

Report of the Third Plenary AquaMoney Meeting

26-28 September 2007, University of Bologna, Italy

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SIXTH FRAMEWORK PROGRAMME

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Summary

- The third plenary AquaMoney meeting was organized from 26 until and including 28 September 2007 by the University of Bologna. Twenty-eight project partners from 16 international research institutes participated in the meeting.
- The main objective of the third plenary AquaMoney meeting was to discuss the design and set-up of the AquaMoney test case studies based on the key methodological issues in water resource valuation outlined in the draft guidelines.
- The AquaMoney case studies are organized in three main groups, reflecting the key water management issues in the context of the Water Framework Directive (WFD) across European Member States:
 - Water quality with an emphasis on eutrophication and other water pollution problems (Humber-UK, Morsa-Norway, Odense-Denmark, Rhine-Netherlands, Scheldt-Netherlands, Scheldt-Belgium, Neris-Lithuania)
 - Ecological restoration of heavily modified water bodies (Danube river basin in Austria, Hungary and Romania)
 - Water scarcity and water resource allocation costs (Jucar-Spain, Guadalquivir-Spain, Tajo-Spain, Po-Italy, Pinios-Greece)
- The blue print for the three main case study groups is a common valuation design aiming to facilitate the comparability of the case study results in different WFD management contexts and test the transferability of the economic values associated with the environmental and resource costs and benefits of WFD implementation.
- In line with the ‘no deterioration’ rule in the WFD, most case studies focus on the economic value of the non-market benefits of WFD implementation across EU member States.
- Different types of economic choice models are used to elicit public preferences for WFD implementation and the associated benefits.
- Based on the common valuation design agreed upon among project partners during the meeting in Bologna the case studies are set-up, developed further and carried out in the second half of the second project year (October 2007-March 2008).
- A 4-day choice modeling course is organized by the project coordinator 21-24 November 2007 to help the AquaMoney project partners analyze the results of the test case studies using state-of-the-art methods and techniques.
- The case study results will be presented at the 4th plenary meeting organized by Corvinus University of Budapest and RISSAC in Budapest 7-8 April 2008.

1. Introduction

This report summarizes the main results of the third plenary meeting of the AquaMoney project, which took place at the University of Bologna, Italy, 26-28 September 2007. The project AquaMoney (SPPI-022723) is a Specific Targeted Research Project, supported by the European Commission, DG Research, under the 6th Framework Programme. The third plenary meeting marked the further preparation of the AquaMoney test case studies. Further background information about the project and the foreseen activities can be found at the project website www.aquamoney.org and from the Description of Work.

The main objective of the third plenary meeting was to design and prepare the AquaMoney test case studies, taking into account the key methodological issues listed in the draft guidelines presented and discussed at the previous plenary AquaMoney meeting in Berlin 26-27 March 2007. The program of the meeting and the list of participants are included in the Annex to this report. The presentations at the meeting are available at the project website. The meeting consisted of a combination of **parallel sessions** of the three different case study working groups for *Water Quality* (UK, NL, B, DK, NO, LT, FR), *Water Scarcity* (SP, GR, IT) and *Ecological Restoration* (RO, HU, AUS) focusing on the common research design to be employed in the test case studies and **plenary sessions** where the common research design across the case study working groups was presented and discussed with all partners. During the parallel sessions the partners worked together on the common research design to facilitate comparability and testing of the transferability of the economic values of water resources use (i.e. the environmental and resource costs and benefits involved) across different European contexts and WFD management problems. The plenary sessions were also used to present and discuss the way the key methodological issues in the draft guidelines are addressed in the different case studies, and the preliminary results of the meta-analysis of existing economic valuation studies and economic values of water resources use.

