
The politics of landscape value: a case study of wind farm conflict in rural Catalonia

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Abstract. Conflicts over the installation of wind farms constrain the potential to adopt an effective means for mitigating climate change. Although conventional wisdom attributes wind farm opposition to ‘not in my back yard’ attitudes, research shows that this explanation fails to incorporate the multiplicity of underlying motivations of opposition. Instead, distributional and institutional factors and procedural opportunities for public participation significantly influence support for wind farms. We consider the relevance of a political ecology explanation of wind farm conflicts by focusing on a case study in rural Catalonia, Spain. We argue that the conflict constitutes a recurrence of older and broader ‘centre’–‘periphery’ antagonisms and that two more explanatory elements are complementary to this political ecology explanation: the existence of alternative landscape valuations and the encouragement of instrumental rationality by the planning framework. We suggest that the absence of opportunities for meaningful deliberation in decision making and the predominance of decisional bottom lines curtail claims to fairer distribution of costs and benefits from locally hosted energy developments, as well as alternative landscape value claims, and that this fuels conflict.

Introduction

On 16 March 2008 the inhabitants of the Catalan village of Horta de Sant Joan in the comarca⁽¹⁾ of Terra Alta were invited to vote for or against the installation of a wind farm in their community. Almost 78% of the voters rejected the project. According to the highest-circulation Catalan daily newspaper, *La Vanguardia*,

“what happened in Horta de Sant Joan, beyond the democratic right of citizens to express their opinion, is a matter of concern because it represents a new stage in the ‘no’ culture developing in matters of energy infrastructure. ‘No’ to new nuclear power stations, ‘no’ to thermal power stations, ‘no’ to power lines and, most recently, ‘no’ to wind power, despite its being one of the cleanest energies. This negative tendency adopted by Catalan society is very dangerous, for it blocks access to new energy sources. Catalonia does none the less need new energy sources to make up for its electricity deficits” (*La Vanguardia* 2008, page 14).

Conventional wisdom indeed holds that opposition to wind farms is an expression of ‘not in my back yard’ (NIMBY) attitudes that reflect an individualistic, selfish stance towards socially beneficial developments such as renewable energy. Such local NIMBYism is an embarrassment for the environmental movement concerned about greenhouse gases and opposed to nuclear energy. Conflicts over wind energy also splits environmentalists between renewable energy and conservation supporters, thus confounding attempts to shape common views over the meaning of sustainable development. Furthermore, they regularly result in delaying or even abandoning the installation of facilities, constraining the potential of economies to adapt to the challenges of climate change. From a policy perspective, understanding opposition to wind farm siting is crucial as it can help resolve or avoid such localised conflicts in the future.

⁽¹⁾ Territorial-administrative division one level below province and one level above municipality; roughly equal to the British ‘county’.

Although attesting to the significance of landscape values, relevant studies identify little evidence of NIMBY attitudes and instead underline the importance of both distributional property rights ('who owns the land, who owns the wind') and institutional structures of decision making for explaining conflicts over wind farm siting. They further advocate the need to pursue collaborative and communicative planning practices for successful wind energy implementation. Yet, the planning literature indicates that such practices are limited in their potential to consider the practical context of sociopolitical power that surrounds planning, which points to the need for an explanatory framework that is also sensitive to these contexts. We put forward one such framework (political ecology) and explore its explanatory value in the context of a case study of conflict over wind farms in a small rural area in southern Catalonia, Spain.

We first present the literature on conflicts over the implementation of wind energy, focusing on the interpretation of reasons behind conflict (NIMBY model), and consider the ensuing change of research focus towards procedural aspects of decision making and the relevance of political ecology. We then move on to the case study and develop a political ecology explanation of the conflict, complementing it with evidence from other relevant aspects identified through fieldwork, before closing with some concluding remarks.

The explanation of conflict over wind energy: from NIMBY to communicative planning and beyond

Evidence of overall support for wind power as a 'clean' and renewable source of energy generation has been combined with manifestations of wind farm opposition on the basis of local landscape impacts to suggest that opposition reflects a NIMBY attitude. NIMBYism expresses a situation where an individual holds positive attitudes towards something (eg wind energy) until actually confronted with it, at which point the same individual opposes it for selfish reasons (eg adverse impact on the aesthetic quality of their surrounding landscape) (O'Hare, 1977). However, research on individual attitudes identifies low numbers of persons looking at costs and benefits in terms of individual utility and instead shows high numbers of opponents putting more weight on public interest and the interests of others (Wolsink, 1994). Also, studies fail to find a relation between distance and opposition (Wolsink, 2000), a central element of the NIMBY construct. The literature on wind energy conflicts indicates that the construct not only inadequately explains opposition to wind energy projects (eg Wolsink, 2000) but also blurs our understanding of it (Kempton et al, 2005). Some scholars even argue that the classification of opposition to public projects as NIMBY serves as a means to disqualify and hence silence opponents (eg McAvoy, 1998) and that perhaps NIMBYism indicates a pattern of political activism, rather than one of public opinion (Michaud et al, 2008). Pendall (1999) explains that public protests are based on a multitude of underlying motivations instead of the calculative rationality of NIMBY, and Devine-Wright (2005) agrees that NIMBY is not a useful concept for explaining reactions because it misrepresents underlying opposition motives and overall wind energy attitudes of opponents.

Instead, equity and fairness are regularly central concerns for local opposition to wind farms (Wolsink, 2007) and institutional factors (eg a formal decision-making framework) have a greater impact on wind energy implementation than individual perceptions (Wolsink, 2000). Research also highlights the existence of dynamic change in attitudes towards wind farms during the decision-making process (Pasqualetti, 2001) and the influence of social networks and communication on shaping perceptions (Devine-Wright, 2003). Attempts to better explain opposition suggest that groups have no prefixed interests, as NIMBY assumes, and, as the decision-making process is a crucial stage where stakeholder attitudes are formed, more attention needs to be

paid to procedural opportunities for public participation (Healey, 1998); siting conflicts are not market imperfections or bureaucratic obstacles but the result of ineffective planning (Wolsink, 2000). Planning systems that reproduce top-down decision-making styles which tend to trigger opposition are highlighted as failing to take into account issues that are most important to those concerned with local impacts of wind energy (Wolsink, 2007). This line of research argues that the quest for consensus-laden solutions (Lambert and Elix, 2005), the advance of collaborative siting (Bell et al, 2005), the building up of institutional capital, and the promotion of open planning practices (Wolsink, 2000; 2007) are crucial for improving wind energy implementation rates.

