

## **The Institute's Environmental Focus: A Backgrounder**

*By Jehaan Cooper (Bachelors in Environmental Studies) (3 year standing)*

*Environmental Studies Internship Course*

Research Intern, Institute of Island Studies

December 2024

### **Introduction**

The opportunity to take a position as a research intern at the Institute of Island Studies during the Fall semester of 2024 fell perfectly into place with both my academic and career aspirations. My work involved detailed analyses of the Institute of Island Studies publications relevant to the natural environment, active participation in the environmentally-themed Island Studies lectures, and writing this background paper, which synthesizes the Institute's activities in the production and sharing of environmental knowledge.

### **Institute of Island Studies**

The Institute of Island Studies at the University of Prince Edward Island has emerged as a leading research center focused on island sustainability. Its core mission centers on interdisciplinary research that integrates environmental, social, and economic perspectives. The Institute is distinguished by its commitment to community-based participatory research, knowledge translation, and public engagement. By emphasizing policy-relevant research and sustainable development in island contexts, the Institute bridges academic scholarship with practical environmental solutions<sup>1</sup>.

### **Past Environmental Focus**

The Institute of Island Studies has developed a multifaceted approach to environmental research, demonstrating remarkable depth in addressing island-specific ecological challenges<sup>1</sup>. The "One Island, One Source" groundwater review exemplifies the Institute's work to mobilize knowledge, in this case emerging from the "Island Water Futures Symposium"<sup>2</sup>.

The Institute's research extends beyond traditional environmental studies, integrating social, cultural, and economic perspectives unique to island ecosystems. Their "Sustainable Agriculture and the Island's Food System" symposium explores innovative agricultural approaches, emphasizing crop rotation, reduced tillage, and community-supported agriculture<sup>4</sup>. The "Heart of Mother Earth" study on marine resource management demonstrates the Institute's commitment to youth engagement and environmental stewardship. This research particularly focuses on community-led initiatives like beach clean-ups, sustainable fishing workshops, and educational programs that empower young people to address critical marine conservation challenges<sup>5</sup>. By highlighting the complex interactions between land use, water resources, and climate change, the Institute provides crucial insights for sustainable resource management<sup>3</sup>.

Coastal ecosystem management represents another critical domain of the Institute's environmental research. Drawing from the "Fostering Belonging, Inclusivity and Vitality on PEI" project, their approach goes beyond traditional environmental assessment to incorporate

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community resilience and social dynamics<sup>6</sup>. The research explores how environmental management intersects with social structures, examining issues of resource accessibility, environmental justice, and community engagement. By developing comprehensive frameworks that consider both ecological systems and human communities, the Institute provides innovative strategies for addressing complex environmental challenges. Their work highlights the importance of adaptive management, demonstrating how island communities can develop resilient approaches to environmental change that respect both natural systems and local cultural contexts<sup>7</sup>.

### **Insights from the Island Lecture Series**

#### **September 17: Academic Perspectives on Environmental Research with Dr. Eric Mijts (SISSTEM, University of Aruba)**

Dr. Eric Mijts' lecture from the University of Aruba was a profound exploration of the critical role academia plays in addressing contemporary environmental challenges. Dr. Mijts is the director of the University of Aruba Research center, co-founder and coordinator of the Sustainable Island Solutions through Science, Technology, Engineering and Mathematics (SISSTEM) project cluster and he is co-founder of the Academic Foundation Year. Far beyond a traditional academic presentation, the lecture delved into the transformative potential of interdisciplinary research in understanding and mitigating complex environmental issues specific to island contexts.

The presentation demonstrated the complex relationships that exist between academic research and the practical resolution of environmental issues. Dr. Mijts stated the importance of dismantling conventional disciplinary boundaries, stating that environmental problems necessitate comprehensive and integrated strategies. Utilizing examples from his extensive research in the Caribbean, he illustrated how academic institutions can function as vital links connecting scientific insights, community expertise, and the execution of policy.

One important takeaway was how crucial it is to have teamwork in research, involving experts from different areas like ecology, social science, economics, and policy-making. The lecture pushed back against the idea that academic research is just about theory, showing instead that it can actively respond to urgent environmental issues. Dr. Mijts provided interesting examples that showed how research can help shape sustainable development plans, especially in fragile island ecosystems<sup>8</sup>.

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### **October 22: Localized Narratives of Environmental Connection with Barbara Palmer Rousseau (MAIS student and author, UPEI)**

Barbara Palmer Rousseau's book launch was a deeply moving exploration of the intricate relationship between human experiences and environmental landscapes. As a Master of Arts in Island Studies student and author of *Finding Home at the Harbour*, Rousseau brought a unique perspective that blended personal narrative, academic research, and community storytelling.

The event was more than just a regular book launch; it turned into a strong example of how storytelling helps us grasp our links to the environment. Rousseau's work showed that both personal and community stories can reveal important truths about environmental issues that numbers and data might miss. She talked about "environmental identity," which is how our own experiences influence how we see and connect with nature.