Before the third plenary meeting, the *Ecological Restoration* and *Water Quality* groups met separately in Budapest (7-8 June 2007) and Amsterdam (5-6 September 2007) to prepare the set-up of the case studies and the third plenary meeting. No separate minutes exist of these meetings, but both meetings aimed to prepare for the set-up of the test case studies and discuss common grounds and interests, including the WFD policy relevance. The meeting in Amsterdam was organized and facilitated by the project coordinator at IVM-VU (Roy Brouwer, Marije Schaafsma, Alison Gilbert, Julia Martín-Ortega) and attended by the project partners from UEA (Stephanie Watkins), NIVA (David Barton), VITO (Leo de Nocker), AAPC (Daiva Semenienė and Rasa Ščeponavičiūtė), RVAU (Alex Dubgaard and Berit Hasler). The meeting in Budapest was organized and facilitated by RISSAC and the Corvinus University Budapest and the project coordinator at IVM-VU. Participants included the project partners from Corvinus (Sandor Kerekes, Simon Milton, Zsuzsanna Szerényi, Szilvia Luda), RISSAC (Zsuzsanna Flachner and Zsófia Bakacsi), the University of Bucharest (Angheluta Vadineanu and Teodora Palarie), IHSK (Michael Getzner and Markus Bliem), and IVM-VU (Roy Brouwer). The meeting in Budapest was also attended by the Hungarian representative in the AquaMoney Advisory Board (Eszter Kovács).

The remainder of this report consists of a summary report of the parallel sessions of the case study working groups for *Water Quality*, *Water Scarcity* and *Ecological Restoration* and a brief overview of the next steps.

2. Water Scarcity

Participants:

University of Bologna: Davide Viaggi, Meri Raggi, Laura Sardonini and Davide Ronchi

University of the Aegean: Michalis Skourtos and Thanassis Machleras

University of Valencia: Manuel Pulido and Joaquín Andreu

University of Cordoba: Julia Martín-Ortega

Objectives of the meeting:

- Define the final water scarcity common valuation design
- Agree on the common set of questions
- Establish forthcoming time plan

Background of the meeting

The main objectives of the research can be summarized as follows:

- To assess the resource costs associated with water use based on stated preference methods, i.e. estimate the economic value of limited water availability.
- Specifically examine the economic value attached to using limited water supply for the main groups of water users, including the environment (non-use value associated with water scarcity).
- To elicit the economic value of keeping the option of future water use (option value) that a risk-averse individual is WTP.
- To test the possibilities of benefits transfer.

A first common valuation design was produced via on-line discussions during the months of June/July 2007. Different versions of this valuation design were tested. The attributes composing the valuation design are presented below:

- YEARS OF SUPPLY: refers to the years of guaranteed future water supply aimed to estimate option values.
- PRIORITARY USE: refers to which water use should be satisfied first after household use in case of limited water availability. This attribute tries to estimate the marginal economic value for a specific user group, including the environment (non-use value) in time of limited water.
- HOUSEHOLD WATER SAVING. Refers to household willingness to take water saving measures in order to increase water availability for other purposes.

Different versions of the common valuation design were tested on-site in the case studies. A summary of the pre-tests and their results is presented below.

- Spain-Guadalquivir
20 interviews (10 * 2 different versions of the valuation design) held in Córdoba (July 2007). Each respondent faced 3 choice occasions.

Main results

Prioritary use was dominant over the other attributes. Household water saving was not correctly understood, and in many cases ignored. Some (not much) scepticism in relation to the capability of guaranteeing water supply within 5 years was detected. Yearly money amounts more credible than monthly ones.

- Italy
14 people interviewed in Bologna, Ravenna, Forlì-Cesena, Modena and Rimini, in September 2007. The valuation design included a combination of WTP and WTA (for water savings in the household – see annex). Each respondent faced 4 choice occasions.

Main results

Guaranteed water is the main attribute affecting the choice; but supply is not easy to understand and range too wide compared to the other attributes (100 to 500%, compared to changes of 1-5% for the other attributes). Saving water uses (important): involves directly family behaviours; important to specify role of technology, specific (voluntary) actions, need for care, information and assistance, narrow range compared with other attributes (in particular with guaranteed water supply). Water bill (not so important): difficult to understand the variation in the water bill, narrow range compared with other attributes (in particular with

guaranteed water supply), often connection to uses reduction and to payment vehicle. Less importance given to the secondary water use: it is not realistic to think about one use only; people ask questions.

- *Greece*

32 interviews: 5 interviews during a first pre-test of the valuation design, held in Thessaly (August 2007). Each respondent faced 3 choice occasions. 27 interviews during a second pre-test (September 2007) with 2 versions of the valuation design (a 9 pages questionnaire has been tested). Each respondent faced 10 choice occasions.

Main results (concerning the choice experiment):

Presentation of scenario is too long. Recreation as attribute in combination with environment seems to be problematic. Respondents mention high correlation between the two attributes. Proposed range of Euro amounts is too high. Some of the respondents mention that only a small fraction of our survey could pay the amounts mentioned.

