

## **Information guide**

### **Training award programs: New evaluation criteria**

For those interested in applying for fall 2021 Fonds de recherche du Québec training award competitions

## Preamble

Over the past few years, the Fonds de recherche du Québec (FRQ) have been engaged in a reflection on the notion of excellence at the core of their respective mandates and missions. In this respect and with the support of the intersectoral student committee of the FRQ, the three Fonds de recherche (Nature et technologies, Santé, Société et culture) jointly undertook to revise and harmonize the evaluation criteria of the training awards programs (master's, doctoral and postdoctoral) in spring 2020. The new criteria will come into effect with the fall 2021 competitions.

The approach aims to recognize the important role new researchers play in society and ensure the ways in which excellence is assessed help it better stand out in the paths and profiles of emerging investigators. Indeed, that particular aspect is part of the FRQ's equity, diversity and inclusion (EDI) commitment and in line with the new EDI strategy.

The FRQ are aware that these changes are significant to the communities they support and will require adjustments on your part as you draft your application, as well as on the part of the researchers who provide training and join review committees. The FRQ therefore plan to implement this culture shift gradually and in a flexible way. Following the fall 2021 competitions, the new criteria will be reviewed so the FRQ can make further adjustments in response to the needs of our communities. With that in mind, this guide aims to provide you with the right tools to draft your application and facilitate your understanding and interpretation of the newly added criteria.

## Evaluation criteria

The table below lists the harmonized evaluation criteria and sub-criteria, as well as their weighting based on training level.

The new sub-criteria (highlighted in yellow) are detailed and explained in the section entitled *Description of the new evaluation criteria* to help you better understand their meaning and scope, as well as the FRQ's expectations.

1. Academic record and background	Master's award	Doctoral award	Postdoctoral award
<b>Evaluation criterion</b>	<b>Academic record (university)</b>	<b>Academic record</b>	<b>Research skills</b>
<b>Weighting</b>	30	30	25
<b>Evaluation sub-criteria</b>			
a. Transcripts	√	√	√
b. Honours (awards, distinctions, scholarships)	√	√	√
c. Relevant experience and scientific achievements		√	√
d. Ability to present her/his background in an integrated manner	√	√	√

2. Research proposal	Master's award	Doctoral award	Postdoctoral award
<b>Evaluation criterion</b>	<b>Interest and potential in research</b>	<b>Research project</b>	
<b>Weighting</b>	50	45	35
<b>Evaluation sub-criteria</b>			
a. Relevant experience and scientific achievements	√		
b. Proposed research: originality, clarity, relevance, etc.	√		
c. Originality of the project and contribution to the advancement of knowledge		√	√
d. Clarity and coherence of the research problem		√	√
e. Relevance of the methodology		√	√
f. Project feasibility and realism of the time frame		√	√

3. Host environment	Master's award	Doctoral award	Postdoctoral award
<b>Evaluation criterion</b>	<b>Host environment</b>		
<b>Weighting</b>			15
a. Justification and relevance of the chosen host environment to carry out the project			√
b. Added value for career plan development			√

4. Social mobilization	Master's award	Doctoral award	Postdoctoral award
<b>Evaluation criterion</b>	<b>Social mobilization</b>		
<b>Weighting</b>	15	20	20
<b>Evaluation sub-criteria</b>			
a. Capacity to facilitate dialogue between science and society	√	√	√
b. Capacity for engagement	√	√	√
c. Consideration of United Nations Sustainable Development Goals, including equity, diversity and inclusion	√	√	√

5. Presentation of the application	Master's award	Doctoral award	Postdoctoral award
<b>Weighting</b>	5	5	5

## Description of the new evaluation criteria

### Academic record and background

#### Sub-criterion d : Ability to present her/his background in an integrated manner

Many roads can lead a researcher to a particular field. Some are more conventional, while others are atypical. This sub-criterion aims to highlight the links between your experiences, interests and academic background. We therefore invite you to describe your academic and professional paths and focus on the elements you want to emphasize in your training award application.

Underscore your strengths and the circumstances, positive influences and opportunities that helped guide your training, consolidate your knowledge and strengthen the skills relevant to your career development. When necessary, demonstrate how the events that marked your academic, professional and personal paths enriched your intellectual experience. If necessary, explain the factors that motivated you to interrupt your studies. If you had to face particular obstacles, describe how you overcame them. Ultimately, the goal is to inform the members of the review committee and provide an overview of your path.

