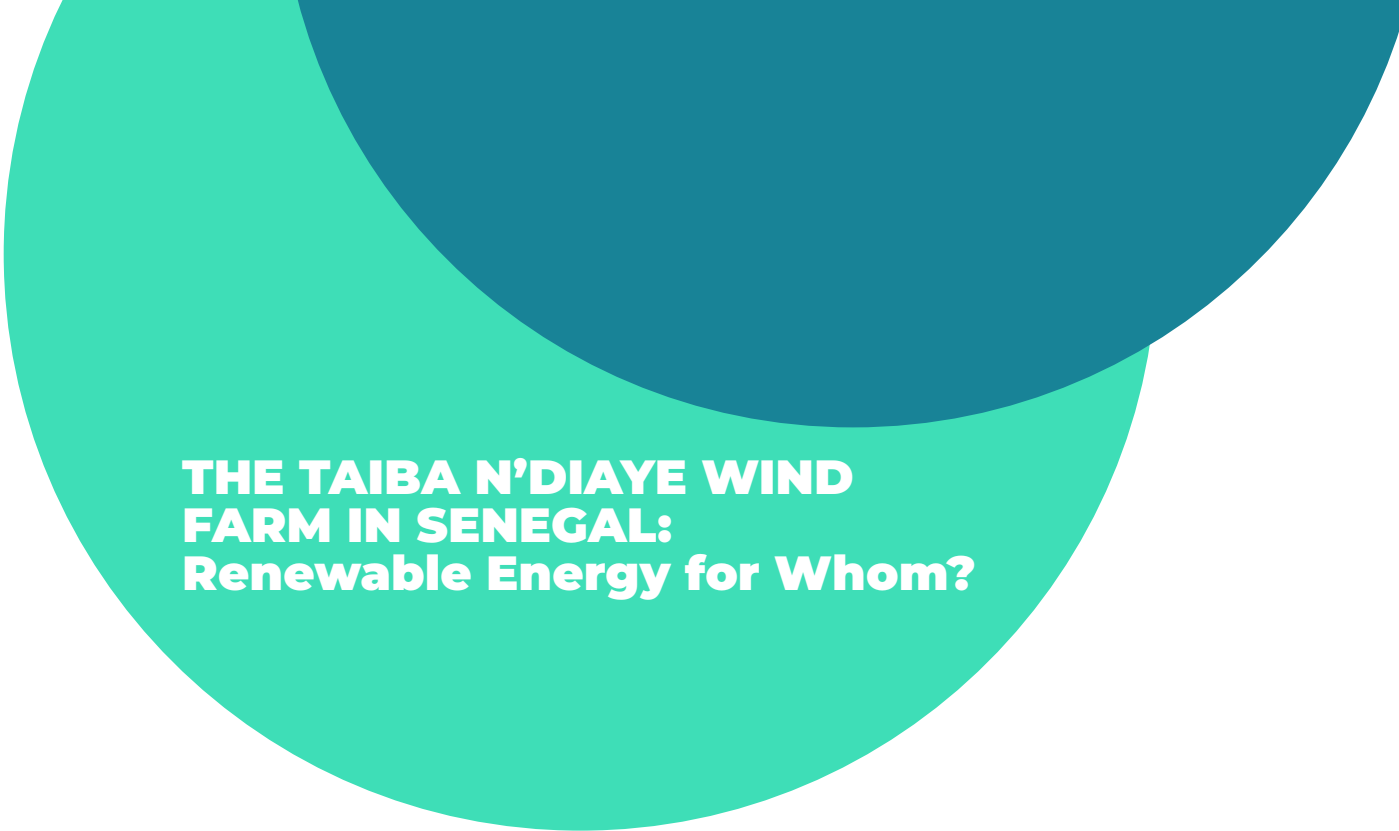


# **THE TAIBA N'DIAYE WIND FARM IN SENEGAL: Renewable Energy for Whom?**





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## EXECUTIVE SUMMARY

The Parc Éolien Taïba N'Diaye (PETN) is the first large-scale wind energy project in Senegal and aims to provide clean energy to more than 2 million people, while investing in the local community to improve education, entrepreneurship and the environment. The Multilateral Investment Guarantee Agency (MIGA), part of the World Bank Group, has issued a \$105.4m (€90.6m) guarantee to support this project. However, the project is classified as Category A under the MIGA Policy on Environmental and Social Sustainability (2013) as there were potentially significant environmental and social impacts related to the loss of livelihoods of people affected by the project project as well as biodiversity in the installation site.

This research aims to look at how the PETN project from construction to its current operations is affecting the lives and livelihoods of project-affected communities. The research found issues regarding:



**Transparency, access to information and community participation:** Interviews with local communities, stakeholders and elected representatives revealed major concerns about transparency and inclusion in the implementation of the project. Indeed, while the majority of local stakeholders agree that Lekela is a pioneering company in the municipality with good Corporate Social Responsibility (CSR) practices, a series of problems and gaps in terms of involvement and communication between the company and local communities were identified.



**Land acquisition, involuntary resettlement and restoration of livelihoods:** The expropriations resulting from the construction of the wind turbines have thus contributed to a decline in the affected communities economic activities and the loss of much of their livelihood.



**Gendered impacts on communities:** A number of gendered impacts on affected communities have been documented mainly stemming from the fact that women have not been properly consulted nor have they been part of decision-making processes throughout project implementation.



**Impacts on the environment:** Overall, using wind to produce energy has fewer effects on the environment than many other energy sources, but associated infrastructure can still have impacts especially when located close to or in agricultural fields.

Based on the analysis, the paper recommends:

For the World Bank Group to:



**Increase Transparency and Accountability:** The Bank should demand complete transparency in the implementation of funded projects, including full disclosure of environmental and social impact assessments, as well as monitoring reports.



**Assess Long-Term Impacts:** The WB should require long-term impact assessments of its projects, monitoring their performance beyond the initial financing phase to ensure long-term sustainability and continued benefits for local communities.



**Review ESS Standards:** The WB should revise its environmental and social standards to align them with international best practices, ensuring better protection of the environment and the rights of communities.



**Establish an Independent Monitoring Mechanism:** Establish an independent monitoring mechanism to assess project compliance with WB standards and national regulations. If discrepancies from WB standards are identified, demand that corrective measures be implemented to address these issues.

For the Senegalese Government to:



**Strengthen Environmental and Social Regulations:** The government should review and strengthen environmental and social laws and regulations to ensure that development projects adhere to international standards of sustainability, environmental protection, and the rights of local communities.



**Facilitate Community Participation:** Promote active participation of local communities in the planning, implementation, and monitoring of projects, ensuring that their concerns are addressed from the outset of the process with the support of administrative authorities and local governments.