Key issues discussed during the meeting

During the parallel session of the Water Scarcity Common Valuation and the presentation in the Plenary Meeting, the proposed valuation design still presented important conceptual problems, pointing out the need of further refinement. The key issues in this respect are summarized below.

1) Allocation among water uses

The main difficulty to be solved is the inclusion of the notion of “allocation among sectors” in the valuation design. Allocation is a key element of water scarcity problems and should therefore be at the heart of the design. A categorical inclusion, as proposed in the first common valuation design (“priority water use”) gives rise to the following concerns:

- a) For the statistical interpretation of the results: we obtain the WTP for prioritizing a particular water use in front of the others, but what is exactly the difference between the priority use and the rest?. This is a different matter from the comparison of the ratios B_{use1}/B_{cost} Vs B_{use2}/B_{cost} : the later comparison gives us the difference on how much do people value more to have use 1 as priority than use 2, but does not say anything about the difference between the priority use (whichever) and the second use(s). David Barton suggested that the relative importance of the specific water use could be obtained by dividing the parameter of the priority level (whichever) by the sum of the rest.
- b) Including households in the priority uses scale: During the discussions households was included as an additional level of the “priority use” attribute (on the contrary to the pre-test, where the priority use was explicitly supplied “after household needs were satisfied”). A concern about the dominance of the household being systematically elected as the priority use arose during the discussions.
- c) Usefulness of the results for policy-making: how can the “priority use” results be introduced practically as in-puts in decisions?.

Alternatively, the inclusion of the different sectors as different attributes of the design (instead of levels of the same attribute) ignores the trade-off between the sectors and thus the allocation issue is not addressed.

The inclusion of one attribute being the water allocated to the environment and another attribute being the reduction of water in households to be allocated to the environment for instance is this results in correlation and hence refraction of the IID assumption underlying CE.

The following solutions/proposal came up during the discussions in Bologna:

A only measuring the environment. The simplest option is to only look at the value attached to the availability of water for the environment (i.e. WTP for allocating enough water to the environment in which could be consider a “quantitative” quality ladder for the state of the environment). This option would satisfy the requirements of WFD regarding resource cost as it would allow us to estimate the opportunity costs of not allocating enough water for the environment in order to assure the good ecological status and would be useful as inputs into a CBA of reaching good ecological status. This option, nevertheless, ignores the limitations of water allocation related to water scarcity: no trade-off among sectors is required. The Italian team agrees with this option, although admitting that it is less informative as it seems to exclude the trade-off explicitly. They point out that if this option is taken, an environmental value scale (such as poor, sufficient or good) needs to be defined. They suggest a scale based on the “Minimum Vital Flow”(MVF), for example: poor = MVF, sufficient = MVF+15% and good > MVF +15%). The Greeks support this scale, but Manuel has

expressed his concerns about the understandable-ness of this scale and suggested to try to referee it to some more understandable for the public categories as we do in the water quality design (maybe use some visual support).

B trade-off between environment and one water use in quantitative terms. A more complicated alternative is to include in the design the trade-off among sectors inherent to allocation problems in a quantitative way. As the trade-off among sectors would necessarily include correlation if included as different attributes, there is an option to be included within the same attribute (e.g. level 1: 1% of a current water use would be allocated to the environment, level 2: 2% of the current water use agriculture would be allocated to the environment, etc). Because of the multiple uses and differences between cases studies, it might be necessary to restrict the trade off between only the environment and households. This later option generates another problem: we are asking people to do a “double trade-off”: accepting less water in the household plus paying for this. This double trade-off seems nevertheless inherent to any design that addresses the allocation problems. This is very problematic according to some of the partners.

2) The option values and the notion of risk

The attribute “years of guaranteed supply” was introduced in order to elicit the option value of water availability, i.e. how much are people willing to pay to make sure they will have the option to use the water in the future. Concerns were expressed about i) the extent to which respondents understand the attribute and ii) the definition of the attribute, and the conceptual mixing between the concepts of option, risk and uncertainty. The former is nevertheless a matter of the goodness of the description of the problem to the respondent, but the latter is crucially related to the environmental good that we are actually trying to assess.

