

**Political Responses to Environmental Activism Tactics:**

A matrix analysis approach using case studies from the anti-pesticide movement in eastern Canada between 1960-2000

By

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## ABSTRACT

Despite scientific and social support, campaigns of the environmental movement often struggle to gain political traction. This research explores political responses to environmental activism using a matrix analysis approach that compares various activism tactics with six designations of potential political response in order to better understand the *relationship* between activism tactics and the polity, and to consider the relevance of Antonio Gramsci's Counter-Hegemonic theory within the environmental movement. Case studies are drawn from five campaigns within eastern Canada's anti-pesticide spraying movement between 1960-2000, largely collected from the archives of the Ecology Action Centre. Discussion of the case study results suggest that Gramsci's indicators of successful counter-hegemony do not appear to affect the overall likelihood of receiving a political response, but that some individual tactics or trends in tactical approach consistently appear more advantageous. A critical analysis of the method also reflects on the matrices' ability to synthesize information about complex and interconnected events, so that they can be displayed, understood, and compared visually, while also maintaining their complexity and narrative depth. This research provides an interdisciplinary analysis approach, applies activism theory to tactics and events as the intersection between polity and activism, and also adds to the understanding of environmental activism within the Canadian context.

Keywords:

*Activism, Antonio Gramsci, Canada anti-pesticide spraying movement, case study analysis, environmental movement, Hegemony, herbicide trials, matrix analysis, pesticides, spruce budworm*

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## 1. INTRODUCTION

### 1.1 Overview of the Problem

#### 1.1.1 *Slow political response to the environmental movement*

Social movements have always been at the root of societal progress, be it supporting the integration of new technology or advocating for new forms of cultural acceptance (Zinn, 2007). However, the new wave environmental movement struggles to gain political traction compared to the relative success of other modern social movements, in spite of emerging scientific and social support (Nordhaus & Shellenberger, 2004). In the wake of disastrous environmental damage around the world, from international scale issues like global climate change to local concerns like pesticide runoff affecting water supplies, non-government organizations and grassroots groups are often the leading advocates for immediate action and activism. Unfortunately, the political realm in North America seems slow to adapt to the pressure for change (Docherty & Marsden, 2013). Critics, academics, and everyday citizens (concerned or not) seem to cite lack of political will as a hindrance to progress on environmental issues (Smith, 2012). Much is to be learned from analyzing the arena where these players intersect.

The complexity and vast scope of the environmental movement contributes to its difficulty achieving systematic change, as its goals are less specific than other examples such as the Civil Rights movement or women's suffrage. Yet some sections of the environmental movement have been successful at reaching their goals and inspiring political action. For example, great strides have been made in reducing and regulating the use of toxic pesticides in Canada since the anti-spraying movement began in the 1960s,

sparked by the publication of Rachel Carson's book *Silent Spring* (Lutts, 1985). My research further analyzes campaigns of the anti-spraying movement within a forty-year time span to determine the influence of individual environmental activism tactics on the campaigns' political success.

### **1.1.2 Sustainability**

Human beings, like all species on Earth, are connected to the ecological systems that support them. Thus, social sustainability is inherently dependant on environmental sustainability. The term *sustainability* has many interpretations, but even when applied more narrowly to the environment, sustainability complexly encompasses physical, social, political, economic, cultural, geological and geographical concerns. For this reason environmental sustainability has been deemed a 'wicked problem' (Hulme, 2009), because no single solution can alone address its interdependent facets. Many environmental problems are the product of social injustices, thus environmental solutions are not only needed, but also social solutions that use an interdisciplinary approach. Crossover between disciplinary methods presents an opportunity to break with the traditional narrative understanding of events, create new frameworks for viewing complex problems, and collaborate on multidisciplinary solutions.

Political systems are often used to represent the vitality and success of social systems (Jenkins, 1995), and, as such, are symbolic of social sustainability. It then becomes integral to challenge and test political regimes to ensure they are responsive to civil society in addressing its social and environmental concerns. Political participation by civil society takes many forms, one of the most direct being activism (Shaw, 2001).

