



The Gulf of St. Lawrence Tracer Release eXperiment (TReX)

RQM/MEOPAR TReX Graduate Students Awards

The TReX Project

Responding to emergencies, managing coastal environments sustainably, predicting the impacts of human activity and climate change on marine ecosystems, and ensuring safety and well-being of coastal communities require having timely access to appropriate information about the state of the ocean and its evolution. This information must be properly used, understood, and communicated among individuals at various organizations involved in response management. The overarching objective of the RQM-MEOPAR Tracer Release Experiment (TReX) in the Gulf of St. Lawrence is to develop and demonstrate Canadian capacity for the forecasting of contaminant dispersal and biogeochemical transformation in coastal marine environments. This is linked, explicitly, to a response component involving coastal communities and government agencies responsible for responding to accidental releases of contaminants. The study is designed to act as a research aggregator: drawing together modelling, observational, and response research teams from across Canada, and from government and academia.

Three key sub-objectives of the experiment are to:

- 1) validate and compare models of ocean dispersion of water and contaminants, including models developed inside MEOPAR and government;
- 2) test and demonstrate newly developed technologies for rapid marine environmental assessment;
- 3) improve understanding of rates of chemical and biological transformations in the coastal environment.

This project comprises two field observational programs in the St. Lawrence system:

- 1) The surface experiment — involves the release of a dye and Lagrangian drifters near the ocean's surface in the lower St-Lawrence Estuary.
- 2) The deep experiment — involves releasing an inert chemical tracer in deep waters, below the seasonal pycnocline, near Cabot Strait.

In addition to the field programs, there are prediction and response core research activities drawing together many governmental researchers and partners to interpret the experiment and utilize its results to improve preparedness for spills and environmental accidents. The study represents an integration of multiple strands of research and development conducted within several MEOPAR projects, including

especially its Observation, Prediction and Response Cores. It forms the center piece of a collaborative project between RQM's Odyssée Saint-Laurent Research Program (ship-time) and MEOPAR, strengthening ties amongst government and universities within the Atlantic provinces and Quebec, as well as across Canada (TReX project website: <http://trexstlaurent.ugqar.ca>).

About the TReX Graduate Student Award

The purpose of the **Graduate Students Awards** is to attract and support graduate students to participate in the TReX project. Proposed research activities that would be supported by this award must fall under, and contribute, to the TReX project.

The **Graduate Students Awards** will provide a stipend for students currently enrolled in a graduate program while carrying-on research activities on the TReX project. The award does not aim at funding the graduate student stipend for the totality of the student graduate program, but fund the student for a certain number of semesters during which the student will carry out research activities on the TReX project that will contribute to a part of the student's research project for its thesis.

RQM and MEOPAR are committed to fostering a culture grounded in diversity and inclusiveness. We encourage applications from Aboriginal people, persons with a disability, racially visible persons, women, persons of minority sexual orientations and gender identities, and all candidates who would contribute to the diversity of our network.

The **Graduate Students Awards** are on a semester basis and a student can apply for 1 semester up to 2 consecutive semesters Fall 2021 & Winter 2022.

Graduate Program	Award value
M.Sc.	\$6,000/semester
Ph.D.	\$7,000/semester

Eligibility

Student applicants must:

- Be currently enrolled (at the time of receiving the award) in a graduate program full-time at a Canadian university.
- Be supervised by a researcher from any NSERC eligible institution outside of Québec and "co-advised" by a researcher (e.g. university, government, etc.) in Québec that is participating/collaborating on the TReX project OR Be supervised by a researcher from any NSERC eligible institution in Québec and "co-advised" by a researcher (e.g. university, government, etc.) outside of Québec that is participating/collaborating on the TReX project
 - o The "co-advisor" doesn't have to be on the student's thesis committee.
 - o The "co-advisor" will have an advisory role with the student in the context of the student's proposed project as part of TReX.
 - o The "co-advisor" has to be participating/collaborating on the TReX project.
- The student supervisor must:
 - o Explain how the student will be funded in addition to the **Graduate Students Award(s)** until graduation.

- Provide letters of support from both supervisor and “co-advisor” for the proposed work on the TReX project.

