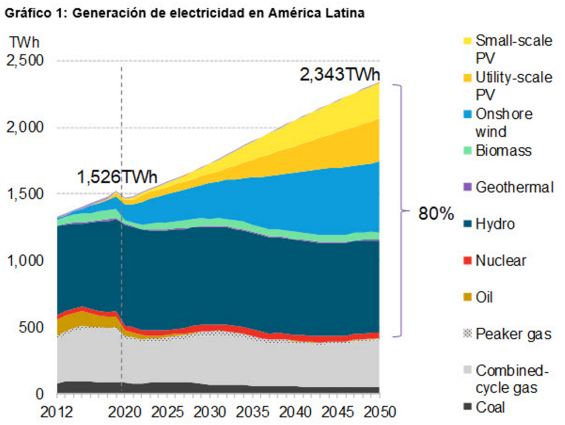
Global Energy Monitor

REPORT: MARCH 2022

Unjust Transition: Environmental Justice Issues surrounding Wind Energy in Latin America

Introduction

Despite the pandemic, the Latin American region broke records in 2020 by installing 4.673 GW of new capacity in wind power. Brazil, Chile, Argentina, and Mexico continue leading the way in wind energy development in the region. As more Latin American countries commit to carbon neutrality and a clean energy transition, the new capacity installed per year is projected to continue breaking records. By 2050, the New Energy Outlook report indicates that wind and solar energy will represent more than half of the energy mix in Latin America, out of which onshore wind farms are projected to provide 140 GW.



Graph 1: Electricity Generation in Latin America
Source: BloombergNEF

The development of wind energy can bring positive effects to the Latin American region besides reducing greenhouse gas emissions and other forms of pollution. Among these benefits, wind farms' development, construction, and operation create more jobs, satisfy the increasing energy demand, and promote economic development. However, there are also potential negative effects that academia and the government sector have mostly ignored. These negative effects arise due to malpractices in the energy industry and government administration, impacting the local and indigenous communities where the wind farms are placed. There are several cases in Mexico, Chile, and Colombia that exemplify these issues.

Environmental justice issues

a. An Inadequate procedure of consultation and citizen participation

According to Convention no. 169 of the International Labour Organization and the United Nations Declaration on the Rights of Indigenous Peoples (UNDRIP), indigenous communities have to give their Free, Prior, and Informed Consent (FPIC) before governments can approve projects that will affect their territories and natural resources. In order to receive the FPIC, the government and companies involved must engage in a procedure of consultation to inform the indigenous communities about the project and its impacts. Despite the fact that consultation and FPIC are legally mandatory, there are still issues concerning the way consultations and citizen engagement processes are managed when applied to wind energy projects.

The most evident problem arises when the government and wind energy companies sign contracts before the consultation. This scenario directly violates the *Prior* element of FPIC, as the consultation takes place after the project has already been approved. One example of this issue is Eólica del Sur Wind Farm in Oaxaca, Mexico, whose contracts were signed between 2012 and 2013, while the consultation with the indigenous communities took place between 2015 and 2016. Similarly, the community members of El Agro complained about the lack of adequate consultation concerning Negrete Wind Farm in Biobío, Chile. A community member testified they were informed about the project's execution after the company had received all necessary permits. There are also cases where the companies did not engage in any consultation, like Cansahacab Wind Farm in Yucatan, Mexico, where the Supreme Court canceled the construction permits and ordered the company Fuerza Energía Limpia de Yucatán to consult with the Maya communities.

Another issue is the unclear or unfair rules applied to consultation. The Colombian government had to suspend the execution of a power transmission line—part of Jepirachi Wind Farm—due to complaints about the consultation process with the Wayúu people, an indigenous community in La Guajira, Colombia. INDEPAZ identified several irregularities in the procedure, such as the fragmentation of consultation, which was pursued with each of the Wayúu groups separately and caused divisions among the greater Wayúu community. Moreover, there was no clarity regarding the need for consultation after modifying or expanding the original project. Comparably in Mexico, the consultation procedure of Eólica del Sur Wind Farm was flawed. Sessions began 2 or 3 hours later than the proposed starting hour. Additionally, the dialogue was limited to a Q&A after a presentation, which created a hierarchical and linear structure of events that exacerbated the community's mistrust.

