

Wind Conflicts In The Isthmus Of Tehuantepec

The Role of Ownership and Decision-Making Models in Indigenous Resistance to Wind Projects in Southern Mexico¹

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Abstract

Wind energy projects in the Pacific coast of the Isthmus of Tehuantepec (Oaxaca, Mexico) are facing an increasing local resistance. This region, primarily inhabited by indigenous peoples whose land rights are recognised collectively in so-called Ejidos, is gifted with one of the best wind resources in the world. Projects to install more than 2,300 MW of wind energy capacity in the region within the next 4 years have already been approved, and more are expected to be approved in the coming years, mainly within the framework of self-supplying contracts in which primarily European (and

1 This article is a shortened version of an article presented by the author at the 7th World Wind Energy Conference which took place in Kingston, Canada on the 24-26 June 2008. The article has not been updated since then. The most important current news is that right now there is an escalation of tension in La Venta with incidents of violence breaking out, and a decision of the Ejido's assembly to stop the works, which has not been respected by the developers (CEMEX in cooperation with Acciona and other powerful smaller players). There are already calls for the special commission in charge of indigenous affairs at the parliament to intervene, but these calls are extremely unlikely to be listened to. The situation looks set to worsen in the near future.

in particular Spanish) companies act as providers and a number of Mexican and international companies as receivers of wind power. However, a growing number of farmers and communities in the region and of environmental and human rights NGOs oppose these projects. They argue that the wind farm projects were drawn and are being executed without local consultation or involvement, and that the companies have provided incomplete and/or incorrect information to land owners in order to obtain abusive land lease contracts. A hundred and eighty legal demands to nullify the land lease contracts have been presented to court by land owners, as well as a case against the former local authority of the Ejido where the only operating wind farm is installed. The creation of a Law for the Use of Renewable Energy Sources and of a National Wind Energy Plan provide an opportunity to address the structural reasons underlying this conflict and to establish a framework where local communities can make use of their wind resource. This would foster a conflict-free and community-oriented development of the Mexican wind resource.

One Introduction

This paper explores the conflicts that are taking place around wind projects in this Isthmus of Tehuantepec, with the objective of explaining the causes that motivate them and of deriving from them possible solutions that allow a positive development of wind energy in Tehuantepec and Mexico.

After explaining the socio-economic, legal and entrepreneurial context in which these projects are taking place, the paper explores the different dimensions of the conflict around them. Subsequently the local organisational processes of resistance against wind energy projects are briefly described. This is followed by an analysis of the possibilities opened by the (not yet approved) initiative for a Law for the Use of Renewable Energy Sources as well as by the National Wind Energy Plan which is being drafted right now, with the aim of exploring possible solutions to the conflict. The paper ends with a series of conclusions and recommendations referred both to the case of Tehuantepec and to the development of wind energy in general.

Two Context

2.1 Geographic and Socio-Economic Context

The Pacific coast of the Isthmus of Tehuantepec, in the Mexican state of Oaxaca, has one of the best wind resources in the world. According to Antonio Pérez Rodríguez, Director for Energy and Environment, there are four different estimations of the total wind energy potential in the area. The most optimistic one goes up to 40,000 MW, but there is a consensus on the potential being at least 10,000 MW, probably larger.

This region is inhabited mainly by five different indigenous peoples, the most numerous of which are Zapotecos and Huaves, whose territorial rights are recognised, and in almost all cases collectively organised in so-called ejidos and communities, Mexican legal figures that combine individual land use with collective property. The collective character of some ejidos and communities has been (or is being) modified through the plans PROCEDE and PROCECOM, which give more emphasis to private than to common property; however, not all ejidos and communities have applied these plans.

There are two areas (Juchitán and Unión Hidalgo) where ejidos were not established, but according to a Presidential Resolution of 1964, the use of land is communal, even if the plots of land are distributed. This Resolution was never translated in the formation of ejidos. A first attempt to do so in the 1970s was aborted after the political disappearance of Víctor Pineda Henestrosa, the leader in the struggle for collective territorial rights. A second attempt to establish an ejido in Unión Hidalgo was abandoned in 2002 due to the lack of funds and the high cost of the process and the lawyers.

