

Expertise and Excellence

A Hefty Share of Research Funding

Université du Québec professors and researchers receive half the funding awarded by NSERC and the SSHRC for environmental research in Québec. As a group, they are the third best-funded institution in Canada.



186 research laboratories, groups, centres and institutes in the environment and related fields

Source: Data supplied by institutions

UQ MEMBER INSTITUTIONS: Leaders in Environmental Science Research

56%

of Québec's environment professors



Source: UQ institutional research office
Distribution of environment professors in Québec
Fall 2010
SYSPER data cube, Bureau de coopération interuniversitaire (BCI),
September 22, 2016

50%

of Québec environmental research funding



Source: UQ institutional research office
Québec university research funding in the environmental field, SIRU university research information system (MEES).
Compiled from CLASS codes 5243, 5247, 5249, 5270, 5271, 5300, 5300, 5307, 8076.
October 2016

1 st	University of Saskatchewan	\$79.2 million
2 nd	University of British Columbia	\$50.8 million
3 rd	Université du Québec system	\$46 million
4 th	University of Alberta	\$44.6 million
5 th	Université Laval	\$39.7 million
6 th	University of Toronto	\$39.1 million
7 th	University of Waterloo	\$36.6 million
8 th	McGill University	\$32.2 million
9 th	University of Calgary	\$30.3 million
10 th	Dalhousie University	\$28.6 million

Source: UQ institutional research office
The top 10 environmental research universities in Canada
NSERC and SSHRC funding, excluding awards to students
September 22, 2016

EXAMPLES OF FIELDS IN WHICH RESEARCHERS AT UQ INSTITUTIONS HAVE DEVELOPED EXPERTISE

Agri-food • Food security and production, agriculture impacts, epidemiological and food issues of globalized agriculture, urban agriculture, food justice

Ecotourism • Whale watching and its environmental, social, and economic impacts

Education • Environmental education and communication, environmental issue awareness, practitioner and decision-maker knowledge transfer

Energy • Energy efficiency, renewables, biomass, biomass conversion

Environmental health • Ecotoxicology, environmental contamination, air pollution

Forests • Sustainable forest ecosystem management, forest management, wood conversion and processing

Land • Land-use planning, regional, rural, semirural, and urban social and economic development, landscape ecology, coastal community and infrastructure vulnerability

Mining • Ore deposits, groundwater and aquifers, mine reclamation and recycling of tailings, mining entrepreneurship

Northern issues • Environmental, social, and economic change in arctic communities, northern ecology, changes in northern landscapes

Oceanography • Ocean protection, chemical constituents and reactions in marine environments, marine organisms and microorganisms, aquaculture, fisheries exploitation systems, formation of ocean basins, seafloor evolution, sediment properties

Public policy • Internalizing the concept of sustainable development in policy development and implementation

Sustainable development • Climate change, environmental consulting and sustainable development, environmental management, ecosystem-based approach, conservation of ecosystems, environmental enhancement

Water • Water management, contaminated water treatment, aquatic ecosystem viability, drainage basins

Wildlife • Population dynamics, wildlife ecology, vulnerable and threatened species conservation

and Sustainable Development

in the Université du Québec System

Université du Québec member institutions were at the forefront in the environmental sciences* and remain leaders in the field. They are home to 56% of the professors working on environmental issues at Québec universities and receive 50% of all National Research Council of Canada (NSERC) and Social Sciences and Humanities Research Council (SSHRC) funding in the field.

Varied Programs

Member institutions offer a wide range of environmental and related programs, including just under 70 degree programs (18 doctoral) and more than 40 professional development programs.

Close to one out of two students in a Québec program focusing on the environment (45%) attends one of Université du Québec's ten institutions.

Cutting-Edge Facilities and Equipment

Students and professors member institutions have the latest cutting-edge research technology at their disposal in the system's 186 research laboratories, centres, groups, and institutes. Two member institutions have research vessels, one for fresh-water [UQTR's *Lampsilis*] and the other for research in the Gulf of St. Lawrence and on the high seas [UQAR's *Coriolis II*]. Other member institutions have research forests, both for research and training purposes, which encompass a diverse range of Québec's temperate and boreal forest.



*The environment is an extremely broad field in which many disciplines overlap and whose borders are often difficult to determine. For our purposes here, "the environment and related fields" covers the wide range of disciplines and fields of research related to environmental topics, and "environmental" refers to disciplines and fields that specifically focus on environmental topics.

ABOUT UNIVERSITÉ DU QUÉBEC

The mission of Université du Québec's ten institutions is to promote access to higher education while contributing scientific advancement and regional development across Québec. Today 102,000 fall-session students attend over 1,000 programs at member institutions. Their 7,300 professors and lecturers and permanent staff of more than 4,200 pursue that teaching and research mission in over 60 municipalities throughout the province.

Université du Québec à Montréal (**UQAM**) / Université du Québec à Trois-Rivières (**UQTR**) / Université du Québec à Chicoutimi (**UQAC**) / Université du Québec à Rimouski (**UQAR**) / Université du Québec en Outaouais (**UQO**) / Université du Québec en Abitibi-Témiscamingue (**UQAT**) / Institut national de la recherche scientifique (**INRS**) / École nationale d'administration publique (**ENAP**) / École de technologie supérieure (**ÉTS**) / Télé-université (**TÉLUQ**)

Science Programs

More Than 100 Programs in All

Université du Québec member institutions offer more than 100 programs in environmental sciences and related fields (TABLES A and B). The wide range of programs covers practically every issue relating to the environment and sustainable development, including the following:

- Earth's ecosystems (geography, geology, geomatics, wildlife biology, ecology, atmospheric science, meteorology, etc.)
- Sustainable resource management (mining, forestry, etc.)
- Renewable energy development from an energy efficiency perspective (wind, hydroelectricity, biomass, thermal)

- New materials development and the incorporation of environmental concerns in engineering
- Environmental applications of natural sciences (biology, biochemistry, biotechnology, chemistry, physics, etc.)
- Social sciences (environmental education, environmental risk management, social responsibility, public policy, land use planning, etc.)