Our initial intention was to estimate an option value. Discussions during the plenary meeting questioned the notion of risk included in the design. This is due to the way the option value is included in the design (years of guaranteed supply). This attribute was meant to identify the value of having the option to use the water in the future, but during the plenary meeting this was interpreted as a notion of risk (risk of not having enough water for a certain period of time). This consideration led the discussion to the lack of definition of the amount of the risk involved (as only the time frame was established in the attribute). Two possible interpretations of this are:

- Maybe the “water scarcity team members” failed during the discussion to explain the original intention of the attribute (option value)
- Maybe the two concepts are too conceptually interlinked to be treated independently.

In any case, we then need first to make up our minds about what are we really trying to estimate and then provide a more sound way of measuring it through the conceptually correct attribute. A decision has to be taken:

A WTP for avoiding uncertainty. There are several options:

a. Decrease of frequency of water-cuts per year. This attribute should be expressed in a “positive” way (i.e. WTP to avoid water cuts) instead of in a “negative” way (i.e. WTA to have water cuts) in order to avoid the inclusion of both WTP and WTA in the same design. This creates a problem however related to different baselines (would it be credible to ask people to pay to reduce water-cuts if they actually don’t regularly have them in some of the case studies?).

Additional comments:

- There are already studies which address the preferences to avoid watercuts. they are very detailed in terms of introducing key variables for the analysis (e.g. moment of the day when the watercut takes place, number of hours, week day or weekend, season of the year, etc.). We will not be able to introduce all those many variables in our design.
- Some partners mentioned in relation to this issue that it might be convenient to also think about property rights.

b. Percentage of reduction of the water restrictions. Is this understandable for respondents? What does this mean in their real life?

c. Levels of drought alarm (making clear that we mean “managing” the drought and not only related to the natural phenomenon).

In relation to options a. and b. the attribute seems to be related to households, but this has not yet been defined. Besides, a question remains open in relation to a and b: how can we make sure that we do not have correlation in our design in relation to attributes 1 and 2, i.e. if more water is allocated to the environment (option1.A) or the priority use is not the household (option 1.B), this might imply higher probability of water cuts. The Italian team seems to propose a kind of mixture between a. and c.: they suggest to ask for the WTP for avoiding uncertainty not in relation to an specific sector but to the area as a whole in what they call "adverse event".

B option values. We might want to stick to the idea of option value for which we will have to work on a better definition.

In any case, the definition of this attribute is depending on the definition of the previous one, in order to clarify if we mean uncertainty of water supply or option use in general (in the region, for all uses) or only relating to households).

3) The baseline and the consequences of opting-out

Further discussion needs to be done in relation to the definition of the baseline, taking in account that partners have different starting points (e.g. in Greece, water uses are currently submitted to scarcity, in Italy the distinction between water quantity and water quality problems is not so straight forward). Partners have agreed to establish common targets (derived from the common valuation design) and different baselines (corresponding to real current situations). The challenge is then to be able to describe the baseline and consequences of the opt-out in a somehow generic and meaningful way for respondents, which should also allow us to quantify the change for which the welfare measure is calculated. Partners pointed out that the trends have to be taken into account in the definition if the status quo or opting-out represents that the current situation cannot be kept in any case but a deterioration (or maybe improvement!). May be possible to find a common point if the trends will follow the same path.

Other issues

A common set of questions (besides the valuation exercises) was discussed and agreed upon during the meeting.

Time frame

The time frame and payment vehicle was also discussed. It was agreed to use yearly increases in the water bill. Still the time horizon does not seem to be completely clear and it seems to be dependent on the attributes that we select, mainly in relation to the inclusion of the option value attribute. Partners have pointed out the need of having a time horizon for aggregation purposes and use in for policy-making.

3. Water Quality

Participants:

University of East Anglia: Ian Bateman
 IVM-Vrije Universiteit: Marije Schaafsma
 NIVA: David Barton
 VITO: Leo de Nocker
 BRGM: Jean Daniel Rinaudo and Stephanie Aulong
 AAPC: Daiva Semenienė and Rasa Ščeponavičiūtė
 RVAU: Alex Dubgaard and Berit Hasler

Issues to be discussed at the meeting:

- Definition of good (water quality ladder, length of river, etc.)
- Maps (concerned about map scale – what should be on the maps? Common level of detail. Suggests adding the lengths in miles/km).
- Rivers/lakes
- Payment vehicle
- Elicitation format
- Scope test

Ian Bateman gave a presentation outlining a proposed contingent valuation (CV) approach to a common design element for all issues. The presentation is found back at the project website. An overview of the proposed sampling procedure in the case study areas is given below. This provides an important starting point and boundary condition for the possibilities to test the various methodological issues in the draft guidelines.