**Enhance Transparency and Accountability:** Establish independent monitoring and evaluation mechanisms to ensure that projects adhere to environmental, social, and ethical standards, and ensure that the results are accessible to the public.

For PETN to:



**Enhance Engagement with Local Communities:** The company should establish an open and transparent dialogue with local communities, ensuring that they are informed, consulted, and involved in all phases of the project.



**Improve CSR Policy and Impact Mitigation:** Giving greater consideration to the needs of communities and vulnerable groups such as women could enable the company to implement a more effective CSR policy that genuinely benefits the communities of Taïba Ndiaye.



**Ensure Fair Compensation:** Ensure that communities affected by the project receive fair compensation for the loss of their land and livelihoods, following international standards.



**Promote Local Job Creation:** Prioritise the employment of local labour in the maintenance of the wind farm.

## INTRODUCTION

In August 2023, Lumière Synergie pour le développement (LSD)<sup>1</sup>, in partnership with Recourse<sup>2</sup>, carried out research into the evolution of energy policy in Senegal and the implications of the World Bank Group (WBG) in the deployment of renewable energy technologies. The case study focused on the Parc Éolien de Taïba Ndiaye (PETN), which benefited from a guarantee covering equity and quasi-equity investments by Lekela Power Holding from the WBG's Multilateral Investment Guarantee Agency (MIGA). The results of the research are intended to formulate recommendations on how the Bank's policies and performance standards should evolve in response to the energy transition.

The Multilateral Development Banks (MDBs), including the WBG, are committed to aligning their policies, programs and operations with the Paris Agreement. The WBG is the largest multilateral provider of climate action finance to developing countries and has increased its funding to unprecedented levels in recent years. As part of its 2016-2020 Climate Change Action Plan (CCAP)<sup>3</sup>, the WBG exceeded its target of increasing climate finance to 28% of its portfolio per year, providing a total of more than \$83b dollars in the same period.

This year is of critical importance as the WBG has adopted a way forward for its own institutional reform and the deployment of its methodology for alignment with the Paris Agreement, as well as on how such reforms are intended to meet the needs of the energy transition. From July 1, 2023, all new operations (projects and other forms of assistance), which are submitted to the WBG Board of Directors, must demonstrate how they align with the Paris Agreement. These provisions are also set out in the CCAP (2021-2025) and apply to all Bank Group entities, including the International Finance Corporation (IFC) and the MIGA.<sup>4</sup>

In March 2023, Recourse, together with a group of civil society organisations, released a methodology that provides tools to assess the WBG progress in supporting the transition to sustainable and renewable economies, particularly in developing countries and low-income countries in a way that respects human rights, dignity and environmental integrity. The methodology starts from the fact that the transition should take place in a fair way in favour of the countries and communities less responsible for climate change and more vulnerable to the effects of the latter.<sup>5</sup>

The Parc Éolien Taïba N'Diaye (PETN) is the first large-scale wind energy project in Senegal and aims to provide clean energy to more than 2 million people, while investing in the local community to improve education, entrepreneurship and the environment.<sup>6</sup> However, the project is classified as Category A under the MIGA Policy on Environmental and Social Sustainability (2013) as there were potentially significant environmental and social impacts related to the loss of livelihoods of people affected by the project, as well as biodiversity on the installation site.<sup>7</sup>

The general objective of this case study is to assess how the Taiba Ndiaye Wind Farm project in Senegal combines with the efforts of the WBG in the energy and just transition. Specifically, the study aims to:

1. Organise project site visits and interviews with all stakeholders;
2. Assess issues related to transparency, access to information and participation of local communities;
3. Analyse the positive and negative socio-economic impacts of the Taiba Ndiaye Wind Farm project on local communities and their livelihoods, with particular emphasis on women;
4. Assess the effectiveness of the compensation and mitigation measures implemented to reduce the negative effects of the project on the environment and the affected populations in accordance with the WBG Environmental and Social Standards (ESS);
5. Formulate specific recommendations to improve the accountability of the World Bank Group in energy and just transition within the framework of the Taiba Ndiaye Wind Farm project in Senegal.



## SITUATION OF RENEWABLE ENERGY DEVELOPMENT IN SENEGAL

About ten years ago, the electricity sub-sector in Senegal was characterised by a low production capacity that was well below the level of national demand, resulting in frequent load shedding that cost the country up to two percentage points of annual growth. The country's energy profile was also characterised by heavy dependence on external supplies of liquid and gaseous hydrocarbons. This had the effect of making the economic production system particularly vulnerable, not to mention the unsustainable pressure that the erratic variations in the prices of these products exerted on the State's public finances. In response to these problems, which constitute a serious handicap to economic development, in 2013 the government put in place the Senegal Emerging Plan (PSE) to 2035, which targeted eight areas, including "solving the energy crisis to ensure the country's development".<sup>8</sup>

These objectives include universal access to electricity by 2025, with energy in sufficient quantity and quality, clean and at lower cost. Senegal has rapidly increased its renewable energy capacity, largely to reduce its historical dependence on expensive and polluting liquid fuels (particularly Diesel). The country has pledged to source 30% of its generating capacity from renewables by 2030. Since then, an impressive range of projects have been carried out, including some of the largest in West Africa. These include the commissioning of four solar photovoltaic power stations, namely Senergy and Ten Merina, each with a production capacity of 30MW, Kahone Solaire SA (35MW) and Kael Solaire SA (25MW), located in the Kaolack and Diourbel regions respectively, in the centre of the country.<sup>9</sup> The Taïba Ndiaye project (158 MW), the first large-scale wind farm in West Africa, was also commissioned in February 2020. By 2021, renewable energies excluding hydro (75MW) accounted for 24% of the national energy mix, with 226MW from photovoltaic solar energy and 158 MW from wind power.<sup>10</sup>

Further, in its 2020 Nationally Determined Contributions (NDCs), Senegal had already been established that the energy sector would grow exponentially and account for more than 50% of the country's overall greenhouse gas (GHG) emissions from the start of oil and gas production, rising to more than 63% by 2030.<sup>11</sup> Between 2014 and 2016, Senegal made a series of discoveries of oil and gas resources off its coasts, the development of which is now a major component of the country's economy. According to projections, the oil and gas sector is expected to accelerate the country's GDP to 10.6 percent in 2024 and 7.4 percent in 2025.<sup>12</sup> These developments have prompted a change of direction in the Senegalese government's plans for immediate development of renewable power plants, and shifting to putting in place the infrastructure needed to use domestic gas for electricity generation. The Senegalese government introduced a Gas-to-Power strategy in November 2018 to provide the legal framework for private sector participation. Two major fields are under development: The Sangomar field operated by Australia's Woodside Energy and the BP/Kosmos Energy Greater Tortue Ahmeyim (GTA) project which straddles the maritime border with Mauritania. Both fields are scheduled to start producing first gas in 2023, following delays due to the impact of the COVID-19 pandemic.

