

# STRATEGIC PLAN

2010-2012



**IRIS** INSTITUTE FOR RESEARCH AND  
INNOVATION IN SUSTAINABILITY

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## INTRODUCTION

York University has a tremendous opportunity to lead the national and international discourse around campus sustainability by integrating the University's sustainability commitment with the University's broader goals. As a campus hub for sustainability, the Institute for Research and Innovation in Sustainability (IRIS) has the potential to act in two capacities:

- (1)** To provide leadership within the university that enables and supports York University's leadership role.
- (2)** To provide leadership in creating and modeling best practices for interdisciplinary research, given that interdisciplinarity provides the framework for the creation of sustainable communities, including those on university campuses.

As an organized research unit, IRIS is able to play a unique role in providing an interdisciplinary space that houses innovative research projects. This includes on going research or “self study” to encourage organizational reflexivity of York University, which in turn, improves IRIS’ effectiveness to further campus sustainability goals. IRIS provides a home for research projects that cross disciplines. While they may initially emerge from different university departments, they develop in ways that transcend traditional boundaries and which lead to new areas of research and collaboration. IRIS, as campus hub for sustainability research, also engages the community in research projects that aim to educate the public – both on campus and in the communities where we conduct our research.

IRIS provides leadership for cultural trans-

formation within the university around sustainability through our mandate for engaging with the entire campus community. Through this engagement, we are able to enhance student, staff and faculty engagement, governance, campus facilities and also, non-traditional pedagogies. As the third largest university in Canada, York University has made a commitment to sustainability, and therefore must find ways of ensuring that its community is able to achieve both a good comprehension of the subject and be engaged in implementing and promoting sustainability.

## VISION

IRIS is a leader in the creation of a culture of sustainability within and beyond York University through engagement in practical, collaborative and interdisciplinary research and innovation that drives change.



## MISSION

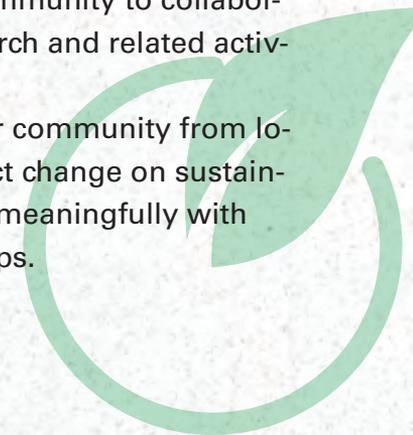
IRIS promotes practical sustainability solutions that encompass environmental, social and economic considerations at local, regional and global scales. Operating as a leading edge interdisciplinary university wide research institute, IRIS is a hub for sustainability-related activities at York University. In this role we bridge internal and external interests through a policy of inclusivity, recognizing sustainability as a universal goal.

The all-encompassing and multi-dimensionality of sustainability provide IRIS with a broad mandate for operating beyond traditional disciplinary boundaries, be they faculties, the broader university or research fields.

## GOALS

Provide leadership, integration and dissemination of interdisciplinary sustainability research by championing the use of a trans-disciplinary approach.

- Engage with campus communities to create a “next generation” visible and collaborative green curriculum at York University.
- Serve as a leading source for policy and decision makers on a variety of sustainability issues which reflect the current interests of affiliated faculty and fellows.
- Engage students, staff and faculty in campus sustainability research and innovation projects that include pursuing carbon neutrality and implementing renewable energy to reduce York’s environmental footprint and sharing the knowledge with other sustainability offices nationally.
- Make IRIS an accessible jumping off point for people and organizations both within and outside of the York community to collaborate on sustainability research and related activities.
- Engage the broader community from local to international to effect change on sustainability by communicating meaningfully with different stakeholder groups.





## IMPACT AND ACHIEVEMENTS

IRIS has gone through a major transition and growth period in the last three years, leading to a new governance structure, a rationalized slate of programs and stronger engagement with the university community. IRIS is now well positioned to accomplish its goals and achieve a significant impact on the campus community. With the help of IRIS, York University can demonstrate its commitment to sustainable practices and become a leader for academic institutions.

