematic implementation of their project.

Consequently, WoC (before LTWP became operational) had invested €2.1 mln in community development projects. For these projects LTWP contracted local businesses only. Until the end of 2018, WoC sank a number of boreholes in the local communities along the new road, and built several water storage tanks and watering troughs important for the households and animals of the local people. They also furnished and equipped regional schools, dispensaries and a maternity ward; and provided a solar system to these dispensaries, the nearest schools and the local hospital.[318] The main priority though is to support education and skill development in the area to increase employability. Seventeen members of local communities were sent for an official training for solar technicians to Nairobi. They also funded Winds of Korr – the IT Centre giving residents of Laisamis constituency IT classes. Moreover, WoC had constructed two classrooms at the new Loiyangalani Youth Polytechnic site where students will develop vocational skills, and they became involved in discussions to develop vocational training in the Marsabit South Technical Institute to boost tertiary education. In future, establishment of a scholarship fund for secondary and vocational education in the area are planned. Other development possibilities through WoC are support for feasible community business initiatives (i.e. an abattoir, commercial fishing, veterinary services, tourism development) and the electrification and extension of electricity to five urban settlements in the area (although collaboration with the Kenyan government is an imperative in this case) (LTWP, 2016b).

LTWP has been increasingly working in partnerships with the County government.[319] Among the collaborative CSR projects, the dispensary in Sarima or the maternity ward in Kurungu where LTWP provided the buildings, while the County provided nurses and equipment can be mentioned. Furthermore, in Arge, LTWP partly repaired, partly constructed 14km of a water pipeline that belongs to the County. In case of drought, LTWP also partnered with the local government who provided water while LTWP provides fuel. Finally, LTWP is also financially supporting the annual cultural festival organised by the County government in Loiyangalani.[320] Since the devolution, the area has seen an increased presence and involvement of the local government compared to the years before the reform, but more quality and intensity is needed. This was also an area where WoC has been contributing to.

[318] For the full list of WoC projects, see Annex 11.

[319] Although some local officials also remained passive and expected LTWP to take over their responsibilities. Some of them reportedly claimed some of the LTWP CSR projects as the County initiative. The central government is also committed to share the income gained from the carbon credits generated by the project with the communities on the site as well as along the transmission line but it remains unclear how these benefits will be distributed within the County (Kazimierczuk, 2017).

[320] This is a very delicate matter. The company had to sponsor the cultural festival in order to 'please' the local County leadership, secure political capital and assure its own visibility within the communities. Similar things happened on the other side of the lake, where Tullow Oil in order to secure its position locally, sponsored popular cultural events and investments, as well as established a University bursary scheme for the local Turkana youth (Lind, 2018).

For example, WoC played a role in ameliorating existing government-built school infrastructure by i.e. constructing a teacher's office, an accommodation and storage unit, as well as sanitation for the Sarima Primary school, or providing solar systems, and constructing a laboratory and dormitory in secondary schools. Similarly, in the health care area. For instance, most of the local dispensaries had no access to electricity and limited sanitary facilities. So far, WoC supported two of them with solar systems, a water system, fridge/freezer for keeping vaccinations cool, installed two toilets, supplied maternity beds and constructed an incinerator. Finally, in Kurungu, a building that previously was an LTWP employment office was handed over to the community and upgraded to a maternity ward.

One of the main lessons learnt with regard to the social engagement with the local communities was that the company should have started their CSR activities much earlier – even before the actual construction phase – to assure a positive local perception of the investment already ahead of time. Such view, as well as ultimately implemented projects during the construction phase support the critical voices that CSR is not really 'for' local people but it is ultimately 'for' the company, so they can operate and pursue with the project, particularly in such complex areas. Nevertheless, it does work both ways. The communities were provided with the long-awaited infrastructure and/or services, in exchange, the company was 'allowed' to proceed with the planned investment. The time was needed for LTWP to be accepted by the local communities, and for both sides to learn and develop ways of requesting and distributing the funding.

To indicate its serious and inclusive engagement in the local community development, LTWP tried to fund CSR projects among all communities to better balance the distribution of CSR benefits within the whole Laisamis constituency. Furthermore, in 2017, they conducted a mapping exercise capturing the real and perceived promises that have been made to the local communities by various actors (not necessarily by the LTWP leadership, but perceived as such). Based on this participatory assessment, LTWP redrafted the CSR plans and would decide together with the communities about the way forward. Parallel to this, WoC staff has been locally present and has been sensitising the communities about the status and the role of the Foundation, also to position themselves as a non-governmental body with a limited budget to lower the communities' immediate expectations but also assure them about their long-term presence and strategy for local development. Finally, they have been increasingly partnering with the local government to omit any possible project duplications and, more importantly, not to fall into a trap where the private investor would be held accountable for entirely filling the development void in the region.

5.7.3.5 Community impact and engagement

In the internal LTWP documents, on number of occasions, it was highlighted that the company was committed and wished that their activities would positively impact the local communities. They wished to achieve that through the activities of the WoC (described above), improved security and the new upgraded road. Regarding the security in the area, it has been reported that it had indeed significantly improved since the beginning of the project. Most importantly, the road, as a public good, was expected to benefit all by opening up the area to new economic developments and bringing new investments. However, the communities for the time being were not able to directly benefit from the energy produced on their territory, as they were not connected to the grid. Practically speaking, the area is so sparsely populated that off-grid solutions are much more suitable form of electrification, yet the fact remains that in regard to power distribution, for today, the wind farm is benefiting more the private investor and the rest of Kenya that has a grid connection, rather than the local communities.