Using an interdisciplinary approach, my research intends to examine the political response to one of civil society's many environmental concerns, while addressing the consequent issues of environmental and social sustainability.

### **1.1.3 *Political Activism Theory***

Although there are competing theories used to describe political activism, such as modernization theories, institutional accounts, agency theories, and the Civic Voluntarism model, they focus specifically on broad social trends, political structures, mobilizing organizations, or social inequalities (Norris, 2002). These theories do little to explore the *relationship* between politics and activism and do not adequately recognize the space in which social movements and politics directly intersect, the *action* and *response*.

Social movement and revolution literature emphasizes how “economic, political, and demographic change alters class relations and state structures to produce revolutions” (Schock, 2013, p. 281). However, it neglects to link theory with practice and thus is mainly received by an academic audience (Schock, 2013). Civil resistance literature is most like my own study in that it focuses on the strategic logic of activism methods, specifically nonviolence, and observes why a series of specific actions may or may not be successful (Schock, 2013). It is useful in that it encourages comparisons between theory and practical application while considering the role of ideology and culture (Schock, 2013). This real life component allows it to be received by practitioners, policy-makers, and academics (Schock, 2013). However, civil resistance literature tends to focus on structural theories and mobilization, and does not often emphasize the political response.



I address this theoretical knowledge gap within the range of political activism and related theory by drawing on the historic theories of Antonio Gramsci on hegemonic and counter-hegemonic relationships between state and civil society to see if they remain relevant to today's activism. In doing so I will contribute to the growing body of civil resistance literature and make connections to social movement and revolution literature.

## **1.2 Purpose and Significance of the Study**

The purpose of this case study is to analyze the activism tactics used by communities, organizations, and individuals in order to determine their effectiveness at creating political change. In the research, environmental activism tactics are considered actions taken by non-government organizations/community groups/lobbyists/individuals, such as protests, boycotts, awareness campaigns, legal actions, and petitions that promote the health and protection of the natural environment. Using campaigns from the eastern Canadian anti-pesticide movement between 1960-2000 to isolate activism events, I provide examples of the environmental movement's struggle to gain political traction and successes at creating measurable change. Although the results of this research will not resonate with all incarnations of the environmental movement, by linking political responses with activism tactics, strategic lessons may be applied to today's advocacy for environmental sustainability. This research further provides a unique systematic categorization matrix for future analysis and is a contribution to the growing body of academic literature on sociopolitical relationships founded in environmentalism.

### 1.3 Research Question

There is a knowledge gap in existing literature and modern theory about the *relationship* between the state and social movements (Jenkins, 1995). What is the common political response to the environmental movement, or more specifically, to direct pressure and environmental activism? Do different activism tactics meet different political responses? How can activism be effectively used to encourage political progress on environmental issues? These problems must be explored in order to better understand the activist-polity relationship, the context in which the environmental movement is situated, and which activism characteristics have lead to tangible success. To better understand this, I begin by analyzing the different political responses to cases of environmental activism using activism tactics from five campaigns of the anti-pesticide spraying movement in eastern Canada between 1960-2000. With information from these cases I compare the real life outcomes to descriptions of counter-hegemonic change by philosopher and political theorist Antonio Gramsci.

### 1.4 Role of the Researcher

As a student of Environment, Sustainability and Society and Political Science, I am intrigued by the way my two fields of study overlap and interact. Thus, for my honours thesis it seemed only natural to further explore the relationship between politics and environmental sustainability. I am also motivated by my own experience as a young environmental activist to look at the effectiveness of different kinds of actions. However, I have limited this bias by selecting a movement from the past, in which I was not involved. I have encountered frustration and anger with Canadian national and local

politics, as well as moments where I am moved, satisfied, or even impressed. Moreover, the camaraderie and support of those passionately seeking social and environmental justice makes me optimistic that the effort is necessary, worthwhile, and almost always enjoyable. I know first hand that there are no simple formulae to ensure the success of an activist's cause, but will continue to pursue methods, within and outside of academia, to make activist strategies more understandable, accessible, and politically powerful. An exposure to Gramscian theories earlier in my studies has guided my choice for theoretical comparison, while my experience with activism goal setting and studies in political science have influenced my categorization of political responses.