The following endeavours are examples of IRIS' recent success:

### **Established a trans-disciplinary research project on human security.**

The International Polar Year GAPS (Gas, Arctic Peoples and Security) project in NWT combines the fields of ecology, health, social science and political science through the lens of human security to justify the use of this framework, and includes graduate students as co-applicants.

### **Provided leadership for an international grant in a new leading edge research field.**

Granted by the Social Sciences and Humanities Research council project, this one million dollar project, Work in a Warming World, examines the impacts of climate change on employment and work in Canada—a new area of study bridging labour studies and climate change.



**Showcased the issue of climate justice at an international conference.**

IRIS applied for civil society observer status on behalf of York University. Faculty, students and staff participated actively at the United Nations Framework Convention on Climate Change (COP15) in Copenhagen Denmark in December 2009, where they launched the website [www.globalclimatejustice.net](http://www.globalclimatejustice.net) in partnership with ECOAR-Brazil.

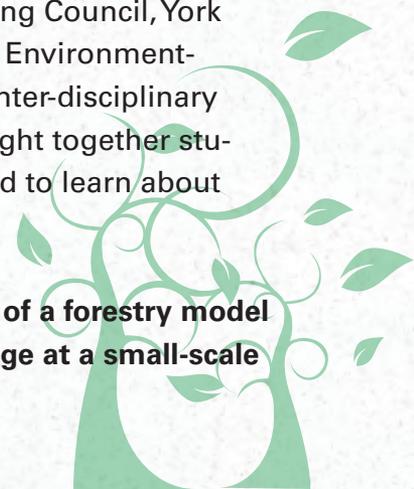
**Improved campus sustainability through student-led action research.**

Campus-wide research involving, students, staff and faculty, was conducted by students on public perception and understanding of food sustainability. The final report was delivered to a number of campus groups, including the President's Sustainability Council and a number of recommendations were included in the Council's report to the President.

**Provided leadership in creating a cutting-edge 'green' curriculum.**

The International Summer School in Green Building Design emerged from partnerships with the World Green Building Council, York International and Faculty of Environmental Studies. This innovative inter-disciplinary undergraduate course brought together students from around the world to learn about green building.

**Demonstrated applicability of a forestry model that measures carbon storage at a small-scale**



IRIS conducted a study of the state of York University Keele Campus' urban forests using the USDA Urban Forest Effect Model (UFORE), and scaled-down the model developed for municipalities, towns and cities, to the campus, in a low-budget and low-tech approach. These results are of international interest.

## EXTENT OF WORK

The work that IRIS undertakes is rooted in its mission and goals. Acting as a hub, IRIS connects the campus' research centres, the university institution and external organizations to stimulate collaboration in the field of sustainability. IRIS also plays an active role in facilitating campus sustainability initiatives, by participating in the President's Sustainability Council, YORKWISE and a host of other committees, providing support, connections and leadership, as needed.

Many faculties and departments at the university are involved in research projects that en-

compass some aspect of sustainability. Some of these projects may be in faculties and departments that have an ongoing relationship with IRIS through their faculty. These projects can be mapped onto a spectrum between projects held by a single faculty or researcher and typically focus on a specific field of research, and projects that are more inter-disciplinary, and therefore are best housed by an organ-



ized research unit that enables researchers to reach across the university with as few barriers as possible. Depending on where a project fits on this spectrum, IRIS may be directly involved administratively. Either way, both IRIS administered projects and projects lead by faculty members who chose to showcase their sustainability research can be found on the IRIS website: [www.iris.yorku.ca/projects](http://www.iris.yorku.ca/projects).

## RESOURCE LIMITATIONS

Like all research centres, funding and human resources are the limiting factor. There are only a few full-time and part-time staff at IRIS who are responsible for providing all administrative and coordination functions. Occasionally, these staff may also be involved in project work.

Considering its function as a hub, the majority of research work, although organized with the help of IRIS, is actually undertaken by core faculty members. Typically, a core faculty member will lead a project and work with members

from other faculties in order to achieve its objectives. Aside from faculty members, research projects may also involve a number of post-doctoral fellows, research/graduate assistants and graduate/undergraduate students. Other projects and programs may be led by students or directly by IRIS. In these cases, there will be more direct involvement by IRIS staff members with support from graduate/undergraduate students and volunteers. This is true of the projects led by the Director of the Institute.