This is an agricultural region with high-quality land and rich water resources. It is endowed with several important rivers, such as Ostuta, Corte, Tehuantepec and Los Perros, and with the dam Benito Juárez which provides irrigation to 23,000 hectares. There is also an

underground aquifer at a depth of between 6 and 12 meters, but in some places it already emerges at 1,5 meters of depth. It was a sugar-producing region until the government sugar policies changed. Today the main activities are milk production and agriculture. In the Huave area a large proportion of the population works also as artisanal fishers.

Bettina Cruz Velázquez, specialist in territorial planning and regional development and member of the Assembly in Defence of the Land and Territory of Juchitán, declares that farmers produce three harvests per year in irrigated land and two harvests in non-irrigated land. Farmers in the area feel that this agricultural wealth is not properly valued by the authorities in charge of wind energy programmes, which according to them argue that the land in the region has a low productivity and it should therefore be devoted to wind energy generation.

Carlos Vázquez, landless labourer from Unión Hidalgo, reports about the concern amongst sectors of the local population about the change of land use (from agricultural to industrial) required by wind energy projects. This change could have negative consequences in terms of access to irrigation water. The loss of irrigation water would bring serious consequences to the farmers and also to the landless labourers whose work depends on the irrigation.

Most of the population lives in poverty, but there is no hunger due to food production for self-supply. Bettina Cruz Velázquez explains that most of the population obtains income from the small-scale commercialisation of agricultural, husbandry or fishing production. The trade takes place either through intermediaries (for those who have more land), which tend to keep a large share of the profit, or directly in local markets in the whole Isthmus region and beyond, all the way to Guatemala. The direct commercialisation of excess production is often undertaken by women, who play a key social role in the indigenous cultures of this region.

Lack of access to education is a serious problem. Alejo Girón Carrasco, from the Grupo Solidario in La Venta, remarks that in his community, where the first operative wind farm was built, 76% of the population is illiterate. Amongst those who had the chance to receive formal education, most only completed the 3rd year of primary school. The situation is similar in all the affected communities. As a consequence, “caciquismo” (authoritarian social structures where the leader commands the community) is still alive: an important part of the population obeys the orders of local leaders, especially in communities where political parties have more influence due to the erosion of traditional practises of collective decision-making.

In this sense, it seems no coincidence that the first wind farm came into operation in the community of La Venta, which has lost much of its indigenous inheritance, where the Zapoteco language has been lost, and where political parties have a larger influence.

Huave communities confront specific problems in their fishing activities due to the pollution caused by a nearby refinery, and to persistent organic pollution that come all the way from North America, which affect their mangroves and reduce their income from fishing.

2.2

Legal Framework and Approved Projects

According to the Director for Energy and Environment at the Secretaría de Energía (Energy Ministry), renewable energy sources (RES) have entered Mexican energy policy mainly in pursuit of diversification objectives, not due to environmental or social objectives. Hence, there isn't yet a legal framework to promote their use, although this is expected to change with the approval of a Law for the Use of RES (see section 5). For the time being there are no specific laws or plans regarding wind energy. Within the next months the Secretaría de Energía will publish a draft National Wind Energy Plan.

In Mexico the Federal Electricity Commission (CFE) has a monopoly over the transmission network and over most power generation, due to Article 27 of the Mexican Constitution, which also mandates CFE to generate electricity at the lowest possible cost. This had important consequences for the development of wind energy, since the power generation cost is higher than with conventional sources.

Julio Valle Pereña, Director for Promotion of Investments in the Energy Sector, explains that the only operative wind farm (La Venta I and La Venta II, now integrated in one single farm) was built under the format of Financed Public Work, a turn-key contract in which a company builds the farm and delivers it against payment to CFE, which then becomes owner and operator of the wind farm. La Venta I, installed in 1994, consists of 5 small Vestas wind turbine generators (WTGs), adding to a bit more than 1,5 MW in total. La Venta II, inaugurated in March 2007, has 98 Gamesa WTGs of 850 kW each, and was built by a consortium built by Iberdrola and Gamesa.