On 22 June 2023, at the Summit for a New Financial Pact held in Paris, Senegal and the group of international partners comprising France, Germany, the European Union, the United Kingdom and Canada launched the Just Energy Transition Partnership (JETP). The JETP aims to support Senegal's efforts to achieve universal access to energy and consolidate a



'low-carbon, resilient and sustainable energy system' by deploying €2.5b in funding mostly in the form of loans.<sup>13</sup> However, given the current geopolitical landscape, the countries providing financial assistance under JETP are not necessarily exclusively concerned about the climate implications of the partnership, but also about whether it can increase security of supply of critical raw materials needed to meet their own energy needs. The JETP with Senegal can be taken as an example where natural gas has been explicitly recognised as a "transition energy". The initiative was launched at a time when some donor countries had serious concerns about energy security following Russia's invasion of Ukraine. The partnership was therefore closely linked to a potential increase in the production and use of natural gas, which was also later reflected in the political declaration with French President Emmanuel Macron<sup>14</sup>.

## THE WORLD BANK GROUP'S INFLUENCE IN SENEGAL'S ENERGY POLICY

One of the main examples of the WBG's influence in Senegal is in the energy sector, with the International Development Association (IDA), the IFC and the MIGA working closely together to enable the private sector to develop and diversify in the sector. In view of the major oil and gas discoveries in recent years, the Bank is pushing Senegal to equip itself with the necessary resources to improve its investment framework in the energy sector in order to 'end its dependence on costly imports of heavy fuel/diesel.' Under the Country Partnership Framework (CPF) for the period 2020-2024, while interventions provide attention to renewable electricity expansion, it also encourages Senegal to maximise the revenues from gas and attract private investment to the sector.

The WBG is at the heart of the three main renewable energy projects in Senegal mentioned above.<sup>15</sup> The Kahone Solaire SA (35MW) and Kael Solaire SA (25MW) projects were built as part of the WBG's Scaling Solar programme and supply energy at rates of 3.98 and 3.80 euro cents per kilowatt-hour respectively - one of the lowest prices in sub-Saharan Africa. These projects prevent greenhouse gas emissions of 89,000 tonnes of CO<sub>2</sub> per year. MIGA has issued guarantees to support these two projects on an equity basis, in addition to IFC loans, to provide protection against non-commercial risks. Close to the Taïba Ndiaye wind farm, which is the subject of this study, there is also the Tobene Power project, which has benefited from an IDA guarantee. Tobene Power SA is an independent power producer (IPP) tasked with developing an efficient 96-megawatt heavy fuel oil-fired power plant at Taïba Ndiaye on a Build-Own-Operate-Transfer model. The plant has the potential to be converted to run on natural gas.<sup>16</sup>

In parallel, the national utility company Senelec has signed a memorandum of understanding with local developer West African Energy for the development of a 300 MW gas-fired power plant at Cap Des Biches, around 20 km from Dakar, with work due to start in 2021. IFC will provide foreign exchange hedging for the \$91m loan provided by Overseas Private Investment Corporation (OPIC) for the project. On completion, the Cap des Biches gas-fired power plant will be the largest in the country, supplying around 25% of the country's electricity output.<sup>17</sup>

With funding mainly coming from IFC and IDA, the WBG continues to support the implementation of a framework for the 'optimal use' of gas resources to increase the share of gas in the energy mix in Senegal. The IFC is advising the Government of Senegal, through its Gas-Electricity Committee, on the development of an onshore gas pipeline network that will link hydrocarbon fields to existing and future gas-fired power plants.<sup>18</sup> IDA, for its part, is providing technical assistance both for upstream gas development and for the intermediate and downstream segments.<sup>19</sup>

Prior to the discovery of oil and gas fields in the country, Senegal was on a path to developing its own renewable energy sector. The interventions of the WBG however in the form of direct and indirect loans, guarantees and technical assistance is gearing the country to refocus its efforts on the development of energy infrastructure that will benefit the fossil gas industry and allow it to export energy. These WBG interventions therefore distract the energy transition in Senegal by providing incentives for fossil fuel development to persist.

## PETN PROJECT

The Taïba Ndiaye Wind Farm (PETN) project involves the construction and operation of a 158.1 MW wind farm in the municipality of Taïba N'Diaye in the department of Tivaouane, Thiès region, approximately 75 kilometres (km) north-east of Dakar in Senegal. Inaugurated on 24 February 2020, PETN is Senegal's first large-scale wind energy project and is in line with the Senegalese government's strategy to increase the production of clean electricity and diversify the energy mix.<sup>20</sup> The idea for the project originated in 2007 with the French company Sarreole Sarl, which had discovered the potential of the coastal region of Thiès (86 km north of Dakar), swept by the harmattan and Atlantic winds with speeds of between 8 and 20 metres per second (m/s), ideal for energy production. In 2016, Lekela Holding Group, a company specialising in the production of renewable energy in Africa, signed a power purchase agreement with Senelec in collaboration with Danish subcontractor Vestas for the construction, management and maintenance of the infrastructure. Work finally got underway in December 2018 following several feasibility studies.<sup>21</sup>

PETN represents a 15% increase in the country's electricity generation capacity. In its first phase of operation, it injected 400 GWh into the interconnected grid by 2021, compared with 217 GWh in 2020. Lekela has also signed a grant agreement with the United States Development Finance Corporation (DFC) to finance a feasibility study for an extension of the wind farm with a target capacity of 100 MW, which could potentially be installed in the commune of Mont Rolland, 27 kilometres from Taïba Ndiaye.<sup>22</sup>

Regarding the financing package, the US government's development finance institution, OPIC, committed \$250m in financing and \$70m in reinsurance for PETN 2016.<sup>23</sup> Danish Export Credit Agency EKF also guaranteed a €140m (\$161 million) export loan facility for the project in August 2018. The U.S. Agency for International Development Power Africa, an initiative of the U.S. Agency for International Development (USAID), also supported the project early in its development phase.

