

**Project: A healthy society - towards the optimal management of wind turbine noise**



**D1.1 Selection of the target group for main research (M6)**



Projekt: Healthy society - towards optimal management of wind turbines' noise



## D1.1 Selection of the target group for main research (M6)

### Executive summary

Our plans for identifying a core group of respondents for the research were ambitious because we originally identify 4 potential groups of respondents:

- 1st group people living close to wind turbines for a few years
- 2nd group people living near wind turbines at most six months
- 3rd group people living at a greater distance from the wind turbines
- 4th group people exposed to wind turbine noise for the first time

Based on discussions with all the project partners we decided to select group 4 as the target group, i.e. to study the assessment of the annoyance of wind turbine noise among people who are exposed to this noise for the first time. This choice will allow us to invite to our laboratory (arranged as a living room) people (recruited for this project for a fee) who will evaluate the annoyance of previously recorded noise generated by wind turbines.

Authors	Date of submission	Confidentiality level
Anna Preis Jan Felcyn	30.IX.2021	It can be made available on the project website: <a href="https://hetman-wind.ios.edu.pl">https://hetman-wind.ios.edu.pl</a>

Our plans for identifying a core group of respondents for the research were ambitious because we assumed that we would be able to survey a large farm at the start of this project (we assumed 300 surveys) and identify 4 potential groups of respondents:

- 1st group people living close to wind turbines for a few years
- 2nd group people living near wind turbines at most six months
- 3rd group people living at a greater distance from the wind turbines
- 4th group people exposed to wind turbine noise for the first time

Unfortunately, it turned out that the managers of this large farm refused us access both with questionnaires and with objective measurements to their wind farm after long negotiations. We managed to get permission to conduct acoustic measurements as well as questionnaires at the other wind farm. However, after a local inspection of this farm it turned out that there are very few houses where we could conduct surveys. We are currently waiting for favorable wind conditions to conduct the surveys and measurements at this farm. In order to conduct surveys on the farm, we have to meet with the inhabitants and obtain their consent to let us into their houses in order to conduct the surveys. An additional difficulty is the still

prevailing pandemic and people's fear of contact. Our survey will include audio examples and so we are keen to do a face to face survey rather than a postal questionnaire.

Discussions are ongoing for a further two farms where we may be able to survey more respondents. These difficulties in accessing wind farms surprised us, as we thought that the presence of PWEA in the project consortium would help in negotiations with wind farm managers. As an argument why they do not want to let us on the farm we hear that such research may arouse distrust of local residents, that windmills probably harm people since researchers come here and ask them about the annoyance of such noise sources. Our research (according to the managers) may cause unnecessary complaints from the residents.

We did not foresee such a situation when planning this project and therefore we have to adjust our plans regarding the selection of this target group on the basis of the surveys. The analyses we wanted to carry out comparing noise annoyance ratings of wind turbines in different groups will be carried out post factum, i.e. after the selection of the target group for our main study.

The differences will be found between the assessment of annoyance of people living close to wind turbines for a few years (1st group), people living near wind turbines at most six months (2nd group) people living at a greater distance from the wind turbines (3th group) and people exposed to wind turbine noise for the first time (4th group). It will allow to study:

- impact of the non-acoustic factors (eg. negative attitude) on the assessment of wind turbine noise (higher annoyance rating observed for 1st group than for others);
- if short exposure to unknown noise leads to a reliable assessment of the wind turbine noise? Is the annoyance assessment undertaken on the basis of a momentary impression, or the transposition of a momentary impression on the long-term experience? (different annoyance rating observed for 4th group, than for others)
- preliminary assessment of an adaptation effect on wind turbine noise (lower annoyance rating observed for 2st group than for others)

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