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Monetary Valuation of Environmental Goods: Alternatives to Contingent Valuation

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Appendix I The IJburg Questionnaire

This appendix contains the complete text of the IJburg questionnaire. First, the introductory letter is presented, followed by the text of the questionnaire. There are thirty-five versions of the questionnaire: thirty versions for the conjoint measurement study, and five versions for the contingent valuation study. In this appendix, one CM questionnaire (version RII-6) is given in its entirety. The CVM questionnaire is almost identical, except for the valuation questions (question 7, 8 and 9). Here, only these deviant questions are given (version V-4).

Introductory letter

Date:	31 January, 1997	Department:	BE/F&O
Your ref.:		Contact:	Ms B.E. Baarsma
Our ref.:		Phone direct:	(+31) 20 525.4223
Enclosure(s):	2	FAX:	(+31) 20 525.4033
Subject:	Questionnaire IJburg		

Dear resident of Amsterdam,

Currently, a research is being carried out on the valuation of the impacts on the environment of the (possible) construction of a new district, viz. IJburg. This study is part of a research project on the valuation of the environment. We kindly request you to look at the enclosed questionnaire and to answer the questions. This will take up about 10 minutes of your time.

As you may know, the Municipality of Amsterdam intends to construct the new district of IJburg in the IJmeer, on artificial islands. This plan has met with quite some resistance. The question whether or not this new district IJburg is to be realised, will shortly be the subject of a referendum in Amsterdam.

It is important to note that the research on hand is strictly for scientific purposes and is not in any way connected with either the referendum or the Municipality of Amsterdam, or with any groups in favour of or against the new district. The results will be used exclusively for scientific purposes, and will not be released for any other purposes. Apart from this, we would like to stress that, in processing these questionnaires, your anonymity is fully guaranteed.

For the research to succeed it is essential that you fill in the questionnaire, and return it before March 15th, 1997. Please use the enclosed return envelop (no stamps required).

If you have any further questions, please contact Ms Barbara Baarsma (phone 525.4223). During the period of February 4 – March 14, 1997, she will be available on weekdays (except Mondays) between 09.30 and 12.00 hours.

Thanking you in advance for your time and effort,

Yours sincerely,

Ms Barbara E. Baarsma

Prof. dr. J.G. Lambooy

CM Questionnaire

This questionnaire is about the valuation of environmental issues. Filling in the form will take about 10 minutes. For the success of this research it is essential that you fill in the form and return it before March 15th, 1997.

1) First of all, a general question.

In the Netherlands we are faced with various problems. Several of these problems are mentioned below. Please indicate for each problem whether we should spend more, less, or exactly as much as we are currently spending on it in the Netherlands (please circle your choice for each issue):

	More	The same	Less	Don't know
- Improving education	X	X	X	X
- Protecting the environment	X	X	X	X
- Fighting the housing shortage	X	X	X	X
- Fighting crime	X	X	X	X
- Fighting congestion	X	X	X	X
- The issue of immigration	X	X	X	X
- Development aid	X	X	X	X
- Fighting unemployment	X	X	X	X

In this questionnaire we also address various problems connected with the Municipality of Amsterdam's plan to expand the town into an eastern direction. This plan is called the IJburg project. IJburg is to become a new district, to be built in the IJmeer on six artificial islands, which are yet to be constructed. In this new district, some 18,000 dwellings are to be built, to house about 40,000 people.

2) Have you ever heard of or read about this project?

- Yes

- No

- Don't know

There are advocates of as well as opponents to the IJburg project. Below we present brief sketches of the arguments of both groups.

Those who are opposed to the IJburg project mainly are against the (partial) attack on the IJmeer green area. Nationally, the IJmeer is an important area, as part of a chain of green areas crossing the whole of the Netherlands. Internationally also the IJmeer is important, among other things as a resting and feeding area for all kinds of water birds. As a consequence of building IJburg, part of the IJmeer will disappear. Those who are *in favour* of IJburg point out that this only involves a small part of the IJmeer. But *opponents* argue that, with IJburg, a start is made to cover the entire IJmeer with buildings.

Those who are *in favour* of the project mainly indicate the considerable contribution of IJburg in the fighting the housing shortage in Amsterdam (IJburg will contain 18,000 dwelling). *Opponents* argue against this that there are other possible locations for building housing estates (like Almere, the Bovenkerkervolder to the South of Amstelveen, et cetera). *Advocates* point out that these alternative locations involve (more substantial) disadvantages. For instance, a location way outside Amsterdam will result in unnecessary increases in commuter traffic, and several of the alternative locations will also involve the loss of green areas (e.g., parts of Waterland or Amstelland). Some *opponents* doubt whether so many new dwellings are indeed required, and they advocate a somewhat lesser increase in the number of dwellings – which could then easily take place within the current city limits.