The Law of Public Service of Electric Energy, approved in 1992, defines 5 cases in which the private sector is allowed to participate in

electricity generation.² This law applies to power and natural gas, which are therefore partially open sectors, albeit within a relatively narrow regulatory framework. The oil sector is still completely in the hands of the Mexican State, but the Calderón administration is currently trying (like previous administrations) to open it partially to private investment, a highly controversial proposal that has already been rejected in the past by wide sectors of the population and has generated an intense debate. This debate is relevant to the renewable energy sector, since the initiative for a Law for the Use of RES will not be discussed until the debate on hydrocarbons is resolved, and its outcomes are likely to influence the final contents of the law.

RES is one of the sectors that have been partially liberalised by the Law of Public Service of Electric Energy, and the one on which private investors have expressed most interest. Public administration has taken measures to resolve the existing obstacles to that investment, creating the conditions in which private projects can take place.

In conclusion, the current legal framework for wind energy projects in Mexico is not based on environmental or social objectives, but on economic criteria. Therefore, the protection of the rights and interests of the communities where the wind resource is located is not part of the existing legislation. However, private projects do interact with the public domain, primarily through the transmission infrastructure and because they place on the State the responsibility to install additional capacity to balance the natural fluctuations in wind power generation. This is particularly important for the Mexican transmission network, which is very complex and relatively unstable.

Three Conflicts in the Isthmus of Tehuantepec

This section describes the reasons that have moved members of the communities affected by wind farm projects to establish organisational processes to oppose them, generating a still embryonic but growing movement. Each subsection first reflects the reasons for opposition as

2 Unless otherwise stated, all the information included in the rest of subsection 2.2, except for the final concluding paragraph, was facilitated by Mr. Julio Valle Pereña.

they were described by members of these groups, followed by the responses given by the President of the Mexican Wind Energy Association (AMDEE) and by high-ranking public servants from the Secretaría de Energía.

3.1 Conflicts Regarding Participation and Decision-Making

The lack of local and community-based participation is one of the main reasons for the rejection of wind farms. Opposing groups argue that the projects were only discussed between companies and institutions, and the local communities were only seen as providers of land. Since wind is a local resource, and given the great impact that the installation of thousands of megawatt-class turbines will have in their region, they claim that the communities should be the ones deciding how and on which scale this resource should be used, and they should participate in equality of conditions with the other players.

Lack of transparency has also generated animosity in the affected communities. Alejo Girón Carrasco, from Grupo Solidario in La Venta, underlines that neither the companies nor the institutions have provided information about the profits expected from the planned investments. All opposing groups claim that land lease contracts have been signed without the farmers having access to their contents or their appendixes, in particular the one detailing the restrictions in the activities that farmers can undertake once the wind farm is in operation.

Alejo Girón Carrasco asserts that the Environmental Impact Assessment for the project La Venta II was never consulted with the community, although according to the law this document has to include a section on the social impact which has to be consulted with the local population, offering a period of time to question it and modify it. In this case, the assessment was not available to the local population until the works were almost finished.

Opposing groups also denounce the use of antidemocratic practices based on caciquismo (see section 2.1) in order to push projects through. Grupo Solidario from La Venta claims that the order to sign land lease contracts came directly from the Governor of Oaxaca, Ulises Ruiz, from the same political party (PRI) that dominated this community at that moment, and was blindly obeyed by a high percentage of the population. They denounce that in this community, as in all others, the caciques receive a commission for each land lease contract signed by local farmers.

Most groups opposed to the current projects would support other wind energy projects, but only if local communities participate in them and in decision-making around them, if they are carried through in a democratic manner, if there is economic justice, and if the negative impacts (in agricultural production, bird life, electromagnetic radiation etc) are minimised.

Eduardo Zenteno, President of the Mexican Wind Energy Association, claims that most communities are in favour of the projects and bases this claim on the 1,500 land lease contracts that have already been signed. He asserts that each company informs the farmers with which it has contracts, and that there is a dialogue with legitimate land owners. However, when asked whether he has met the local communities, he responds that this is not necessary, since it is enough to meet 10 leaders from the region, and that those who oppose the projects should be careful since Oaxaca is a violent region. This answer does suggest the use of caciquista practices in the wind projects of the region.

None of the three persons interviewed in the Secretaría de Energía denies that the projects were planned without participation from the affected communities. However, they claim that the relationship between companies and land owners is essentially positive, even though there are some voices against the projects.