Even in cases where consultation rules are clear, the information about energy projects is usually limited and hardly accessible, creating a significant power disparity between the energy companies and the local communities. This problem directly violates the *Informed* element of FPIC. In San Dionisio del Mar, Oaxaca, Mareña Renovables, a wind energy company, ignored the Ikojt community's multiple requests for information, which became the foundation for the mistrust and conflict that led to the occupation of a municipal building. The community El Ciruelo Sur is also in an active campaign against the construction of wind farms in Los Angeles, Chile. Their main point of contention is that they were not informed

about these projects, and their preoccupations concerning the installation were not resolved. The lack of access to information is also caused by the failure to provide documents and hold the consultation in the community's native language.

Image 1: Protest Against Campo Lindo Wind Farm in Los Angeles, Chile
Source: Comunidad El Ciruelo Sur Youtube Account

Inadequate consultation and citizen participation have inevitably led to conflicts, and there are several cases where governments have confronted these conflicts through police repression and violence. Concerning Eolica del Sur Wind Farm, the Zapotec leaders had to request precautionary protective measures from the Inter-American Commission on Human Rights, as the allies of the local politicians and the company had threatened them because of their campaigning against the wind farm. Similarly, the Zapotec community in San Blas Atempa denounced the violence exerted by the Mexican federal authorities, who were forcing them to leave their territories to construct the Granja Sedena Wind Farm, even though the wind energy company and the government did not consult the community. They even blocked a road as a form of protest due to the lack of attention to their demands. The inadequate consultation process and citizen engagement in addition to the repression suggest the aforementioned wind energy projects would fit the definition of "green grabbing," meaning the appropriation of land and resources for environmental ends. Green grabbing is dangerous as it replicates neocolonial and exploitative practices that are hidden behind an environmentalist narrative, which conceals the potential violation of local communities' rights.

b. Environmental Impacts

One of the main concerns that local and indigenous communities have concerning wind farms is their impacts on their environment, like groundwater contamination. On Chiloé Island, Chile, dynamite used during construction of the San Pedro Wind Farm caused severe damage to the local peat bogs, which are a vital source of water for the region and are even more important considering the zone's water crisis. Five other potential wind farm projects are planned to be constructed in the same zone, putting a larger portion of the bogland at risk. Meanwhile, the construction of Tizimin Wind Farm in Mexico used machinery to extract stone, which was prohibited in the region due to the possible effect on groundwater.

Moreover, because there is no information about the weight of the wind farm's structure, it was not possible to analyze if the weight could cause the introduction of saline water into the groundwater.

Local communities tend to worry about the effects on local fauna as well. The community of Mar Brava in Chile complained that the installation of Chiloé Wind Farm would hurt the birds and the Islotes de Puñihuil, a natural monument. Moreover, they felt that the mitigation measures of the environmental impacts were useless, as the impacts would be irreversible. For instance, instead of monitoring the local fauna two years after the installation --once the damage had already been done --, they argued that the project should be stopped altogether to avoid any potential harm. In Mexico, the Zapotec community in the Isthmus of Tehuantepec complained that the Tizimin Wind Farm could cause the death of migratory birds, cattle, and bats.

Another related impact is on landscape and local production activities like agriculture and tourism. Community members of Mar Brava claimed that Chiloé Wind Farm would negatively impact the touristic potential of the area due to the change in the landscape caused by the wind turbines' presence, which is visible within a 30-kilometer radius. In Los Angeles, Chile, a community member also complained that the four wind farm projects that were going to be installed in the area would negatively impact beekeeping and the local economy. In the Isthmus of Tehuantepec, Mexico, indigenous communities were also worried about potential soil degradation, which could affect local agriculture.