### Social mobilization criterion

Social mobilization is expressed through activities covered by one or other of the following sub-criteria or a combination of them. This criterion is assessed as a whole and therefore does not allocate a specific number of points to either sub-criterion.

#### Sub-criterion a : Capacity to facilitate dialogue between science and society

Closer ties between the research sector and society and an ongoing dialogue are essential to develop a scientific culture and strengthen critical thinking. Dialogue is understood to be the exchange of ideas and knowledge and mutual influence between parties. Collaboration between research settings and those who use the knowledge (communities, businesses, governments, municipalities, community organizations, non-profit organizations, etc.) fosters knowledge sharing and accelerates innovation for the benefit of society. Through this sub-criterion, the FRQ strongly encourage the scientific community to provide significant visibility for the results of publicly-funded research.

Demonstrate your ability to spark a dialogue with society by describing earlier activities or those during the first year of funding (should you receive the award). Taking part in or helping to organize a scientific event for the general public, contributing to a science popularization activity for elementary or high school students, making a scientific contribution to a roundtable discussion and developing a community survey are all examples that highlight your ability to initiate or encourage dialogue.

#### Sub-criterion b : Capacity for engagement

Engagement is considered to mean citizen participation and contributions to community life and the common welfare. Regardless of the form it takes (compensation, remuneration or not) or whether the issue is local, national or international, the approach should involve dedicating your thoughts, words and actions to a community cause. Engagement strengthens solidarity and mutual support by stimulating the sense of belonging to a community and is rooted in key values, including inclusion, respect, collaboration, excellence and reciprocity.

Highlight your engagement and describe the different levels of your participation. There are several ways to express your engagement through activities that are collective in scope. Demonstrate how your involvement enables you to gain leadership skills and fundamental knowledge and capacities you would not have acquired otherwise. Examples include your contribution to community projects, mobilization within a student or entrepreneurial association, participation in educational or sports activities in your region and support for

vulnerable people here and abroad. If applicable, describe the engagement activities you carried out, are currently carrying out or intend to carry out in the first year of funding (should you receive the award).

### **Sub-criterion c : Consideration of United Nations Sustainable Development Goals, including equity, diversity and inclusion**

The integration of the United Nations Sustainable Development Goals (SDGs) is part of an approach to raise awareness of the role of science and the significance of the contribution new generations of researchers to achieve them. Through this sub-criterion, we invite you to familiarize yourself with the SDGs and consider them when drafting your application. If applicable, in each relevant section of the application form, document how your academic background, research activities, efforts to spark dialogue between science and society and social engagement contribute or could contribute to the attainment of the SDGs, including aspects related to equity, diversity and inclusion.

Through these steps, the applicant is invited to present a reflection on her/his contribution to the issues at stake in the SDGs in terms, for example, of environmental sustainability or gender equity. Note that the quality of the links between the SDGs, your past and current activities and those you intend to carry out during the funding period, including the potential benefits of your research, will be considered.

The FRQ acknowledge that not all research projects directly contribute to the SDGs or the specific indicators identified by governments. Research, and especially basic research, open fields of knowledge that may not necessarily lead to tangible applications. With that in mind, this sub-criterion should not be perceived as a restriction on your freedom or creativity. In the long term, the advancement of knowledge through basic research contributes to the development of means to meet the social challenges the SDGs seek to address.

It is important to remember that the training award application evaluation process does not pit research fields against each other. Rather, it aims to highlight the ways in which you are working to address social issues.

For more information on the consideration of the SDGs in your application, we invite you to consult the annex: *Considering the United Nations Sustainable Development Goals, including equity, diversity and inclusion.*

## Considering the United Nations Sustainable Development Goals, including equity, diversity and inclusion

### Contextual elements

On September 25, 2015, in New York City, 193 countries including Canada adopted the [2030 Agenda for Sustainable Development](#), which is centred on an ambitious set of **17 Sustainable Development Goals (SDGs) and 169 targets** to transform our world. The Sustainable Development Goals are a call for action by all countries—poor, rich and middle-income—to promote prosperity while protecting the planet. They are ambitious because they recognize that ending poverty must go hand-in-hand with strategies that build economic growth and address a range of social needs including education, health, social protection and job opportunities, while tackling climate change and environmental protection. At the heart of the 2030 agenda is the commitment to ensure no one is left behind, and the SDGs must therefore be achieved through an open, inclusive and participative process. Goal 17 to revitalize the global partnership for sustainable development contributes to the process by encouraging and promoting partnerships and cooperation between stakeholders.