## 2. LITERATURE REVIEW

This literature review begins by introducing and contextualizing Antonio Gramsci's Hegemonic and Counter-Hegemonic theories so they may later be compared to anti-pesticide movement case studies; it will then review bodies of literature contributing to the discussion of activism tactics that have helped shape my definition of activism and the categorization of the analysis matrix. This considers the development of prevalent theories in activism and civil resistance literature about organizational best practices and competing conclusions. In doing so the considerable lack of discussion within the literature about the *relationship* between politics and activism will become evident. The final section of the literature review provides background on the anti-pesticide movement by defining pesticides, providing an overview of their regulation in Canada, and illustrating its development within the growing grassroots environmental movement of the 1960s.

### 2.1 Antonio Gramsci's Hegemonic Theories

To fully understand if environmental activism engages politics in a counter-hegemonic relationship, one must be formally acquainted with the both the Hegemonic and Counter-Hegemonic theories of Antonio Gramsci and the circumstances in which his theories were developed. Gramsci was an Italian communist, writer, and political theorist in the time of Mussolini's fascist regime who observed history, the state of Italian politics, and the implications of power relations (Cox, 1983). The observations made in his work describe the balances of power between state and civil society, politics and ethics, and ideology and production, which lead to the construction of social norms and hegemonic

cultures (Cox, 1983). The concept of ‘hegemony’ portrays a social system in which the elites assert influence over the masses to pursue their own interests. However, the key element is that this control does not require force, but is achieved through general consensus, despite marginalizing the interests of civil society (Gramsci, 1999). Alan Hunt (1990) illustrates this clearly when he explains cultural hegemony as an active process wherein there is “spontaneous consent of the mass of the population to the general direction imposed on social life by the dominant fundamental group (historical bloc)” (Hunt, 1990, p. 311). The ‘historical bloc’ asserts ideological influence on government, which in return provides regulation and legal expectations, installing elite interests in powerful laws that govern the population.

The work of Robert Cox (1983) additionally implies that the current political system, despite being democratic in title, is a product of hegemony, and therefore works to emulate hegemony in all its systems. The media, education system, religious congregations, and other various institutions perpetuate hegemonic culture by establishing accepted norms and ideology (Cox, 1983). Consent is given by accepting these norms as the ‘*common sense*’, rather than pursuing ‘*good sense*’ based on social justice (Hunt, 1990). This reproduction of elite ideology throughout society creates a hegemonic culture identifiable using certain criteria. Evidence of hegemonic culture may include specific government policies, corporate pervasiveness, privatization, corrupt elections, or attempts to limit human rights, all of which diminish the pursuit of social justice.

Hegemony prevails within modern political system at undermining environmental justice, an expression of social justice. However, hegemony is not an unbreakable force.

Counter-hegemonic forces, the corresponding aspect of Gramscian theory, exist to challenge cultural hegemony and pursue greater social justice. I intend to explore if and how the environmental movement uses counter-hegemonic activism tactics to inject 'good sense' into civil society in attempts to replace current hegemonic structures.

Counter-hegemony, as described by Gramsci, requires that first focus must be transferred from 'corporate' to 'universal' interests, which occurs through strategic actions that change the understanding of common sense within society (Gramsci, 1999).

In his work Gramsci connects progressive social transformation with war tactics. He explains that approaches to counter-hegemony vary depending on the circumstances, occurring as either strategies of movement or position. Wars of movement can be described as reactionary attacks, but as the system is built to withstand this type of assault, results are short lived and often provoke retaliation (Gramsci, 1999).

Alternatively, wars of position attempt to engage civil society and enlighten it to differences between civility and the elite by injecting 'good sense' into the 'common sense' (Gramsci, 1999). Influencing the attitudes of society requires a great deal of strategy, time, coordination, and organization, but the effects are more significant because focus is on influencing the masses before the government (Gramsci, 1999). Wars of position are the proactive approach recommended by many modern activists like Randy Shaw, who says that "a political environment hostile to progressive change has succeeded in putting many social change activists on the defensive, and the need for proactive planning...has never been clearer" (Shaw, 1996, p. 5). Both counter-hegemonic strategies begin with individuals questioning their internalized ideology because an "emergent perspective has come as a result of their personal experiences" (Kebede, 2004,

p.86), and lead to groups of likeminded citizens seeking social justice. My research analysis assesses if the activism tactics used in the case studies are wars of movement or position, and compares the political responses of reactionary attacks to proactive organized strategies.