Some communities in Mexico and Chile have also complained about noise contamination provoked by the sound of wind turbines. Negrete Wind Farm is located 300 meters away from the community of El Agro, Chile. El Agro's neighbors pointed out the wind farm's sounds do not let them sleep comfortably and cause headaches. The indigenous communities in the Isthmus of Tehuantepec also protested against the wind farms due to their noise, which perturbed local residents and the region's bird population. However, it is important to point out that noise contamination is rarely the sole reason a community opposes a wind farm.

All of these complaints raised by local communities are consistent with scientific findings that indicate wind farms can potentially affect groundwater, impact local fauna like birds and bats, cause visual contamination, degrade soil, and produce noise pollution.

An important factor that has been sometimes ignored is the cumulative environmental impacts of wind farms when located in the same region. In Yucatan, Mexico, there are five operational wind farms and twenty-four in development. However, the association Articulación Yucatán pointed out that there has not been any regional environmental assessment to analyze all these wind farms' compounded environmental and social impacts on the territory. This problem is particularly worrying as many wind farms are planned to be placed in highly biodiverse areas. Comparably, on Chiloé Island, there is one operational wind farm and five in development, which causes preoccupation among the population as they are planned to be placed in a bogland. The first wind farm, Chiloé Wind Farm, caused damage to the area, and the addition of four or five wind farms is projected to have a synergistic effect that will degrade the ecosystem even further.

c. Disparities in Benefits

The profits, energy, and overall socioeconomic impacts of wind farms in Latin America are not evenly distributed across companies, governments, and the local communities. The benefits offered by corporations to local communities are not always what people expected. For instance, companies putting conditions on the benefits they promise to communities has been present in several wind farm cases which restricts the agency of the local communities. In Los Ángeles, Chile, community members were not in favor of having to apply for the benefits to receive compensation. Instead, the community wanted to receive the funds directly from the company. In Colombia, Jepirachi Wind Farm offered a single payment of 25 million Colombian pesos as land-usage compensation, which would be around 1,200,000 USD. However, this single payment was conditional on the execution of an economically productive project in the community, taking away the community's liberty to administer the money independently.

Another irregularity present in the Jepirachi Wind Farm's business model is that they reported their compensation for land usage and environmental impacts as voluntary donations to the community. Through this method, the corporation created a false philanthropic facade when they were only fulfilling the minimum requirements. There are also cases, like Negrete Wind Farm, in Biobio, Chile, where the corporation fails altogether to provide the compensations they promised to provide.

Wind energy companies also promise jobs for local community members. However, the reality behind these jobs is that the majority are limited and temporary. In the case of Negrete Wind Farm, they were only able to provide 65 jobs that lasted for 98 days, which was the duration of the construction phase. Meanwhile, only 38 jobs were created and sustained during the construction phase of the Jepirachi Wind Farm.

The benefits offered by wind energy companies could also increase inequality. In La Ventosa, Oaxaca, community members complained that the only people that received benefits from the companies operating in the area were the community members that own land where the wind farms are placed. The discrimination in the distribution of benefits creates inequality between the landowners in the community and those not being compensated for land usage.

The price increase of basic goods in La Ventosa may have also increased inequality. The price increases are supposedly linked to the community's rise in wealth due to the installation of a wind farm. The price increase in basic goods affects low-income communities the most, widening income inequality. Meanwhile, in Negrete Wind Farm, Chile, community members have complained about the devaluation of their territories due to the wind farms' presence. The devaluation of land exacerbates the poverty and precarious conditions of these communities, thus increasing inequality.

It is crucial to consider how the energy produced by these wind farms is distributed as well. Jepirachi Wind Farm, one of the two operational wind farms in Colombia, does not provide energy to the local communities. Instead, they sell it to the multinational Coca-Cola FEMSA so they can power their seven factories in Colombia. In Mexico, Piedra Larga Wind Farm exclusively provides electricity to Grupo Bimbo, which will cover 100% of its operations in

Mexico and 50% of its worldwide production. While local and indigenous communities are being directly affected, these wind energy companies take advantage of the energy produced and give them to factories, extractive companies, and multinational corporations. This process represents an extractivist dynamic between the communities and the companies which increases inequality and ultimately leaves the communities empty-handed.

