

PARTNERS FOR ACTION

P4A

ANNUAL

REPORT 2021



PARTNERS FOR ACTION



UNIVERSITY OF
WATERLOO

FACULTY OF
ENVIRONMENT






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PARTNERS FOR ACTION (P4A)



Land Acknowledgement

INCLUSIVE PARTNERSHIP

Partners for Action is part of the University of Waterloo. We acknowledge that much of our work takes place on the traditional territory of the Neutral, Anishinaabeg and Haudenosaunee peoples.

Our main campus is situated on the Haldimand Tract, the land promised to the Six Nations that includes six miles on each side of the Grand River. Our active work toward reconciliation takes place across our campuses through research, learning, teaching, and community building, and is centralized within the Office of Indigenous Relations.

We are inspired by the **Dish with One Spoon Treaty** that governs the shared territory of the Great Lakes Region in Southwestern Ontario. It asks that we take only what we need, leave some for others and keep the dish clean. Honouring this treaty helps promote sustainable practices and mutual respect in our communities, wherever we are in Canada.

Indigenous communities across Canada are disproportionately exposed to floods and flood risk. We recognize that climate injustice and colonial legacies have contributed to this exposure and believe that climate action, climate adaptation and climate justice are necessary as acts of Reconciliation. The work of Partners for Action is aimed at catalyzing these actions in partnership with Indigenous leaders and communities to achieve inclusive resilience where it is most needed.

About Us

P4A

PARTNERS FOR ACTION (P4A)



P4A empowers Canadians to become flood resilient by promoting awareness and preparedness actions that are inclusive and evidence-based.

Partnership is central to our approach: strategic collaborations allow us to focus on changing the flood response landscape at the ground level and with policy makers.

We value curiosity, collaboration, transparency, and accountability in all our interactions.

As a thought leader and steward of Flood Smart Canada, P4A moves conversation and multi-level action forward by:

- › localizing community-engaged flood risk awareness and preparedness
- › partnering for adaptation, and
- › developing flood resilience planning and foresight.

These priorities will enable communities to access effective resources and innovative research, and ultimately, embrace inclusive resilience.

Message from the

DIRECTOR AND CHAIR

Now more than ever

This year has been one for the books – with waves of Covid-19 variants affecting every community in Canada, historic floods, wildfires and heat waves – we’ve felt the true meaning of vulnerability and faced these challenges with sustained resiliency.

It was against this backdrop that I started as P4A’s new Director and began exploring its strategic position in the flood risk management landscape. By mid-year we had a draft strategic plan to shape with our founding partners, Co-operators and Farm Mutual Re. Over the last seven years, this partnership has provided us with a stable foundation to pursue important research projects that inform gaps in our collective response to flood risk resiliency. We are delighted to confirm the renewal of this partnership for another three years with Co-operators, and acknowledge the continuing support of Farm Mutual Re.

We’re now preparing for another transition – the end of Jean Andrey’s term as Dean of the Faculty of Environment, and Chair of Partners for Action’s Advisory Committee. Jean’s investment in people and relationships has allowed those of us who work with her to thrive, despite the daily challenges we face navigating a global pandemic. Her commitment to P4A is deeply appreciated and it is with sincere gratitude that we begin work together in 2022, in her last months with us.



JULIE WRIGHT

DIRECTOR, PARTNERS FOR ACTION
UNIVERSITY OF WATERLOO



JEAN ANDREY

DEAN, FACULTY OF ENVIRONMENT
CHAIR, PARTNERS FOR ACTION
ADVISORY COMMITTEE

“Across Canada, damage from extreme weather has cost taxpayers and insurers almost \$10 billion since 1998. Water-related damage is now the leading cause of home-insurance claims in many communities, large and small. Municipal governments, the insurance industry, researchers, and the public are coming together to better understand what we can do to prevent flood damage in the first place, instead of focusing most of our efforts and resources on the clean-up afterward.” – *Jean Andrey*

There are no “maybes” or “ifs” left when it comes to the very real flood risk in Canada. We are out of time for wondering; we are in immediate need of creative, community-driven, inclusive actions to address flood risk as evidenced by historic flooding in both British Columbia and on the east coast of Canada in 2021. This same year was a “2B” – one of the top five years in terms of insurable losses, according to CatIQ. Flood risk is only increasing as Canada warms at twice the global rate. Simply put, we have to act and not just through our traditional, centralized approaches. Peoples, communities and municipalities have to be empowered to enact change in the places they live, where the risks are the greatest.