<i>Partner</i>	<i>Sample size and delivery mode</i>
Belgium Sheldt	500 web
Lithuania	500 face-to-face
France	Unknown
Netherlands	500 face-to-face
Norway	1000 web
Denmark	1800 web (split samples)
UK	1000 face-to-face (split samples)

Notes on the structure of a Common Contingent Valuation Design

This section lays out the key issues that would need to be tackled in devising a common design CV question. The discussion was arranged to roughly address issues in the order they would arise when presenting a CV element to respondents. Phrases in speech marks (“..”) indicate approximate statements to respondents.

Introduction

Interviewer states “this is a new section, with a new type of question”.

“Consider this map” (show the status quo (SQ) map – see Figure 1 for an example)

Suggest that most partners use a paper map.

Extent; sufficient to avoid edge effects (stretch well within map and surrounded on all sides by sample points).

Features – sufficient to clarify location (main roads, towns, etc.) Focus group work may be needed to determine necessary information level. Key to scale.

Q: “Can you point to where your home is?” Record this location on the map (will need a new copy for each respondent)

Then explain river quality colour coding system “This ladder explains water quality...”

Water quality ladder (WQL) revisions:

- Add icon for common bird/duck (and plants?)
- Can icons be arranged horizontally?
- Slice off one bank, rotate and add side view structure.
- Lose the bridge.
- Make deeper on one side
- Make murkier on red side in deeper water.
- Retain swimming in green (good) quality.
- Stephanie Watkins to check course fish is ok – probably leave it as it is (consider a lakes version with shading on course fish removed for yellow).

Pollution causes, responsibility and change:

- Need a statement explaining why water quality changes (to do with sewage outfalls, water treatment plants, etc.).
- Responsibility: Explain that agricultural and industrial pollution is being tackled and those polluters are paying/ Explain the responsibility of households to address their contribution to river pollution.
- Explain technology solution – enhancements of sewage works to deal with domestic pollution.

Improvement and payment

- Show the second map. Clarify the difference between maps;
- Payment and delivery: Pay from 01 Jan 2008; benefits from ?? (soon – e.g. end of 2008).
- Specify the payment vehicle (water bill increases; addition to household bill; per annum, every year).
- Add budget reminder.

Willingness to pay (WTP) elicitation

- WTP question: “What are you willing to pay?”
- Present payment card amounts
- Use per annum payment period.

Scope test:

Quality changes are being investigated in the choice experiments. Therefore scope test to focus on quantity changes. Criteria for quantity levels:

- Ensure lower level is not so big that people do not care about money for upper level.
- Roughly double
- Lakes group conferred regarding setting same numbers of lakes (Denmark, Norway, Lithuania and Netherlands). Also, similar distances apart (across countries).
- Denmark examining lakes, rivers and fjords (via 6 subsamples of about 300 each). Should provide a useful point of cross-comparison.
- DE, BE, UK all looking at rivers.

Example: scope test

Define

A^1 = Improvement to (say) 15km of river (or the smaller number of lakes)

A^2 = Improvement to (say) 30km of river (or the larger number of lakes)

Note that we define A^2 so that it contains all of A^1 plus some additional river (it is important that all of A^1 is included to ensure that, in quantity and quality terms $A^2 > A^1$). Note that this does not mean that the utility of A^2 (which we can denote as $V(A^2)$ for which the willingness to pay is $WTP(A^2)$) is necessarily greater

than the utility of A^1 (which we can denote as $V(A^1)$ for which the willingness to pay is $WTP(A^1)$). This is because of diminishing marginal utility associated with most environmental goods (e.g. I might have a high value for improving a first lake, but once that is improved I might be indifferent about improving a second lake). However by ensuring that A^2 contains all of A^1 then we know that

$$WTP(A^1) \leq WTP(A^2)$$

Question ordering and incentive compatibility

Arguably the ordering of the two scope questions affects their *incentive compatibility*. Carson and Groves (2007) show that once a respondent realises that there is more than one valuation question then they become aware of a possibility that they might be able to get the improvements in question at different prices. In such circumstances, Carson and Groves argue that respondents may pretend to have a lower WTP than they really do.