Regarding the community engagement, LTWP should be complemented for their efforts to understand local cultural norms and values, and skilfully (and patiently) navigating them in search of most pragmatic compromises. Naturally, the judgement of such attitude and aptitude is not straightforward. The broad analysis of over 230 pages of internal documents, including number of reports and minutes from community consultations pictures well the amount of time dedicated during the project development

to the community engagement. The first official consultation took place on 26 May 2007 in a meeting with community Elders in Loiyangalani town but the minutes of the meeting are not available (CDM 2011). The first available minutes were from a meeting that took place on 15 November 2007 on the Environmental and Social Impact Assessment (ESIA) study of the wind. According to an LTWP internal document, 137 official meetings with stakeholders in the area took place between November 2007 and June 2016. Furthermore, the company has been engaging with local stakeholders since 2005 through a number of informal consultations (that have not been captured in the official file) either on site or during frequent visits of the LTWP team, or via their dedicated CLOs (CDM, 2011; LTWP, 2016c). Some of the minutes as well as interviews during the fieldwork confirmed that the consultations were taking place since 2005/2006.

Community Liaison Officers are people recruited locally who speak the local languages and are knowledgeable on the local ethnic dynamics. In case of LTWP, this position was critical, as it acted as a proxy between the company and the local communities. However, in practice, it also caused some problems for both sides. By August 2016, there were 3 CLOs for the LTWP and 1 CLO for each of the seven contractors engaged in the construction of the wind farm. CLOs were employed by LTWP (and subcontractors) and as a result, they were seen as representatives of the company's interest. On the other hand, past cases of CLOs dividing and inciting the communities to claim more financial benefits from LTWP were reported.[321] Furthermore, some CLOs reportedly used their position for personal benefit. The position was 'used' to build political capital and support, but cases of theft of community money have also been registered. It shows how quickly some local people did skilfully use each opportunity to their own benefits. It also illustrates how important but difficult was to find a dedicated CLO.

There have been two key persons that have been playing a pivotal role in addressing communities and managing the arising tensions. One is a LTWP CLO who has been involved since the wind measurements started back in 2006. Another key person on the ground was the former LTWP Chief Operations Officer (COO), who sometimes was referred to as the 7th 'founding father' of the project. Ten years of the project development allowed the key personnel to spend enough time with the communities and get to know their customs, culture and local dynamics. The dedicated individuals invested considerable amount of their time and resources to develop these relations. The messages convened by the COO to the local communities were consistent, honest, respectful, highlighted unity and promoted peace. This person is until now consider trustworthy and honest even by the local opponents and critics of the project (Drew, 2018). LTWP representatives were meeting with local Chiefs, Elders of the villages and carefully selected community influencers. We could call them the local political and traditional elite. Such consultations are the standard practice in the Kenyan setting. It would be upmost disrespectful, especially for an outside investor, not to meet with these groups of people to discuss the project. During most of the meetings, the said leadership expressed their strong support to the project.[322] As these were the people who should have represented well the interest of their communities and their attitude was positive to the project, an investor may have been inclined not to question their motives (despite knowing that they would very likely be expecting something in return). Once this permission was secured, what was needed was time to build trust. This time was dedicated to organise a number of additional community consultations[323] and respond to a number of ad hoc (small) requests from the

[321] Similar problems with CLOs was reported by Lind (2018) in case of Tullow Oil in Turkana County, on the other side of the lake.

[322] It should be noted that James Drew (2018) in his PhD dissertation points out that the initial consultation took place with only selected committees of elders who were more inclined to lease the land to the company than the wider community that they supposed to represent.

[323] Some of the LTWP minutes as well as interviews during the fieldwork confirmed that the consultations between the company and the local population were taking place since 2005/2006. Yet, the communities and some respondents highlighted that it could have still not been enough. As majority of the local pastoralists are nomads, it is possible that they were not present in the area during the official meetings.

community members, such as need for diesel and water, vehicle assistance, or bringing miraa. Positive response to such requests built an important *rapport* between the outside investor and the local population. It was a way for the LTWP key personnel to gradually build their network and partial solid local support for the project. However, as one cannot fulfil all the expectations at once, it also led to creation of a local opposition to the project that would be discussed in the next section.

5.7.4 Conclusion

To conclude, successful completion of the wind farm can be considered a major achievement. Even more so given that the wind farm was built predominantly by Kenyans. This was possible because the company put dedicated policies in place that promoted local and national recruitment. This can be considered a major inclusive outcome of the project.

At the local level, the arrival of the wind mega project clearly impacted the area, as well as generated substantial (temporary and permanent) employment. Managing high expectations regarding local employment and equal distribution of other benefits from the project were the most challenging processes. The company policy was to distribute jobs based on communities and not based on ethnicity in order to minimalize risks of potential conflict. Moreover, during the road construction, the priority was given to employ people from communities located directly on the new road. The salary schemes were also streamlined among all the contractors, with established decent minimum rate for all employees in order to provide equal opportunities for all. A similar strategy was applied to the distribution of CSR projects, which have been implemented not only in the direct project's vicinity, but also in the greater Laisamis constituency, to better balance the distribution of CSR benefits among the larger territory. For their CSR projects, LTWP contracted only local businesses, which also created a business opportunity for local entrepreneurs. These are other major inclusive outcomes of the project.