The MIGA, part of the World Bank Group, has issued a USD 105.4 million (€90.6m) guarantee. The MIGA is an international agency whose mission is to promote foreign direct investment (FDI) in developing countries.<sup>24</sup>

The project site comprises a total footprint of 67 hectares (ha) housing 46 wind turbines, spread over five rows, and ancillary facilities. The five rows of turbines cover a total area of approximately 7.5 ha, with hub heights ranging from 84 to 137 metres. The associated infrastructure includes internal and external electrical connections, a substation, access roads and operation, maintenance and administrative buildings. A zone of influence has been defined to extend to a radius of 500 metres (m) around each turbine, comprising a total of 2,200 ha of land. Land acquisition mainly concerned farms, with temporary and permanent restrictions on 423 plots, the loss of around 2,000 mango trees and the economic displacement of 409 project-affected parties (PAPs) in the three municipalities of Taïba Ndiaye, Darou Khoudoss and Notto Gouye Diama.<sup>25</sup>

The Environmental and Social Review states that the project is classified as Category A under MIGA's Environmental Sustainability Policy. Category A projects imply potentially significant and irreversible impacts on the environment and/or society which therefore requires a detailed environmental and social impact assessment (ESIA) prior to implementation. Although all

performance standards (PS) are applied to the project according to the information provided to MIGA, it has been determined that the project must be managed in accordance with the following MIGA safeguard policies<sup>26</sup>:

- ▶ PS1: Assessment and Management of Environmental and Social Risks and Impacts
- ▶ PS2: Work and Working Conditions
- ▶ SP3: Resource Efficiency and Pollution Prevention
- ▶ SP4: Community Health, Safety and Security
- ▶ SP5: Land Acquisition and Involuntary Resettlement
- ▶ SP6: Biodiversity Conservation and Sustainable Management of Living Natural Resources
- ▶ SP8: Cultural Heritage

In addition, the following World Bank Group (WBG) Environment, Health and Safety (EHS) guidelines apply to the project:

- ▶ WBG General EHS Guidelines (2007)<sup>27</sup>
- ▶ WBG EHS guidelines for wind energy (2015)<sup>28</sup>

In an interview with the research team, Amadou Oumar Sow, PETN's social and environmental manager, pointed out that, as part of the PETN project, Lekela implemented a proactive policy very early on to manage the impacts and negative externalities on communities and biodiversity appropriately. One concrete example concerns land compensation, where the company, having subscribed to Sustainable Farming Incentive (SFI) standards, has voluntarily chosen to compensate those affected to the tune of CFAF3m (\$4,749) per hectare. This represents double the national scale, which the company has judged not to be in line with international requirements and standards. Mr. Sow also set out the development of a livelihood restoration plan, with the main achievement being the development of a two-hectare pilot market garden for farmers considered to be the most affected by the expropriation of land (loss of more than 20% of land assets). The project team is also studying the feasibility of a project to support the irrigation of farmland crossed by the PETN laterite road.<sup>29</sup>





*Notice board, site entrance to Parc Eolien Taiba Ndiaye*



*Mamadou Sarr, community representative*



*Interview: Amadou Oumar Sow, PETN CSR Manager*





*CSR Action Lekela: Computer Room Lycee TN*

With regard to the measures put in place to respond to stakeholder complaints, the the PETN's CSR manager stated that the project has a grievance system in place to deal with complaints and questions from the communities concerned. Among the cases received are complaints from residents about the nuisance caused by the turbines. According to CSR a study<sup>30</sup> was commissioned by the company, which concluded that noise levels were below the set limits. Particular attention has also been paid to restoring wildlife and biodiversity, with a programme to repopulate birds occasionally hit by the turbines. The CSR manager states that the cases of accidents only concern local species and not rare species threatened with extinction. As PETN is considered to be a classified installation project, a protocol<sup>31</sup> has been put in place with the municipality to prevent the installation and construction of living quarters within 500 m (extended to 800 m). This measure is combined with the payment of a fee to the municipality in return. The PETN project also involved the construction of 30km of laterite road. For the social and environmental manager, "this has improved access to the municipality and nearby fields, making it easier to transport harvested produce".

PETN is also committed to sustainable development in the commune and to promoting local development. During its operational phase, PETN plans to invest \$20m in socio-economic projects for the benefit of the commune of Taïba N'Diaye, at a rate of \$1m per year. PETN is in its first year of operation, but has been able to carry out a large number of micro-projects well before the operational phase.



The projects revolve around four main pillars:

- ▶ **Education and skills development:** In the education sector, Lekela is running a programme to support the development of science courses, one of the best achievements of which was the construction and equipping of a computer room for the Taïba Ndiaye high school. Built in 2019, the room has 32 desktop computers, along with furniture and teaching materials. Mr Keita, the school's headmaster, says that PETN is the only project in the municipality that supports his school. He believes that the computer room has helped to boost the interest of pupils, who are increasingly turning away from classroom teaching, which is considered to be too theoretical in terms of computing and research. PETN also funds remedial courses for pupils, as well as a scholarship programme for the best science students in the commune, particularly girls. The headmaster says that the programme has considerably improved school performance and results, with a pass rate of around 92%. In 2022, PETN was also able to build a new middle school in the village of Thiallé. PETN also supports young people in vocational training and pays for accommodation for local students attending Dakar University (two flats for boys and girls).<sup>32</sup>
- ▶ **Job and business creation:** PETN's ambition is to put in place an agricultural value chain development programme, setting up cooperatives for farmers and women around income-generating activities. The company also aims to set up agricultural cooperatives, dividing the commune into agricultural areas where farmers can identify their needs<sup>33</sup>.
- ▶ **Economic empowerment of women:** A marked priority is the economic empowerment of women, who make up the majority of the company's financing portfolio. Initiatives aimed at supporting young people and women to develop local businesses in the agro-sylvo-pastoral<sup>34</sup> value chains have been put in place. Training, capacity building and support programmes for the processing of local products (mangoes, cassava, cereals) have been developed to encourage women's economic empowerment. In Taïba Ndiaye, for example, PETN has undertaken to relaunch the activities of a group specialising in fruit and vegetable processing, which had come to a standstill during the Covid-19 period. PETN's contribution focused on refurbishing the organisation's headquarters, including the building a solar power plant (15 panels and energy storage infrastructure) as well as production and conservation equipment<sup>35</sup>.
- ▶ **Environment fights climate change:** PETN has launched a reforestation programme and is actively supporting the collection and processing of solid waste in all 35 villages in the commune. During the first phase of the programme, 15 standardised waste collection points were set up in pilot villages. PETN has also fully funded the Taïba Ndiaye communal development plan, which is currently being drawn up. The Vestas subcontracting company is also carrying out a significant number of CSR actions, including the construction of a fish market in Miname and a recent request for the construction of a toilet block at the girls' high school. It was asked whether all the projects had been implemented in line with the needs expressed by the communities. The CSR manager stated that the PETN has ensured that each of the programmes that the project is carrying out involves and engages with all the stakeholder communities in order to identify the real needs of the community. Each programme is therefore steered by a technical committee made up of community representatives, as well as a multi-stakeholder committee, a third of which is made up of women. All CSR investments also benefit from a performance measurement framework. "We make sure that we don't lock ourselves away in our offices and decide for ourselves what is necessary for the community," he says.