We can test for this by asking some respondents to value improvement A^1 and then A^2 while other respondents value A^2 and then A^1 . If we denote the 1st and 2nd question by subscripts then, by varying the order of presentation we will obtain WTP estimates for the following:

- A_1^1
- A_2^1
- A_1^2
- A_2^2

This arrangement also provides a test for psychologically based *anomalies* in responses. These may arise when respondents either do not have the underlying preferences assumed by standard economic theory, or even if they do they use some heuristic rule to determine their answers.

If responses are not affected by either anomalies or incentive compatibility then we would expect to see:

$$H_0^1: A_1^1 = A_2^1$$

and

$$H_0^2: A_1^2 = A_2^2$$

We obtain the data for this test for this by randomly allocating all respondents to either the ordering:

- A_1^1 followed by A_2^2 (this is known as the bottom-up (BU) sequence)
- or
- A_1^2 followed by A_2^1 (this is known as the top-down (TD) sequence)

Note that most partners are actually conducting choice experiment questions as well as the common design CV questions. Clearly if the choice experiment questions precede the CV questions then the latter cannot be incentive compatible. Therefore we suggest that the common design CV questions should come before the choice experiment questions in partners studies.

Note that the two sequences give us two estimates of the magnitude of scope sensitivity which we can denote as follows:

BU sequence: $A_2^2 - A_1^1 = \Delta BU$

TD sequence: $A_2^1 - A_1^2 = \Delta TD$

Preference consistency would lead us to expect that

$$H_0^3: \Delta BU = \Delta TD$$

Some of these issues are considered by Bateman et al., (2004) which was circulated during the meeting.

Sampling strategy and distance effects

One of the key features of the proposal is that, by sampling respondents who live in different locations, we vary distances to the river/lake being improved and distances to all substitutes. We have shown elsewhere (Bateman et al., 2006; this has also been circulated) that variation in these distances is a key determination of variation in WTP. Therefore a sampling strategy which allows for this variation (and records this information in the course of the interview) is a fundamental feature of our common design proposal.

Tasks and timeline

<i>Deadline</i>	<i>Who</i>	<i>What</i>	<i>Completed</i>
28.10.07	Birit	Convene lakes group re quantity levels for scope test	28.10.07
28.10.07	Ian	Convene rivers group (Birit, Leo and Ian) re quantity levels for scope test	28.10.07
28.10.07	David	Organising funds for revision of WQL	?
2.11.07	Daiva	Organise email list and contact details	2.11.07
5.11.07	Ian	Provide a report outlining the proposal	5.11.07
5.11.07	Steph and Ian	Begin revision of WQL	Begun 2.10.07 – liaising with artist
10.11.07	Ian	Draft text of CV question	Underway
5.11.07	Leo	Provide text for ‘Other’ common questions – usage, socio-economics, etc.	
5.11.07	All	Send payment cards in Euros to David	
5.11.07	All	Maps – to Ian	
5.11.07	All	Propose a sampling strategy – this must vary distance to improved river/lake (D_i) and vary distance to substitutes (D_{ik}) and send this to Ian who will advise on sampling strategy	
12.11.07	All	Find out what quality levels are ‘reasonable/plausible’ for SQ.	

4. Ecological Restoration

Participants:

Corvinus University of Budapest: Zsuzsanna Szerényi, Simon Milton, Szilvia Luda

RISSAC: Zsófia Bakacsi

IHSK: Markus Bliem

University of Bucharest: Angheluta Vadineanu and Theodora Palaria

Most important issues

The most important points of group discussion were the following:

-an overview of the results of pre-tests and preliminary statistical results. In general the questionnaire was understandable; no major problems were found with the general (non-valuation questions) and the choice experiment questions were found to be more or less reasonable for the respondents in all three countries.

-modification of the questionnaire. For example, we deleted some attitude-related questions from the beginning of the questionnaire, and we decided on some modification in methodology: the choice experiment question will remain but an additional contingent valuation with split samples will be used.