### The role of science in the attainment of the SDGs

The attainment of the SDGs depends on us all, and the scientific community is called on to take action to achieve these ambitious goals.

The contribution of the scientific community to the attainment of the SDGs can take different forms (see Sachs et coll., [Nature Sustainability](#) | VOL 2 | SEPTEMBER 2019 | 805–814 ([link](#)):

- Advancing knowledge on themes and issues in connection with the SDGs;
- Relying on its expertise to develop tools to model the changes required to attain the goals, including estimates of the financial and economic costs and cost of inaction;
- Enhancing the collection, analysis and dissemination of data on progress;
- Ensuring stakeholders are involved, aligned and collaborating to operationalize the SDGs.

Entitled [The Future is Now: Science for Achieving Sustainable Development](#), the 2019 Global Sustainable Development Report by the Independent Group of Scientists appointed by the United Nations Secretary-General illustrates the contributions science has made.

### The Fonds de recherche du Québec

The FRQ seek to mobilize the research community to make a more significant contribution to this ambitious project, which reaches far beyond environmental issues. Institutions of higher education are already [involved in the attainment of the SDGs](#) at different levels, through their teaching, research, management and social contributions.

The proposed approach aims to raise awareness of the role of science and new generations of scientific experts in the attainment of the issues raised by the SDGs, including equity, diversity and inclusion (EDI). To do so, the FRQ invites training award applicants to become familiar with the SDGs, consider their application through the lens of these goals and document, in each relevant section of the application, how their academic background, research activities and efforts to initiate a dialogue between science and society and social engagement contribute or could contribute to the attainment of the SDGs, including EDI. Through this approach, applicants should reflect on their contributions to the social issues related to the SDGs (e.g. environmental sustainability, gender equity, etc.). This sub-criterion is new, and its assessment considers the quality of the links between the SDGs, the applicant's achievements and the activities planned during the award period. Where relevant, this reflection on the SDGs could also lead applicants to enhance their approach to either contribute to an SDG or avoid frustrating the efforts invested in an SDG, since the goals are all closely interrelated. Finally, all SDGs are of

equal importance to the FRQ. Applicants should note that the competitions are discipline-specific, so different research areas do not compete with each other.

The approach put forward by the FRQ does not impede the applicants' freedom or creativity as they carry out their projects. The FRQ are aware that not all research projects directly tackle the issues the SDGs aim to address or the specific indicators identified by governments. Research, and especially basic research, open fields of knowledge whose tangible applications are not necessarily known at this time. The approach is therefore not limited to the proposed research, and the consideration of SDGs may relate to social engagement, dialogue between science and an individual's training path.

## Step 1: Become familiar with the SDGs

The website of the [United Nations Sustainable Development Goals](#) details the goals and their context and provides information to grasp their scope.

Each SDG includes the following elements:



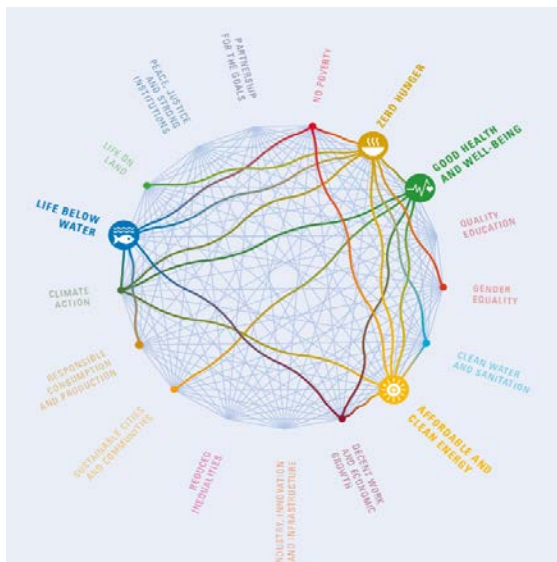
- ▶ Logo and slogan
- ▶ Description of the goal
- ▶ Operational targets
- ▶ Targets and means to attain the goal

**Equity, diversity and inclusion (EDI):** Goal 5 and Goal 10 specifically contribute to promoting EDI.

**Culture and sustainable development.** Goal 11: Make cities inclusive, safe, resilient and sustainable attaches importance to culture in the attainment of the SDGs, as presented in the [Culture: Urban Future Global Report on Culture for Sustainable Urban Development](#) released by UNESCO. Still, the FRQ will consider the expanded scope of Goal 11 by integrating intangible heritage, as defined in the [Convention for the Safeguarding of the Intangible Cultural Heritage](#).