Antonio Pérez Rodríguez, Director for Energy and Environment, when asked if it would be possible to involve the communities directly in the projects, replies that the problem to involve them beyond leasing the land is that the companies involved are large multinational corporations that do not want to share their profits. He went twice to talk to the communities, but his main source of information are the persons in charge of wind energy projects in the Government of Oaxaca.

Julio Valle Pereña, Director for Promotion of Investments in the Energy Sector, remarks that the region of Tehuantepec is politically unstable and very poor, which generates lack of confidence in politics amongst the communities. He claims that investors have agreed with the ejido councils and the community councils the payment to lease the land, the amount of land to be used, etc. He asserts that much of the noise is of political nature, and comes from people who are not even from the communities affected or the State of Oaxaca, but are external professional agitators.

This claim did not match my observations in the communities. All the persons from opposing groups that I met are members of the local indigenous communities and active participants in community life. Some of them had access to higher education, and this probably

contributes to their lack of docility and to their criticism to this kind of projects, but this does not mean that they are external to the communities. Most members of the opposing groups are small landholders or landless labourers who unfortunately didn't have access to medium or higher education (and often to any formal education at all), but have a rich community-based informal education and are aware of their rights and identity.

3.2 Economic Conflicts

Opposing groups denounce that the annual rent offered to land owners is an arbitrary amount and is insufficient to compensate the negative consequences that wind farms have on farmers and communities. According to Grupo Solidario from La Venta, some people signed land lease contracts for La Venta II for 1,500 Mexican pesos (around 150 USD) per hectare and year.³ Due to the pressure exerted by their group, later contracts paid 3,000 pesos per hectare and year. A new farm being built in La Venta pays 6,000 pesos per hectare and year, and in other areas apparently 12,000 pesos are being paid per hectare and year, an increase of 800% with respect to the first contracts, for areas with a similar wind resource. Apparently some contracts have been signed with offer to the land leasers a payment in relation to the power produced, but the details of these contracts have not been released. This variation in the terms of the contracts has led many people to conclude that the companies offer as little as possible for the land, and that those amounts have no relation with the value of the wind resource that they receive in exchange.

There is the perception that many projects operate through intermediaries (called "coyotes" by the local population) that keep an important part of the profits. Alejo Girón Carrasco from the Grupo Solidario offers the example of the private project being built in La Venta, which is making payments with cheques made by hand and signed by a physical person rather than a company.

According to Pedro Matus, agrarian engineer from Unión Hidalgo, milk producers earn about 40,000 pesos per hectare and year in irrigated areas, and extra income from selling cows and calves. Irrigated land costs around 100,000 pesos per hectare, but there is no stability in the prices. Once a land lease contract is signed, the land

3 The amounts mentioned refer to the rents that farmers will receive once the projects are in operation. Before the construction works start, farmers receive a much smaller rent, between 100 and 500 pesos (between 10 and 50 dollars) per hectare and year.

value is reduced to about 20,000 or 30,000 pesos per hectare. There is also the fear that underground aquifers, which in this coastal region are very close to the surface, will be affected by the foundations of the Wind Turbine Generators.

In theory, farming activities can continue once the works have been finalised, but in the case of La Venta II (the only operating wind farm) the roads and the lines of generators have been raised, affecting irrigation channels and the natural water flows to discharge rainwater. Therefore, there are plots with no access to irrigation and others that get flooded when it rains. This kind of planning of the works shows that the interests and needs of farmers have been ignored in the framework of the project. In addition, the contracts include an appendix with restrictions on the use of the land by the farmers, banning them from planting anything that grows beyond 2 meters, erecting any kind of building, opening wells, etc. In contrast, the contracts grant "usufructo" (unrestricted use rights) of the land to the companies.

According to an estimation made by Bettina Cruz Velázquez from the Assembly in Defence of the Land and Territory of Juchitán, the first private wind farm which is being built in La Venta is building foundations of approximately 30 x 30 meters, leaving approximately 80 meters between foundations. Therefore, a large percentage of the land sited in the line of generators will be rendered permanently unfit for agriculture. It is still unknown how much distance there will be between the lines of generators, since the company is still building the first line. Initially, the Spanish investors said that the lines would be placed at a distance of 500 meters and that there would be a total of 180 WTGs in the farm, but according to Alejo Girón Carrasco, discussions between the company and trade unions have revealed that the current plan is to install 300 WTGs in the farm. According to a report by the Mexican weekly *Proceso*, the Spanish family Mouriño plays a key role in this private project in La Venta. The report denounces that this family is making large profits in Mexico, especially in the energy sector, through contracts and procedures that not always follow the existing regulations. Juan Camilo Mouriño, son of the owner of the company GES that builds the private wind farm in La Venta, is Secretario de Gobernación (Federal Government Secretary) in the Calderón administration.