The emphasis on actor communication during the decision-making process as a crucial element of attitude formation towards wind farms reflects a more general shift in the field of policy analysis. This is a shift from using a constraining rational, utilitarian, and individualist profit maximisation model of human action in order to explain environmental attitudes, towards a model of communicative rationality (Habermas, 1984). Realised through intersubjective communication, communicative action is oriented towards understanding between individuals instead of achieving preestablished ends as assumed by the instrumental rationality of the NIMBY model. The idea of using communicative rationality in policy contexts has given rise to a theory of communicative planning (eg Albrechts, 2003). Proponents argue that the democratisation of planning practice can be pursued by imbuing planning with communicative decision-making processes that have an increased potential to encompass multiple languages and values (eg Healey, 1997). Such processes are rooted upon the idea of deliberation in the quest of consensual planning solutions, which takes place through the transformation of preferences by means of reflection: actors listen to each other's arguments and reflect on their own preferences, which they transform in the quest for common solutions. For the process to be genuinely democratic, actors need engage in a communication that is

“free from coercion, deception, self-deception, strategizing, and manipulation” (Dryzek, 2000, page 21).

The emphasis on deliberation as a benchmark of ‘good’ decision making marks an attempt to entrench the legitimacy of public decisions in a model of democracy able to both encompass multiple values and seek (consensus-based) solutions.

However, scholars seem to be sceptical as to the potential of communicative rationality alone to achieve democratic and effective planning results. Communicative planning theory advocates have been reproached for their assumption that the workings of power could be temporarily suspended through communicative planning practice in order for new consensual planning discourses to emerge. Critics point out that this theory

“pays insufficient attention to the practical context of power relations in which planning practice is situated” (McGuirk, 2001, page 196),

and that theories

“aiming at the democratisation of planning practice will need to depart from an orientation to consensus ... and instead account for the irreducible nature of power and difference” (page 195).

Similarly, others have argued that

“a deliberative and democratic praxis of sustainability may be effective only if and when underpinned by substantive changes to the exercise of power and leadership” (Stratford and Jaskolski, 2004, page 311).

The wind energy literature abounds with suggestions to consider more participatory planning processes in order to avoid conflict (eg Bell et al, 2005; Khan, 2003; Lambert and Elix, 2005; Strachan and Lal, 2004). However, power issues also seem to be relevant here as one basic matter concerns who has access and ownership of land

and wind property rights. As evidenced by the success of the Danish model, community ownership of wind farms that implies a financial stake and voice in planning, development, and management of facilities reduces opposition (Toke, 2002). Interestingly, reduced opposition could be attributed less to monetary compensation and more to the fact that community property rights imply local control over the siting process, which entails ability to accommodate local concerns (Bell et al, 2005). Furthermore,

“the visual evaluation of the impact of wind power on the values of the landscape is by far the most dominant factor in explaining why some are opposed to wind power implementation and why others support it” (Wolsink, 2007, page 2696).

Considering the importance of property rights and the conflictive nature of landscape change then seems crucial for understanding the conflict, and this is the reason that in this study we adopt a political ecology conceptual framework which also takes into account power relations in the explanation of environmental conflict. Such an explanation of wind energy conflicts is missing from the literature, and this is surprising given that political ecology focuses *inter alia* on the relevance of property rights in environmental conflicts and the occurrence of conflicts arising from landscape change (Robbins, 2004) is arguably dramatic in the case of wind turbines.

Political ecology conceptualises environmental conflicts as ecological distribution conflicts—that is, struggles for redressing emerging or existing power inequities and unequal distributions of costs and benefits resulting from landscape or ecological change (eg Blaikie and Brookfield, 1987; Martínez-Alier, 2002; Peet and Watts, 1996). Political ecologists hold that landscape change generates redistributions of costs and benefits, which tend to be unequal; as a result, ‘losers’ from such redistributions tend to challenge them and reclaim different ones, which leads to conflict. Moreover, environmental conflicts over cost–benefit redistributions from landscape change tend to be part of larger gendered, classed, and raced struggles (Robbins, 2004)—that is, struggles over some kind of broader discrimination.

Political ecologists tend to study power in two main ways (Paulson et al, 2003). Firstly, as “a social relation built on an asymmetrical distribution of resources and risks” (Hornborg, 2001, page 1), they explore how power circulates among and between different social groups, resources, and spaces. This essentially neo-Marxist view looks at power as something that “presses on the subject from the outside, as what subordinates” (Butler, 1997, page 2) and has proved very useful. An alternative way of looking at power is by examining the ways people, resources, and places are constituted. This follows Foucault’s view that power is omnipresent and formative, that it becomes embodied in social practice, and that in this twisted way it provides “the very condition of [a subject’s] existence and the trajectory of its desire” (Butler, 1997, page 2). It should be noted here that this approach is not meant to celebrate but to supply more nuanced means of identifying and studying power.

Political are then found in the practices and mechanisms through which the power to decide over environmental issues is circulated: politics are a contested realm characterised by “practices and processes through which power, in its multiple forms, is wielded and negotiated” (Paulson et al, 2003, page 209) on multiple scales and contexts. This understanding of politics goes beyond institutions of governance to “encompass struggles over human practice, meaning, and representation in relation to the environment” (page 213). These conceptualisations of power and politics are used to improve research on environmental change and conflict and to develop better ways of addressing practical problems of resource degradation and social marginalisation.

The focus on power and landscape issues makes political ecology conceptually attractive as an explanatory framework to improve understanding of wind farm conflicts.

Moreover, its empirical application can help to determine its limits as well as ways to improve the framework.

