Activities on public perception and preferences in The Netherlands

In the past four years, the Centre for Energy and Environmental Studies of Leiden University has engaged in a research project that focussed on studying informed opinions of the general public regarding CCS options. This study has investigated the choices the general public would make after having received and evaluated expert information on the consequences pertaining to these choices.

The method used to collect these informed preferences is called the Information-Choice Questionnaire (ICQ). By comparing informed public preferences, obtained through administration of the ICQ, with current public opinions and preferences regarding CCS options, collected in a more conventional survey, the outcomes of this project can indicate what options would be considered acceptable given sufficient knowledge, and how much and in what respect the current situation deviates from this possible future situation.

1. The Information-Choice Questionnaire

The aim of the ICQ is to provide respondents with the necessary information to reach an informed opinion, and help them make use of this information to form opinions about different policy options. Before respondents in the ICQ choose between policy options, they receive information to make a more informed choice. First, the choice is explicitly framed as a decision problem and respondents are informed about the background of the decision problem (e.g. they are told why these specific options are included in the decision problem). Second, respondents are provided with information about the consequences of the different policy options.

First, it is essential to define a clearly specified and policy relevant choice problem. The policy problem was defined as:
"Which CCS option is the best to implement in the Netherlands by 2030 at the latest in order to reduce CO_2 emissions by 20% compared to the status quo?"
Six CCS options were chosen by the experts as most likely to be implemented on a large scale within 10 to 25 years in order to reduce CO_2 emissions.

Second, when informing people about the defined policy problem and about the consequences of the options that can solve this problem, it is essential that this information is valid and balanced. The information for this ICQ is therefore compiled by experts from different backgrounds and different organisations and checked by another, similarly differentiated group of experts.
Seven experts checked the final document with all information. This information was translated by psychologists to lay language and then checked again by a different group of independent experts ("the resonance committee"). After this, the information for lay people and the procedure of the current ICQ was tested on different groups of people.

The final ICQ was administered to a representative sample of the Dutch population (995 respondents) in November and December 2004.

Simultaneous with the administration of the ICQ, a more traditional questionnaire was given to a different sample of respondents (327 respondents). A second more traditional questionnaire was administered a year later to a different sample of 300 respondents. The traditional questionnaires did **not contain** the full descriptions of the options and the descriptions of the aspects and consequences that were in the ICQ.

2. The results

The analyses of the overall evaluations in the ICQ show that the average grades for the CCS options vary between 5.9 and 6.5 (on a scale 1-10). Only minute percentages (1.4 to 6.4%) of respondents stated to find specific CCS technologies so unacceptable, that they considered taking action when this technology were to be implemented on a large scale in the Netherlands. Of the six CCS technologies, "ECBM" was named most (which was the 6.4%) as unacceptable.

In the more traditional questionnaires, not all CCS technologies were evaluated as adequate. All coal options are graded below 6 on average. This is different from the average grades in the ICQ and shows respondents in the ICQ have been affected by the expert information they were given. When respondents, in the first traditional questionnaire were asked to evaluate the CCS options again after a bit of information, the grades mostly went slightly up. After no information, but an annoying irrelevant filler task, the grades remained or went down. Similar to what others have found before this study, the uninformed opinions in the traditional questionnaires were easily changed and very unstable. Large percentages of the respondents in the traditional questionnaires admitted not to have heard of the specific CCS options (between 60% and 90% depending on CCS option). Still, a substantial part of the respondents did not refrain from giving their overall evaluation. This resulted in evaluations that were easily changed within 12 minutes.

3. Conclusions

In this study, it is clearly shown that the current public opinions on CCS options, assessed by traditional questionnaires, are mostly pseudo-opinions: they are unstable and are affected by tiny amounts of non-diagnostic information and by the mood of the respondent. These uninformed opinions are totally worthless for predicting future public opinions on CCS options.

All in all, the results of the ICQ suggest that, after processing relevant information, people are likely to agree with large scale implementation of each of the six CCS options. Respondents find all CCS options on average "adequate", seldom find these options unacceptable and do not choose one of the options over the others with a majority of respondents.

Some reservations are important when interpreting these ICQ results.
First:
The evaluations and choices are made by the respondents within the context of the presented choice problem and this restricted the choice of respondents only to CCS options. When the CCS options are compared with other energy options, such as renewables, nuclear energy or efficiency options, overall evaluations might change[*].
Second:
Respondents in the ICQ processed valid and balanced information on aspects and consequences of the CCS options. The evaluations that result from this are an indication for potential public support for CCS options after the public is fully informed about pros and cons of CCS options.

Note
More detailed information can be found in the report ***"Public perceptions and preferences regarding large scale implementation of six CO_2 capture and storage technologies"*** *written by M. de Best-Waldhober and D.Daamen, Centre for Energy and Environmental Studies, Faculty of Social Sciences, Leiden University (march 2006). This project is executed in close collaboration with the Dutch CATO programme, the national programme on Carbon Capture, Transport and Storage in the Netherlands.*

[*] Within the Dutch CATO project, a new ICQ study is in progress where public opinions on CCS options are studied in the context of such other options.