However, to reach this balance was not an easy task. The process was long and some local communities engaged in coercive methods. Initially, the company was more tolerant towards the local communities claims and requests voiced through such methods. They knew that allowing additional local employment or funding additional CSR project in the short term would assure a temporary peaceful and least-problematic implementation of their project. To some extent, it was a compromise that the company had to make during the process to be accepted by the local communities. Often, the compromise achieved had rather exclusive character. Only once this was done, the company started to slowly and carefully introduce its own rules of the game regarding their activities that ultimately led to a number of inclusive outcomes.

An outside investor which operates in the complex area of pastoral margins, like LTWP, would always need time to develop relationship with the local communities. The case of LTWP shows that the long-term presence of the key personnel and their will to understand and accept the complexity of the local remote context and poverty is critical. This understanding allowed for adapting a pragmatic and culturally accepted approach by the external private investor, which ultimately was necessary to build the necessary relationship with the local communities. This relationship allowed the successful completion of the project and hopefully will be sufficiently maintained during the forthcoming operation phase.

5.8 Local Impact of the Lake Turkana Wind Power project: The local community view

This sub-chapter will examine the contribution of the LTWP to the local (inclusive) development by assessing the impact of local employment creation, road construction and impact on the society (through the WoC foundation activities) as perceived by the local communities. Inhabitants of seven villages were consulted in order to assess their perceptions of the project and the new road. As described in detail in the methodology section, the villages were chosen for two main reasons: first, they were the most affected by the project and second, they provided the majority of local employees to the wind farm. During the interviews, the subjective impact of the changes in the area was pictured. Through additional questions, it was also possible to learn about the history of the villages, and the very few development activities initiated by the local government and a handful of NGOs before the arrival of LTWP. To analyse the perception of positive and negative changes in the project area, an exercise from PADev methodology was loosely adapted (Dietz et al., 2013, Kazimierczuk, 2009, 2010). This section begins with a brief history of the development of the villages before reporting the perceived changes and impact of LTWP and the new road on people's and community lives.

5.8.1 Brief (perceived) history and development of the visited villages

Chapter 5.5 provided detailed history of the marginalisation of the project area. This section will zoom in even closer to the level of visited villages. As described before, the area is inhabited mostly by people from nomadic groups. Most of the visited villages became permanent settlements in the 1960s with the arrival of the Roman Catholic Mission (Consolata) and the Africa Inland Mission (AIM) missionaries who established first schools and churches.[324] All villages, except from Mount Kulal (Mt. Kulal), were important centres located on the old road from Laisamis to Loiyangalani. Most of them started very modestly, with 2-3 shops often run by the Somalis, a school, a church and a few manyattas. With time, the towns were increasingly used as distribution centres for the famine relief, provided schooling and some basic health services. As often was the case elsewhere, also in Laisamis district (some) pastoralists have been progressively adopting a sedentary life style in such locations (African Union, 2010; Witsenburg & Roba, 2004). Illaut and South Horr are among the oldest 'towns' in the area (Table 35). Illaut is an important location because of its "singing wells" – a source of fresh water that "never dries out". Sarima is the 'youngest' of all seven visited villages. It became a more permanent location only after the resettlement by LTWP in 2014, which also provided the village with a source of fresh water.

Table 35. Basic facts per village

	Illaut	Ngurnit	Namarei	South Horr	Loiyangalani	Mt. Kulal	Sarima
Inception	1964	1968	1984	1964	±1960s	1967*	2014
Population	2,645	8,293	5,400	1,456	7,761	2,595	1,500
Dominant ethnic group	Samburu & Rendille	Samburu & Rendille	Rendille	Samburu	Turkana	Samburu	Turkana

* Settlement established around 1947, possibly earlier, while in 1967, missionaries established the first school.
Source: LTWP internal document, field notes

Life in the area is shaped by the rhythm of the seasons. It is the weather that to a large extent determines whether to stay or to move to another location in search of water and pasture for the animals. It is therefore no surprise to see that the respondents, when asked about the major historical events in the area, listed natural disasters most frequently. From this list (Table 36) it is evident that the area has been subjected to very harsh weather patterns. Severe droughts have been recurrent and

[324] Read more about it in the Chapter 5.5.

they have become more frequent.[325] In 1997, the heavy rains caused by the El Niño effect seriously affected the area. One respondent described it as a situation "when it rains but animals are dying". Indeed, a number of them died. The rains also caused the malaria outbreaks and led to ethnic clashes over access to water. Since then, a number of droughts and floods have affected the area forcing the government to provide food relief. Other recurrent historical events are related to the long history of inter-ethnic conflict, particularly between the Samburu and the Turkana. The respondents listed a number of such incidences (although there were probably much more of them). Finally, two other events were significant to the interviewees: the solar eclipse of 1973 and the filming in 2006 of the American movie "The Constant Gardener". The latter was particularly positively perceived as it provided a number of temporary jobs for the local people during the filming.