The true cost of these disasters is measured by how resilient individuals and communities are. Multiple social deprivations can leave populations unable to recover from a major shock, like a flood event. Natural hazard events are occurring more frequently and are augmented by climate change. In light of this evolving context, it’s important to consider equity and resilience by directing resources and supports toward those who are most adversely affected.

This year was not an anomaly. If we are proactive, community-minded, and centre people in our preparedness, we can develop a flood resiliency in Canada that will preserve and protect our communities. We believe that flood resiliency is a pathway toward climate action, climate adaptation and climate justice and that inclusive resilience must be at the heart of flood awareness, preparedness and response. And this is why we are focusing on research and tools – like the Social Vulnerability Index, policy work on managed retreat, and a study on inclusive risk communication – that can help inform and catalyze inclusive resilience. Through focus groups, interviews, workshops and webinars in 2022, we will work with people on the ground and bring their voices into the collective response.

Building community-engaged flood resiliency must be a part of our national climate adaptation strategy. P4A aims to accelerate community resilience by taking a systems-based approach, communicating early and often, and prioritizing the exploration of solutions at a watershed level to link downstream communities in partnership toward a common goal.

We’re better together. Join us in this work.

Building a Resilient Canada

PARTNERS FOR ACTION (P4A)

No one person, no one organization, will create a flood-resilient Canada, nor will it happen over night. Partners for Action's collective-action approach allows for everyone to have a role in building flood resilience.

Our strategic focus on building inclusive resiliency for all peoples in Canada is rooted in our umbrella organization at the University of Waterloo – where there is a desire to understand and enhance human experiences, address the human dimensions of global challenges, and examine ways to translate knowledge for governance and policy.¹

Along with the University and the Faculty of the Environment, we seek

- > to strengthen sustainable and diverse communities,²
- > use our unique position at a leading teaching and research institute for the environment to create sustainable solutions needed to address the complex challenges facing our world.³

We are mindful of the resources, privilege, and voice available to us and we are committed to using it for active change in Canada, and beyond.

Partners for Action is a trusted resource and thought leader in the area of flood-preparedness and resiliency and we drive impact through research, new approaches to inclusive resilience and by centring human experiences in everything we do.

¹ University of Waterloo Strategic Plan – Advancing research for global impact

² University of Waterloo Strategic Plan

³ Faculty of Environment Strategic Plan

In 2021, Partners for Action experts shared insight and analysis online, on the ground, and with policy makers.

WITH POLICY MAKERS

P4A has contributed to the Government of Canada's:

- > Task Force on Flood Insurance and Relocation
- > Disaster Resilience and Security Advisory Table for the National Adaptation Strategy
- > Consultations on issues facing off-reserve Indigenous communities living in high risk flooding areas for the purpose of developing insurance and co-operative relocation plans

ONLINE

- > We are expanding our social media reach through Instagram and LinkedIn to explore differentiated messaging and audience growth strategies.
- > Engagement on Twitter saw a significant boost in the last quarter of 2021 with news, research and commentary resulting in 35,050 impressions and 15K profile visits.
- > Floodsmartcanada.ca continues to be a go-to resource for flood risk resources. Engagement skyrocketed by more than 430% year-over-year with the overwhelming majority of users seeking information on flood plain maps.
- > We collaborated with **Unflood Ontario** as an amplification partner during its viral marketing campaign in Spring 2021. By partnering as a content amplifier, we build trust among partners and greater alignment in our future activities, all while communicating the flood resiliency messaging.

IN THE NEWS





Issue Focus

THE MOMENT

Floods in 2021

- › Record rainfall across 20 communities in southern British Columbia resulted in the evacuation of more than 17,000 people and caused the most costly extreme weather event in the province's history
- › Early estimates suggest the insured damage in BC at \$450 million while the City of Abbotsford is pegging flood damage at \$1B.
- › Heavy rainfall also flooded communities in Atlantic Canada in November, including areas of Cape Breton that flooded as recently as 2016.
- › Many communities across Southwest Ontario saw record rainfall on September 22, 2021 – in Waterloo, 93.4 millimetres were recorded by the University of Waterloo in a 24-hour period, up from 91.4mm in January 2020.



