Wind Energ. Sci. Discuss., author comment AC3
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Reply on RC5

Michael Ruddat

Author comment on "Public acceptance of wind energy – concepts, empirical drivers and some open questions" by Michael Ruddat, Wind Energ. Sci. Discuss., https://doi.org/10.5194/wes-2021-118-AC3, 2022

Thank you very much for your response. It will surely help to improve the quality of the article.

Maybe it would be good to explain how this article came into being since you are questioning the necessity of it. I was asked to present an overview about the acceptance of wind energy at the WESC 2021. I did it and based the overview on my scientific knowledge about the topic at that time. There were no complaints by the attendees (some of them with considerable experience in social science research in this field), about the (narrow) sociopsychological perspective or the main empirical drivers of acceptance. Since I assume that readers of WES and attendees of the WESC session could have at least some overleaps there was no reason for me to change a lot for the article (important to mention that presenters were given the opportunity to publish a written version of the presentation in WES). Of course, it has some gaps like every review article has. Maybe, my one can fill some of the gaps in the reviews you mentioned. In addition, my open questions from the discussion section are still not addressed in the literature (as far as I know it) and can be seen as a contribution to the ongoing scientific research process in this field. With respect to the perspective and scope of the article (especially with respect to social acceptance), see also my comments on the text of reviewer#1.

You are absolutely right that the statement "The further development of wind energy is of major importance for the success of the energy system transformation in Germany and elsewhere" is in a sense normative and needs some explanation. What is meant is that as far as I know it, wind energy is "technically" necessary for the success of the energy system transformation in Germany and elsewhere since it is more technically advanced than most other renewable technologies, is most economically profitable (so relatively cheap) and can be easily exploited. I forgot the relevant literature here and I apologize for that. I just wanted to be very brief at this point. The statement is supported for example by Cohen at al. 2014 (p. 4), Devine-Wright 2005 (p. 125), Ellis and Ferraro 2016 (p. 2 and 6) and Hagett 2011 (p. 503). Especially Ellis and Ferraro summarize it in a pretty good way: "Europe has some of the best wind resources in the world, providing a relatively cheap and exploitable renewable resource that has been core to many Member States' strategies for climate change and energy transition" (Ellis and Ferraro 2016: 2). The "problem of resistance" with effects like local conflicts, delay of implementation or abandonment of projects is also mentioned in the relevant literature many times (e.g. Breukers and Wolsink 2007, Cohen et al. 2014, Haggett 2011, Harper at al. 2019). I do not mark opposition to be deviant behaviour. This is why I also define non-acceptance.

But if one takes the normative perspective of reaching a sustainable energy system, renewables are a main part of it. This leads to the question: "What are the factors that have an impact on local acceptance?". And this is the focus of my article (or at least one of them since I also deal with public acceptance).

Distributional fairness contains a social element since the question is how risks and benefits are distributed between different groups in society (e.g. residents, stakeholders). Risks and benefits are simply lists of (more or less probable) negative and positive effects, respectively. Fairness and participation have indeed some connections and because of that I discuss them in the same chapter.

Some of the definitions cited use the term "risk acceptance" and some "acceptance" and this is why I set the "risk" here in brackets. Of course, the description is rather brief and the relationship between risk perception and risk acceptance could be presented in more detail (if I only had enough room for that) but it would not give much more interesting insights in the topic. Additionally, in the psychometric paradigm, risk perception (e.g. perceived catastrophic potential, perceived social hazard) is sometimes hard to sperate from risk acceptance.

Cultural and institutional context are only two examples for circumstances. The context of the locality is surely another example and I can add this. And yes, like reviewer#1 already correctly remarked, social acceptance is complex, multidimensional and dynamic and dependent on myriads of variables (financial system, support programs, legislation, culture, local context et.). But I do not see a single study that encompasses all or at least many of these variables. There are serious problems of measurement as well as conceptualization (e.g. integration of qualitative and quantitative data, setting of adequate boundaries for the research area). This seems to be a big challenge for social science research that I cannot adequately address this in my article. This is why I concentrate on a mainly sociopsychological perspective and my focus is on public (or individual) acceptance of wind energy, wind turbines and wind farms. There are many more perspectives as reviewer#1 had already rightly pointed out. But this would be on the one hand too much material for the article and on the other hand isn't really in my expertise. So, public acceptance is indeed only a part of the puzzle and I will certainly acknowledge that in the second version of the article.

The summary cited ("In general, […]") is based on the last part of chapter two. I cite several empirical studies to come to that conclusion (Devine-Wright, 2005; 2007, European Commission 2011, FA Wind, 2020; Krohn and Damborg, 1999; Liebe and Dobers 2019, Ruddat and Sonnberger 2019, Steentjes et al., 2017). Of course, this research (like every research) has limitations but these are not in the focus of my article because it is not a methodological one.