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Hydrology and Earth System Sciences
Discussions

Interactive comment on "Non-market valuation supporting water management: the case study in Czestochowa, Poland" *by* Y. Kountouris et al.

Anonymous Referee #1

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This paper uses a choice experiment to measure non-market benefits associated with improvements in groundwater quality a Polish region. While the paper is well written* and straightforward, and I am sure it is certainly of policy interest in Poland, it does not represent a significant academic contribution. It does not provide any particular new angle or innovation neither to the literature on environmental valuation (it uses a straightforward methodological design and the most basic modelling approach) neither to the application of the disproportionality principle of the WFD (discussion and contribution to this literature is simply missing). Authors state that this is the first paper on the non-market valuation of groundwater in Poland, which as said, is interesting and valuable for Polish policy-makers, but does not represent a substantial contribution to scientific progress. As authors themselves report in the paper there is already an ex-

tensive literature looking at the valuation of groundwater quality in different countries and regarding a set of different angles and aspects, and I fail to see in which respect the valuation design developed in this case adds anything new to that. For example, authors do not comment on how their valuation scenario and choice and definition of attributes address any of the limitations that may have been encountered by previous applications.

Regarding the policy background of the study, authors state (page 7171, paragraph 5) that: "According to the WFD measures should be assessed by cost-effectiveness and cost-benefit analysis". This is not exactly accurate. While the WFD does say that Member States shall make judgements on the most cost-effective ways of attaining GES, it does not prescribe the application of cost-benefit analysis. Cost-benefit analysis has been interpreted by the literature as the 'natural' way of addressing the disproportionality principle of the WFD, but it remains a political decision of Member States on what is to be considered proportionate or not. While agreeing with the authors on the fact that cost-benefit analysis is a necessary tool for the application of the WFD, I think they need to acknowledge the complexity of the issue and the discussions that have taken place in the literature regarding this issue (for example, the actual term disproportionality it is only mentioned at the end of the paper and it is not explained).

Paragraph 15 of page 7173 seems to mix up the concept of effectiveness with benefits, mixing up cost-effectiveness and cost-benefit analysis.

In general the conceptualization of the valuation design and its attributes is poor. Water pollution is defined as: no pollution, pollution at the safe level and pollution 20% higher than safe level. This specification is vague and leaves too much room for a broad range of interpretations from the side of respondents. Were they informed about the implications of each of these levels of pollution? How can authors be sure of the interpreted distinction between no pollution and pollution at the safe level? Were the attributes described in deeper level of detail to respondents (e.g. in terms of their implications, e.g what does 20% more pollution mean (for the public)?). How was this

issue addressed by the literature before and why authors think this is the best way? The attribute of the time to improvement, which is potentially an interesting angle, is not explained or justified. What was the purpose of using this attribute? Has this been addressed before by the literature?

The analytical application seems sound, while being basic (I personally don't have anything against basic applications, I don't like unnecessary analytical over complications, when there is sufficient added value in the conceptualization of the research design and/or the relevance of the outcomes for the broader policy-science debate, which is not the case in this paper). Details on sample representativeness, protest answers, etc. would have been good (although I understand the journal requires short contributions).

Minor issues: - *I have detected a number of small mistakes in the use of articles and prepositions. While generally well written, I would recommend another English check (e.g. the title "a case study in Czestochowa" or "the case study of Czestochowa"). - Page 7171 paragraph 5 mentions what is considered to be a 'cost' (cost per one person connected to sewerage). For completeness, I would recommend to also specify how effectiveness is measured. - Conclusions contain results that appear for the first time (aggregation and cost comparison). I would suggest moving them to the results section and focus the conclusions on the higher level discussion and contribution to the literature.

In sum, this is a valid analytical application of relevance at the local policy level, but does not meet, in my view, the requirements of advancement of scientific progress required by the journal. Although authors could improve some aspects of the paper by rooting their application and deepening the discussion in the literature, the relevance of the study will remain limited. I recommend authors to publish the paper in a more policy/technical oriented publication in Poland.

Interactive comment on Hydrol. Earth Syst. Sci. Discuss., 11, 7169, 2014.