University of Ottawa: Directed Research Projects on Canadian Economic Policy for 4th Year Students in Economics

**Host organization:** Environment and Climate Change Canada

**Project Supervisor:**
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**Language:** English

**Project Title:** Reviewing Water Quality Valuation Literature (with a focus on two or three specified fields)

**Background:**
The Economic Analysis Directorate of Environment and Climate Change Canada conducts cost-benefit analysis (CBA) in support of the Regulatory Impact Assessment Statement (RIAS) of environmental policies. Whenever possible, both compliance costs to the industry and benefits to human and environmental health are estimated in monetary terms. Economists frequently face short timelines and resource constraints that prevent undertaking primary valuation of these regulatory impacts. Therefore, they often rely on benefit transfer (applying the outcomes of previous valuation studies to another new policy context) in order to provide economic estimates to decision-makers.

**Project Description:**
In this fictive case study, the Government of Canada is planning to implement effluent standards that will apply to a specific sector across Canada. As a result of the new regulations, the water quality in certain water bodies (including surface water and groundwater) is expected to improve over time. To conduct a CBA for the regulations, monetary values of the cumulative benefits to human health and the environment over the next 25 to 50 years need to be estimated. In order to apply benefit transfer, you will need to identify applicable valuation studies, and prepare a literature review. You are also encouraged to provide advice with regards to the choice of specific estimates, and suggest the proper adjustments to be made when transferring the values to the policy sites. Given that a lot of literature review of water quality valuation studies has already been conducted, you will focus on two or three fields specified by the supervisor (e.g., groundwater valuation studies in Canada, valuation studies on TSS and Nitrate).
**Project Deliverables:**

1) Identifying a minimum of 20 studies/reports valuing the costs of water quality pollution or the benefits of an improvement in water quality. These valuation studies may have been conducted within any country, but preferably in Canada. An initial list of suggested studies, as well as additional clarifications will be provided to the student by the project supervisor.

2) Summarizing the findings of the studies/reports in an Excel spreadsheet. These studies will be pre-approved by the project supervisor.

3) Preparing a literature review that will (1) summarize the gist of the selected valuation studies with a focus on the economic values/functions; (2) discuss the contributions, limitations and caveats of the studies; (3) (Optional) provide advice with regards to the choice of specific estimates, and suggest the proper adjustments to be made when transferring the values to policy sites

**Qualifications:**
- Capacity to quickly find environmental valuation studies
- Basic knowledge of non-market valuation and the “total economic value” framework
- Sound judgment and methodological rigor
- Ability to synthesize complex information
- Focused and efficient communication (excellent writing skills)

**Learning Experience:**
- Building capacity to rapidly find environmental valuation literature
- Increasing knowledge of non-market valuation and benefit transfer approach
- Developing capacity to efficiently synthesize information
- Improving analytic skills in order to provide expert advice to decision-makers