## FOCUS OF WORK

In order to determine which projects and programs receive access to its resources, IRIS uses the following four criteria as a guide.

## THEMES

The Executive Board has chosen a series of themes which all aim to solve large issues facing humanity, which are derived from IRIS' goals. Typically, a research proposal must touch



on at least one of these themes in order to be pursued. Although the themes are more or less mutually exclusive, it is possible that a project may cover more than one theme.

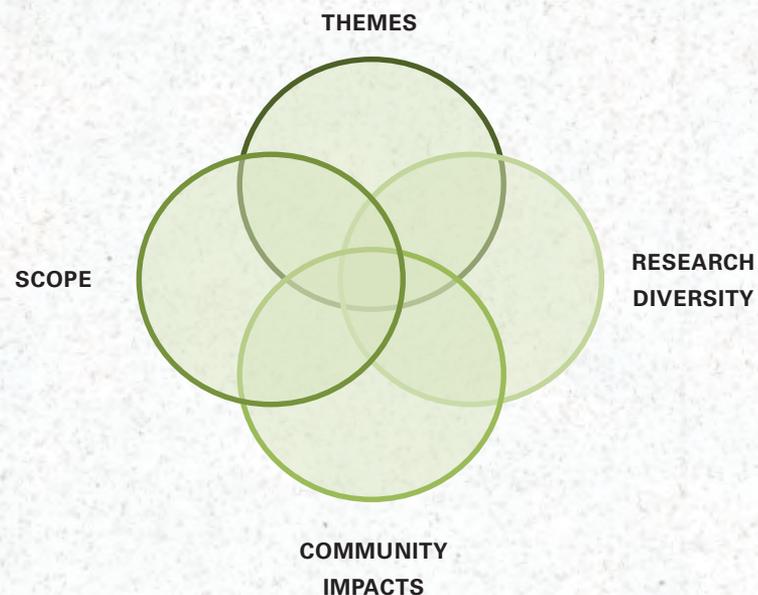
### **SCOPE**

As a university based research unit focused on sustainability, IRIS clearly has a mandate to effect change at multiple scales: on the campus and well beyond it. Some research projects may focus entirely on the broader needs of sustainability on a regional, national or global scale. Ideally, a project will be both relevant to communities at the same scale, as well as having implications to a wider audience.

### **RESEARCH DIVERSITY**

IRIS aims to be an inter-disciplinary research unit supporting research that goes beyond the scope of a single faculty, and which ultimately aims to be trans-disciplinary, yielding novel research fields or solutions about sustainability issues. Considering the broad nature of sus-

tainability—environmental, social, and economic—having multiple fields involved in a project strengthens the research and its applicability. The strongest projects include aspect of all three realms.



## **COMMUNITY IMPACT**

To have the widest possible impact and undertake research that leads to action, it is necessary to branch out beyond academia into the community by providing results in multiple forms, including plain language summaries. Other organizations have a wealth of information and connections that can help turn sustainability research into action. When research is translated into policy, technology, new development techniques, etc, the greatest impact is achieved.

The following section describe further IRIS' four themes. This is followed by a chart that aims to provide a framework for visualizing how IRIS' research projects relate to each other, mapping theme scope and research diversity. It should be noted that a project may start out in one space and then move around to different levels and locations. In this way, we aim to illustrate the dynamic nature of collaborative, interdisciplinary research.





# CORE THEMES

## **CLIMATE CHANGE**

As a complex global issue that drives the need for sustainability, climate change is the largest issue facing the planet, and consequently is reflected as a theme or topic in many IRIS projects. On campus, IRIS aims to raise awareness of the issues surrounding climate change through lectures, workshops and other events. By sponsoring large interdisciplinary research projects, IRIS has enabled the university to tackle complex climate change issues that are beyond the scope of individual faculties.

Climate Justice is a global issue which reflects the imbalance between the Global North and South's ecological footprint, which will affect the lifestyles of all as climate change progresses.