Finally, some *opponents* feel that, as a result of the building of IJburg, the possibilities for recreation in the area are diminished. *Advocates* however argue that, through all kinds of new services in IJburg, the possibilities for recreation will increase.

- 3) Are you for or against IJburg?
 - I am for IJburg
 - I am against IJburg
 - I hold no view whatsoever on IJburg

- 4) IJburg will play various roles. Which role do you think is IJburg's key role?
 A project leading *mainly* to (please mark one option only):
 - decreasing possibilities for recreation
 - employment creation
 - total devastation of a green area
 - partial destruction of a green area
 - combating congestion (keeping commuter traffic low)
 - improving the housing situation (decreasing housing shortage)
 - a different role, viz.:

To everyone, both advocates and opponents, it is clear that the construction of IJburg in the southern part of the IJmeer involves the loss of certain values of green and recreation areas, like certain kinds of water birds, plants, and shellfish and diminished opportunities for sailing and rowing. Now, suppose that there are plans to construct a new green and recreation area in and around the IJmeer, as compensation for these losses. The new green area will be developed elsewhere in the IJmeer, and will serve as an alternative location for plants and animals. The new recreation area will contain opportunities for water sports as well as for other means of relaxation (like walking, cycling, sports). For instance, a yachting marina and beaches will be built on and around IJburg, and areas for walking and cycling as well as sports fields will be constructed in the areas along the IJmeer.

- 5) Do you think that it is *possible* to compensate for the natural and recreational values that are lost because of the construction of IJburg?
 - Yes
 - No
 - Don't know

- 6) Do you think that it is *desirable* to compensate for the natural and recreational values that are lost because of the construction of IJburg?
 - Yes
 - No
 - Don't know

The construction of this new green and recreation area will cost a great deal of money. Now, suppose that an 'IJmeer Fund' is established, which will pay for the costs of this development project. Everyone is asked to pay a *voluntary, one-time-only* contribution to this fund. These contributions will be used only for the construction of the new green and recreation area, and if more money is contributed than is needed, the surplus will be paid back to the contributors, proportionally according to their contributions.

7) Below you find 6 different situations concerning the new green and recreation areas in and around the IJmeer, and concerning the individual contributions to the IJmeer Fund. If you were asked to arrange these situations hierarchically, from best to worst, which situation would you put first (that is: the best situation), which one would you put second (that is: the second best situation), et cetera, up till and including the situation that you would put in the sixth place (the worst situation).

Situation 1
Nature: the quantity of plants and animals in the IJmeer increases by 25%
Recreation: the possibilities for water sports and other forms of recreation decrease by 25%
One-time contribution: f10

Situation 2
Nature: the quantity of plants and animals in the IJmeer decreases by 50%
Recreation: the possibilities for water sports and other forms of recreation increase by 10%
One-time contribution: f25

Situation 3
Nature: the quantity of plants and animals in the IJmeer increases by 25%
Recreation: the possibilities for water sports and other forms of recreation decrease by 25%
One-time contribution: f2.50

Situation 4

Nature: the quantity of plants and animals in the IJmeer remains the same

Recreation: the possibilities for water sports and other forms of recreation decrease by 10%

One-time contribution: f15

Situation 5

Nature: the quantity of plants and animals in the IJmeer decreases by 50%

Recreation: the possibilities for water sports and other forms of recreation remain the same

One-time contribution: f2.50

Situation 6

Nature: the quantity of plants and animals in the IJmeer remains the same

Recreation: the possibilities for water sports and other forms of recreation remain the same

One-time contribution: f5

Please indicate your ordering of the six situations below. Consider the various situations well and keep in mind your income and other expenses. (Please state the number of the situation of your choice on the dotted lines.)

- My first choice would be situation No.
- My second choice would be situation No.
- My third choice would be situation No.
- My fourth choice would be situation No.
- My fifth choice would be situation No.
- My sixth choice would be situation No.

- 8) Could you please give report marks (between 0 and 10) for each of the six situations, where 10 represents what you feel to be the best possible situation and 0 represents what you feel to be the worst possible situation. Your choices can get marks ranging from 0 to 10, and each subsequent choice gets a lower mark than did the previous one (the second choice gets a lower mark than does the first choice, the third choice gets a lower mark than does the second choice, and so on). Please give marks for each choice.

- First choice: mark
- Second choice: mark
- Third choice: mark
- Fourth choice: mark
- Fifth choice: mark
- Sixth choice: mark

- 9) You have now ranked and graded the six different situations, but could you please also indicate the situation that is the most acceptable to you (meaning the situation that you would really be willing to pay for).

Please cross one answer only.