Study aims and methodology

The aim of this study is to offer an alternative (to NIMBY) explanation of wind farm conflicts based on political ecology. We do this by focusing on a case study of a relevant conflict in a small rural area, the comarca of Terra Alta in southern Catalonia. The case-study research methodology (Yin, 2003) is used, combining data from interviews, documentation, and direct and participant observation. Fieldwork took place for approximately two months and the whole study was conducted in the course of sixteen months (May 2006 to September 2007). As regards documentation, provincial, regional (Catalan), and national (Spanish) media sources were researched for the period spanning back to 1999 which marks the beginning of wind-farm-related issues in the area; moreover, locally available material (eg pamphlets and maps) was collected and studied. Fourteen in-depth interviews were conducted with local village mayors, members of opposition groups, farmers, wind farm supporters, landowners controversially affected by wind farms, businesses, legal experts, and academics specialising in the area and its conflicts. Interviewees were selected to represent a broad spectrum of local interests, knowledge regarding wind energy implementation in the area, and positions and roles taken both in the past (eg mayors who negotiated and signed agreements with energy companies) and in the present (eg wind farm opposition leaders). Interviewees were first requested to provide an account of the implementation of wind energy according to their experience and then asked open-ended questions about issues such as pros and cons of wind farms and the implementation process, reasons why they considered the whole issue to be conflictive, and their views over the value of the local landscape. Some interviews were conducted indoors (eg in offices or homes of the interviewees) while others were conducted outdoors with interviewees showing us and discussing the significance of landscape aspects that would be affected by wind farms. Observation involved *inter alia* participation in village council plenary sessions, meetings of local opposition groups, and local social events.

The explanation-building technique (Yin, 2003) was used to analyse both primary (interview and observation) and secondary (documentation) data, and in particular to consider how specific key events and elements of the siting process fit with a political ecology explanation of wind energy conflicts. Such explanation building is also shown in the sections that follow, in which we analyse three key aspects of the conflict in the terms drawn out by Yin (2003). In particular, we first stipulate and examine the relevance of an initial political ecology statement about the conflict (that unequal economic and environmental cost – benefit distributions are at the heart of the conflict) and then juxtapose this to evidence identified through fieldwork (ie the importance of local life project initiatives). We then use this evidence to revise the initial statement and move on repeating this process to two more key aspects of the conflict (ie the life projects themselves and procedural aspects of decision making). This whole process allows the consideration of the relevance and applicability for the case study of the initial political ecology explanatory statement and leads to a refinement of the statement itself, which permits both a better explanation of the case study and further advancement of the concept theoretically. It is important to note that the value of single case studies lies mainly in making analytical instead of statistical generalisations (Yin, 2003)—that is, in this case to expand, generalise, and refine political ecology theory, implying that the approach can help to explain this but not necessarily all wind energy conflicts. Still, by doing so, this case study adds new perspectives that help to obtain a more in-depth and global understanding of the phenomenon. We begin the analysis with a

brief description of the case-study area and a concise presentation of the cause of the conflict.

Terra Alta: land and wind farms

Terra Alta is a small comarca of twelve villages in the westernmost corner of the province of Tarragona at the southwest of Catalonia (figure 1). Its size is roughly 740 km² (just above 2% of Catalan territory) and its population is slightly over 12 700 people (approximately 0.4% of the population of Catalonia) with a markedly low population density (17.12 inhabitants per km² in comparison with the 218.73 inhabitants per km² average of Catalonia). Terra Alta is the second poorest comarca in Catalonia (Nel·lo, 2003) and was recently ranked among the three (out of a total of forty one) least competitive Catalan comarcas (Deltell, 2007). Its low gross domestic product (GDP) per capita (€15 600)⁽²⁾ and the fact that it is the comarca with the lowest enterprise concentration per 1000 inhabitants were among the reasons that recently prompted the Catalan government to include it in the four comarcas most needy of ‘economic revitalisation’ (Generalitat de Catalunya, 2008).

Anyone travelling for the first time in Terra Alta quickly notes that this is “an eminently agricultural territory dominated by the cultivation of vine” (Olivé and Alay, 1994, page 273).

In 1989 more than 60 000 ha out of the approximately 70 000 ha of cultivable land were assigned to agricultural uses (Arrufat i Viñoles et al, 1993), mainly cultivation of vine,



Figure 1. [In colour online, see <http://dx.doi.org/10.1068/a41208>] Terra Alta in Catalonia. Reproduced with permission from the Institut Cartogràfic de Catalunya.

⁽²⁾ Low compared with the €19 300 average for Catalonia in 2006.

olives, almonds, and hazelnuts. Not surprisingly, Terra Alta has the highest proportion of population actively engaged in agriculture in Catalonia (Nel.lo, 2003): in 2001 over a quarter of the workforce was employed in agriculture (compared with a 2.5% average for Catalonia). Although retaining a major role in local economic life, the potential of agriculture constantly declines. Official statistics (IDESCAT, 2007) reveal that, within a generation, agriculture changed from generating 66% (1970) of employment in the comarca down to 26.5% (2001). Still, in 1996 (latest available data) agriculture accounted for nearly a quarter of the gross economic value generated in the comarca (average for Catalonia was a mere 2%) (IDESCAT, 2007); however, here also, one can observe a marked decline (the figure was 30.3% in 1991) (IDESCAT, 2007).

But the Terra Alta landscape is marked not only by agricultural but also by population decline: data show long and relatively stable reduction trends with scant signs of a possible recovery. Terra Alta reached a population peak in 1920, with 23 365 inhabitants (Arrufat i Viñoles et al, 1993), meaning that today's population has been reduced to nearly half that figure. In 2006 more than a quarter of the population were aged 65 or over and in 2001 there was clear evidence of negative population growth (minus 6.4; the overall trend in Catalonia was positive) (IDESCAT, 2007). During the 1950s the industrial development of the metropolitan areas of Tarragona and Barcelona attracted the comarca's working population. From the 1960s onwards these areas offered more secure employment opportunities that people cannot find in their villages anymore (Arrufat i Viñoles et al, 1993). This slow but steady drainage of the youngest part of the population carries on until today, intensifying the need to increase employment opportunities in order for younger generations not to leave villages. The recent influx of younger Eastern European and Latin American immigrants has only slightly moderated negative trends.