JASON THISTLETHWAITE

ASSOCIATE DIRECTOR, PARTNERS FOR ACTION

ASSOCIATE PROFESSOR IN THE SCHOOL OF
ENVIRONMENT, ENTERPRISE AND DEVELOPMENT (SEED)

UNIVERSITY OF WATERLOO

Local Flood Risks

LACK OF INFORMATION, LACK OF OVERSIGHT

In the past year, the need for accurate flood risk resources, proactive communal preparedness and accessible flood risk tools has been made abundantly clear.

Municipalities, where development is overseen and approved, are at the forefront of disaster management, but are almost powerless in their ability to prevent development in the most high risk areas. The result is a cycle of decisions driven by revenue over science, leaving community members vulnerable to flood risks they may not even be aware of.

It begins with a lack of information: there isn't a publically available national map or oversight tool to help name and address high risk flood zones. The result leaves municipalities and homeowners woefully unaware of the risk they are exposed to.

Developers, driven by their own economic targets – at times unaware of or ambivalent to flood risks – advocate for new builds in high risk (but still lucrative) waterfront or water-adjacent zones. The municipalities, who rely on tax revenue from development to survive, take on development that the local ecosystem cannot handle.



Some areas, including the Province of Ontario, have a third party weigh in – usually a conservation authority – that grants or denies building permissions based on science and environmental hazards including flood risk. This governance structure protects community interest and guides development away from flood-prone areas.

Flood-risk maps – maps that everyone can see, including local communities, home owners and developers – are a critical tool that level the playing field, offering data-driven information to those who need it to make informed decisions, and allow all community stakeholders to navigate the risk their location presents. By combining data sets – Geographic information sets (GIS) and a Social Vulnerability Index (SoVI) – it becomes possible to identify communities disproportionately affected by risk that should be prioritized for protection. Using these tools, provinces can create regulations that require municipalities to limit high risk development.

Once those structures are in place, high risk areas can be identified and local communities and provincial authorities can begin to develop inclusive resilience together. This information sharing builds transparency and accountability, moving forward solutions that are rooted in communal needs and evidence-based understandings.

Research Projects

P4A

PARTNERS FOR ACTION (P4A)



Inclusive Resilience ***with Canadian Red Cross, funded by Public Safety Canada***

What is Inclusive Resilience?

Resilience is the ability to prepare for and recover from disasters.

To take an inclusive approach, we must recognize that different groups of people need different emergency response measures. Inclusive resilience ensures all people have an opportunity to make meaningful contributions to decision making, planning and response efforts.

For communities to move forward in healthy, proactive, and inclusive ways they first must understand what information people are paying attention to and how they want to receive it. This study asks the all-important question: how do people learn about and prepare for floods, wildfires and earthquakes in their communities? The end goal is to improve messaging, in all forms, around these emergencies – including planning and recovery. This study is underpinned by the development of a Social Vulnerability Index that enables analysis of the combined impacts of exposure to hazard risk and socio-economic vulnerability.

What is a Social Vulnerability Index (SoVI)?

A SoVI provides analysis on socio-economic vulnerability and can be combined with other data sets, like hazard maps, to explore gaps in resilience assessment, which is usually limited to hazard extent (i.e. where the water flows) and exposure (i.e. interaction of people and property with water). By providing a solid foundation for prioritizing public investment in flood management policies and decisions, we can support Gender-based Analysis Plus (GBA+), social justice as fairness, and vulnerability-based environmental equity principles in emergency management and disaster risk reduction.⁴

Why it matters: Populations that are highly vulnerable as a result of economic and social insecurity are disproportionately affected by natural disasters. For example, women, Indigenous peoples, seniors and newcomers are more susceptible to the negative impacts of environmental hazards. With partners at the Canadian Red Cross, P4A's Inclusive Resilience research can shift the focus and finances of disaster planning to where it is needed most.