## IMPACTS ON COMMUNITIES

### Transparency, access to information and community participation

Interviews with local communities, stakeholders and elected representatives revealed major concerns about transparency and inclusion in the implementation of the project. Indeed, while the majority of local stakeholders agree that Lekela is a pioneering CSR company in the municipality, a series of problems and gaps in terms of involvement and communication between the company and local communities were identified. Mor Fall Kharma, currently deputy mayor, and Mamadou Sarr, former councillor, revealed that the initial signing of the agreement between Lekela and the municipality took place without any prior understanding of the details and without any real involvement on the part of the municipality. In response to the councillors' refusal to sign and commit the municipality to an agreement without knowing its content, a review committee was set up.

This committee played a key role in revising the agreement, notably by adjusting its duration and enabling the municipality's tax revenues to be increased. However, the agreement between the municipality and Lekela has not yet been signed. Since then, the company has also been operating without any real involvement from the municipality. In fact, the current mayor has requested an audience with the director. In Mr Kharma's view, the company should have used a law firm at the time of setting up to better negotiate and defend its interests. Indeed, one of the main provisions that had been put forward, to bring Lekela closer to the community, was the construction of the company's head office in the locality. The municipality had even approved a plot of land for the headquarters, but until now the company has had its head office in Dakar and has rented offices for its technical team in Taïba Ndiaye. At the start of the project, the company had decided to set up a foundation to act as the implementing body for the CSR investment funds, but this was eventually withdrawn.

It was confirmed that the company had set up a multi-stakeholder committee, to facilitate collaboration. However, there is a real problem of coordination and a lack of information and feedback mechanisms. A further difficulty lies in the ability of the parties involved to transmit information effectively and to reach all the residents, given that the commune is made up of 35 villages.

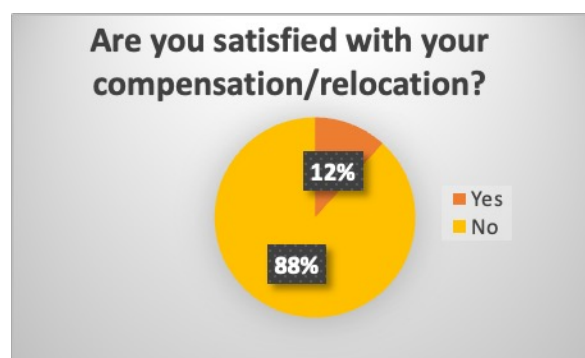
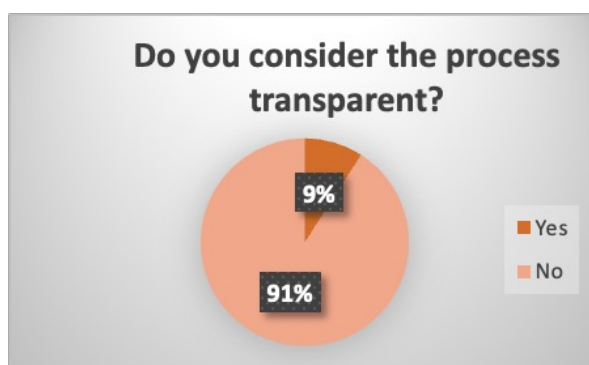
To overcome these challenges, local stakeholders have stressed the importance of acquiring and equipping a community radio station. This radio could be financed by the company according to local authorities. Such an initiative would strengthen communication, disseminate important information and facilitate dialogue between the company and local communities.

### Land acquisition, involuntary resettlement and restoration of livelihoods



**1| Lack of transparency in the compensation process:** The main irregularity identified by the People Affected by the Project (PAPs) interviewed for this research was the failure of the project proponents to honour the commitments they made during the discussions to clear the rights of way. These included support for the development and irrigation of all the PAPs' land, even though it had not been affected by the project right-of-way. To date, these commitments have not been honoured, the PAPs informed us. For them, support for the irrigation

of the remaining plots to the affected farmers would have been more than enough to restore their livelihoods and correct the various shortcomings noted in the company's compensation process. Nearly 90% of the PAPS say they are not satisfied with their compensation.



They believe, however, that the installation of a single borehole to serve all the land along the wind farm road would have been more than sufficient to meet the water needs of the farmers, who are prepared to pay for the service. Abdou Aziz Deme, the village chief of Sao, confirms this with these words: "as proof, the current borehole in the area dates back to the 90s and is shared by over 7,000 dwellers. Despite its dilapidation, it is able to meet the water needs of a large part of the population and livestock". The PAPS share the view that agriculture is the only economic activity on which the satisfaction of their needs and those of their families depends. The loss of land therefore has extreme consequences for family survival.

In other words, only a few metres of land have been compensated, while many of them are left with land that has been completely taken over or rendered unusable because of stones from the construction work. The developers have therefore decided to compensate only the agricultural assets and not the land. All PAPS interviewed shared that they have been compensated to the tune of 50,000 fcfa (79 USD) per mango tree, the amount they were able to exploit for each fruit tree each year. They feel that the destruction of their livelihoods has not really been compensated sufficiently. "Only the large mango trees were also valued, and for the small mango trees that have not yet started producing, we were paid 3,000 fcfa (4,75 USD). The PAPS therefore refute the figures given by PETN for the payment of expenses, namely 165,000 fcfa (261 USD) for each mango tree and 3 million fcfa (4,749 USD)," according to one of the community members interviewed.

At the time of payment, too, the PAPS received no supporting documents, making it difficult to trace compensation amounts. Some of the land was shared by several brothers, heads of families with a large number of dependents.

The PAPS claim that the market gardening perimeter developed by PETN did not follow a consensual and inclusive process. If the criteria established were really to define the choice of beneficiaries, then all those whose livelihoods have been negatively impacted or completely destroyed should benefit.