The conflict

Wind farms can offer such a promise. With sites where the speed of wind reaches $7-8 \text{ m sec}^{-1}$ (and even $9-10 \text{ m sec}^{-1}$ in some places), Terra Alta is one of the two comarcas in Catalonia that provide the best inshore wind resources (Generalitat de Catalunya, 2002), although doubt is cast over the way that wind availability is calculated by the Catalan Map of Wind Energy Resources (the Map, for brevity) (interview 12, local geographer). The first plan for a major project was announced in June 1999 by a German company intending to construct a wind farm of eighty turbines, "one of the biggest potential in the world" installed on a single farm (Nel.lo, 2003, page 86). The promoters publicised that this large investment would create 200 posts during the construction period and 20 long-term posts for farm maintenance. Soon after, several representatives of local municipal authorities proclaimed the possible future installation of energy plants as

"a way toward the development of the comarca, given the absence of any other industrial activity to revive the economy of this part of Catalonia" (Nel.lo, 2003, page 86).

Wind farm promoters quickly capitalised on this message and several projects took root in the comarca, resulting in the Government of Catalonia (GC)⁽³⁾ authorising eleven wind farms by the end of 2005. These would involve 183 (there are currently just 2) wind turbines, running on a discontinuous line of 40 km across the comarca (figure 2), generating approximately 360 MW (Aymí, 2006). Evacuating this energy requires the construction of two new lines of high-tension electricity wires that would run for approximately 60 km across the comarca. A 2006 study contracted by the local association of wind energy promoters, Aprofitament Energies Renovables

⁽³⁾ Generalitat de Catalunya, in Catalan.

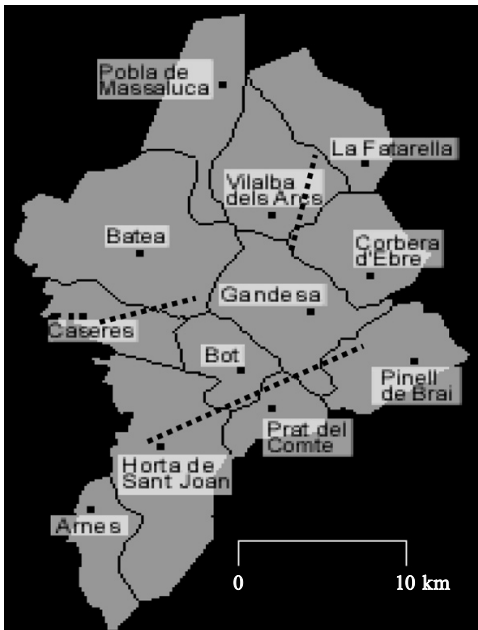


Figure 2. Approximate locations of wind turbines (dotted lines) in Terra Alta (source: authors' own elaboration; map from Associació Cultural Zero Mig Partit-Per-Mig).

Terra Alta,⁽⁴⁾ concluded that if the comarca got fully on the wind energy bandwagon it could receive up to €9.6 million annually for twenty-five years which would represent a considerable 7% increase in its GDP (Berbís, 2006).

However, in August 1999 the local opposing group Platform for Terra Alta (PTA) was set up. Its supporters argue that, if all planned wind farms get the go-ahead, the comarca will end up generating approximately 40% of total wind energy in Catalonia while consuming roughly 3% of total energy in Catalonia (interview 8, local researcher). This point encapsulates the main local opposition argument that wind energy is good but its generation should not be massively concentrated in the area. Initially, PTA opposed the building of wind farms in two civil war battle sites together with a controversial ENRON power station and the highly contentious National Hydrological Plan that promoted diversion of the River Ebro to use water for regions in the south of Spain (Valencia and Murcia). In these struggles PTA successfully sided with other organisations and in March 2001 the Catalan Parliament voted against both the National Hydrological Plan and the ENRON facility. By 2002 the above-mentioned historical sites were excluded as potential wind farm sites thus signalling a victory for local opposition. The change of government after November 2003 that meant the end of twenty-three years of one party's dominance in Catalan politics created expectations for more participatory forms of decision making, but the new government soon showed they had no different plans as regards the exploitation of the area's wind potential. Since early 2005 PTA have resumed protest, at times adopting direct action (eg road blockings), and have pursued media visibility in the province via interviews, press conferences, and manifestos. However, more and more local mayors seem to support wind farm projects, which results in them being scrutinised by local opponents who ask for more transparency in decision making. The final outcome of this conflict is yet unclear: at the time that the study was completed no wind farm had been built

⁽⁴⁾ Exploitation of Renewable Energy Terra Alta, in English.

but many had their applications at an advanced stage. Yet, local reaction was also gathering pace with new opposing groups emerging and some municipalities taking up initiatives to conduct local referendums.

Geography of an energy-generating landscape

Imbalances on the generation and consumption of locally hosted energy production are at the heart of this conflict. Indeed, local opposition has repeatedly maintained their objection towards the *massive* installation of over 180 wind turbines that will result from the construction of all eleven wind farms authorised by the GC and not towards wind energy per se (Moreno, 2006). Locally, the term ‘massification’ is used to describe the phenomenon of both existing and planned concentration of energy facilities in and around the comarca, which turn the broader area into a powerhouse for the Catalan ‘centre’ (eg Barcelona). Considering a 30 km radius around the comarca, one can draw a geography of energy-generating facilities that reveals how the area has consistently attracted facilities representative of their times: dams in the 1950s and 1960s, nuclear power stations in the 1970s and 1980s and combined-cycle and renewable energy facilities during the 1990s and the 2000s.

Two out of seven nuclear power plants operating in Spain are located within a close distance of Terra Alta. In 1972 a 480 MW nuclear power reactor was installed in the village of Vandellòs some 30 km⁽⁵⁾ from the administrative limits of Terra Alta; a second reactor of 1087 MW installed capacity was built in 1987. In 1989 and after a fire threatened the facility a decision was taken to close down the older reactor. In 1982 a nuclear power plant was built in Ascó, less than 10 km away from Terra Alta. Its reactor (approximately 1000 MW of installed capacity) was later (in 1985) supplemented by a second one of more or less the same capacity. Nuclear power plants were locally opposed with massive mobilisations, evidence of which is still evident in graffiti in Terra Alta villages.