Table 36. Major historical events

Year/Decade	Event	Event description and effects
Long time ago	Very severe drought	Many people and animals died. A reported case of cannibalism. A number of people left the area.
1917	Inter-ethnic conflict	1st war between the Samburu and the Turkana.
1970s	Inter-ethnic conflict	Major conflict between the Samburu and the Turkana.
1971	Major drought	Almost all animals died. Government provided food relief.
1973	Solar eclipse	Solar eclipse.
1984	'Yellow maize' drought	Many people and animals died. Government and US Aid provided food relief.
1990	Drought	
1997	El Niño	Flood. Many animals died. Malaria outbreak. Ethnic clashes over water.
2002	Drought	Many animals died. Government provided food relief.
2004	Drought	Many animals died. Government provided food relief.
2006	Entertainment	Shooting of the movie "The Constant Gardener"
2008-2009	Drought	Many animals died. Many people migrated to Baragoi.
2014	Flood and drought	
2015	Inter-ethnic conflict	Fight near Mt. Kulal between the Samburu and the Turkana.
2015	Flood	

Source: Own elaboration based on information obtained during fieldwork.

The interviewees were asked to list the known (to them) development interventions by the government and NGOs. There was an observable difference in knowledge regarding development interventions per respondents and per village. The lists included in Table 37 and Table 38, therefore, are indicative rather than exhaustive. The assessment of the development projects was not the main objective of this

[325] The list is not exhaustive and from data collected by Adano and Witsenburg (2004) we know that more droughts took place before the 1970s. As the respondents were the former employees and most of the work was physical mean that they were not the representatives of the local elders. That would explain why there are almost no events listed that happened before the 1970s. For the few 'older' respondents the changes in weather patterns were prominent.

research, therefore not much follow up efforts were made to assure that the project lists were completed per location. This question was partly used as an icebreaker, nevertheless it is important to include it to show how limited, fragmented and short-term the presence of NGOs and the government has been so far (or at least it was perceived as such).

The projects funded by the government were mostly in the domain of education and health. Reportedly all villages have at least one school and a dispensary. In some cases, churches or NGOs constructed the buildings, but it was the government that provided the teachers, nurses and medicine for the daily operations. The government also provided the emergency famine relief in response to cases of the recurring natural disasters, and provided very appreciated financial support to the elderly, orphans, widows and disabled people. With regard to the security, the government also trained and equipped the Kenya Reserve Police (KRP), as well as funded the police. The resources put in this area could, however, increase according to the respondents. Similarly, regarding the infrastructure. Before the upgrade and the construction of the new road, the existing roads (main road and small local roads between the villages) were in a very poor shape and were not maintain regularly. The government was also rarely credited for the water projects, which in such arid area one would assume should have been among its top priorities.

This gap was partly filled in by NGOs, which focused their efforts on water and animal care projects. Some also worked in the education and health care domain, provided trainings (often for women), focused on conservation and established women saving groups. The presence of most of them was project-based, thus a number of the organisations withdrew from the area after the funding ended. Consequently, most of the NGOs listed in Table 38 were no longer present in the area. One of the respondents from Loiyangalani said that there is “not much [presence of the NGOs]. Many empty buildings now”.

Finally, LTWP with its ambitious long-term corporate responsibility component also became a development agent. The list of projects implemented so far by the Winds of Change Foundation (WoC) is listed in Annex 11. A number of people were aware of the projects implemented by LTWP, however the community perception of the CSR programme of LTWP was less positive that the one of the company. During the fieldwork back in September 2016, many respondents recognised that some projects were implemented. Water projects were particularly appreciated. However, a rather pertinent feeling of a number of respondents was that the WoC didn't consult the communities enough and that many promises were made but very little has been done so far. Despite numerous consultations between the company and communities and their assurance that more projects would eventually be established once the wind farm is operational, the high expectations and impatience persisted. One community made a long list of expected projects;[326] another one was planning to prepare a request for CSR in writing (which was a rather positive sign of improved communication between the community and the company). Nevertheless, the general feeling regarding the CSR activities of the LTWP up until that day[327] could be summarized by one of the interviewees who said: “They did a lot – we are grateful but we expect more”.

Most of the respondents had a low opinion of the effectiveness of the NGOs and the local government, as well as low expectations towards fulfilment of the promises made by the officials. There was, however, an observable trend in people’s perceptions that the involvement of the local government had slightly increased since the devolved system of governance came into effect. The cash transfer to the elderly, widows, orphans and disabled people was recurrently referred to (in five out of seven

[326] The desirable interventions were as follows: sponsoring poor people, electricity, road repair, construction of a health facility, establishing university scholarships for local students, more water tanks, more employment and more local content.
[327] September 2016.

villages) as one of the major positive actions implemented by the government.[328] Most of the respondents though, preferred to put their hopes in LTWP – a much more capable and resourceful agent, committed to stay for the next 20 years. With its substantial local presence, it was also easily available and much closer to the communities.