**2 | A market garden to restore livelihoods:** PETN has set up a two-hectare pilot market garden for 20 farmers deemed 'most affected' by the land expropriations (loss of more than 20% of expropriated area). In 2022, without PETN's support, the market gardeners in the pilot project bought their own seeds and started the market garden production campaign, mainly consisting of potatoes, turnips, eggplants and onions. According to estimates, last year's harvest generated sales of 3,316,150 FCFA (\$5,249.47) in 4 months. When researchers visited the site in question, the project's beneficiaries confirmed that the perimeter had enabled them to restore their livelihoods to a large extent. The site benefits from water supply and solar panels, enabling farmers to cultivate both in the dry and rainy seasons. Although the initiative is greatly appreciated by the community in general, project beneficiary Youssou Samb shares that the best way to support those impacted by the project would have been to provide them with adequate compensation while supporting them to improve the productivity of their remaining land. This would have enabled an effective and more equitable program to be put in place, as many of those affected lost their entire assets and livelihoods without being selected as beneficiaries. They reveal that the choice of farmers who were to benefit from the market garden perimeter was not made on the basis of a consensus with all those affected. Limitations were also noted in the support and monitoring of the initiative by PETN. In fact, the project team very rarely visits the perimeter and is slow to set up a real mechanism for monitoring the initiative with which they can express their concerns and proposals for improving the initiative. The expectations expressed mainly concern support for access to inputs, perimeter expansion, improved water supply and lighting of access tracks.



**3 | Accountability and impact management in other communes impacted by the project:** the case of Darou Khoudoss: Given the large number of PAPs living outside the Taïba Ndiaye commune, the CSR manager was asked about the potential mitigation policies the project plans to implement in these areas. He shared that PETN is in its pilot phase in terms of supporting socio-economic development and deploying its CSR policy. Initially, therefore, interventions will only concern the commune of Taïba Ndiaye, considered to be the project's main area of influence. That said, PETN is not ruling out the idea of extending its interventions in the localities in question in the years to come.





*Focus group : PAPs/Darou Khoudoss*



*Focus Group/PAPs Taïba Ndiaye*

The PAPs of Darou Khoudoss have confirmed that they do not benefit from the social projects carried out by PETN. By way of example, the perimeter developed for the benefit of the PAPs concerned only the residents of Taïba Ndiaye. Yet the majority of them claim to be among those most affected by the project, some of whom have even lost their entire land holdings. The village chief of Sao, one of the Darou Khoudoss villages also impacted by the project, points out that even if the project's right-of-way area is administratively under Taïba Ndiaye, mitigation measures must be carried out based on community needs rather than a strictly geographical basis. Mor Mar, president of the Darou Khoudoss commune, believes that the information that the PETN right-of-way zone exclusively concerns the Taïba Ndiaye commune is false. According to him, cadastral data show that two wind farms are located



in the commune of Darou Khoudoss. The municipality has taken steps to demand royalties from PETN. Mawa Diop, the commune's municipal secretary, believes that it is the project's implementation process that has not been inclusive from the outset. For a project of this scale, the identification of stakeholders must be as broad as possible. In his opinion, the Darou Khoudoss commune could have better collaborated and defended its interests before the project was set up, which for him is now too late.

Mbène Diop, a farmer whose field is particularly close to the wind turbines, states that in addition to their land being taken over, they are confronted on a daily basis with the nuisance effects of the installations. The women of Darou Khoudoss hear daily about the support and financing projects set up by PETN, but have so far failed to benefit from them.

The PAPs have also raised their concerns about the PETN extension project. In their view, they run the risk of being forced overnight to give up their remaining land holdings.

### **Gender dimension in PETN project**

At a meeting attended by several representatives of women's groups in Taïba Ndiaye, the women discussed the limitations of PETN's CSR policy. The women shared that they had been primarily affected by land grabbing. Indeed, even women who don't own land manage to earn income from fields belonging to their husbands. The expropriations have thus contributed to a decline in their economic activities and the loss of much of their livelihood.



*Khady Diop : PAPs/Taiba Ndiaye*





*Focus group with Taiba Ndiaye women's groups*



*Mbene Diop/farmer*

They also reveal that PETN undertakes initiatives without first gathering their expectations and needs. The women do not see themselves in the various CSR programs, which for them are not really aimed at empowering them, since it's the company itself that sets out its own vision and support methods. Yacine Ndiaye, chairwoman of the women's commission of the current municipal team, argues that local women have attended numerous meetings with the company, without so far seeing any concrete action. Ngone Diop, president of the women's group in her village, explains that at the start of the project, a meeting specifically dedicated to women was held, at which the project team collected their expectations, which mainly revolved around the formalisation of the various groups, training and capacity building, and financing to support. The promoters had volunteered to refurbish the group's headquarters and equip it with toilets. It's been more than two years since these commitments were honoured. The women note very slow progress in the execution of the women's support program.

They also spoke of the lack of transparency and equity in PETN initiatives, which is often a source of division among the women in the community. Based on interviews with women in affected communities, PETN provided support to only one women's organisation with members who are not even directly impacted by the project. The company has supported a group of women specialising in poultry farming and agricultural product processing in Taïba Ndiaye, providing them with solar panels, storage batteries, a freezer, a generator, etc., and has built them a headquarters in the village centre. PETN affirmed that it was on the basis of a well-developed business plan that the group obtained this support. For women, the support process is far from transparent and inclusive, given that these women represent only a minority of those affected. The women also acknowledged that PETN is ahead of other projects in the locality. They cited Tobene Power as an example, which makes no attempt to establish channels of communication with the local population, particularly women.

### **Impacts on the environment**

Wind is a renewable energy source. Overall, using wind to produce energy has fewer effects on the environment than many other energy sources, but associated infrastructure can still have impacts especially when located close to or in agricultural fields. For instance, the unpaved parts of the laterite tracks in the area are causing dust to scatter, and stones to invade agricultural fields, thus contributing to the deterioration of the living environment. Although it has improved accessibility, it is also giving rise to safety concerns, notably cases of theft of crops and agricultural equipment from fields crossed by the track.

It also does not help that the community is close to the Tobene Heavy-Fuel Oil Power Plant which exacerbates impacts. According to the communities, the impacts they are experiencing are cumulative with those of the Tobene Power plant, located in the same area as the PETN project. There have been reports of gas escapes, reduced orchard and mango yields, and the disappearance of local varieties of fruit trees in favour of those with a shorter lifespan.

Communities also denounce the fact that environmental and social impact studies do not involve the community in any significant way. The research team also observed several bird carcasses on the wind farm site.





*Tobene power plant with emissions, close to the wind farm*



*Bird carcasses found under the turbines/PETN*

# RECOMMENDATIONS

## 1. For the World Bank Group:



a. **Increase Transparency and Accountability:** The Bank should demand complete transparency in the implementation of funded projects, including full disclosure of environmental and social impact assessments, as well as monitoring reports. For instance, the Environmental and Social Impact Study of the Taiba Ndiaye Wind Farm, conducted by a Senegalese firm, is a 372-page document entirely in English, with no French version available online. This limits access to information, especially considering that communities may not be adequately equipped to fully understand all project-related issues. Additionally, local-scale meetings are often restricted (only leaders are invited), and not all sensitive information is necessarily shared.



b. **Assess Long-Term Impacts:** The World Bank should require long-term impact assessments of its projects, monitoring their performance beyond the initial financing phase to ensure long-term sustainability and continued benefits for local communities.



c. **Review ESS Standards:** The World Bank should revise its environmental and social standards to align them with international best practices, ensuring better protection of the environment and the rights of communities.



d. **Independent Monitoring:** Establish an independent monitoring mechanism to assess project compliance with World Bank standards and national regulations. If discrepancies from World Bank standards are identified, demand that corrective measures be implemented to address these issues.