The advance of hydroelectric energy has also left its mark in the area. In the village of Flix, less than 20 km from Terra Alta, a hydroelectric plant was built in 1950. The dam reservoir contains remains of DDT residues previously dumped in the River Ebro by a chemicals factory (Ercros, previously ERKIMIA) that still operates in the area. In 1969 another dam was constructed in Riba-Roja d’Ebre, approximately 15 km from Terra Alta. At the time, the nearby villages of Fayón and Mequinenza had to be inundated, and new villages were built for their inhabitants. Nearly half of Mequinenza’s and over two thirds of Fayón’s population abandoned the area. More recently the area has attracted not only ecoefficient wind farms but also energy-efficient combined-cycle power plants. There is currently one combined-cycle power plant in the broader area (Vandellòs) built in 2007, but there are plans for at least two more (Fayón and Riba-roja d’Ebre). Finally, the comarca is a candidate for hosting the first ever nuclear waste cemetery to be built in Spain exactly due to its proximity to two out of seven nuclear power plants in the country (to minimise costs and risks of nuclear waste transport).

Still, while the urban region of Barcelona with a population of approximately 5 million people requires (at the present level of nearly 1 KW of power per person) electricity from roughly three nuclear power stations (3000 MW), two large dams (600 MW), three combined-cycle gas power stations (1200 MW), and also wind power, Terra Alta requires at most 13000 kW. However, the siting of electricity production (figure 3) shows that, in comparison with the rest of Catalonia, the broader area concentrates a significant number of facilities set to become even higher with the planned installation of Terra Alta wind farms, which creates a large imbalance in

⁽⁵⁾ Distances in this section are measured in a straight line as this is relevant for understanding negative impacts of controversial developments (eg nuclear energy).

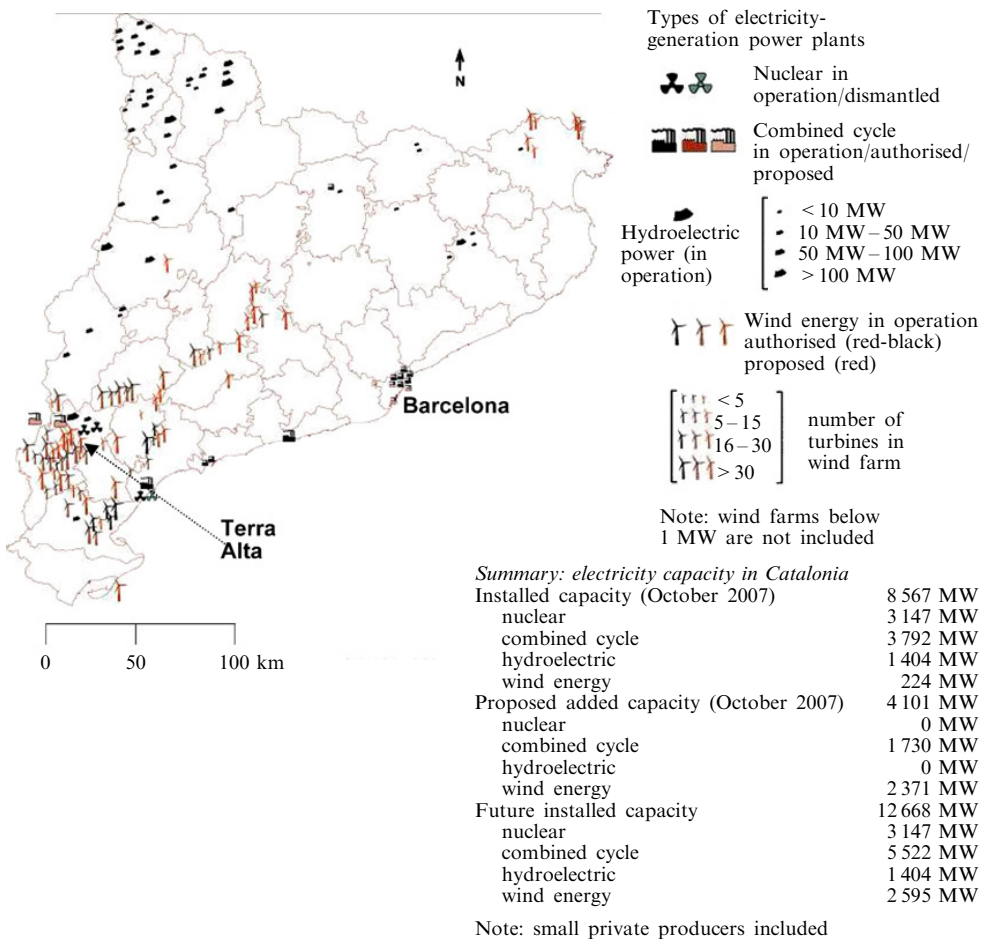


Figure 3. [In colour online.] Electricity generation in Catalonia, October 2007: installed capacity, current situation, and future scenarios (source: Sergi Saladie; reproduced with author's permission).

terms of sharing environmental costs and economic benefits from locally hosted energy generation.

Wind farm planning in Catalonia seems to reflect a historical pattern that tends to favour the installation of controversial facilities in southern Catalonia ('periphery'), where local opponents ask political authorities "why always here?" (Nel.lo, 2003). In Terra Alta both wind farm opponents and supporters agree that the reasons for this are structural, namely the reduced political power of the comarca and its poor economic profile that result in the comarca's political 'invisibility' within Catalonia and the resultant disregard of its voice:

"We are talking to those politicians who ignore that there is a Catalonia to the south of Port Aventura!"⁽⁶⁾ (Plataforma per la Defensa de la Terra Alta, 2006).

As pointed out by political ecologists (eg Robbins, 2004), the distribution of benefits, costs, and risks of environmental change at various scales is vital for understanding this wind farm siting conflict. Decisions taken over the siting of energy generation facilities reflect interests on one (regional and national) scale, whereas reaction and impacts are felt at the local scale. In that sense, environmental (landscape) change

⁽⁶⁾ Massive theme park just outside the city of Tarragona.

brought about with wind turbines exacerbates historical inequalities imprinted upon the energy-generating landscape of the region, which reflects a historical and systematic shifting of the costs of development of the ‘centre’ to the ‘periphery’ that goes back to the 1950s.