Table 37. Development projects funded by government

Domain	Project	Illaut	Ngurnit	Namarei	South Horr	Loiyangalani	Mt. Kulal	Sarima
Education	Primary school	X	X	X (3)	X (7)		X (5)	X
	Secondary school				X (3)		X (1)	
	Nursery	X					X	
	Teachers	X	X	X	X		X	X
	Scholarships	X				X	X	
	School feeding					X		
	Dormitory		X					
Health	Dispensary	X	X		X			X
	Medicines	X	X	X	X	X	X	X
	Nurses for the dispensary	X	X	X	X		X	X
	Mobile clinic			X				
Social welfare	Financial support to elderly, orphans, widows and disabled people	X		X		X	X	X
Infrastructure	Small road to the villages	X					X*	
	Stadium		X					
Water	Borehole	X	X**	X				
	Dams for animals	X	X	X (3)				
	Rock catchment		X	X				
	Motorboat					X		
Emergency response	Famine relief	X	X	X	X			
Security	KPR	X					X	
	Police post				X		X	

*Road was a very bad shape

** At local school.

Source: Own elaboration based on information obtained during fieldwork.

[328] As it is a national policy, it is highly likely that such social protection measures were also reaching target groups in two remaining villages but were not explicitly reported by the respondents.

Table 38. Development projects funded by NGOs

NGO	Description of the project	Illaut	Ngurnit	Namarei	South Horr	Loiyangalani	Mt. Kulal	Sarima
AIC	Support school fees and needing		X					
	Dispensary						X	
Boma project	Women savings group	X	X	X		X		
Building Bridges Northern Kenya	Excavations		X					
Care International	Computer	X						
	Social welfare (w/gov.)	X						
	Ponds for water						X	
	Sanitation						X	
Church (unspecified)	Support school fees and needing		X					
	Dispensary (construction)			X				
Constant Gardener Trust	Construction of 3 primary schools					X		
	Construction of a secondary schools					X		
Cordaid and Food for the Hungry (FH)	Dam			X				
	Rock catchment			X				
CRS	Seedlings				X			
Doctors without Boarders	Provided soap after shigellosis outbreak (in 1997)		X					
Food for the Hungry (FH)	Food relief				X	X	X	X
Food for Work	Water pumps			X				
GIZ	Fish project					X		
	Off-grid solar project (new)						X	
Mosque	Support school fees and needing		X					
NDMA	Seminars about droughts					X		
National Museum of Kenya	Conservation						X	
PISP (Pastoral Integrated Support Project)	Water project		X	X		X		
	Nutrition and diet supplements		X			X		
	Mobile clinic		X					
Red Cross	Vegetable garden in Kurungu				X*			
Solidarity	Water project						X	X
	Sanitation						X	
	Farming						X	
	Deworming the animals						X	
	Boats for the community					X		
UNESCO	Environment (tree planting)	X						
	Livestock	X	X					

	Women education	X						
Vets without Boarders (VSF)	Animal care			X		X	X	
Vicoba	Women empowerment and savings groups					X		
World Vision	Health	X			X			
	Sanitation	X						
	Support for widows and children	X		X				
	Distribution of animals	X						
	Training	X						
	Construction of market hall		X					
SIDA, AidLang, Concern Worldwide, CEFA		NGOs no longer present in the area but mentioned by the respondents (without specific project)						

*The Red Cross abandoned the project a number of years ago. Since then, the garden and its infrastructure seriously dilapidated.

Source: Own elaboration based on information obtained during fieldwork.

5.8.2 LTWP and the road: perception of changes

The purpose of this exercise was to get a detailed list of perceptions of the participants about the positive and negative changes in the project area, and if possible, attribute them to the presence of LTWP or the construction of the new road.[329] Respondents were asked to reflect on the differences they observed in their lives and surroundings between their childhood and the present day. As most of the respondents were between 20 and 40 years old, it was assumed that this was the time period they had referred to.

From the interviews we can note that there has been a number of changes in the area, which were predominantly perceived as positive (70%) (Table 40 in Annex 12). Most of them can be classified as general changes in the natural, physical and cultural domain (Table 41 in Annex 12). These were the changes that happened with time and were not attributed specifically to the presence of LTWP or the new road (although that depends on the location for some of them). The changes attributed to LTWP were perceived either as positive or both, i.e. simultaneously positive and negative. There were no direct negative changes attributed to the company's presence.[330] One of the major changes attributed to the presence of LTWP was the infrastructure upgrade. The rest of the perceived changes attributed to the presence of LTWP were related to their direct activities (incl. CSR) and employment created, while the changes attributed to the road went beyond that. The arrival of such mega project and the major infrastructure upgrade in a remote area with a long history of marginalisation certainty would impact the area in both positive and negative way. This was also how interviewed local people perceived it. From all the changes attributed to both the presence of LTWP and the road, 75% of them were perceived as positive, 12% as negative and 14% as having both positive and negative aspect.

Participants noted most frequently the changes in the natural domain: erratic weather patterns, less regular rains thus less water, decreasing grazing land and forest area (only one village noted that there

[329] For a detail list of changes per location see Annex 13.