## 2. For the Senegalese Government:



a. **Strengthen Environmental and Social Regulations:** The government should review and strengthen environmental and social laws and regulations to ensure that development projects adhere to international standards in sustainability, environmental protection, and the rights of local communities.



b. **Facilitate Community Participation:** Promote active participation of local communities in the planning, implementation, and monitoring of projects, ensuring that their concerns are addressed from the outset of the process with the support of administrative authorities and local governments.



c. **Enhance Transparency and Accountability:** Establish independent monitoring and evaluation mechanisms to ensure that projects adhere to environmental, social, and ethical standards, and ensure that the results are accessible to the public.

### 3. For PETN:



- a. **Enhance Engagement with Local Communities:** The company should establish an open and transparent dialogue with local communities, ensuring that they are informed, consulted, and involved in all phases of the project. The recommendations from various stakeholders, including locating the company's headquarters in Taïba Ndiaye and setting up and equipping a community radio station, could significantly contribute to strengthening the company's proximity to the communities. While it has been mentioned that inter-village and multi-stakeholder consultation committees have been established, many issues related to relaying information to the communities have been identified.



- b. **Improve CSR Policy and Impact Mitigation:** Giving greater consideration to the needs of communities and vulnerable groups such as women could enable the company to implement a more effective CSR policy that genuinely benefits the communities of Taïba Ndiaye. A dedicated office for gender programs could be established. The establishment of boreholes for irrigation support, which was a commitment of the company, has also been a strong demand from the affected farmers. The company should also establish a permanent office for the collection of complaints and grievance resolution, such as concerns related to wind turbine noise, in order to implement necessary mitigation measures.




- c. **Ensure Fair Compensation:** Ensure that communities affected by the project receive fair compensation for the loss of their land and livelihoods, following international standards.



- d. **Promote Local Job Creation:** Prioritise the employment of local labour in the maintenance of the wind farm. Most communities have noted the company's failure to meet commitments regarding the recruitment of local youth at the outset of the project. For communities, this was one of the main motivations for hosting the project.

## CONCLUSION

 *The Taïba Ndiaye wind farm may be a sustainable development project. However, just as it aims to protect the environment, it must also ensure respect for the rights and safeguard the dignity of the human beings who depend on it.*  
Mbene Diop, farmer

**W**hile it is important to recognise that the Taïba Ndiaye is essential in providing a growing share of renewable energy to the national energy mix, rightful compensation for project-affected communities must be provided for by the PETN and the WBG as the main proponents and financiers of the project. PETN is considered a pioneer in its CSR efforts in the locality but it can do better. In order to transform PETN's efforts into a model of sustainable development and just transition, it becomes essential to strengthen community participation and ownership. This implies establishing mechanisms for regular and transparent consultations, as well as a systematic review of compensation and livelihood restoration policies. The next steps for PETN and the WBG involve fulfilling commitments to support irrigation and agricultural livelihoods, while improving CSR governance by setting up a solid mechanism for community involvement. The company is also expected to strengthen initiatives aimed at reducing socio-economic and environmental impacts of the wind project. Locating the company's head office in Taïba Ndiaye could also help enhance transparency and communication between the company and communities.



## **GLOSSARY OF TERMS**

CPF	Country Partnership Framework
CSR	Corporate Social Responsibility
DFIs	Development Finance Institutions
EHS	Environmental and Health Standards
ESF	Environmental and Social Framework
ESIA	Environmental and Social Impact Assessment
ESS	Environmental and Social Standards
GHG	Greenhouse Gases
IDA	International Development Agency
IFC	International Finance Corporation
IPP	Independent Power Producer
FDI	Foreign Direct Investments
JETP	Just Energy Transition Partnership
MDBs	Multilateral Development Banks
MIGA	Multilateral Investment Guarantee Agency
NDCs	Nationally Determined Contributions
OPIC	Overseas Private Investment Corporation
PAPs	Project Affected Persons
PETN	Parc Éolien Taïba N'Diaye
PS	Performance Standards
SFI	Sustainable Farming Incentive
USAID	United States Agency for International Development
WBG	World Bank Group