The main issues discussed regarding common questionnaire design were the following:

- Ensuring *consistency and comparability* between regional questionnaires (maps e.g. scale and provided information, questionnaire introduction, valuation question standardisation, currency harmonisation)
- Discussion of *elements of the Choice Experiment methodology (1)* – especially regarding what are suitable *attributes for inclusion* (specifically, the need to include habitat, biodiversity or connectivity attributes). It was agreed that giving meaningful descriptions of these attributes would be difficult, and a decision was made to omit such additional/alternative attributes.
- Discussion of *elements of the Choice Experiment methodology (2)* – how to *represent level changes* in attributes in a meaningful and accurate way. For water quality the use of pictograms or pictures was discussed – and the utility of a proven standard water quality ladder. The group also discussed and wrote *sample descriptions of water quality levels* to include a 'use' and a 'non-use' descriptor. It was agreed that the 'drinking water' quality level pictogram should be modified or changed so that any suggestion of water for consumption would be avoided.
- Discussion was over the necessity to include a 5 level *water quality scale*. Austrian partners felt that the level 'poor' was not applicable to their case study area (80% of Austrian waters are of 'very good or good' water quality level) – offering the level 'poor' in the CE choice sets would not allow respondents realistic choices. It was agreed to delete 'poor' water quality level.
- Discussion of how to *clarify the introduction to the choice experiment question* – it was felt that too much information had been provided to respondents in the test questionnaire which could give them prior knowledge.

Debriefing regarding the pretest results

- A pre-test was conducted on 22-23 September in Tata, Hungary, which is the largest town in the catchment area of the Által-ér. The touristically most significant lake, the Öreg-tó is also located here. We filled a total of 32 questionnaires during personal interviews.
- A decision was made to simplify the introduction and simply give a basic description of the link between river restoration and water quality and flood 'risk' levels.
- Discussion was had over the suitability (and possibility to represent) flood 'risk' levels (risk being a combination of frequency and magnitude – there would be difficulty in representing magnitude of outcome in a meaningful way to respondents). Agreement was reached to *change the attribute from Flood Risk to Flood Frequency*.
- The Austrian survey was pre-tested between 14 and 19 September 2007; the questionnaire was implemented as a web-based survey, the sample size was n=109. The final sample will be representative for the population of Vienna and Lower Austria (n=500). The final version of the questionnaire will also be used

in the field as a web-based survey. Furthermore, a number of printed copies of the questionnaire were disseminated in order to receive qualitative feedback as well.

The results of our regional ecological restoration work group were presented at the plenary session, where the key points in the presentation were:

1. Similarities and differences with the other 2 case-studies: water quality and scarcity
2. The link between river restoration and water quality (The WFD includes ecological restoration as a solution for reaching Good Ecological Status)
3. Maps and descriptors of location of case-studies AUT, HUN and ROM
4. Description of structure of questionnaires
5. Definition of attributes:
 - a. flood frequency intervals: once 100 years, once 50 years, once 25 years, once 5 years
 - b. water quality: 4 levels: very good, good, moderate
6. Decision to change pictograms – based on comments: not to mix pictures with icons and to have them more suggestive.
7. Design: Fractional Factorial Design
8. CE and Cards: decision to delete river system restoration attributes

Time plan

Week 40-41:	Rewrite the introduction to the CE, rephrase and add questions in the questionnaire, finalize the pictograms
Week 40-42:	Create restoration maps for the CV questions
Week 43-44:	Finalize questionnaire design
Week 44-45:	Final pre-testing
Week 46:	Final survey implementation and creation database
Week 47:	Bring database to CE course in Amsterdam

5. Administration

The project coordinator briefly informs the project partners about the state of play regarding the first annual report and his contacts with Brussels about the AquaMoney project. So far only the AquaMoney kick-off meeting in Amsterdam was attended by a scientific officer from DG Research (Mr. Zissimos Vergos). The new scientific officer from DG Research, Mr. Balabanis, was invited to the second and third plenary meeting but was unable to attend on both occasions. Some concern is raised about the absence of DG Research during the follow-up meetings. The coordinator will try to inform the scientific officer about the next meeting in Budapest as soon as possible.

The coordinator has also not heard back yet about the first annual report except for some minor budget justification issues raised by the Administration from DG Research. The coordinator was contacted by some partners bilaterally about the second payment of funds in view of the fact that substantial expenses would be made in the second half of the second project year in the case study work. The coordinator has contacted DG Research about this and is awaiting a reply.

6. Next Steps

The next steps involve the further development and finalization of the common research design to be employed in the AquaMoney case studies. Detailed agreements were made during the Bologna meeting between project partners for this purpose. The case studies have to be carried out, analyzed and written up in a case study report by the end of the second project year. The deadline for this is end of March 2008. The case study results will then be presented at the next (4th) plenary meeting to be held in Budapest 7 and 8 April 2008. Also the Advisory Committee will be invited to this meeting.