Invasive species have a serious ecological and socio-economic impact on communities by reducing biodiversity and affecting ecosystems leading to global environmental change.

As climate change progresses it will have an increasing effect on work and employment, as the environment affects the economy, leading to policy and cultural shifts.

## SCIENCE-POLICY GAP

Despite significant research being undertaken in the area of sustainability, policy formulation based on research outcomes remains difficult to achieve. The complex and siloed nature of this research translates into many uncertainties, providing insufficiently synthesized information for policy makers.

- Supports policy development by improving access to structured information available for policy centres by focusing on research that encompasses and builds on previous literature from multiple disciplines, for example, through knowledge-syntheses.
- Provide expertise at regional and provincial forums and councils which aims to solve policy issues where there is a lack of consensus on how to interpret and manage the science.



## CAMPUS SUSTAINABILITY

Making the campus more sustainable is a core objective of IRIS. In order to improve our understanding of the relevance of sustainability on campus, this theme can be broken down into five areas: administration, curriculum, research, operations and campus community.



- The university is a complex organisation with many sub-units that need to collaborate with each other in order to function in a more holistic and sustainable manner. IRIS engages at multiple levels, from the President's office to individual students, and across many different faculties and departments in order to bring people together and encourage discussion on key issues.

- York University is a teaching institution and within every subject there is a potential for including a sustainability perspective. Working within each faculty and in collaboration with the university governing bodies, IRIS aims to encourage innovations and additions to the curriculum.
- As a center for research, the university conducts research in many different areas. The principles of sustainability can provide new insights into how existing research fields can transform their approaches, for example by taking on whole systems, inter- and trans-disciplinary techniques.
- The day-to-day operations of the university—from buildings to waste management practices—define its overall impact on the environment and the surrounding community, and are therefore critical to campus sustainability. IRIS supports student-led research into these aspects of campus sustainability and



actively promotes improvements. IRIS is committed to finding ways to support the creation of renewable energy projects on campus. The first step is to support programmes that reduce energy consumption. Once the community has maximized its savings in this area, we will work to move towards renewable energy sources.

- IRIS interacts with the entire campus community including students, faculty and staff. This is reflected in the IRIS Executive board's composition, which contains members from each of these stakeholder groups, and both the Keele and Glendon campuses. Consideration is also paid to the needs of the surrounding neighbourhoods.