Her research on Prince Edward Island showed how local stories can uncover important environmental relationships that scientists might miss. She highlighted how crucial it is to keep and understand local ecological knowledge, showing that personal experiences can help create better ways to manage the environment. Her presentation reminded everyone that understanding the environment isn't just about numbers and data; it's also about the connections between people, cultural traditions, and real-life experiences<sup>9</sup>.

### **November 19: Groundwater Sustainability Research with Dr. Michael van den Heuvel (Department of Biology, UPEI)**

Dr. Michael van den Heuvel's presentation on groundwater extraction research was a masterful exploration of one of Prince Edward Island's most critical environmental challenges. The lecture provided a comprehensive overview of the island's groundwater resources, revealing the complex scientific, environmental, and social considerations involved in water resource management.

The presentation provided valuable information about the difficulties in keeping water clean and sustainable. Dr. van den Heuvel discussed how farming methods affect groundwater, pointing out problems like nutrient runoff, pesticide contamination, and the tricky balance between growing crops and protecting the environment.

Changing temperatures due to climate change became a really important topic during the lecture, which considered how changes in rainfall and the environment impact the way groundwater is replenished. The research shared wasn't just about science; it was a strong message that we need to act now. Dr. van den Heuvel pointed out that we need to manage our water resources in smart and flexible ways. He stressed that combining scientific research with what communities know,

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farming methods, and policies is super important to effectively managing water resources amid climate change impacts<sup>10</sup>.

### **December 10: Lobster Fishery and Climate Adaptation with Marlene Chapman (Fisher and MAIS graduate)**

Marlene Chapman's innovative research explores the lobster fishery in Prince Edward Island, revealing how climate change, social dynamics, and economic sustainability are interconnected in this lively industry. Her findings are significant not just for highlighting a crucial aspect of the local economy, but also for recognizing the real individuals behind the numbers. The lobster fishery brings in about 2 billion dollars each year and supports the livelihoods of 82% of fish harvesters, making it an essential component of the community's structure.

Chapman discussed her research on Lobster Fishing Areas (LFAs) and emphasized how local fishermen adapt to the ongoing challenges caused by climate change. She recognized that these fishers are not just business owners; they are part of families, communities, and traditions that have a strong bond with the ocean. By conducting interviews with local fishers, she presented their stories, challenges, and hopes, blending personal experiences with detailed academic analysis. This approach adds a personal element to the complex world of lobster fishing, showing that each catch is linked to genuine experiences and difficulties.

Chapman's presentation spoke deeply to the lobster ecosystem, explaining the lifecycle of the species and how it is affected by climate changes. She took a close look at the federal government's role, especially the Department of Fisheries and Oceans (DFO), in trying to find a balance between conservation efforts and economic needs. This is a complex situation, and Chapman pointed out how social structures and the special idea of "islandness" influence the fishery's ability to adapt to environmental shifts.

By combining these aspects, she spoke not only about the ecosystem but also shed light on how communities function and the strong ties that fishers share with their surroundings. Chapman's research uncovered possible flaws in existing management approaches and sparked a discussion about how to enhance support for this crucial industry as it faces upcoming challenges.

Chapman's research goes beyond just being academic; it provides insight into the complex relationship between people and nature in the PEI lobster fishery. It encourages us to think about the human experiences that are hidden beneath the surface of this vital industry.<sup>11</sup>.

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### **Reflections on the Internship**

The internship at the Institute of Island Studies was an eye-opening experience that went well beyond regular classroom learning. By diving into innovative research and working across different fields, I learned a lot about tackling environmental issues through teamwork and a well-rounded perspective.

What stood out the most was seeing how scientific research connects with local knowledge, policy-making, and cultural insights. For anyone passionate about island studies, this internship is an amazing chance to build a deep and well-rounded understanding of environmental sustainability.

### **Conclusion**

The Institute of Island Studies showcases a unique way of looking at environmental research, showing that working together across different fields leads to sustainable solutions. By combining solid scientific methods with insights from the community, the Institute provides promising ideas and creative ways to tackle tough environmental issues. This internship has completely changed how I view environmental studies, highlighting the vital role of interconnected and flexible thinking.

### **References**

1. Institute of Island Studies. (2021). *Contributing to Public Policy on PEI: An Overview*.
2. Institute of Island Studies. (2014). *One Island, One Source: A Review of the Literature Concerning Prince Edward Island's Groundwater Resources*.
3. Institute of Island Studies. (2014). *Social and Cultural Values Mapping as a Decision-Support Tool for Climate Change Adaptation*.
4. Institute of Island Studies. (2016). *Sustainable Agriculture and the Island's Food System: A Public Symposium*.
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6. Institute of Island Studies. (2022). *Fostering Belonging, Inclusivity and Vitality on PEI*.
7. Institute of Island Studies. (2023). *Project Well Being: Quality of Life on Prince Edward Island*.

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8. Lecture Series Notes - Dr. Eric Mjits (September 17, 2024)
9. Lecture Series Notes - Barbara Palmer Rousseau (October 22, 2024)
10. Lecture Series Notes - Dr. Michael van den Heuvel (November 19, 2024)
11. Lecture Series Notes - Marlene Chapman (December 10, 2024)