All these reasons have led several environmental and human rights NGOs to express criticism towards the wind energy projects in the Isthmus. Mass media recently published the position of Greenpeace; Cecilia Navarro, communication officer of Greenpeace Mexico, declared: "We do not want corporations to build wind farms that expel communities out of their land. This is not the development

that the country needs, we need to develop clean energies together with the communities that own the land, so that they are part of the wind farms, that they make the decisions.”⁴

Eduardo Zenteno, President of The Mexican Wind Energy Association, asserts that all companies involved are socially responsible, and that the protests are based on ignorance, sensationalism and bad faith. According to him, the protests come from a minority represented by leaders who pursue their own interests, but most of those who have signed land lease contracts are not complaining. He claims that all companies are paying in similar terms, that a fair rent is being paid for the use of the land, and that most companies have social plans for the communities that they are working with. He understands the economic trickle-down process that will be provoked by the projects to be a contribution to the development of the area, since it is providing an extra income to the farmers and improving their quality of life. He also underlines that the companies should not take over the role of the State towards the communities.

He estimates that farmers in the area have an average of 10 hectares and earn less than 10,000 pesos per month (i.e. 12,000 pesos per hectare and year), and that when the wind farms start operating they will receive around 120,000 pesos per year (12,000 per hectare) as an average rent. They will also receive compensations for the construction works (all farmers) and specific compensations to those whose land is affected by roads or lines of generators. He claims that many farmers have been receiving rent for 8 years (a reduced amount to reserve the right of land use), even though the works have not started yet, and that all companies are paying the rents in time.

He also claims that the value of land in the Isthmus is about 30,000 pesos per hectare, although the price depends on whether it is irrigated land. He says that most of the land has no irrigation and are not apt for agriculture due to the strong winds. He adds that members of the ejidos do not have ownership over their land, they only have the right of use, but no property, which belongs to the Mexican State.

Regarding the role of intermediaries, he claims that all companies that are part of the Mexican Wind Energy Association sign their contracts directly with land owners, and that only Acciona (a Spanish company that is not part of the Association) uses intermediaries. He says that the problems due to the elevation of roads and WTG lines in La Venta II are responsibility of the Federal Electricity Commission, not of the companies represented by the Mexican Wind Energy Association.

4 <http://estadis.eluniversal.com.mx/notas/512513.html>

He asserts that Greenpeace knows nothing about what is happening in Oaxaca, that its position is based on rumours and that it creates problems where there aren't any. He does not know what interests it pursues, but thinks that they are illegitimate interests.

Oscar Galindo Ríos, representative of Eoliotec and responsible within the Mexican Wind Energy Association for wind energy projects in Oaxaca, asserts that the protests come from those who have not signed the contracts, not from those who have signed them. He explains that it is important to consider the conditions in which the projects are being built. They pay a very high price for the transmission infrastructure, a growing price for the WTGs and there is no feed-in tariff to guarantee the economic viability. Only for the new transmission line they pay 145,000 USD per installed MW, in addition to the connection to CFE's substation, which costs an average of around 50,000 USD per installed MW. They depend completely on the power tariff charged by CFE: if there is a policy of reduction of power tariffs, all the self-supply projects would collapse. He claims that the projects are not very profitable, and that the fulfilment of many is still uncertain, since this is an area with high seismic activity, there is little infrastructure, a lack of cranes, and there is also lack of certainty with regards to access to land. All this means that Oaxacan wind farms are amongst the most expensive in the world, and their economic viability rests solely on the great wind resource in the Isthmus.