- Only the first choice
- The first and the second choice
- The first, second and third choice
- The first, second, third and fourth choice
- The first, second, third, fourth and fifth choice
- All six choices
- None of these choices

Some background questions to conclude with.

- 10) What is your age?
- I am years of age
- 11) Are you a male or a female?
- Male

- Female

- 12) Your household consists of how many members (including yourself)? Please indicate the number of people per age group.
- persons in the age group of 0-18
 - persons in the age group of 19-64
 - persons in the age group of 65 and over
- 13) Are you the breadwinner (are you the one who provides the major part of the household income)?
- Yes
 - No
- 14) What is your current employment situation?
- employed (paid job)
 - unemployed / disabled
 - on a pension / on early retirement
 - full-time housewife or househusband
 - student
 - otherwise, viz.
- 15) Are you currently house-hunting?
- Yes, I have been for years already
 - No
- 16) Do you have any plans to move to a location outside Amsterdam?
- Yes, because
 - No
- 17) Would you like to live in IJburg?
- Yes
 - No
 - Don't know
- 18) How much is the net monthly household income (the sum total of all incomes, including your own)? (Net income means the income after taxes.)
- Less than f1,500
 - f1,501 – f2,000
 - f2,001 – f2,500
 - f2,501 – f3,000
 - f3,001 – f3,500
 - f3,501 – f4,000
 - f4,001 – f4,500
 - f4,501 – f5,000
 - f5,001 – f5,500
 - f5,501 – f6,000
 - f6,001 – f6,500
 - f6,501 – f7,500
 - f7,501 – f8,500
 - f8,501 – f9,500
 - f9,501 – f10,500
 - f10,501 or more
- 19) What is the highest educational level of the breadwinner (the one contributing most to the household income)?
- Primary school
 - Lower vocational education (LBO/VBO)
 - Lower general secondary education (MAVO)
 - Intermediate vocational education (MBO)
 - Higher general secondary education (HAVO)
 - Pre-university education (VWO)
 - Higher vocational education (HBO)
 - University education
 - Other, viz.
- 20) Do you own a car?
- Yes
 - No
- 21) Do you consider yourself or your household to be environment-friendly?
- Yes
 - No
 - To a certain extent
- 22) Are you, or is any other member of your household, a member of an environment protection or nature reserve / natural heritage society?
- Yes → Please continue with question 22a
 - No → Please continue with question 23
 - Don't know → Please continue with question 22a

22a) Which of the societies mentioned below are you (or is a member of your household) a member of?

- Greenpeace
- World Nature Fund
- Society of Natural Heritage
- Birds Protection Society
- Animal Protection Society
- Environment Protection Society
- Society for the Preservation of the IJsselmeer
- Others, viz.

23) Do you ever go on or near the IJmeer (e.g., for sailing or rowing, or for cycling or walking)?

- Yes, at least once a week
- Yes, at least once a month
- Yes, twice a year
- Yes, once a year or less
- No

24) Do you have future plans to make use of the IJmeer as a green and recreation area?

- Yes
- No
- Don't know

If you have any further remarks or suggestions concerning this questionnaire or the IJmeer in general, please use the space below.

Thank you very much for your kind co-operation.

CVM questionnaire: question 7, 8 and 9

The construction of this new green and recreation area will cost a great deal of money. Now, *suppose* that an 'IJmeer Fund' is established, which will pay for the costs of this development project. Everyone is asked to pay a *voluntary, one-time-only* contribution to this fund. These contributions will be used only for the construction of the new green and recreation area, and if more money is contributed than is needed, the surplus will be paid back to the contributors, proportionally according to their contributions. When answering question No.7, you should assume that all green and recreational values that are lost as a result of the construction of the new areas, are to be compensated.

- 7) Some people say that they are willing to contribute *f*15 to the 'IJmeer Fund', others are willing to pay more, whereas yet others are willing to pay less. Would you be willing to contribute *f*15, more than *f*15, or less than *f*15 to the 'IJmeer Fund'?
- Please keep in mind your income and other expenses.
- About *f*15 → Please continue with question 10
 - More than *f*15, viz. *f*..... → Please continue with question 10
 - Less than *f*15, viz. *f*..... → Please continue with question 8
 - Don't know → Please continue with question 9
- 8) You are willing to pay less than *f*15 to the 'IJmeer Fund'. For what reason?
- It is not worth that much to me
 - I cannot afford it
 - Others should pay for it
 - Different reason, viz.
- 9) You are not sure how much you would contribute to the 'IJmeer Fund'. Why not?
- Insufficient information
 - I am not sure whether my household can afford such a sum
 - I am not sure how much it is worth to me
 - The decision is not mine to make
 - Different reason, viz.

