Hydrol. Earth Syst. Sci. Discuss., 5, S249–S252, 2008
www.hydrol-earth-syst-sci-discuss.net/5/S249/2008/

Hydrology and Earth System Sciences Discussions

Interactive comment on "Measuring perspectives on future flood management on the Rhine: application and discussion of Q methodology" *by* G. T. Raadgever et al.

G. T. Raadgever et al.

Received and published: 25 April 2008

The authors of this paper would again like to thank Referee #1 for the many constructive comments. Below we describe how we handled the referee's specific comments. We also submitted an author comment, in a new discussion thread, in which we explain the general changes that we will make to the aim and the structure of the manuscript.

1. With "insufficient technical knowledge" we mean that there is not enough technical knowledge to determine the significance of problems, or to distinguish between alternative solutions. Insufficient technical knowledge may manifest itself, 1) through stakeholders stating that technical knowledge is lacking, or 2) through stakeholders drawing different conclusions about technical problems aspects and suitable solutions

based on disagreeing sources of technical knowledge.

2. See general authors' response.

3. See general authors' response.

4. We will better explain the differences between Q methodology and other questionnaires: "Q methodology differs from other survey methods in its aim to measure, correlate, and group subjective perspectives across a small, selected sample of individuals. It analyses each individual perspective as a whole, and does not aim to generate correlations between objective attributes that are abstracted from the individual (Steelman and Maguire, 1999), such as the relation between the nationality, gender, age and preferred management strategy of the respondent. Furthermore, Q methodology identifies perspectives within the sample of respondents, and is not intended to generalize the results to a larger population (Steelman and Maguire, 1999). "

5. We took the term 'quasi-normal distribution' from van Exel and de Graaf, but will correct the wording to 'uni-modal and symmetric distribution'.

6. This comment was already partly addressed in our earlier response. Furthermore, we will shorten the paragraph about factor analysis, and discuss it in more detail in the Appendices.

7. We will change "Dutchmen" to "Dutch".

8. We will add a table with how many people, from different stakeholder groups, we have asked to fill in the Q sorting questionnaire.

9. We will mention Table 3 only later, to avoid any confusion.

10 and 11. We will explain as follows: "The shared perspectives explained 43% of the total variance between all 47 individual Q sorts. The factors were defined by 36 individual Q sorts, which had a significant and clean loading on one of the factors. Of the eleven remaining Q sorts, three did not have a significant loading on any of the

HESSD

5, S249–S252, 2008

Interactive Comment

factors, and were therefore not so well reflected in the identified factors. The other eight Q sorts were reflected in the identified factors, but did not have a clean loading; they were not used as defining variables, in order to maintain a clear distinction between the factors. "

12. See our previous comment on this point. However, we may have misunderstood the meaning of the referee’s comment. We will add an explanation of the spread around each factor score: "The spread around the factor scores is 0.51 for factor A, 0.65 for factor B, and 0.82 for factor C (with p=0.01) (See for formula Brown, 1980, p. 298) . "

13. We will explain earlier in the manuscript: "After the selection of defining variables, PQMethod calculated ultimate factor scores for each statement. Such a score is the average score of the defining Q sorts, weighted by their factor loadings. "

14. We will explain why a 2-point difference between factors in factor Q sort value on a consensus statement can occur: "The factor Q sort values, which are integer numbers, differ up to two points, but the normalized factor scores do not significantly differ (with p = 0.01). "

15. The conclusions about non-significant statements will be deleted.

16. There have been many discussions about the maximum future discharge of the Rhine at the German-Dutch border. In 2015, the Dutch dikes have to be ready to safely discharge 16.000 m3/s. Through climate change the discharge may increase: discharges up to 18.000 or 20.000 m3/s are mentioned. Lammersen et al investigated the influence of floodings in Germany, and concluded (for now) that the discharge will stay below 17.000 m3/s. We adopted this number. This discussion has nothing to do with the elicitation of general values or worldviews of the respondents.

17. Uncertainty bands will be added to the table displaying the correlations between the factors.

HESSD

5, S249–S252, 2008

18. We will explain better what a correlation if -0.22 means for the analysis of controversy: "The lowest correlation that could be found between an individual and a shared perspective, or between two individual perspectives, was -0.22. This number indicates that there is some controversy within the P set, but that there are no fully opposite perspectives, with a correlation close to -1."

19. See general authors’ response.

20. See general authors' response. We will try to make the extent to which the limitations of the applied methodology have significantly impacted the results clear in the results paragraph.

21. See general authors' response.

Interactive comment on Hydrol. Earth Syst. Sci. Discuss., 5, 437, 2008.

HESSD

5, S249–S252, 2008

Interactive Comment