# Nela Římanová: Particulate matter in Ostrava's air: analysis and foresight.

Opponent's review of the master thesis

## **General intro**

Nela Římanová submitted an interesting and useful thesis. Combination of addressing an environmental issue and applying foresight method fits well to the scope of new foresight study line at our department. In general, all my critique aims mostly to less important formal imperfections. Methods, content and results are relevant for master thesis and text as the whole are on very good level.

Theoretical part, which consists of a good introduction into particulate matters (PM) research area, is on appropriate general level. Despite the fact that it describes quite well-known facts, all important information is mentioned and well explained. The same is about history and situation of monitoring of PM in targeted area (Ostravsko).

Because of the novelty of foresight in the Czech Republic, I appreciate short introduction to foresight discourse and methods listed in the beginning od research part of thesis. Research results are explained in detail (sometimes a bit redundantly), esp. when describing sources of PM in particular steps of used methods.

The whole text is logically constructed, consistent and well interconnected. The language used in work (as far as I can know as non-native speaker) is advanced, almost without grammatic mistakes and typing errors. Sources used in theses and work with references are perfect.

## **Objections and critique**

To share my objections effectively, let me provide it in short bullet-list statements:

- The number of respondents in research part is 13; it is enough to gain relevant results? Answer in chapter 9 (Discussion) doesn't really satisfy me. Moreover, anonymity principle could be questionable in case of knowing respondents personally
- The weakest part of the work is graphical supplements.
  - What the measure belongs to in picture 1? Isn't it situated in the wrong corner of the map?
  - The map on picture 2 (p. 25) is dark and not really readable. In fact, it is blind map. Quality of maps is generally low. The same problem is with picture 4 (p. 37). Moreover, range of measuring stations is hardly understandable without detailed reading through the chapter.
  - There is also a problem with the source because OpenStreetMap (as declared source) does not provide aerial photomaps
  - The table 6 (p. 31) overflow on the next page
- I am not sure about the relevance and necessity of some chapters, e.g. list of measuring stations in chap. 5.3 and their technical details

- Despite description of methods provided at the beginning of theses, there is quite a big discontinuity between chapter 6.1 and 6.2. With no word about changing topic (as for example in chap. 7), reader is suddenly throwing down in the middle of research process.
- Was it necessary to describe results in chapter 6.2 so wordy? I think that one big or few shorter tables would provide more comprehensive and consistent overview of outcomes.
- Some information is repeated in result parts in variation.
- Page numbers are in the right bottom corner, which is a bit uncomfortable for orientation

Despite my objections stated above, Nela did remarkable piece work what should not be left away. Synthetic data, considering the number of circumstances and showing long-term development of PM<sub>x</sub> emission, could well serve for local authority or policymakers to make things better. The logical consistency of the research part, description of results and strict following of methods is what I appreciate even more. Including chapter 8 – Recommendation. For those who don't want to read whole text, chapter 10 (Conclusions) briefly and succinctly summarise all important outcomes.

#### **Evaluation**

Master theses od Nela Římanová fits well in the scope of foresight study line which combines environmental studies and foresight. Research questions addressed at the beginning of work are well stated and answered, both parts (theoretical and research) meet their aims. Defects in graphical parts are marginal. Especially, I would like to emphasize author's ability to apply foresight method on real environmental problem and provide practical outcomes. I can recommend these for defence grading A.

#### Questions

In sub-chapter "Transboundary air pollution from Poland" (p. 28) is written: *"In 2009, the effects of transboundary air pollution were discussed, for the first time."* Do you mean for the first time between the Czech Republic and Poland or at all? If so, what about *Convention on Long-range Transboundary Air Pollution*, signed in Geneva, 1979?

Why are measured zones (Picture 3, p. 35) oval? Is it a feature of measuring devices or is it because of squeezed map?

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