[330] Methodological reflection: the interviews were conducted in a friendly and rather open atmosphere. Respondents didn't shy from listing a number of negative changes. Nevertheless, in regard to changes attributed to the company, a possibility of a bias should be considered. Despite my best effort to present myself as an independent researcher and assurance about full anonymity of the respondents; there was a chance that I was still associated with the company. As most people wished for more employment, it was likely that they were more positive about the company in general. On the other hand, all changes associated with the road and described above could be also associated with the presence of the company.

were more trees now), decreasing number of wild animals and fish in the lake. Most of these changes were perceived as negative and they can be attributed to global climate change. It is striking to see how much this global process caused by environmental exploitation and degradation in one place affected people elsewhere on the planet (Altaf, 2019). This negative impact of climate change appears to be severe to those whose livelihoods depend on animal economy, thus regular and predictable weather patterns. Finally, the population growth was perceived as both good and bad. Only respondents from Sarima perceived the increase in population as negative. On a positive note, it was a sign of improved health, hygiene, sanitation, access to modern medicines that all contributed to a longer life and less deaths (all positive changes also mentioned under the human domain). On the other hand, an increase in population meant increased pressure on already scarce resources: pasture, water, and land. Respondents from Mount Kulal and Sarima noted separately the influx of foreigners – in both cases it was perceived as both positive and negative. It was seen as good as many people mentioned, that through interactions, they saw and learnt many new things, including English and Kiswahili language skills. People started to wear modern clothes, women wore beadwork less frequently, they worked and some left their husbands and emigrated. Bad, as many people explained, the influx simply put too much pressure on scarce resources and brought "bad behaviour". The problem was particularly persistent in Sarima, initially a village of ±1,000 people that nearly doubled in population during the peak of the construction works. At the time of the fieldwork, a number of people living in Sarima had reportedly decreased to 1,500,[331] as no more new employment was offered at that stage.

Regarding the changes in the physical domain, people mostly attributed them to LTWP and the new road. Schools and dispensary in Ngurnit and Namarey were attributed to the government or NGOs, while in Sarima the respondents recognised the role of LTWP in establishing school, dispensary and toilets. Surprisingly, school extensions and upgrade, dispensary, maternity ward were not really noted or attributed nor associated with CSR activities of LTWP. Within the CSR programme, LTWP sponsored office extension for Loiyangalani Police – this project was mentioned during the interviews but was perceived by some as a project for the local government and not for the community.

There were numerous new or upgraded houses in the area built with cement, brick and iron-sheet roof. Such (positive) upgrade was attributed to the presence of LTWP in all villages but Ngurnit (where it was considered a general change). Inspired by the new type of constructions (such as "The Village"), with available expertise (a number of local employees were trained how to build 'a modern house') and often finances from employment or compensations, a number of people decided to upgrade or build a new 'modern' house. New boreholes were attributed to LTWP and perceived very positively in Ilaut, Ngurnit and Sarima.

The upgraded road was generally perceived positively, but some adverse effects of it were also mentioned, such as dust, accidents and cars' over-speeding. Initially, people didn't know how to behave and that caused some accidents. They involved mostly animals. The company provided compensations for the lost animals and started to educate people on road safety. Two villages that the new road bypassed (Ngurnit and South Horr) did notice less cars passing by, which impacted the occupancy of their lodges and local 'hotels'. People from Mt. Kulal and Loyiangalani generally were positive about the road upgrade but they wished that the 'good road' would be extended to their own villages. Another adverse effect of the road construction, especially for one community that initially hosted the road constructing team, was additional garbage generated in their village.

On a negative note regarding new infrastructure, one senior person noted that he was actually "a bit scared of the turbines" at first. LTWP dedicated time to train and sensitise people by organising a visit

[331] The population of Sarima in January 2019 was reportedly 1,000.

for a group of community educators to Ngong Hills to see the installed turbines in action and not fenced.[332]

One of the most important game-changers in the area was the cellular network coverage. The cell phones became a very important tool in Kenya not only for communication, but also for largely used mobile payment system, called M-PESA. People in South Horr also mentioned available (for some) off-grid mobile solar system called M-KOPA. The quick adaptation of the mobile phone technology has been impressive and outran the speed of general 'modernisation' of the area. It did, however, create an interesting blend of modern and tradition. For instance, it was quite common to spot a young warrior, a moran, wearing customary cloths, traditional face decorations and a typical haircut talking on his cell phone in the middle of an empty road.

The culture and traditions, although declining, remained important. The majority of changes in this domain mentioned by the respondents were attributed to the general changes. The only change in the tradition sub-domain associated positively with LTWP was noted in South Horr and Mt. Kulal. The respondents considered themselves now less dependent on the animals for livelihood, increasingly seeing jobs and businesses as an option. The general major difference noted by respondents from all villages but Mt. Kulal related to the way of life. More people have adopted a sedentary lifestyle. This change was also reflected in the change in diet, which no longer consisted of only meat, milk and blood, but was increasingly supplemented with other foodstuffs. These products could be purchased at local markets and from local shops for money gained from selling animals. On a negative note in cultural domain, people noticed increased consumption of alcoholic beverages and consumption of miraa (khat). With money available from the associated employment it became much easier to pay for many things, including alcohol, miraa and women, with their associated problems. One of the respondents said "Samburu knows how to deal with animals. They don't know how to deal with money". South Horr and Loiyangalani respondents reported on increased prostitution in their locations. Overall, these were negative but also rather typical consequences associated with infrastructure development and modernisation.

Finally, the substantial cultural changes related to the status of women, who traditionally was very low. Women were finally allowed to participate in barazas (community gatherings), talk in front of the men, and even teach them new things. There have been a decrease number of FGM practices and increased liberty in regard to marriage: one can marry regardless his or her age group and there have been less arranged marriages. With more women now also involved in economic activities, men have been more frequently assisting women and taking care of children.