Antonio Pérez Rodríguez, Director for Energy and Environment in the Secretaría de Energía, claims that currently there are no economic problems with the ejido members who own the land. His colleagues in the Government of Oaxaca told him that this problem came up last year because the companies pay a lower price to reserve the land before the wind farms are built than once they are in operation; for this reason the farmers were complaining for the low rents, but the Oaxaca Government already explained that they will earn more when the projects start and the problem was solved. He adds that the trickle-down effect provoked by the wind farms has to reach the whole community in order to avoid that people migrate out of the area; therefore, there have to be training and employment possibilities for the local population.

Julio Valle Pereña, Director for Promotion of Investments in the Energy Sector, claims that the investors have been very open in terms of giving a fair rent for the land, but there were problems due to people who came to feed strange ideas to the communities and to claim that everyone gets paid and not only those who lease the land. Some people did not sign contracts and now protest for this reason. The Secretaría de Energía does not enter into the issue of land lease,

since it is outside of its competence. They are private contracts, governed by commercial laws, since there is no specific regulation in this respect. Land property is governed by a law that defines the property systems, but it does not regulate land lease contracts.

3.3 Cultural and Territorial Conflicts

Opposing groups claim that, due to the lack of justice towards the communities that own the wind resource, wind farms will contribute to migration processes to other parts of Mexico and other countries (particularly the USA), and to the influx of external professionals from urban centres. The result will be the disappearance of the existing indigenous cultures, a process that they perceive as territorial displacement by private companies (most of which are owned by foreign capital).

Alejo Girón Carrasco, from the Grupo Solidario in La Venta, also asserts that these projects have resulted in increased criminality. This is due to the fact that during the construction period, an unusual amount of money enters the community (due to compensations for the impact of the works, but also due to the employment and trade generated temporarily by them), but when the works are over only the money of the rents remains, which is insufficient to compensate the negative effects brought about by the wind farms. This intervention in the community destabilises the local economy and generates new problems. According to Grupo Solidario, their community used to be totally safe, but now there are increasingly frequent robberies.

According to the Human Rights Centre Tepeyac from Tehuantepec (an organisation created by the basis of the Catholic Church to defend the rights of the local population and in particular of indigenous people) and other opposing groups, the companies have distorted the information given to the indigenous population, in particular to those who do not speak Spanish. Their contracts were signed due to the intervention of translators who did not translate the contracts literally and withdrew or manipulated information on many of their contents. The contracts were not translated into the languages spoken by the communities, even though there is a law of language rights which determines that they have to, and even though Mexico has signed Convention 169 from the International Labour Organisation, which establishes that such translations must be provided. Article 7 of the same convention establishes that indigenous peoples have to participate in the formulation, implementation and evaluation of

national and regional development plans that might directly affect them.

Bettina Cruz Velázquez, member of the Zapoteca community and of the Assembly in Defence of the Land and Territory of Juchitán, underlines that the concept of development of the indigenous peoples in the region is based on their autonomy and capacity to decide collectively about their future. From her point of view, wind energy projects will erode both aspects, resulting in the loss of indigenous cultural identities that have remained alive in the Isthmus for the last 500 years despite the adverse conditions that they faced. She asserts that such a result is probably not casual but intentional, since the loss of identity is a necessary condition to undertake other kinds of mega-projects in the Isthmus, a region of great geo-strategic interest.

The fact that land lease contracts are valid for 30 years and automatically renewed for another 30 years is one of the main reasons for concern with regards to the future of this territory. The perception of opposing groups is that after 60 years there will be no local population left to claim back the land.

Eduardo Zenteno, President of AMDEE, asserts that all companies work with translators when there is a need to do so, and that the wind farms will bring a positive contribution to the development of the region.

3.4

Juridical Conflicts and Police Interventions

According to groups opposed to the current projects, there are around 180 legal demands to nullify the land lease contracts that have been presented by land owners against the investors, and it is expected that there will be more. All the demands (presented collectively and with the help of NGOs) have been accepted but not yet processed. The juridical argument behind them is that the companies withdrew and manipulated information and acted in a premeditated manner, using the disadvantaged position of farmers in order to obtain larger profits. Many cases are also based on the claim that companies did not provide the contract in indigenous language, and in the case of illiterate farmers, did not read the complete contract including the restrictions implied.

Four Organisational Processes in the Local Communities

There are already groups that reject this kind of wind farm projects in almost all affected communities of the Isthmus of Tehuantepec. These groups have conformed the Frente de Pueblos del Istmo en Defensa de la Tierra (Front of Peoples of the Isthmus in Defence of the Land/Earth).