## 2.2 Activism Tactics

Throughout history, groups resisting oppression or injustice have turned to civil resistance to defend their interests using sustained, non-violent methods (Schock, 2013). Research on tactics of non-violent activism can be drawn from the civil resistance literature. This body of literature considers passive non-violence events that usually focus on individual action, such as boycotts and strikes. Proponents of this method include Leo Tolstoy, who believed in “non-participation in institutions based on violence” (Schock, 2013, p. 277). Alternatively, non-violent methods of non-cooperation, such as public protest, have also been supported by prominent voices. For example, civil disobedience advocate Henry David Thoreau believed in “the open violation of unjust laws or policies in a nonviolent manner on the grounds of conscience” (Schock, 2013, p. 277). Non-violent methods are often regarded as a tactical choice that can give activists moral high ground (Schock, 2013). One of the most widely recognized believers in non-violence, Mahatma Gandhi, developed his own approach to conflict, *satyagraha*, based on his understanding of historical campaigns of collective defiance, religious thought, and civil disobedience literature (Schock, 2013). He used this method of activism to great success and, with attention to strategy and tactics, was able to lead the people of India in massive civil disobedience and public protest (Schock, 2013).

One of the most significant scholars on non-violent resistance was Gene Sharp (Schock, 2013). In the 1950s Sharp began studying the dynamics of non-routine political actions influencing political change. He devised three categories of non-violent action: protest and persuasion, non-cooperation, and intervention (Schock, 2013). Sharp's theory of power also specifies that rulers depend upon compliance and consent from the ruled (Schock, 2013), interestingly similar to Gramsci's theories.

Alternatively, activism writer Randy Shaw (2001) divides activism between direct action events that "immediately confront a specific individual or organization with a set of specific demands" (Shaw, 2001, p. 16), and those that are designed to send a political message to the public. In describing his experiences in 'The Activist's Handbook', Shaw says, "it was the combination of direct action and ideological zeal, not direct action alone, that led to ACT UP's success" (Shaw, 2001, p. 219). He notes that identifying good targets and creating a well-informed campaign are as important as the use of direct action (Shaw, 2001). Despite variations in method, Shaw (2001) states that all social change activism should engage in proactive strategic and tactical planning to be considered successful activism regardless of the results they achieve.

Activism tactics considered in this research include: public protest, legal actions, petitions, letter writing campaigns, boycotts, awareness campaigns, sit-ins, strikes, and lobbying, although the later three did not appear in the cases. These tactics were common in strategy of environmental movement campaigns that arose in the 1960s and continue to this day; they are apparent in the era's anti-pesticide spraying campaigns, which makes it a fitting movement to draw on for my case study analysis.



### 2.3 Anti-Pesticide Spraying Movement

Pesticides are substance mixtures most commonly used to prevent ‘pests’, referring to unwanted insects, animals, plants, fungi, or microorganisms, from interfering with crops or other human activities by killing or adversely affecting them (U.S. Environmental Protection Agency, 2012). The term *pesticide* can refer to herbicides, insecticides, fungicides, and other agents used to rid unwanted pests, and their toxicity varies depending on the components (U.S. Environmental Protection Agency, 2012). Among concerns about the use of pesticides is that non-targeted swaths of the living environment may become collateral damage. Another significant concern is environmental resistance, as some target species have been shown to develop immunity to certain pesticides (Carson, 1962). Human health is the other significant concern because high or long-term exposure levels can be incredibly dangerous. Some pesticides are lethal in substantial doses, some are carcinogens, and others have been linked to serious illnesses, such as Parkinson’s disease (Carson, 1962). These issues are exacerbated by the fact that the very nature of insecticide and herbicide spraying allows over 95% of the pesticide to reach destinations beyond their target species, including other living organisms, air, water, and soil (Miller, 2004).