In the human capital domain, the major positive effect of the project and the road according to the respondents was the substantial security improvement of the area, which used to be marred by recurrent inter-ethnic violence.[333] Only in Loiyangalani, some respondents noticed more theft since the road upgrade. Moreover, it appeared that the upgraded infrastructure and LTWP made it easier to access the hospital in Meru and contributed to a higher enrolment of kids in schools, as due to the salary, more people could have afforded the school fees. However, with more kids at school, there was nobody to look after the animals. Respondents from Ngurnit felt that the new road contributed to their increased standard of living, while the former employees from South Horr appreciated their increased skills through on-the-job training they received, and how they learnt how to stay together with many different people. Interestingly, all changes in the human capital domain were perceived as positive in Sarima (increase school enrolment as positive and negative) and were all attributed to LTWP and the road. The only negative change in this domain, which was mentioned by interviewees in more than just

[332] At the initial stages of the project, regardless assurance from the company, people were concerned about potential fencing of the concession area. The wind farm remains not fenced (apart from the substation and 'The Village'), therefore people are allowed to pass through it with their animals.

[333] Some clashes were still taking place but they moved on the outskirts of the area and were reportedly less.

one location, was the increase number of diseases. In Ilaut and Mt. Kulal, it was perceived as a general change, while in South Horr and Loiyangalani it was attributed to the road. This observation, however, was not possible to confirm with the local medical service.

The majority of changes were noted in the economic domain and were attributed to the new road and the project (Table 41 in Annex 12). The only change not attributed to LTWP or the road was the increased number of women's economic groups, which should be most likely attributed to the above-mentioned BOMA project. Since the ungraded infrastructure "Everything became easier" for the people, as it improved accessibility and opened up the area for many new economic activities. At the time of the fieldwork, in 2016, trade was flourishing, with many people coming from other parts of Kenya to purchase animals on the local market. There was a new regular bus connection (every two days) between the local town Loiyangalani and the county capital Marsabit, which also transported dry fish and meat for sell in the city and exchange for other foodstuff and goods. One of the respondents concluded: "Life is easier, as transport is easier". Trade activities were taking place in local manyattas. The availability of foodstuff and goods had increased substantially. M-PESA, shops, bars, hotels and lodges, and even highly perishable miraa became available in almost every town in the area. The quality of food and goods available had increased the quality of life of many families, especially children for whom, in some cases, the daily food intake would double. One respondent stated: "Those who were not drunk, help themselves" (and the neighbours).

The remaining changes in the economic domain can be associated with employment provided by activities related to LTWP. "Salary helped a lot". The salary allowed most of the people to 'save' in a sense that they did not have to sell their animals to cover their daily expenses – in contrary, most of them were able to increase their savings by purchasing new animals. Moreover, in the Kenyan setting, people are generally helping each other. Therefore, those who worked also supported a number of other family and community members with food, school fees and hospital fees. With cash available from the employment (including the short-term) provided by the LTWP or the contractors, money was available and circulating in the local economy. Some people got married, opened or upgraded shops, or simply bought small items to trade or to rent (for instance utensils). Some got a new bike, motor or a car, new cloths. "The family was happy because of the money". "I cleaned all debts". Other respondents got land, built or upgraded their houses, fenced their compound, bought a chair, installed solar system. Some got empowered and decided to invest in themselves. They went back to school to get further training to become professionals or went to Nairobi to look for a new job.

Once the work was over, financial liquidity was surely affected. Some people went back to herding, worked on their plots (shambas) or were not doing much at that moment ("just sitting"); after all, "not everyone is an entrepreneur". From this research, the long-term effect and sustainability of the temporary jobs provided are not possible to determine.[334] What was clear, however, was the fact that people really appreciated the cash injection and a stable salary. This was also the reason why so many people were hoping to be employed again. The next section will look more closely into the effects of local employment and the tensions that arose during the job distribution among the communities.

5.8.2.1 Employment and community engagement

Employment was highly appreciated by nearly all interviewees. However, the distribution of jobs was among the most problematic and challenging aspects to manage between the communities and the company. Most of the respondents were hired as casual labour for LTWP or one of the contractors.

[334] It should be reminded here that the fieldwork took place in the moment when the temporary local employment, although in decline, was still substantial. It meant that more cash was available in the local economy at that moment. It would be therefore necessary to conduct a follow up research to verify to what extent the initial boost of the local economy related to the cash influx from the local employment was sustainable.

They were engaged mostly on short-term contracts and majority of the contracts had already elapsed by the time of the interviews. The respondents mostly appreciated the salaries and meals provided by LTWP during the course of their employment.[335] "Nobody went to bed hungry", also as the leftover water and food were shared with the nearby communities. The employment contract was covering the obligatory subscription to the National Social Security Fund (NSSF) and the National Hospital Insurance Fund (NHIF). The latter was highly valued, as it covered hospital fees in case of sickness. People also appreciated to be picked up by a vehicle for work and brought back home afterwards. During the interviews, one of the respondents also discussed the 'side business' of some people. According to him, some people were secretly selling project diesel for half price and bags of cement they got at the construction site. Moreover, some wooden pallets couldn't be accounted for. They are now, allegedly, used as beds or tables in some of the local manyattas.