This cost shifting continues a historical process of ‘peripheralisation’ of the area that has occurred in the course of the ‘centre’s’ rapid development. This process is evident in the geography of a landscape marked by the massive concentration of energy-generating facilities (the ‘massification’ issue) and the marginalisation of land propelled by immigration and agricultural decline. Considering the crucial role of energy availability for the significant economic growth of the Catalan ‘centre’ (ie Barcelona) in the second half of the 20th century, such marginalisation could perhaps be conceptualised by a political ecology approach reflected in Harvey’s view of uneven geographical development—that is,

“a structural conditionality for the perpetuation of a capitalist mode of production” (Toscano, 2007, pages 1131 – 1132).

Political ecologists point out that increasing scarcities produced through resource enclosure by state authorities and private firms accelerate conflict between groups, as changes in resource-development policy transform existing and long-term conflicts into ‘ecologised’ ones (Robbins, 2004). Such an interpretation could also apply here, and the Terra Alta conflict could be meaningfully understood within an environmental justice framework—that is, as a struggle to redress the imbalance of costs and benefits of locally generated development and the cost shifting of the ‘centre’s’ development.

This ‘peripheralisation’ process is embedded in a dominant discourse over the agricultural landscape of Terra Alta. This discourse focuses on the limited and declining economic value of agriculture and effectively downplays the importance and value of the main features of the landscape. The accepted ‘reality’ of this discourse is utilised by wind farm supporters and promoters to legitimise their projects as ‘necessary’—for example, in terms of jobs created to support a deprived area. In so doing they simultaneously downplay the importance of arguments that exalt the value of the Terra Alta landscape. As J M Rañé, Industry Minister of the GC, said in his visit to the area, landscape issues are

“value judgements that will not pose an obstacle to the development of wind energy in Catalonia” (Aymí, 2006).

Life projects

However compelling, this political ecology explanation of the conflict risks overlooking the importance of local discourses that place value on exactly those aspects of the landscape downplayed or ignored by the unproductive landscape view. These alternative discourses see the current landscape of Terra Alta as replete of attributes of artistic, historical, and natural value that could form the basis of a project for the future (Olivé and Alay, 1994), and are evident in a series of locally originating practices that display those landscape values. We term these initiatives ‘life projects’ (Blaser and Feit, 2004), a term used in the study of relations between indigenous communities and development to describe resistance activities that could not be explained as solely a reaction to state-promoted and market-promoted development but as efforts to sustain a purposeful and meaningful life (Blaser, 2004). Life projects are distinguished by their intent to transform power asymmetries, their practice of promoting nonhegemonic projects as a way to stretch to the outside world, and their focus on achieving a meaningful degree of control over life and its meaning (Blaser, 2004). They try to address power imbalances as regards ‘the global’ by elevating local attributes as valuable assets capable of providing livelihood opportunities. In the Ogoni and Ijaw

territories in the Niger Delta, comparable projects of autonomy are linked in the fight against multinational companies (Martínez-Alier, 2002). Likewise, in the Colombian Pacific (Grueso et al, 1998) similar projects may take the form of an ‘ethnogenesis’ of Afro-American communities that then use this reaffirmation of identity to fight for the control of natural resources, such as mangroves, and against the shrimp industry. In Terra Alta, art and war are two themes that characterise local life projects.

Terra Alta has hosted one of the most famous 20th-century artists. Pablo Picasso paid two long-stay visits to the village of Horta Sant Joan, painting several scenes of the surrounding countryside in some of his first cubic paintings, copies of which are exhibited in the local Picasso centre. While one may wonder what Picasso would see in a landscape full of wind turbines, the centre seems to be an attempt to vest the local landscape with value by illustrating “links between this land and the great artist” and by classifying his paintings as an “effort to link the land he loves (Horta) with the woman he loves (Fernande)” (<http://www.centrepicasso.cat>). Given that

“many landscapes remain practically the same as when they were immortalised by Picasso” (Olivé and Alay, 1994, page 274),

the centre elevates the value of the current Terra Alta landscape in that it conserves those elements that inspired the great artist.

Another project (‘Art in the Open’) seeks to explore the artistic potential of landscape through a series of sculptures and ‘visual poems’ installed in Terra Alta paths (figure 4). The project invites artists in Terra Alta and asks them to create work

“integrated with nature, respecting its surroundings and using locally-available material” (interview 4, artistic director).

The objective is to stimulate creator and spectator to adopt new ways of looking and living the landscape, which can help transform conventional means of creating and appreciating art:



Figure 4. [In colour online.] Life projects: integrating art and landscape through sculptures in Terra Alta paths to stimulate new ways of looking and living the landscape (*The Power of Wind* by Mariano Andrés).

Figure 5. [In colour online.] Life projects: conserving the memory of the Spanish Civil War through monuments built on hiking trails that connect important Battle of Ebro sites.

“The aim is to advance the connection between the artist and the material born by this land ... Also, we ask people to appreciate a piece of art in its ‘birthplace’, to enjoy an aesthetic creation by allowing its natural surroundings contribute to this enjoyment” (interview 4, artistic director).

Terra Alta is a land whose modern history has been marked by the misfortune of being a stage for nearly all the major armed conflicts that have ravaged Spain. However, the Spanish Civil War (1936–39) has unquestionably left the most visible imprint on the landscape. Between July and November 1938, Terra Alta became the central stage of this war’s bloodiest and most decisive battle, the Battle of Ebro, during which heavy bombardment destroyed several local villages. Evidence of the battle is still visible on the landscape (eg in the broad availability of battle relics) and several local entities engage in activities that aim at conserving the memory of the battle, such as organised walking routes across key battle sites (figure 5). In 1995 a locally based initiative created an art installation project inside the old village of Corbera d’Ebre that still stands in ruins as a result of bombardment. The initiative intends to turn the village

“into a symbol of what should have never happened” (Consell Comarcal de la Terra Alta, 2006, page 33).