2021 Focus + Next Steps

- › Completed surveys of 500 Canadians in 5 regions: Richmond, BC, Bay St. George, NL, Ottawa, ON, Renfrew County, ON, and Thompson, MB
- › Focus groups now underway
- › Following-up with targeted interviews in Winter 2022 in Ottawa, ON, Thompson, MB and Richmond, BC

⁴ <https://uwaterloo.ca/canadian-coastal-resilience/blog/post/researcher-spotlight-series-socioeconomic-vulnerability-and>



Flood Risk Reduction – Property Buyouts *funded by Public Safety Canada*

Effective Property Buyout Programs to Reduce Flood Risk in a Changing Climate *funded by Max Bell Foundation*

What's Managed Retreat?

Within the coming decades, millions of people around the globe will lose their homes to climate change. Managed retreat is the purposeful relocation of people and property out of areas vulnerable to flooding – which is achieved primarily through the public acquisition of exposed structures. While managed retreat is institutionalized in other jurisdictions such as Australia and the United States, it's a relatively nascent policy in Canada.

To implement buyouts effectively, decision makers require evidence-based policy advice about how to design programs that maximize economic efficiency, political viability and social acceptability. With grant funding from the Max Bell Foundation, this project will draw lessons from current and past buyout programs and highlight the tradeoffs that governments must consider when designing new programs.

Why it matters: It is increasingly becoming an important option as different regions become uninhabitable due to the impacts of climate change. To help prepare for this inevitability, P4A provides strategic advice to federal, provincial and territorial governments, as well as municipalities.

Research Focus:

- › Generate new knowledge by critically evaluating the strengths and weaknesses of past property buyout programs in Canadian communities and around the world.
- › Engage target audiences to identify enabling conditions that strengthen the efficiency, social acceptability, and political viability of property buyout programs.
- › Equip policymakers and practitioners with evidence-based guidance about how to design and implement effective property buyout programs.

2021 Focus + Next Steps

- › Foundational work on property buyouts and strategic relocation policy: learning what has worked, what hasn't and how to be inclusive, non-coercive and reasonable moving forward.
- › Next steps: Workshops and webinars will continue in 2022, to assess and engage buyout impacted populations.

Just Green Cities: Integrating the SDGs into Municipal Infrastructure Decision Making

***with Windfall Ecology Centre,
funded by SDG Funding Program
at Employment and Social
Development Canada***

What are the SDGs?

The United Nations Sustainable Development Goals (SDGs) include targets relating to health, wellbeing, biodiversity, climate action, water protection, and land-use among its 17 goals, 169 targets and 232 indicators. It tracks the long-term balance between people, planet, peace, prosperity and partnership with 2030 as its milestone.

This project aligns with Canada's 2030 Agenda National Strategy, a plan for implementing Canada's commitment as a signatory to the 2015 UN Sustainable Development Goals (SDGs). P4A partnered with Windfall Ecology Centre and Possibilian Ventures to hold four stakeholder workshops and investigate three municipal infrastructure issues and their relevance to the SDGs.

The resulting cases focus on:

- > fleet electrification
- > stormwater management
- > net zero buildings

Each case incorporates what we call an Equity² framework – the intersection of four key drivers of change: “green”/ESG equity, social equity, climate change, and municipal infrastructure.

Next Steps

- > The full report – Just Green Cities: Integrating the SDGs into Municipal Infrastructure Decision Making – was released in March 2022. It's available at justgreencities.ca.

Why it matters:

- > The Discussion Paper provides a compelling snapshot of the complexities involved in equity-based responses to three areas of municipal infrastructure renewal at a critical moment in Canada's efforts to implement the SDGs and address the climate emergency.
- > What's abundantly clear is that equity issues need to be centred and prioritized in the planning and decision making process rather than considered downstream when it's too late.



Looking Ahead

A COLLECTIVE ACTION APPROACH

The way forward is with the people who are most impacted by flooding. P4A will continue to work and impact change through evidence-based, inclusive, impactful research, resources, and policy recommendations.