In order to assist the AquaMoney project partners a 4-day capacity building course is organized by the project coordinator for the analysis of the common research part of the case studies 21-24 November 2007 at the IVM in Amsterdam for which 20 partners have registered.

A new policy brief will be written providing more detail about the set-up and purpose of the test case studies. Also the results from the meta-analysis will be incorporated in this policy brief. The coordinator will produce a first set-up of this new policy brief together with the leaders of the three case study groups.

The project partners are asked to send their comments on the stakeholder benchmark written by Ecologic as soon as possible.

Annex

Program



Program Third Plenary AquaMoney Meeting Bologna 26-28 September 2007

Main objectives:

- Discuss common design and preliminary results case studies
- Discuss elaboration of the key methodological issues in the case studies
- Integration of case study results in guidelines
- Presentation valuation database

Main outputs:

- Coordinated set-up and elaboration of the case studies
- Further agreement on key methodological issues in technical guidelines
- Report of the third plenary AquaMoney meeting

Meeting venue:

Hotel Re Enzo – Best Western

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Welcome to the Third Plenary AquaMoney meeting in Bologna.
We hope you will enjoy your stay in the city and that the meeting will be useful for an update on the development of the Project.

We look forward to a fruitful and exciting meeting.
Alma Mater Studiorum – Università di Bologna

SHORT TIMETABLE

Tuesday, 25th September, 2007	h 20.00 Dinner at Hotel Re Enzo
Wednesday, 26th September, 2007	h 09.00 – 17.30 Meeting Session h 20.00 Welcome dinner at Restaurant 'Da Bertino' Meeting place: in the hall of the hotel
Thursday, 27th September, 2007	h 09.00 – 16.15 Meeting Session Free Dinner Meeting place: in the hall of the hotel
Friday, 28th September, 2007	h 09.00 - 16.30 Meeting Session End of the meeting

26 September 2007 – Day 1 : Parallel sessions

09.00-12.30	Meeting of the Common Valuation Design Working Groups <ul style="list-style-type: none">- Water Quality: UK, NL, BE, FR, DK, NO, LT (facilitated by Ian Bateman)- Water Scarcity: GR, IT, SP (facilitated by Julia Martin-Ortega)- Ecological Restoration: RO, HU, AUT (facilitated by Roy Brouwer)
	12.30-13.30 Lunch
13.30-17.30	Meeting of the Common Valuation Design Working Groups <ul style="list-style-type: none">- Water Quality: UK, NL, BE, FR, DK, NO, LT (facilitated by Ian Bateman)- Water Scarcity: GR, IT, SP (facilitated by Julia Martin-Ortega)- Ecological Restoration: RO, HU, AUT (facilitated by Roy Brouwer)

END DAY 1

17.30-18.30 Scientific Council Meeting (WP leaders)

20.00 Dinner 

27 September 2007 – Day 2: Plenary session

09.00 – 12.00 Morning Session: Presentation and Discussion Common Valuation Designs

- 09.00-10.00 Presentation and discussion CVD Water Quality (Ian)
10.00-11.00 Presentation and discussion CVD Water Scarcity (Michalis)
11.00-12.00 Presentation and discussion CVD Ecological restoration (Markus)

→ 12.15-13.15 Lunch

Afternoon Session: Discussion Methodological Issues

- 13.15-13.45 Presentation and discussion Use-Nonuse Values in case studies (Berit)
13.45-14.15 Presentation and discussion Scale and Sensitivity to Scope in case studies (Marije)
14.15-14.45 Presentation and discussion Substitution in case studies (David)
14.45-15.15 Presentation and discussion Aggregation and Distance-Decay in case studies (Ian)

→ 15.15-15.45 Coffee break

- 15.45-16.15 Presentation and discussion Transferability in case studies and Valuation Database (Roy)

END DAY 2

→ 20.00 Dinner

28 September 2007 – Day 3: Plenary session

09.00 – 12.30 Morning Session: Open Discussion Remaining Issues

- Web-based Survey
Choice Experiment Design
Data handling & Analysis

→ 12.30-13.30 Lunch

13.30-16.30

Meeting of the Common Valuation Design Working Groups

- Water Quality: UK, NL, BE, FR, DK, NO, LT (facilitated by Ian Bateman)
- Water Scarcity: GR, IT, SP (facilitated by Julia Martin-Ortega)
- Ecological Restoration: RO, HU, AUT (facilitated by Roy Brouwer)

END OF THE THIRD PLENARY MEETING

List of participants

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