Application procedure

Student applicants must submit the following documents:

- Application Form on the online portal : <https://webportalapp.com/sp/hqptrex>
- Two confidential Letters of Support (one from your supervisor and one from your proposed co-advisor)
- Evidence of your full-time enrollment (or acceptance) in a graduate program
- Curriculum Vitae

Important Dates

- Applications Open: April 6th 2021
- Completed Applications Due: Projects starting in the Fall 2021 semester, the deadline to submit your application is **May 12th 2021** and research activities related to the proposed project should be completed before March 31st 2022.
- Results Available: 8 weeks after the completed application
- Funding Commences: September 2021

*Note that late or incomplete applications will not be reviewed.

Program Requirements

1) *Training*

Funded Graduate Students are expected to participate in RQM and MEOPAR professional and training activities.

On the MEOPAR side, the students will join the MEOPAR Students and New Professionals Group (MEOPeers). Award winners will have the opportunity to present their research in a variety of forums, which may include:

- MEOPAR’s Annual Training and Scientific Meeting
- MEOPAR’s online seminar series

RQM will favor and support the student participation in activities relevant to its network (e.g. RQM Congress, Winter School 2022, etc.)

2) *Reporting*

Funds must flow from the funding organization (RQM, MEOPAR) to the student’s primary supervisor at their institution. The primary supervisor must be Tri-Council eligible. Academic institutions receiving funds in trust are expected to:

- Set up a new account for the funds disbursed during the current proposed project.
- Report on expenditures of funds by submitting a Form 300 to the funding organization Administrative Centre no later than April 15 of each year for the duration of this funding award.

3) Acknowledging RQM and MEOPAR

RQM and MEOPAR-funded graduate students must acknowledge the 2 organizations (and funding program) in their presentations, publications, and other knowledge mobilization activities (including social media, website, etc.) related to research conducted during their funding period. Funded graduate students must use RQM and MEOPAR logo on their posters and other materials related to research conducted during their funding period.

4) Funding Criteria

All eligible applications will be reviewed by a team of experts using the following criteria:

- Quality of Proposed Research (40%)
- Fit and Contribution with TReX Project (20%)
- Quality of Training Environment (20%)
- Excellence of the candidate (20%)

Contact:

At RQM: Geneviève Lalonde, coordinator, Genevieve.Lalonde@uqar.ca

At MEOPAR: Isabelle Tremblay, Research Program Manager, Isabelle.Tremblay@meopar.ca

Appendix 1. Application form to be completed on the online portal. Portal:

<https://webportalapp.com/sp/hqptrex>

BACKGROUND INFORMATION	
Student/Postdoc Name	
Graduate Program (if applicable)	
Department	
Supervisor Name	
Institution/University	This is the institution where the funds will be held.
Co-advisor Name	
Institution/University	
Project Title	
FUNDING REQUESTED	
Start Date for Funding	September 2021 (<i>Postdoc & graduate students</i>) OR January 2022 (<i>graduate students only</i>)
Number of semesters	
Total amount requested	M.Sc.: \$6,000 x #semesters = \$ Ph.D.: \$7,000 x # semesters = \$ Postdoc: \$25,000 for 6 months
QUALITY OF PROPOSED RESEARCH (40%)	
Proposed Project Plan (max. 3 pages)	In this section, present your proposed research project: 1) Describe the issue/question that your proposed research will address. 2) Research objectives of your proposed project 3) Methodology approached that will be used

	4) Explain what resources are needed for your project and if they are available for you to carry on your project.
Proposed Project Timeline	Provide a Gantt Chart with your proposed project activities and associated timeline
FIT AND CONTRIBUTION TO THE TReX PROJECT (20%)	
Fit with TReX Project (max. ½ page)	In this section, describe how your proposed research fits in the TReX Project.
Contribution to the TReX project (max ½ page)	In this section, describe the contribution that your proposed research will bring to the TReX Project.
QUALITY OF TRAINING ENVIRONMENT (20%)	
Network and Partnerships (max. ½ page)	The TReX project is a research aggregator: drawing together teams from across Canada from both academia and government. Describe how, as part of your project, you will engage and collaborate with the government personnel participating to the TReX Project.
RQM/MEOPAR co-supervision (max. ½ page)	Describe how this co-supervision will be benefitting your project and how both supervisor/co-advisor will ensure active engagement with you.
Professional development (max. ½ page)	Describe how your proposed project, as part of TReX project, will benefit your training and professional development.