1. Community-engaged flood risk awareness and preparedness

- a. Flood Smart Canada is the go-to resource for flood resilience resources
- b. Community-level engagement through workshops and place-based activities
- c. Pilot and scale engagement approaches with vulnerable populations

2. Partnering for adaptation

- a. Influence collective action – policy influence, policy implementation (e.g. Property Buyouts and Managed Retreat)
- b. Raise awareness of nature-based solutions (NbS)
- c. Support municipalities on appropriate solutions, where they can and should be prioritized

3. Flood resilience planning and foresight

- a. Positioning flood resiliency as climate action – alignment with 2030 SDG and 2050 decarbonization goals
- b. Investment in stakeholder relationships – collapsing silos between research, policy and sustainable finance
- c. Integrating equity-based perspectives

This shift in focus to a collective action approach requires us to carve out a niche in community-based programming that prioritizes inclusive resilience, opening doors to new voices working for change. In this way, Partners for Action reinforces the notion that flood resiliency is climate action, climate adaptation and climate justice.

Awareness ≠ Preparedness

Encouraging Canadians and municipalities to be proactive and creative in their flood preparedness won't come easily. It is often only once disaster has struck that action happens. The window that follows must be pursued with genuine urgency. Once it has closed, we are back to our best intentions.

In order to move policy conversations from Parliament Hill to main street, we'll continue to promote Flood Smart Canada and develop community-level engagement via workshops, focus groups and other kinds of localized outreach. Ground-up, grassroots measures must meet policy measures half-way.

FINANCIAL SNAPSHOT

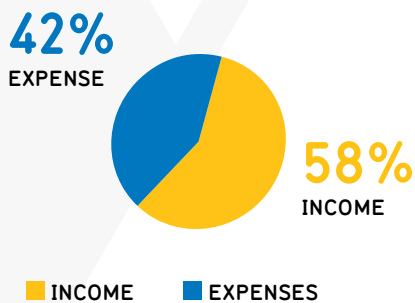
This table shows the revenue and expenses for the 2021 calendar year. The University of Waterloo's fiscal year is May 1-April 30. Individual project grants have their own fiscal deadlines.

	PHILANTHROPIC	GRANTS	TOTAL
INCOME	240,000	239,325	479,325
EXPENSES	119,138	226,279	345,417
SURPLUS	120,862	13,046	133,908

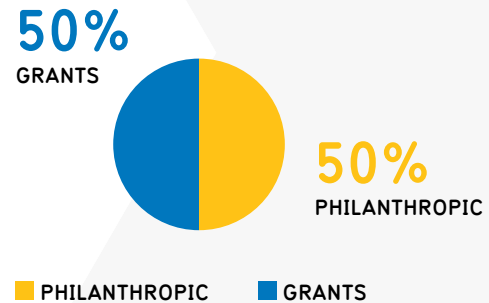
Notes: Operations expenses were lower than usual in 2021 for a number of reasons:

- > Part of the Director's salary was split between two research accounts.
- > A salaried position was reconceived and is pending. In the interim, support for P4A projects came from a Co-op student and researchers working on grant funded projects.
- > Travel expenses and conference fees were affected by COVID restrictions.

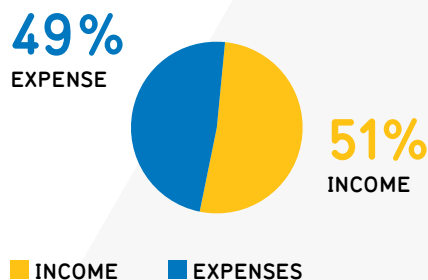
INCOME VS. EXPENSES



INCOME: PHILANTHROPY VS. GRANTS



GRANTS: INCOME VS. EXPENSES



Team and Leadership

ADVISORY COMMITTEE MEMBERS

P4A's work has been made possible by
our founding partners:



Farm Mutual Re
Collaborate. Empower. Succeed.

JEAN ANDREY

CHAIR / WATERLOO / ON

Dean, Faculty of Environment,
University of Waterloo

SHAWNA PEDDLE

GUELPH / ON

AVP, Citizenship
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EDMONTON / AB

Director, Resilience Strategy,
Alberta Environment and Parks

JASON THISTLETHWAITE

WATERLOO / ON

Assistant Professor
Faculty of Environment

Associate Director,
Partners for Action,
University of Waterloo

RESEARCH TEAM

EVALYNA BOGDAN – contract researcher, Inclusive Resilience

Evalyna is a Post-doctoral Associate at the University of Calgary, and co-developer of the **We're Ready! Community Disaster Preparedness workshop** and co-developer of the **Flood Resilience Challenge game**. Her research focuses on how diverse and competing priorities are navigated in policies and practices addressing socio-environmental problems, especially related to flood risk governance. In her research and stakeholder engagement approaches, Evalyna seeks to research and create innovative strategies to enhance societal disaster resilience.