TABLE A

Degree Programs in the Environment and Related Fields

	UQAM	UQTR	UQAC	UQAR	UQO	UQAT	INRS	ENAP	ÉTS	TÉLUQ	TOTAL
Bachelor's	6	7	1	3	-	-	s.o.	s.o.	-	-	17
Master's	10	6	1	3	3	3	4	-	4	-	34
Doctorate	6	2	1	3	1	1	2	-	2	-	18
TOTAL	22	15	3	9	4	4	6	-	6	-	69

Source: Data supplied by institutions
NOTE: INRS and ENAP do not offer undergraduate programs

TABLE B

Specialized Programs in the Environment and Related Fields

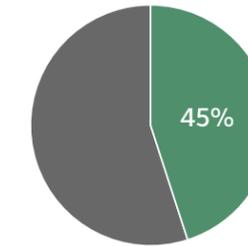
	UQAM	UQTR	UQAC	UQAR	UQO	UQAT	INRS	ENAP	ÉTS	TÉLUQ	TOTAL
Certificates and other (undergraduate level)	5	2	1	5	-	2	s.o.	s.o.	4	3	22
Advanced graduate diploma and other (graduate level)	5	3	5	2	-	1	-	-	2	2	20
TOTAL	10	5	6	7	-	3	-	-	6	5	42

Source: Data supplied by institutions
NOTE: INRS and ENAP do not offer undergraduate programs

of Researchers and Professionals

Université du Québec member institutions play a key role in training the next generation of environmental and sustainable development researchers and professionals.

In Québec, 45% of university students registered in environment programs attend Université du Québec member institutions.



Environment
Source: UQ institutional research office. Fall 2015 data from GDEU system for student population data management (MEES) as of September 22, 2016. Includes all levels. Fields: Meteorology and atmospheric sciences, earth sciences, oceanography, energy, hydrology and water science, natural resources, wildlife studies (wilderness, fish, game), environment (environmental quality, pollution).

Close to 4,000 Undergraduate and Graduate Students in Environmental and Related Fields

TABLE C

Students in Environmental and Related Fields Degree Programs

	UQAM	UQTR	UQAC	UQAR	UQO	UQAT	INRS	ENAP	ÉTS	TÉLUQ	TOTAL
All levels	1 900	622	189	392	35	142	195	*	275	202	3 952

Source: Data supplied by institutions (September 2016). *ENAP offers a master's and doctorate in public administration that may incorporate research issues relating to environmental and sustainable development policy. It was not however possible to get an estimate of the number of students involved.

Over 300 professors
61 research chairs
18 doctoral programs

Université du Québec member institutions have over 300 professors working on environmental issues in the broad sense of the term. They constitute together one of Québec's biggest university-based pools of environmental and related expertise.

Source: Data supplied by institutions

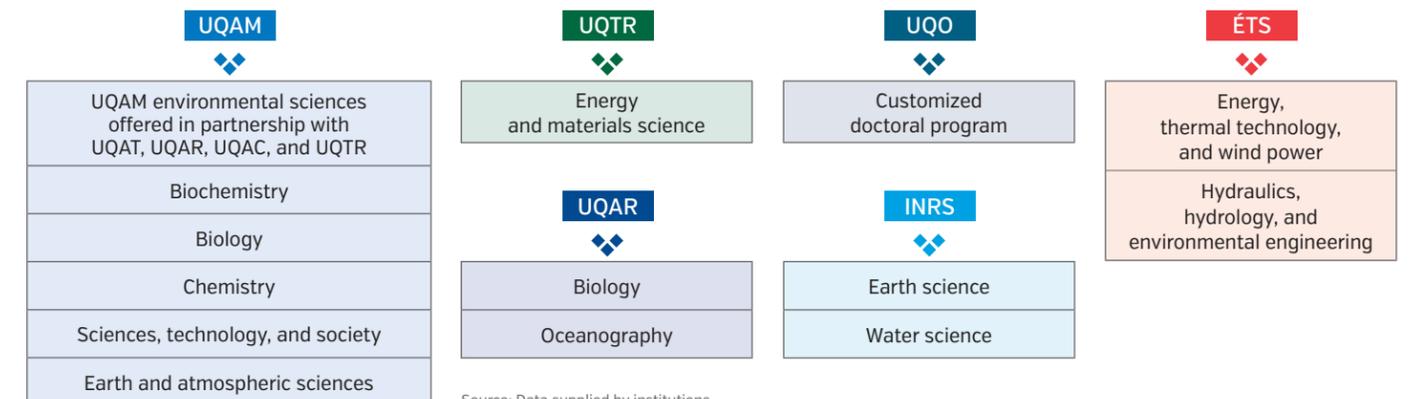
TABLE D

Professors/Researchers in the Environment and Related Fields

	UQAM	UQTR	UQAC	UQAR	UQO	UQAT	INRS	ENAP	ÉTS	TÉLUQ	TOTAL
Professors/researchers	80	68	10	44	10	24	32	1	30	4	303

Source: Data supplied by institutions

DOCTORAL PROGRAMS



Source: Data supplied by institutions