According to Javier Balderas Castillo, from the Human Rights Centre Tepeyac, the organisational process of the communities is still at an early stage and it is not yet a mass movement, since there is not enough information in the communities about the negative impacts for the communities, and since the companies and the Mexican State have based their efforts in the corrupt leaders of some communities. They have demanded comprehensive information about the wind farm projects since 1995, but they never received the information. With the construction and operation of La Venta II people could see the real impacts, but the movement was not mature enough to confront the situation in an effective manner. It was even more difficult to confront the companies that have been signing land lease contracts since years. They assess that between 25,000 and 35,000 hectares have already been leased in negative conditions for the farmers and their communities.

Bettina Cruz Velázquez explains that the Assembly in Defence of the Land and the Territory of Juchitán was constituted on the basis of rejection to the wind projects planned in the community of Juchitán. Its members do not accept negotiations with the companies. The Assembly is not against wind power, but against the land grabbing by companies and against the impact that it will have on the life, culture and territory, due to the way in which the projects have been drawn. They are concerned about how all aspects of social relations will be transformed; for instance the work of women, who play a central role in the Zapoteca culture. These intangible values will be lost due to these projects. They demand complete information, followed by a participatory and democratic territorial planning that assures that the impact is minimised and the common benefit as large as possible.

The Assembly has few members, about 100 persons who signed contracts in Juchitán, but even though they are a minority, the

members are conscious and daring persons. Many people are not yet organised in the Assembly, since they are still waiting to see how the companies' projects will take shape, and if they see that the projects are similar to the one in La Venta, they will join the Assembly's efforts to stop them. In addition to people who signed contracts, there are people who did not sign, or who decided not to sign due to the work of the Assembly. They already paralysed projects in some areas of the Juchitán region. For instance, in El Cazadero the companies wanted access to 2,000 hectares, but the Ejido assembly decided not to approve the project.

There are other examples of the impact that the mobilisation has made in communities where no contracts have been signed yet. The ejidos of San Francisco del Mar and San Mateo del Mar, in the Huave region, rejected the wind projects in their respective assemblies. However, in San Dionisio del Mar (another Huave community) the project was approved due to tricks in the assembly, according to Leonel Gómez.

In La Venta most families have signed, only 10 families have not. Many people regret having signed, but they are resigned; they do not participate actively in the struggle due to fear of losing time and money in legal demands or mobilisations against farms that are already operational or under construction.

Both in La Venta and La Ventosa, the ejidos where most contracts have been signed and most advanced are the projects, the current Presidents of the Ejido Commissariat are critical towards or opposed to the wind farm projects.

The Front of Peoples of the Isthmus in Defence of the Land/Earth has established the following lines of work:

- Making the resistance visible: presenting their situation in Oaxaca City, Mexico City and other places. Looking for national and international allies. Linking this movement to similar movements struggling against large-scale hydropower projects, mining projects, etc.
- Legal work: taking forward the current court cases, and reaching other communities to help them use the legal channels to nullify the land grabbing. This work is limited by the lack of resources needed for lawyers to visit remote communities. They also don't have the resources needed to take farmers to La Venta so that they see the impacts of these projects. However, the work done so far has been effective, and they want to continue with it.
- Involving the communities in an awareness-raising process. Legal demands are documented and taken to the court, and

then remain in the court's hands. The Front thinks it is necessary that the affected communities also participate in organisational processes that consist of concrete actions.

Five The Law for the Use of Renewable Energy Sources and the National Wind Energy Plan

There is currently no specific legislation regulating the use of renewable energy sources (RES), nor a wind energy plan to give shape and coherence to the development of the Mexican wind resource. The initiative to create a specific law, presented by the Mexican Green Ecologist Party, and the draft National Wind Energy Plan, to be presented by the Secretaría de Energía, could resolve these problems. However, there is no guarantee that this will happen, since the contents of the National Wind Energy Plan are not yet public and the law, after being approved by the Mexican Congress in December 2005, has been stuck in the Senate for two and a half years, does not receive much attention from legislators, and apparently will not be debated until 2009. The Secretaría de Energía hopes that the approval of a National Wind Energy Plan (and of a Solar Plan and other plans for other RES) will stimulate the Senate to give more attention to the proposed law.