The majority of the respondents liked to be employed, to gain experience but it was a process in itself. Many people had to learn first what did it mean to actually work. Some acquired new skills, although usually basic and on-the-job. The general trainings were provided on health and safety, fire eventuality and first aid. Otherwise, depending on the position, people learnt wiring, welding, cleaning, riding a wheelbarrow, using a rope and flags, how to build and repair, how to mix cement and sand and to do blocks. Some people were trained as drivers, got a certificate as cook or fundi.[336] CLOs were taught how to talk and mediate with the communities to keep peace between them and the project. Some respondents started small with casual posts but later got promoted on the job.

The negative aspect of the employment was that it was short-term in nature. Furthermore, for many, the work was physically hard, from Monday to Saturday, far from home, and the salary, although objectively decent, could have been higher. Some people complained about their (Kenyan) supervisors and their unfair treatment of local employees (a case of physical abuse [1], some dismissals[337]). The respondents wished for more training, for instance on HIV/Aids, waste disposal, Kiswahili or calculations. Generally, there was a big need for more work, but at the time of the fieldwork, it was no longer possible to get a casual job.

From the outset of the construction period, there was a very high demand for employment and local content. The company (as seen in Chapter 5.6) made an effort to create a number of opportunities for the local businesses, but in practice, it was not possible to hire everybody or supply much locally. The communities felt that the local employment and local content element of the project were too limited, it eventually led to a conflict between the communities and the company. As the construction progressed, the communities started to block the road demanding more employment, benefits and local content despite the initial support of number of the local leaders to the project. For instance, some people from the community of Ngurnit destroyed the water tank of Civicon (which was used to collect water later sold to the company). Following mediation, the community settled for work and agreed to repay the tank. In response to other roadblocks, and after fulfilling the demands (usually more employment), the communities went calm for a while. The interviewees also felt that Kenyans from outside of the County took too many of the (casual) job opportunities. This, however, is clearly a perception, as the analysis in Chapter 5.6 showed that only 6% of non-skilled jobs were given to the non-local population. Nevertheless, such negative belief inhabited a number of respondents.

In theory, the chiefs were supposed to equally distribute jobs among the community members, but some interviewees said that was not always the case. Some chiefs did not always advertise the job

[335] Those on the job were provided with food and beverages in addition to the salary.

[336] A person bought fundi tools from the salary and opened his business. Increasingly, more buildings in towns have been built in 'modern' style. See the section on perceived changes above.

[337] Some of the reported dismissals were performance based or disciplinary (as a result of prolonged absence at work). In few cases though the respondents were embittered with their dismissal, as reportedly they informed their supervisors about their absence in advance, yet they lost their job upon their return. In such cases, the sacked employees felt that the dismissal was caused by ethnic prejudice.

posts. Others claimed that some jobs were distributed along the ethnic lines and some CLOs played a role in this process. Drew (2018) described in details how certain local leaders and brokers used their position and social status to divide and incite local people against or in favour of LTWP to access the investment benefits (cf. Drew, 2018). Especially, at the very beginning of the construction period these were the chiefs and those from the inner circle who would get the extra jobs, have the car rented or their animals bought from by one of the subcontractors. In one village for example, it was the Chief himself who sold over 300 goats to one of the subcontractors. Indisputably, these were often people with education and means, so also capable of delivering the necessary skills or services. However, it also raised the question of the integrity and bias of the local leaders and brokers who per definition should have the best interest of their people in mind. Nevertheless, in the Kenyan setting and in the context of extreme poverty, it appeared that they may have favoured themselves, their relatives and clan members once an opportunity arises.

At some point, LTWP had to step in and responded to the growing tension in the communities related to unequal job distribution. However, the time had passed before they centralised the local recruitment, which provided a window of opportunity for the local leaders and brokers to benefit first before including the others. LTWP could have done that partly to respect the local hierarchy and norms, and partly to build a good relationship with these local decision makers. Bringing these leaders on side would strengthen the company's negotiating position in the future. Such a strategy appeared to work in the long-term. Ultimately, after the centralisation of the recruitment by LTWP, long-term and regular involvement of Chiefs, the redistribution of jobs improved (as showed in Chapter 5.6). According to some interviewees, at least one person per manyatta was hired at some point of time in (most of) their respective villages. Nevertheless, the interviewees still felt that the local leadership should have protected more their own people and push for more local employment from the very beginning.

5.8.3 Conclusions

This sub-chapter showed that in the case of LTWP, the company was able to bring some positive changes that, over time, led to (some) inclusive outcomes at the local level, as perceived by the residents. It was not, however, an easy task. By providing (temporary) employment, improving infrastructure and security, LTWP changed the status of the entire area from a 'neglected' to a 'productive' one, with numerous economic and social development happening and more possibilities to come.

As for a foreign private investor, like LTWP, building a long-term relationship with the local leaders was critical. To do so, it had to respect the local hierarchy, local politics and dynamics, meaning that especially at the very beginning, they had to play by the local rules, which favours some and disregards others. The process, although rather exclusive, required time and good understanding of the local context. This knowledge was essential to anticipate the growing expectations, managing them, as well as ultimately slowly pushing for a greater inclusion of everyone in the communities. This was an extremely time-consuming and fragile process that was managed with great caution by skilled and dedicated individuals.