**Basic research.** The FRQ recognize that the advancement of knowledge through basic research helps address the social issues championed by the SDGs and will therefore consider the goals' broader scope.

**Interdependence between goals.** The SDGs are interdependent and closely related and must therefore be addressed through an integrated approach. For example, the attainment of Goal 2: Zero hunger goes hand in hand with Goal 12 to ensure sustainable consumption and production patterns, Goal 15 to halt biodiversity loss and Goal 10 to reduce inequality within and among countries. This global vision is essential to attain a goal without hindering another.



Source: International Council for Science, *A Guide to SDG Interactions: From Science to Implementation* (12.05.2017)

## Step 2: Consider the SDGs in your training award application

The SDGs, including aspects related to EDI, may be considered through any of these means:

- Training
- Proposed research
- Science/society dialogue
- Social engagement

This section outlines examples of links with SDGs.

### Integrated training path

Through the content studied or skills acquired to tackle issues, your **academic background** may have provided you with tools to address a topic connected to the SDGs in your research or as part of your social engagement. In a few words, describe how your training could help address the issues at stake in the SDGs. Refer to your training that led to a degree, electives, participation in summer schools or continuing education or planned training during the award period.

### Proposed research

Your potential interest in research (master's) or your research project (doctorate or postdoctorate) can contribute to the **development of knowledge and expertise** related to SDGs. In a few words, describe how your research could help address the issues at stake in the SDGs. You may also want to detail how your research (topic or methodology) could be expanded to either contribute to an SDG or avoid frustrating efforts to achieve an SDG.

Certain types of research are clearly linked to the SDGs, while more disciplinary and basic research may contribute to the goals in the longer term. For example, your research may focus on:

- ▶ Disadvantaged seniors (SDG 1: No poverty)
- ▶ Malnutrition and child development (SDG 2: Zero hunger and SDG 3: Good health and well-being)
- ▶ Access to health care and services (SDG 3: Good health and well-being)
- ▶ Health impacts of pollution (SDG 3: Good health and well-being)
- ▶ Biological determinants of mental issues (SDG 3: Good health and well-being)
- ▶ Virus sequencing (SDG 3: Good health and well-being)
- ▶ Engineering functional replacements for heart valves (SDG 3: Good health and well-being, SDG 9: Industry, innovation and infrastructure)
- ▶ Quality education in emergency conditions (SDG 4: Quality education)



- ▶ Theoretical basis of critical pedagogy (SDG 4: Quality education)
- ▶ Young women in STEM programs (SDG 5: Gender equality and SDG 4: Quality education)
- ▶ Gender empowerment for Indigenous women (SDG 5: Gender equality)
- ▶ Bioavailability of minerals (SDG 6: Clean water and sanitation)
- ▶ Scientific tourism (SDG 8: Decent work and economic growth and SDG 9: Industry, innovation and infrastructure)
- ▶ Big data and social innovation (SDG 9: Industry, innovation and infrastructure and SDG based on topic)
- ▶ Employability of immigrants (SDG 8: Decent work and economic growth)
- ▶ Efficient and sustainable e-commerce (SDG 9: Industry, innovation and infrastructure)
- ▶ Modelling for smart buildings (SDG 9: Industry, innovation and infrastructure)
- ▶ Legal aspects of creation and innovation (SDG 9: Industry, innovation and infrastructure)
- ▶ Development of polymer-based materials (SDG 9: Industry, innovation and infrastructure)
- ▶ Development of an aseismic calculation method (SDG 9: Industry, innovation and infrastructure)
- ▶ Resilience of the electrical grid (SDG 9: Industry, innovation and infrastructure)
- ▶ Cybersecurity (SDG 9: Industry, innovation and infrastructure)
- ▶ Closed-loop supply chains (SDG 9: Industry, innovation and infrastructure and SDG 11: Sustainable cities and communities)
- ▶ Universal accessibility (SDG 10: Reduced inequalities and SDG 11: Sustainable cities and communities)
- ▶ Marginalization in a post-pandemic context (SDG 10: Reduced inequalities)
- ▶ Telerehabilitation (SDG 10: Reduced inequalities, SDG 3: Good health and well-being and SDG 9: Industry, innovation and infrastructure)
- ▶ Patients suffering from chronic pain (SDG 10: Reduced inequalities and SDG 3: Good health and well-being)
- ▶ World cultural and scientific heritage (SDG 11: Sustainable cities and communities)
- ▶ Affordable housing and mental health (SDG 11: Sustainable cities and communities and SDG 3: Good health and well-being)
- ▶ Multimodal and transdisciplinary device to foster access to contemporary art by young audiences (SDG 11: Sustainable cities and communities)
- ▶ Literary life in Québec: (SDG 11: Sustainable cities and communities)
- ▶ Dynamics of secularism and religions (SDG 11: Sustainable cities and communities and SDG 16: Peace, justice and strong institutions)
- ▶ Reduction of single-use plastic and ocean pollution (SDG 12: Responsible consumption and production and SDG 14: Life below water)
- ▶ Energy efficiency (SDG 12: Responsible consumption and production)
- ▶ Development of an amendment to improve soil fertility and sequester carbon (SDG 13: Climate action)
- ▶ Climate change and urban transformation (SDG 13: Climate action and SDG 11: Sustainable cities and communities)
- ▶ Ecosystem integrity measurement (SDG 13: Climate action)
- ▶ Water quality in aquaculture (SDG 14: Life below water)
- ▶ Sustainable development of Greenland halibut (SDG 14: Life below water)
- ▶ Mountain system study (SDG 15: Life on land)
- ▶ Sustainable forest management (SDG 15: Life on land)