Six Conclusions and Recommendations

The conflicts around the wind farm projects in the Isthmus of Tehuantepec are a direct consequence of the unequal conditions in which the negotiations are taking place and the land lease contracts are being signed. This inequality of conditions is caused by different factors:

- The exclusion of the communities from planning and decision-making processes regarding wind energy projects
- The great difference in access to information (in particular about the value of the local wind resource and the profitability of projects) of the two parties to the land lease contracts
- The fact that in each community only one company operates, which indicates that the companies have divided the region in areas of influence in order to avoid competing with each other and therefore have a stronger position than the farmers in the negotiation of land lease contracts
- The existence of social and political structures based on caciquismo, maintained by the important deficits in access to education, and their apparent (conscious or unconscious) use by the institutions and companies in order to obtain land lease contracts

Taking into account these factors, the growth of conflicts around these wind energy projects is not surprising. The groups constituted in the affected communities conform the seed of a movement of opposition that could even paralyse part of the approved projects. A more serious consequence of these conflicts could be a negative change in the perception and evaluation of wind energy, both in the communities affected and in society in general, which could delay the necessary transition to renewable energy sources.

It is therefore necessary that the Mexican State takes measures to address the structural reasons underlying this conflict.

There are experiences which prove the viability and importance of local participation in wind energy projects. Denmark combined for many years a feed-in tariff with regulations which only allowed investment in wind turbines by families from the municipalities where they were to be installed, and from the surrounding municipalities, and limited the participation of each family to ensure a fair distribution of benefits. Since the profitability of the projects was guaranteed by the feed-in tariff, banks offered access to credit to all families that wanted to participate, including families without land or resources, since the turbines themselves acted as collateral for the loans. Wind energy grew at exponential rates while this regulatory framework was in place (resulting in technological development and the creation of contemporary Danish wind industry), since all communities wanted wind energy projects to take place in their territory. However, since the wind sector was liberalised, the attitude towards new projects radically changed. Currently new projects face local opposition, and for this reason in the last year virtually no new capacity has been installed. Denmark has lost its leadership in the sector.

Danish participative policies were based on specific social structures and practices and therefore cannot be automatically “exported” to other countries, but they can widen the perspective beyond the property and decision-making models under which the wind energy sector currently operates in Mexico. Experiences from all over the world demonstrate that local acceptance of wind energy depends on an active participation by the local communities, both in project planning and in the distribution of benefits. This is particularly important in regions that still have a high proportion of rural population and an important agricultural activity; evidently, it is not a critical factor for projects installed in inhabited areas. This situation is logical, since wind is essentially a rural resource and its use therefore has to benefit the communities where it occurs, as well as the common good.

The elaboration of a National Wind Energy Plan and the discussion on the Law for the Use of RES provide a perfect opportunity to establish a framework in which local communities can make use of their wind resource. Since the Secretaría de Energía is considering the inclusion of environmental and social externalities when calculating the cost of electricity production, the positive social impact of community-based property models could be taken into account, and such models could be favoured with respect to other models that do not benefit local communities in the same manner. In addition, the fact that Municipalities and Ejidos are entities of the State could facilitate their participation in electricity generation, since this would not contradict the essence of the constitutional mandate. This would foster a conflict-free and community-oriented development of the Mexican wind resource.

The interview with Eduardo Zenteno, President of the Mexican Wind Energy Association, indicates that the private sector does not favour this kind of changes. He expressed concern about the possibility that community-based experiences and policies, since in his opinion even if it is done with good intentions, this will complicate the development of wind energy in Mexico. He underlined that it makes no sense to make comparisons between the policies in Mexico and Europe since the situations are totally different in terms of regulation and in economic terms. He asserted that in Mexico it is not possible for farmers to be co-owners of wind energy projects.

While it is true that the conditions in Mexico are different than in Europe, this does not preclude the possibility of designing domestic policies oriented towards facilitating the participation of local communities in the wind energy sector, along with specific information and training measures to facilitate the participation of communities in the planning and management of wind energy projects. The main

recommendation of this paper is that such policies and measures come out of a broad and participatory consultation, in which local communities should play a central role, since they are, together with the State, the legitimate owners of the local wind resource.