Conclusions and recommendations

Despite wind energy's potential to contribute to a low-carbon energy future, there can be negative consequences and environmental justice issues associated with its development. These issues disproportionately affect low-income, indigenous communities in Latin America, who have been systematically and historically excluded from participating in the decision-making processes concerning their own lands.

The Zapotec (Mexico), Wayúu (Colombia), Ikojt (Mexico), and rural communities in Chile are among many groups throughout Latin America who face police repression, environmental impacts, and unjust benefits while multinational companies profit from energy production on their lands. The pursuit of a clean energy transition should not be at the expense of the rights of local communities. Otherwise, the massification of renewable energy will continue to repeat the same exploitative and unjust practices of the fossil fuel industry. As the clean energy transition speeds up, there will surely be more violations against local communities' rights unless governments rectify this situation.

A few policies and considerations to address these problems are:

- Prioritize the development of Community Renewable Wind Energy Projects: locally owned and locally sited wind energy would allow community owners to have some form of control over the wind farm's management through a co-op or small business. This type of energy development helps minimize environmental, social, and economic impacts, as the community controls the operations based on their knowledge of the local characteristics and vulnerabilities. It would also maximize the benefits received by communities as it allows for a more equitable distribution of profits and promotes the emancipation of local communities while allowing them to avoid being dependent on a multinational corporation.
- Guarantee an inclusive and legally binding consultation with indigenous communities: all Latin American countries must strengthen their legal framework surrounding consultation procedures, making them easier to follow for the indigenous communities. These procedures must also guarantee inclusivity by ensuring all relevant economic and environmental information is publicly available with

translations available when appropriate regarding the negative impacts of each wind farm and the potential reparations needed. Governments should also establish what kind of modifications or expansions require additional consultation. All consultations must be culturally appropriate, guaranteeing translation services at all times and following an organized timetable for meetings.

- Strengthen the legal framework of citizen participation: non-indigenous and indigenous communities should be able to participate in the process of development of wind farms in their territories to make sure all significant damages are avoided and the compensations are fair and appropriate. A first step could be to ratify the Regional Agreement on Access to Information, Public Participation, and Justice in Environmental Matters in Latin America and the Caribbean, also known as the Escazú Agreement. This agreement is grounded in the promotion of access to information, citizen participation, and justice concerning environmental matters. The ratification would help promote international cooperation to transform the three pillars into public policy in each Latin American country.
- Conduct a Strategic environmental assessment (SEA) of the national energy policy and design Regional Spatial and Economic Strategies (RSES): identify the current national energy policy's environmental, economic, and social impacts and continue to develop it accounting for those impacts. Through that assessment, it would be possible to detect any synergistic and accumulative effects of renewable energy development in each region. Then, through the RSES, it would be possible to identify the most suitable areas for renewable energy development in a way that maximizes the socio-economic benefits for all regions.

Background on Global Energy Monitor

Global Energy Monitor (GEM) is a nonprofit research organization developing information on fossil fuel and renewable energy projects worldwide. GEM data is used by the International Energy Agency (IEA), OECD Environment Directorate, UN Environment Programme, U.S. Treasury Department, World Bank, Economist Intelligence Unit, and Bloomberg New Energy Finance. GEM data is also licensed by Bloomberg LP and UBS Evidence Lab.

Background on the Latin America Energy Portal

The Latin America Energy Portal provides a region-wide snapshot of energy infrastructure in Latin America and the Caribbean, through interactive maps, summary data, and hundreds of wiki pages in Spanish, Portuguese, and English. The heart of the portal is a trilingual tracker map that offers easy access to GEM's research on specific projects throughout the region: oil and gas pipelines, oil and gas extraction sites, coal- and gas-fired power plants, LNG terminals, steel plants, coal mines, and more.

Media Contacts

Kiara Ordonez Olazabal
GEM Intern
kiara.ordonez@columbia.edu
646-934-9437

Gregor Clark
Latin America Researcher
gregor.clark@globalenergymonitor.org
802-458-5579