Art pieces

“have been carefully thought for the location where they have been placed and seek to empower a message of fraternity in the midst of the desolation of the landscape” (page 33).

Local opposition to wind farm construction emphasises the heritage value of the landscape claiming it as “sacred land for many people around the world” (Nel.lo, 2003, page 87).

These life projects manifest local valuations of the landscape through livelihood activities and spatial interventions that express it. By trying to exalt the value of Terra Alta vineyards, olive trees, and landmarks of past destruction, the initiatives represent an attempt to imbue the landscape with a value that reflects the particularity of the land and its historical or symbolic significance, no matter if this is valued or not by energy markets and existing rural-development policy frameworks. Notably, those involved in such local life projects perceive wind farms as a direct threat not only to a valuable landscape but also to their attempts to raise the profile of the comarca and provide alternative locally driven means of rural development, as reflected in the words of the Picasso Centre secretary:

“But now, we are distressed by a threat ... They are projecting a wind farm that endangers the landscapes that Picasso loved and painted: the turbines will tear into pieces our beautiful, still virgin, landscape heritage ... These wind-mills will stab our model of development based upon our natural and cultural heritage. These turbines will smash up everything” (Amela, 2006, page 80).

Those who see value in the distinctiveness of the current landscape tend to oppose local and regional administration views that the value of the comarca lies mainly in its wind potential. It may come as little surprise then that promoters of such life projects are frequently in the forefront of recent opposition to wind farms:

“Wind farms will be a blot to a largely well-conserved landscape that people value and actively choose to live in” (interview 5, wind farm opponent).

Procedural issues

The previous two sections discuss the relevance of fairer distributions of costs and benefits from locally hosted development and local life projects. On the ground, what makes these two aspects conflictive is the lack of spaces for their inclusion in decision making, which points to a third important element, the influence of wind farm

siting planning. There are two main features here. First, when assessed from a deliberative democracy perspective, decision-making processes are flawed as they are characterised by elements that encourage instrumental rationality. Second, the planning process limits stakeholder capacity to contribute to decision making with criteria different from those guiding official wind energy policy implementation (mainly wind capacity).

As regards the first feature, Toke et al (2008) observe that locally opposed wind farm projects in Spain can be subject to significant delays but normally end up with “more money being paid for local projects rather than municipal rejection of the schemes” (page 1134). The Territorial Sector Plan for the Environmental Implementation of Wind Energy in Catalonia (the Plan, for brevity) that regulates wind energy development in Catalonia stipulates wind farm proposals in which agreements between municipal authorities and companies have the potential to improve the local economy (Generalitat de Catalunya, 2002, page 48). Both Toke et al’s observation and the Plan’s stipulation perhaps explain why companies tend to contact local authorities early on in the process to assure their positive disposition and if possible formal commitment towards projects through preagreements.

Such agreements specify a set of obligations for applicant companies (mainly compensations to local municipality and landowners) and local municipal authorities. However, and as seen from one such agreement signed in a Terra Alta village, they can also turn local municipalities to project facilitators by committing them to take action for the smooth running of farm applications and for controlling local reactions:

“The municipality of La Fatarella is committed to collaborate, to the extent that this is possible, with the wind farm project, materialising such position, when necessary, for obtaining licences and authorisations that depend from other administrations, and in negotiations regarding connection to the electricity grid.

“The municipality of La Fatarella will also try to prevent and limit possible conflicts of interest that could arise and assume a mediating role with affected property owners.”⁽⁷⁾

These agreements are of a strategic nature to companies as they help prevent future conflicts with local authorities by taking them on board the project. However, such a strategic attitude is also adopted by local municipal authorities who see agreements as a means to retain benefits from projects to which they feel largely unable to oppose:

“There came a moment when we [municipal council] decided that we needed an agreement to prevent companies from interfering with village properties without paying anything Because ... of course you can say no [to a project] but they can impose it on you” (interview 13, ex-mayor of La Fatarella).

Another possible reason for signing such agreements involves local micropolitics as also seen from the case of one village where funds obtained from an agreement were used to finance a local community centre just before municipal elections. Agreements are crucial elements of the decision-making process stipulated by the planning framework that encourages strategic and own-interest-seeking rationality (eg political benefits). Not only do they facilitate companies to pursue wind farm projects in a profitable way but they also instil instrumental rationality to local authorities in their involvement in the decision-making process.

⁽⁷⁾ Quotations taken from a legal contract signed by the utilities and construction company COPCISA S.A. and the Town Hall of La Fatarella in 2003 (page 11). This is entitled “Conveni per la construcció i explotació del ‘parc eòlic de la Fatarella’” [Agreement for the construction and exploitation of the ‘Fatarella wind farm’].

The second relevant feature involves the exclusion of local landscape valuations and cost–benefit distribution concerns as decision-making criteria. In the words of the GC Industry ex-Minister J M Rañé, the basic requirements for giving a wind farm a licence are that:

“it is outside protected areas, the location of the electricity evacuation line and that the zone is included in the Map” (Aymí, 2006).

The role played by local authorities within decision making is quite revealing as to how such exclusions occur. There are two major scales of planning decisions as regards siting: the regional (Catalonia) and the local levels. On the regional level, municipalities have limited capacity to formally object to wind farm applications as long as they comply with Map and conservation criteria. Their decision-making authority is basically limited to issuing urbanism and environmental licences (interview 11, council secretary). However, Spanish law confers nondiscretionary powers to the provision of licences—that is, if an applicant complies with a series of prescribed criteria, municipal authorities have no other (eg cost–benefit distributions) grounds to deny granting a licence. As far as local councils are concerned, the power to provide a licence essentially consists of approving a checklist of criteria strictly prescribed by legal norms (interview 11, council secretary). This significantly restricts their capacity to object to projects within the formal planning process.

However, the limited authority of local municipalities at the regional planning level tells only half the story as to their powers regarding siting decisions. At the local level their potential to determine cost–benefit distributions and the impact of wind farms on local landscape valuations is quite significant. This is evidenced by their role in agreements: not only are they one of the two counterparts determining compensation amounts and distribution between affected parties, but also they assume the role of facilitators for siting choices (who will bear landscape impacts). And it is the way they fulfil this role that has been another object of conflict in Terra Alta:

“For those of us affected by the line the local council did not care at all because they were not going to make any money out of it ... they simply abandoned us to face the company and the law on our own ... a bit of an unequal struggle if you think about it because you have no power whatsoever” (interview 6, affected landowner).