- ▶ Biodiversity (SDG 15: Life on land)
- ▶ Ethics of governance (SDG 16: Peace, justice and strong institutions)
- ▶ Rule of national and international law (SDG 16: Peace, justice and strong institutions)
- ▶ International cooperation (SDG 17: Partnerships for the Goals)

Even if it does not aim to generate SDG-related knowledge, the proposed research may still **help tackle issues addressed by the SDGs** when selecting participants or analyses or planning and conducting field studies. For example:

- ▶ you study urban mobility and include analyses that consider gender-based travel habits (SDG 5: Gender equality);
- ▶ you conduct a review of biodiversity literature and cover perspectives beyond North America and Europe (SDG 10: Reduced inequalities);
- ▶ you develop a plan to minimize the environmental or social impacts of your project (SDG based on topic);
- ▶ your research includes the participation of patient partners or Indigenous communities (SDG 16: Peace, justice and strong institutions and SDG 17: Partnerships for the Goals); or
- ▶ your SDG-related research is conducted in partnership with a developing nation (SDG 17: Partnerships for the Goals).

### **Activities to initiate a dialogue between science and society**

The FRQ encourage the members of the scientific community to communicate their research, findings, approaches and methods to the public. This democratization of knowledge is reflected in the SDGs. For example, Goal 4 Quality education affirms that access to higher education is key to tackling SDG-related issues. In addition, one of the targets of Goal 16: Peace, justice and strong institutions is to ensure public access to information. For example:

- ▶ you consulted the community targeted by your research and accounted for experiential knowledge when developing your project (SDG 10: Reduced inequalities);
- ▶ you share your research findings with a diverse audience (SDG 10: Reduced inequalities);
- ▶ you present your research results outside your academic circles (e.g. in a school, library, magazine, newspaper, etc.);
- ▶ you are the editor of a scientific journal;
- ▶ you present your results in plain language to patient groups;
- ▶ you create video content for the general public;
- ▶ you judge elementary-level science competitions; or
- ▶ you are a counsellor at a science camp.

### **Social engagement**

Your past or current social engagement\* can help tackle SDG-related issues. For example:

- ▶ you are involved in the academic community (by contributing to a student newspaper, representing new students on university committees, joining the green committee, etc.) (SDG 17: Partnerships for the Goals);
- ▶ you are part of a group or committee to foster equity, diversity and inclusion (SDG 10: Reduced inequalities and SDG 5: Gender equality);
- ▶ you create podcasts to encourage healthy living (SDG 3: Good health and well-being);
- ▶ you are on the parents' committee of a school or daycare centre (SDG 4: Quality education);

- ▶ you are a mentor (SDG 4: Quality education and SDG 10: Reduce inequalities);
- ▶ in summer, you volunteer with seniors to break their isolation (SDG 3: Good health and well-being);
- ▶ you help clean up shorelines (SDG 6: clean water and sanitation);
- ▶ you are a member of the board of directors of a housing cooperative (SDG 11: Sustainable cities and communities);
- ▶ you worked in a community literacy association (SDG 4: Quality education).

\* This section is not about your personal waste management or responsible consumption practices but rather your engagement on these issues.