

Report of activities of dr. Wendy Chen during her stay at VITO (Belgium)
from May 21st until July 20th 2012

A. Period of Stay:

Dr. Wendy Chen stayed at VITO for 2 months from May 21st until July 20th 2012.

It is possible that Dr. Wendy Chen will come back for 1 to 8 weeks in the same period in 2013, depending on her agenda. Dr. Chen will start to work at the University of Hong Kong from September 2012 onwards.

B. Dr. Chen's activities during her stay from May 21st until July 20th 2012:

1) Presentation of dr. Chen's research to a VITO audience:

A presentation entitled "Valuation of urban nature in China" was given by Dr. Chen on 07 June, which attracted a wide audience. The presentation demonstrated how the economic value of urban nature (such as the heterogeneous urban natural landscape, urban forest, and urban river) has been quantified in China. She explained the application of contingent valuation method and hedonic pricing method (two valuation techniques for assessing the nonmarketed value of nature). It was further noted that as the importance of urban nature is increasingly recognized in rapidly urbanizing China, the understanding of urban nature's value would facilitate well-informed urban planning and prioritize policy alternatives associated with natural resource management.

2) Literature review – relating the Drongengoedbos paper

A comprehensive and up-to-date literature review was completed for the paper "Valuing landscape preferences for nature restoration: Drongengoed case study(Belgium)". To define the research hypotheses of this paper in a theoretical context, three strands of characteristics that would affect people's preferences for nature restoration have been summarized and synthesized, including the on-site characteristics of the nature site (such as heterogeneous vegetation cover, the presence of rare species, etc.), individual related characteristics (including gender, income and attitude towards nature), and spatial attributes (distance and the existence of substitutes). Based on this thorough literature review, the introductory section of this paper was also clearly drafted.

3) Literature review – relating the paper on the Groebegracht valley

Another substantial and critical literature review has been finished for the paper on the restoration of the Groebegracht valley which would investigate the influence of the payment time scale (one-time lump sum payment or recurrent payment) on respondents' WTP. Although both payment vehicle and income budget have been extensively studied in contingent valuation literature, the interaction of these two factors has been generally overlooked. The present paper argues that there are weak insensitivity of mean WTP when the respondents could be able to take their income/budget constraints into consideration. It provides solid foundation for research objectives/hypotheses, which have been precisely refined upon this literature review in the introduction part.

- 4) Comparing the attitude and valuation towards improvements to freshwater ecosystems in Europe and China

Recognition of the degraded state of freshwater ecosystems (particularly river ecosystem) across the world has prompted the management efforts which promotes river repair through restoration and rehabilitation in both European countries and China. Research on people's recreational use of river (and associated riparian regions) and attitude towards different aspects of river ecosystem (water quality, riparian vegetation, aquatic biodiversity) would be the initial and crucial step for understanding people's WTP for river restoration. Cross-cultural variation/similarity will be explored in association with decision-making philosophy, land-use context, and environmental education.

C. Future perspectives:

I. Continuation of the activities started

- (1) A literature review on substitution effect (perceived substitution and real substitution) will be drafted for the second paper on Drongengoedbos (forest restoration).
- (2) For the paper on Groebegracht valley (one-time payment and recurrent payment), we will continue to work on the data analysis and discussion sections.
- (3) Concerning the comparative study of the attitude and valuation towards improvements to freshwater ecosystems in Europe and China, a paper would be drafted once all related data (results from previous surveys) is collected.

It is possible that Dr. Wendy Chen will come back for 1 to 8 weeks in the same period in 2013, depending on her agenda. Dr. Chen will start to work at the University of Hong Kong from September 2012 onwards.

II. Future collaboration

- (1) Using the same questionnaire (choice experiment on river restoration), a survey would be conducted in Guangzhou. Then the comparison of the mean WTP (and influential factors) between Belgium and China would be undertaken.
- (2) A proposal (joint study of the valuation of nature) would be prepared for the next round of the General Research Fund (provided by HKSAR), or the Natural Science Fund of China.

<p>Report of activities of dr. Wendy Chen during her second stay at VITO (Belgium) from June 1st until July 31st 2013</p>
--

A. Period of Stay:

During her second period at VITO, Dr. Wendy Chen stayed for 2 months from June 1st until July 31th 2013.

B. Dr. Chen's activities during her stay from June 1st until July 31st 2013:

As we already were familiar with dr. Wendy Chen and had the time to prepare her visit well. Dr. Wendy Chen could focus on the research of the Groebegracht valley, which she already started at her previous stay. We held a weekly team meeting to discuss the progress of Wendy's research which resulted in the paper entitled: "Contingent valuation

of a peri-urban riparian meadow restoration in Flanders (Belgium): Impacts of perceived ecosystem services and stated financial constraints". The paper is attached and is meanwhile submitted to the Journal of Environmental Management. Dr. Wendy Chen is the corresponding author for this papers. Co-Authors are Joris Aertsens, Inge Liekens, Steven Broekx and Leo De Nocker.

Abstract: The strategic importance of ecosystem service valuation as an operational basis for policy decisions on natural ecosystem restoration has been increasingly recognized in order to align the provision of ecosystem services with the demands of human society. The contingent valuation method (CVM) is widely used to quantify most non-marketed ecosystem services. However, two areas of concern arise: (1) whether people prefer to value specific functional ecosystem services and overlook some intrinsic aspects of natural restoration, such as benefits for future generations; and (2) whether people could understand the temporal dimension of ecosystem services and payment schedules given in the contingent scenarios. Using a peri-urban riparian meadow (the Big Meadow) restoration project in Flanders, Belgium as a case study, we explored the impacts of residents' demand for various ecosystem services (proxied by perceived importance of ecosystem services) and stated financial constraints (current and future) on their willingness-to-pay for the proposed restoration project employing the CVM. The results indicated that people tended to value all of the benefits of riparian ecosystem restoration concurrently, although they accorded different importance to each individual category of ecosystem services. Additionally, it was found that a longer payment scheme can help the respondents to think more about the flow of ecosystem services into future generations. A weak temporal embedding effect can be detected, which might be attributed to respondents' concern about current financial constraints, rather than financial bindings associated with their income and perceived future financial constraints. This demonstrated the multidimensionality of respondents' financial concerns in contingent valuation studies. This empirical study sheds light on refining future contingent valuation study, especially with regard to the demand for ecosystem services and the temporal dimension of ecosystem services and payment schedules.

C. Future perspectives:

During the stay of dr. Wendy Chen at VITO we discussed the possibility to make a comparative study relating the attitude and valuation towards improvements to freshwater ecosystems in Europe and China. Possibly dr. Chen will continue this study upon her return to Hong Kong University allowing future collaboration.

Topic: Recognition of the degraded state of freshwater ecosystems (particularly river ecosystem) across the world has prompted the management efforts which promotes river repair through restoration and rehabilitation in both European countries and China. Research on people's recreational use of river (and associated riparian regions) and attitude towards different aspects of river ecosystem (water quality, riparian vegetation, aquatic biodiversity) would be the initial and crucial step for understanding people's WTP for river restoration. Cross-cultural variation/similarity will be explored in association with decision-making philosophy, land-use context, and environmental education.