

29 march 2019

Postdoctoral position in Conservation biology and Ecosystem services.

Département de phytologie, Université Laval, Québec, Canada

I aim to recruit a post-doc candidate in the field of systematic planning, ecology and conservation of ecological services. I seek to find an exceptional candidate that will rapidly take the lead of few research projects.

#### **Proposed research :**

My ongoing projects aim at generating knowledge that will help municipalities to plan wetlands conservation, restoration and creation in order to satisfy the needs in ecosystem services (ES). From a fundamental point of view, we aim at refining our approaches in systematic planning for optimizing the supply of ES and fulfilling the demand for these ES at the regional scale.

Initially developed to reach objectives on biodiversity protection, systematic planning has lately been optimized to take into account ecosystem services. Among others, we have considered the spatial relation between sites supplying ES and places where we benefit from them. We now want to apply these approaches to plan wetland restoration and creation at the watershed scale in order to reach no net loss objectives.

The chosen candidate will benefit from a comprehensive data base on ecosystem services quantification and mapping as well as interaction with another postdoc on parallel topics. My projects imply the collaboration with a full research team including hydrologists (modelling, Alain Rousseau de l'INRS ÉTÉ<sup>1</sup>), ecologists (systematic planning, plant ecology, ecological conservation and restoration, Stéphanie Pellerin de l'IRBV<sup>1</sup>), economists (value of ES and restoration costs, Jérôme Dupras de l'UQO<sup>1</sup>) and lawyers (environmental law, Sophie Lavallée de ULaval<sup>1</sup>). My projects are being conducted in collaboration with professionals of the City of Québec. The candidate will also benefit from the Quebec Center for Biodiversity Science (<https://qcbs.ca>). There is a potential to collaborate with

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Bordeaux University and to take part of other projects within my lab and the research team, notably for analyzing former data resulting from projects on patterns of plant diversity as well as on wetland and urban ecology.

**Application :**

Duration: 2 years with a possibility to extend according to coming funds.

Salary: 50 000\$ per year.

Closing date: Applications will be accepted until a suitable candidate is identified.

Start: As soon as possible

To apply, please submit the following by email to [monique.poulin@fsaa.ulaval.ca](mailto:monique.poulin@fsaa.ulaval.ca):

1. Cover letter describing your interest in, and fit for, the type of projects described above.
2. Curriculum vitae
3. Name et contact information of 4 referees

**Main responsibilities:**

The successful candidate will:

- 1) Get acquainted with approaches of systematic planning, notably with programming with Marxan.
- 2) Get familiar with the literature on ecosystem services and wetland vegetation in order to develop conservation scenarios.
- 3) Adapt systematic planning procedures developed for conservation to establish priorities for wetland restoration and creation at the watershed scale.
- 4) Assume the leadership of the research project and organize meetings with partners from the City of Québec. Interact with and help other students of the lab.
- 5) Author\co-author research papers, reports, conference papers and publications.

**Desired skills:**

The ideal candidate will hold a PhD in Ecology, Geography, Natural Resources, or a related field and have a good knowledge in biological conservation, notably on aspects related to ecosystem services and systematic planning. Candidates that are not acquainted with systematic planning tools will be considered if they show excellent potential in research and a great interest to rapidly integrate the appropriate literature and to learn programming with Marxan. A good knowledge of Geographic Information System is necessary. Ideally, the candidate would have a good background in multivariate analyses.

Speaking and reading French will be considered as a great advantage. The successful candidate will show strong aptitudes for both fundamental and applied research as well as for communication and collaboration with other members of the team and with municipal partners. High writing skills are essential.

The candidate will be based in Québec city.

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