Agreements legitimise such differential treatment: in the La Fatarella example, compensations to turbine hosts who are crucial for the fructification of the project are, at their minimum, four times higher than those given to neighbouring landowners, while those affected by the electricity line are altogether ignored. Similarly, neighbours affected by turbine construction works and those visually affected share between them an amount approximately four times lower than that paid to their next-door neighbours who host turbines. The local municipal authority’s role in excluding concerns over cost–benefit distributions and downplaying landscape local valuations is considerable through its contribution to siting decisions. In the same way that regional planning has no space for local municipal authority to express such concerns, pre-agreements allow them to act similarly and reduce the space for potential project ‘losers’ to voice the same concerns at the local planning level. Agreements comprise elements of the wind farm decision-making process that limit inclusive communication and discussion of local concerns—in other words, infringe deliberation. They encourage sides to engage in terms of instrumental rationality and prevent the inclusion of fairer distribution arguments and alternative landscape valuations as compelling decision-making criteria. This underlines a sense of local powerlessness to decisions determined from ‘the outside’ (state or market), which in turn fuels conflict.

Conclusions

This conflict is not about wind energy or indeed wind farms: it is the recurrence of an older 'centre'–'periphery' conflict, which has historically developed with the installation of controversial energy-generation facilities in the broader area. This older conflict is now 'ecologised' by means of arguments as regards the landscape impact of a macrodevelopment, such as the 180 wind turbine scheme perceived to largely benefit the 'centre' and condition the 'periphery' in its options to use landscape as a livelihood resource. In that sense, opposition is about maintaining local control and ownership of property rights of the wind that blows over the comarca, and opposing the de facto transfer of these rights to the 'centre' through wind-powered electricity generation. This is the ecological distribution conflict aspect of the situation, which is quite fittingly explained by a political ecology framing of the phenomenon: conflict arises in the course of the periphery being 'expropriated' at a cheap price of its rights over wind while also suffering damage in terms of perceived landscape degradation.

However, the conflict is also characterised by local objections to accept an official discourse of a local 'valueless' landscape, broadly diffused by all sorts of official documents and utilised by supporters and promoters of wind farms. To comprehend this, one needs to witness specific locally developed landscape-use practices instead of reviewing official documentation. In this way, local landscape appreciations become evident in a series of life projects that build upon past and present human interaction with the landscape in their efforts to bring into evidence its potentiality. Still, there is another aspect to the conflict, which brings together claims for fairer cost–benefit distributions of locally produced development (energy from wind farms) and alternative landscape valuations. This involves a perceived powerlessness to effectively interfere in siting decision-making procedures and push local claims, which occur at two levels of decision making: that of regional planning, where local municipalities feel disempowered to push such claims, and that of local planning, where either disfavoured or disagreeing locals feel unable to establish claims as valid siting criteria. The absence of spaces and, perhaps more importantly, of a spirit of deliberation in the course of decision making becomes then another element of conflict explanation. These absences imply that fairer distribution and alternative landscape value claims receive little attention as siting criteria, which explains why claimants seek to legitimise them by means of political mobilisation.

As regards policy suggestions, if the objective is not only to increase electrical capacity but also to advance smoother and locally more acceptable planning, then the process would need to adopt significantly different stances towards siting standards and consider the introduction of criteria currently absent from decision making. Firstly, as the issue is not really wind farms, but models of landscape uses, the central government should instigate a genuine debate where local views are considered in the context of addressing centre–periphery issues. Alternatively, and in the cases that this is available, the richness of information from Agenda 21 exercises could be used to get a grip of local perspectives and integrate them in siting decision making. Admittedly, adopting such a locality-sensitive perspective seems difficult to imagine given the current significance of energy production for the support of the 'superior' good of economic growth. To put things into perspective it is important to keep in mind that, although Spain is the country with the second-largest installed wind energy capacity in the world (IEAWIND, 2006), it is at the same time among the worst performers of Kyoto Protocol signatories, currently emitting over 53% above its 1990 threshold (*EU Business* 2007) and expecting a 37% (instead of the committed 15%) increase of greenhouse gas emissions by 2012 (Rix and Carr, 2007).

Secondly, the importance of decision-making bottom lines such as wind potential (translating into financial profit) needs to be reduced. The importance of profitability criteria is perhaps understandable from an entrepreneurial perspective, but from a regulatory perspective the legitimacy of such bottom lines and the marginalisation they effect upon other locally important criteria (eg fair distribution) is questionable. Fair distributions of costs and benefits of wind farms developments could be introduced as formal criteria for assessing applications—for example, local authority permit concession. Moreover, the negotiation of local benefits should be as open as possible and not conducted in secrecy, generating suspicion and low levels of trust. Eliminating or at least introducing some sort of citizen control over particular aspects of the decision-making process could contribute to that end. In particular, the necessity of preagreements should be reconsidered, particularly in those cases where they operate to preclude local concerns so as to allow for the establishment of more reflexive institutional forms, genuinely responsive to value pluralism.

The study suggests that a political ecology conceptualisation of this wind energy conflict as a conflict over landscape change is a potent alternative to the obsolete NIMBY conceptualisation of wind energy conflicts. Additionally, such an analysis pays attention to institutional aspects of wind energy governance and considers factors in the realm of politics, both crucial elements for understanding those conflicts (Wolsink, 2000). Furthermore, by examining the role of power in wind energy politics, the approach furthers and refines this institutional perspective by revealing the role of institutions (eg the Map) in facilitating material imbalances between the centre and the periphery. This explanation seems useful both for explaining conflict and for making yet-untried policy-relevant suggestions. However, and notwithstanding the importance of explaining conflict in such terms of larger processes, the significance of agency from local landscape valuations is also important. An approach such as the one presented here that complements political ecology's focus on broader, structural factors of conflict with a more relational focus on agency and a policy focus on procedural aspects of decision making seems capable of going some way in explaining conflicts over wind farm siting.

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