## ENDNOTES

- 1 LSD is a non-governmental organisation specialised in monitoring International Financial Institutions (IFIs) and Multilateral Development Banks (MDBs). Its work focuses on the African Development Bank (AfDB), with the main mission of advocating and ensuring compliance with the Bank's environmental and social safeguard policies in its operations. LSD is also leading a dynamic campaign for climate justice and energy transition in Africa, alongside women, who are most vulnerable to the effects of climate change.
- 2 Recourse is a non-profit organization based in the Netherlands that influences the investment community, financial flows and governments to ensure inclusive, socially equitable, environmentally friendly and pro-poor development. Recourse works to redirect international financial flows away from polluting and harmful investments, towards greener, more inclusive development. Recourse also supports communities in their struggle to have their rights respected and their voices heard, while holding financial institutions accountable for harm caused to people and the environment.
- 3 World Bank Group (2021). Climate Change Action Plan (CCAP). Retrieved from: <https://openknowledge.worldbank.org/handle/10986/35799>
- 4 World Bank Group (6 November 2021). The World Bank Group's Approach to Paris Alignment. Retrieved from: <https://www.worldbank.org/en/events/2021/11/05/the-world-bank-group-s-approach-to-paris-alignment>
- 5 Recourse (April 2023). Harnessing Public Finance Potential to Create Renewable Energy Economies. Retrieved from: [https://re-course.org/wp-content/uploads/2023/03/Harnessing-Public-Finance-Potential-to-Create-RE-Economies\\_FINAL.pdf](https://re-course.org/wp-content/uploads/2023/03/Harnessing-Public-Finance-Potential-to-Create-RE-Economies_FINAL.pdf)
- 6 NS Energy (n.d.). Taiba N'Diaye Wind Farm. Retrieved from: <https://www.nsenenergybusiness.com/projects/taiba-ndiaye-wind-farm-senegal/#>
- 7 Multilateral Investment Guarantee Agency (6 April 2017). Environmental and Social Review Summary - Taiba N'Diaye Wind Farm. Retrieved from: [https://www.miga.org/sites/default/files/2018-10/ESRSLekeleSenegal\\_Final\\_Revised\\_22May2017.pdf](https://www.miga.org/sites/default/files/2018-10/ESRSLekeleSenegal_Final_Revised_22May2017.pdf)
- 8 Presidency of Senegal (2013). Emerging Senegal. Retrieved from: <https://www.presidence.sn/en/pse/emerging-senegal>
- 9 FONSI (2020). Kael et Kahone Solaire : Démarrage de la construction des deux centrales solaires. Retrieved from: <https://www.fonsi.org/fr/articles/16-03-2020/kael-et-kahone-solaire-demarrage-de-la-construction-des-deux-centrales-solaires>
- 10 Senelec (2021). 2021 Annual Report. Retrieved from: <https://www.senelec.sn/assets/uploads/ras2021.pdf>
- 11 Republic of Senegal (June 2022). Nationally Determined Contributions of Senegal. Retrieved from: <https://unfccc.int/sites/default/files/NDC/2022-06/CDNSenegal%20approuv%C3%A9e-pdf-.pdf>
- 12 International Monetary Fund (12 July 2023). Senegal's Growth Prospects are Strong. Retrieved from: <https://www.imf.org/en/News/Articles/2023/07/12/cf-senegals-growth-prospects-are-strong>
- 13 EURACTIV (23 June 2023). Senegal seals €2.5bn green energy deal with EU, UK and Canada. Retrieved from: <https://www.euractiv.com/section/energy-environment/news/senegal-seals-e2-5bn-green-energy-deal-with-eu-uk-and-canada/>
- 14 Emmanuel Macron's Twitter Broadcast (2023). Retrieved from: <https://twitter.com/i/broadcasts/1YqxoAyWpraGv>
- 15 World Bank (February 2020). Country Partnership Framework for the Republic of Senegal for the Period FY20-FY24. Retrieved from: <https://elibrary.worldbank.org/doi/abs/10.1596/33439#:~:text=This%20five%2Dyear%20Country%20Partnership,middle%2Dincome%20status%20by%202035>.
- 16 World Bank (2017). Tobene Oil-Fired Power Plant. Retrieved from: <https://ppi.worldbank.org/en/snapshots/project/tobene-oil-fired-power-plant-9168>
- 17 Energy Capital & Power (12 July 2022). Senegal's Largest Gas-to-Power Plant to be Launched Late 2022. Retrieved from: <https://energycapitalpower.com/senegal-gas-power-plant-to-launch-2022/#:~:text=Senegalese%20energy%20company%2C%20West%20African,African%20nation's%20fields%20in%202023>.
- 18 International Finance Corporation (2019). Gas-to-power Advisory Services (SSA). Retrieved from: <https://disclosures.ifc.org/project-detail/AS/603023/gas-to-power-ssa>
- 19 International Development Association (31 May 2017). World Bank to help Senegal negotiate

- complex oil and gas projects. Retrieved from: <https://www.worldbank.org/en/news/press-release/2017/05/31/world-bank-to-help-senegal-negotiate-complex-oil-gas-projects>
- 20 Energy Capital & Power (2 September 2021). Senegal's Taiba N'Diaye Wind Farm Blows in a New Wave of Green Investment for the MSGBC Region. Retrieved from: <https://energycapitalpower.com/senegal-taiba-ndiaye-wind-farm-blows-in-a-new-wave-of-green-investment-for-the-msgbc-region/>
- 21 American Capital Energy & Infrastructure (8 June 2015). American Capital Energy & Infrastructure Announces Commitment to Invest in West Africa's Largest Wind Farm. Retrieved from: <https://www.prnewswire.com/in/news-releases/american-capital-energy--infrastructure-announces-commitment-to-invest-in-west-africas-largest-wind-farm-506499991.html>
- 22 Lekela (n.d.). Senegal, Parc Eolien Taiba N'Diaye. Retrieved from: <https://lekela.com/projects/senegal-taiba-ndiaye/#:~:text=It%20will%20provide%20a%2015.grid%20system%20operated%20by%20Senelec.>
- 23 Global Trade Alert (16 September 2016). The Overseas Private Investment Corporation provides funding to Projet Eolien Taiba Ndiaye Sa. Retrieved from: <https://www.globaltradealert.org/intervention/95937/financial-assistance-in-foreign-market/united-states-of-america-the-overseas-private-investment-corporation-provides-funding-to-projet-eolien-taiba-ndiaye-sa>
- 24 Multilateral Investment Guarantee Agency (4 December 2019). Supporting Women Entrepreneurs in Senegal. Retrieved from: [https://www.miga.org/slideshow/supporting-women-entrepreneurs-senegal?cid=MIG\\_TT\\_Miga\\_EN\\_EXT](https://www.miga.org/slideshow/supporting-women-entrepreneurs-senegal?cid=MIG_TT_Miga_EN_EXT)
- 25 Multilateral Investment Guarantee Agency (6 April 2017). Environmental and Social Review Summary - Taiba N'Diaye Wind Farm. Retrieved from: [https://www.miga.org/sites/default/files/2018-10/ESRSLekeLaSenegal\\_Final\\_Revised\\_22May2017.pdf](https://www.miga.org/sites/default/files/2018-10/ESRSLekeLaSenegal_Final_Revised_22May2017.pdf)
- 26 PS7 (Indigenous peoples) is not relevant for this project since there are no indigenous communities in Taiba Ndiaye
- 27 World Bank Group (2007). Environmental, Health and Safety Guidelines. Retrieved from: <https://documents1.worldbank.org/curated/en/157871484635724258/pdf/112110-WP-Final-General-EHS-Guidelines.pdf>
- 28 World Bank Group (2015). Environmental, Health and Safety Guidelines for Wind Energy. Retrieved from: <https://documents1.worldbank.org/curated/en/498831479463882556/pdf/110346-WP-FINAL-Aug-2015-Wind-Energy-EHS-Guideline-PUBLIC.pdf>
- 29 Laterite as a term has been applied indiscriminately in tropical highway engineering to any soil displaying a red coloration.
- 30 Information from an interview with CSR. Documentation was not provided even though requested by authors.
- 31 Ibid.
- 32 Ibid.
- 33 Information from the company and local authorities, confirmed by the communities who say they have received visits from company representatives in villages affected by this initiative.
- 34 Agro-silvo-pastoralism is a production activity that combines pastoralism (extensive livestock husbandry on pastures) and agriculture in a partially wooded environment. This activity closely combines these three modes of land use, and might even articulate them on a single site.
- 35 Lekela-2022 Annual report-Communal Investment Plan-TAÏBA NDIAYE WIND FARM



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