LITON CHAKRABORTY – contract researcher, Inclusive Resilience

Liton graduated from the University of Waterloo with a Ph.D. in Geography and Environmental Management. He is a senior policy analyst in the Emergency Management and Programs Branch of Public Safety Canada. His research analyzes socioeconomic vulnerability, environmental and social inequities, and racial/ethnic disparities in exposure to natural hazards to identify and consider gender-based analysis plus (GBA+) factors in decisions supporting data-driven, evidence-based, and equitable disaster and emergency management policy.

SHAIREEE COTTAR – Effective Property Buyout Programs to Reduce Flood Risk in a Changing Climate

Shaieree is the co-ordinator for the Canadian Coastal Resilience Forum and a PhD candidate in the Department of Geography and Environmental Management at the University of Waterloo. Her research is on flood risk management and Canadian policies related to disaster risk reduction, climate change adaptation, managed retreat and resilience building against hazards. Shaieree has a breadth of experience working in academia and the public sector from working for the Ontario Public Service to Environmental NGOs in the Global South.

SHAWNA HAMILTON – Inclusive Resilience

Shawna Hamilton is a graduate student within the Department of Geography and Environmental Management at the University of Waterloo. Prior to beginning her graduate degree, Shawna completed a BSc in Brain and Cognition at the University of Guelph and contributed to research projects related to environmental philosophy. Shawna's Master's research explores the mental health risks of climate change, including the rise of 'ecoanxiety' and disaster-related impacts.

RACHEL KRUEGER – Inclusive Resilience

Rachel Krueger is a graduate student at the School of Environment, Enterprise and Development at the University of Waterloo. Her interest in community flood resilience began during a co-op job placement at the City of Mississauga's stormwater division as part of her undergraduate degree, and it has only grown since. Rachel's graduate research focuses on improving Canadians' flood risk awareness and action by drawing on behavioural science and risk communication.

MELISSA LE GEYT – Effective Property Buyout Programs to Reduce Flood Risk in a Changing Climate

Melissa is a MES student in the School of Planning at the University of Waterloo. Her research explores the policy and planning of managed retreat for risk reduction in Canada, in particular the flood-related property buyout program in Grand Forks, BC. Melissa's broad research interests include Nature-based Solutions, hazard risk reduction, climate change adaptation, and land use planning.

ELVIN MADAMBA – Just Green Cities

Elvin is a Master of Environment and Business candidate at the University of Waterloo and the ESG Research Lead at Competent Boards. Previously, he was a Project Manager at Mindoro Biodiversity Conservation Foundation Inc. in the Philippines. His key pursuits are in sustainability and business, corporate sustainability, sustainable development, and social/impact investment.

REGINALD ORANYE – Just Green Cities

Reginald is a Master of Climate Change (MCC) candidate at the University of Waterloo and holds a Master's degree in Public Policy from Walden University in the United States and another Master's degree in Environmental Management from Rivers State University in Nigeria. Previously, he was an Advisor with Civil Power Africa, a UNFCCC accredited international not-for-profit organization, through which he attended several United Nations climate change talks and conferences.

JONATHAN SERRAVALLE – Just Green Cities

Jonathan is a Master of Climate Change candidate at the University of Waterloo, interested in decarbonization and promoting sustainability in the private sector. He completed his undergraduate degree at the University of Toronto, with field concentrations in History, Political Science and Environmental Management. Jonathan has recently taken a position as ESG Research Analyst at Competent Boards.

LEAH WHITTAKER – Flood Risk Reduction – Property Buyouts

Leah graduated in 2021 with a Master's of Environmental Sciences in Sustainability Management at the School of Environment, Enterprise and Development. Her research focused on flood risk management and the development of policy for managed retreat programs in Canada. Leah now works as a policy analyst at Public Safety and continues her association with P4A on its Advisory Committee.

PARTNERS FOR ACTION

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For further information regarding this report, please contact:

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