## SUSTAINABLE DEVELOPMENT

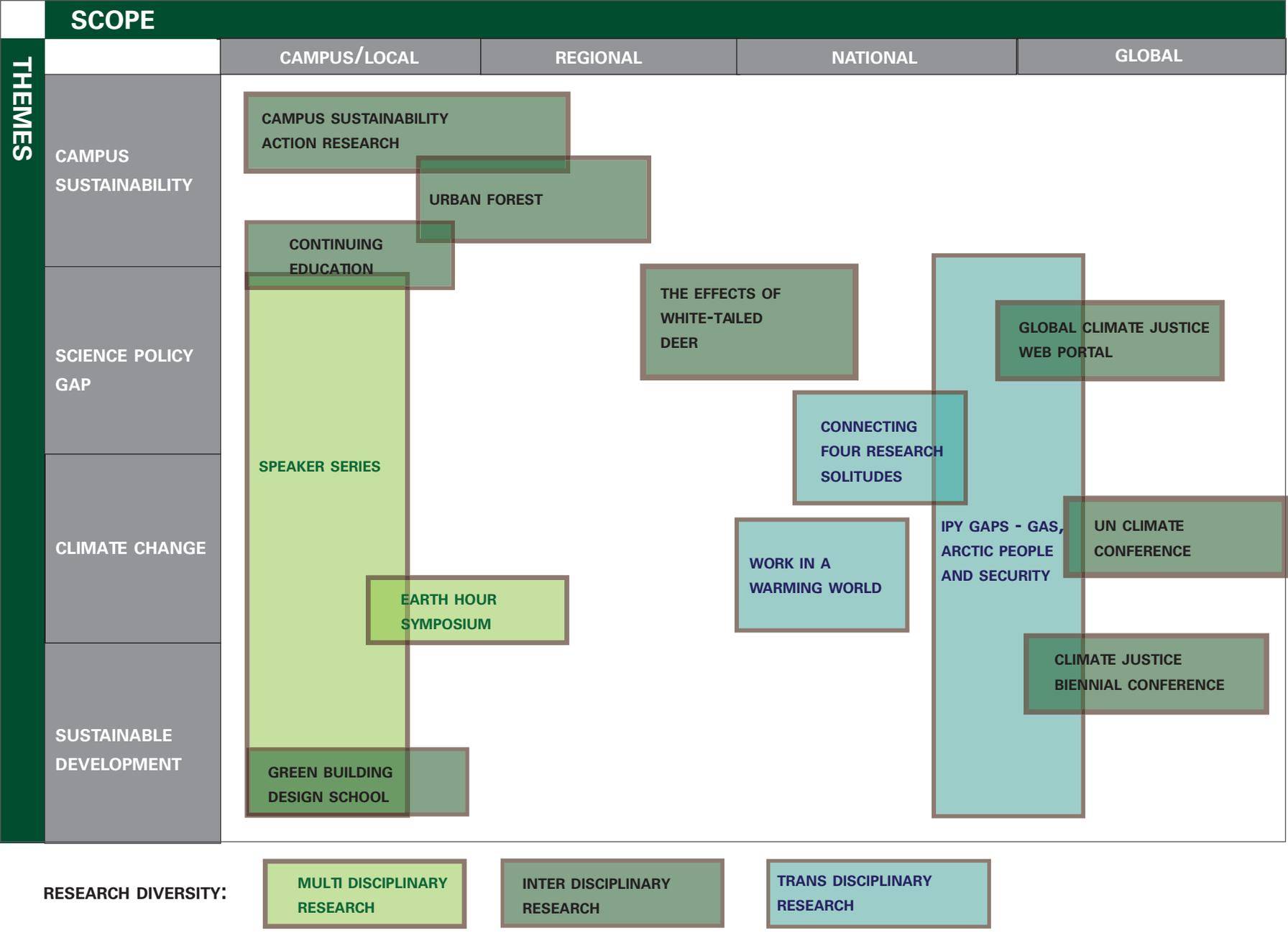
Sustainable development is a challenging aspect of implementing sustainability that affects all bodies, including the formal and informal economies. IRIS projects seek to redefine economic development to always include the environmental and social realms.

- Governance is a barrier to widespread adoption of sustainability. IRIS explores the impact of alternative forms of governance such as self-governance and community-led initiatives.
- Infrastructure is critical to development and hence sustainable development requires a shift in mindset towards green buildings, renewable energy and urban planning.
- Human security is about more than national security and safety. It encompasses a bottom-up approach of respecting security at the individual or community level. True human

security is only achieved with a strong society that respects cultural values and the local environment.

- Traditional economic thinking focuses on a single flow of cash focussing on concepts such as profit, GDP and annual growth. Moving to a sustainable future requires a broader viewpoint that includes the social and environmental consequences to economic activity, including happiness. It also includes new economic mechanisms, such as social enterprises and microfinance.





**SCOPE**

CAMPUS/LOCAL

REGIONAL

NATIONAL

GLOBAL

**THEMES**

CAMPUS SUSTAINABILITY

CAMPUS SUSTAINABILITY ACTION RESEARCH

URBAN FOREST

CONTINUING EDUCATION

SCIENCE POLICY GAP

THE EFFECTS OF WHITE-TAILED DEER

GLOBAL CLIMATE JUSTICE WEB PORTAL

CLIMATE CHANGE

SPEAKER SERIES

EARTH HOUR SYMPOSIUM

CONNECTING FOUR RESEARCH SOLITUDES

IPY GAPS - GAS, ARCTIC PEOPLE AND SECURITY

UN CLIMATE CONFERENCE

SUSTAINABLE DEVELOPMENT

GREEN BUILDING DESIGN SCHOOL

WORK IN A WARMING WORLD

CLIMATE JUSTICE BIENNIAL CONFERENCE

RESEARCH DIVERSITY:

MULTI DISCIPLINARY RESEARCH

INTER DISCIPLINARY RESEARCH

TRANS DISCIPLINARY RESEARCH

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