In Canada pesticide regulations are not environmental legislation, but are determined by Health Canada’s Pest Management Regulation Agency (Health Canada, 2006). The *Pest Control Products Act* dictates current federal regulation, which was originally passed in 1969, overhauled in 2002, and most recently amended in 2006. This Act has regulations referring to: registration, authorization, maximum residue limits, limitations and liability, mandatory reporting, grounds for cancellation, public

consultation, enforcement, offences and punishment (Health Canada, 2006). Provincial legislation is generally charged with regulation of holding and distribution (Health Canada, 2009), for example the *Pest Control Products (Nova Scotia) Act*. In addition, 171 Canadian municipalities in nearly all provinces, including all of Ontario and Quebec, benefit from restrictions on cosmetic pesticide use for public health reasons (Christie, 2010). Furthermore, both New Brunswick and Prince Edward Island have in recent years legislated bans on herbicide 2,4-D (Christie, 2010). These legislated restrictions and bans have largely appeared in the last decade as the result of the dedication and persistence of the anti-pesticide spraying movement that began in the 1960s. The movement has seen considerable success while scientific advancement and sustained public pressure continues to improve pesticides and their regulation.

In 1962 American scientist, researcher, and author Rachel Carson published *Silent Spring*. Despite the best efforts of powerful pesticide and chemical producers and corporations to disparage her work, the book was widely embraced by both academics and the general public, and concerned citizens began to speak up for environmental and human health (Lutts, 1985). *Silent Spring* uses accessible language to explain the different substances commonly used in pesticides at the time, such as the chemical DDT, their properties and impacts on the living organisms and the environment. The devastation to plants and wildlife, especially birds, and the potential threat to human life revealed in her book led to an eventual ban on DDT and sparked the anti-pesticide spraying movement. As historian and social activist Howard Zinn described, “Rachel Carson’s *The Sea Around Us* and *Silent Spring* led millions of people to think, for the

first time, about their natural environment and sparked not only national legislation but the beginning of a social movement” (Zinn, 2007, p. 238).

The anti-spraying movement was supported by a growing body of scientific research. However, without testing human subject, new results could not be recognized with certainty (Leeming, 2013). Still, the public remained weary about the implications of pesticides and communities began to confront the issue when it arose closer to home, making the anti-pesticide spraying activism a true grassroots movement. Activism writer Randy Shaw explains that, “most progressive activists are involved in struggles in the geographic area in which they live...[and] local grassroots groups increasingly represent the greatest prospect for achieving significant progressive change at the national level” (Shaw, 2001, p.3). For this reason my research will further analyze instances of anti-pesticide spraying activism, and through descriptions of each case the characteristics and essence of the anti-pesticide spraying movement will become clearer.

### 3. METHODOLOGY

#### 3.1 Research and Analysis Design

“An inspection of historical evidence encourages us to think in terms of *process*, reminding us that things were not always as they are now and suggesting, therefore, that this is also not how they always must be”

- Atchison & Palys, 2008, p. 227

This research is conducted using qualitative methodology in order to understand the context within which activism successfully harnesses political recognition and change. In order to analyze the relationship between specific activism tactics and political responses I review fifteen tactic case studies from five campaigns and create a visual matrix for systematic categorization and analysis.

Case studies are collected primarily from the Dalhousie University’s archived records of the Ecology Action Centre (EAC) in Halifax, Nova Scotia, a non-government organization involved in pivotal anti-spray campaigns. Existing academic literature about anti-pesticide spraying initiatives and legal documents supplement these resources to cover a longer timeline and add variety to the research. The range of sources incorporates multiple levels of activism organization, from individuals and community groups to more prevalent non-government organizations. Considering case studies from the past distances the researcher from the events to avoid the influence of current political situations (Atchison & Palys, 2008) and associations with environmental activism. Another advantage of my research design is that unobtrusive methods are non-reactive, showing that the results occurred because of the natural context and not because the case studies and political responses were going to be analyzed (Atchison & Palys, 2008). This creates awareness of factors like activist organizations’ presentation of events or the

public perception of politicians and how their actions may be altered for public consumption or edited for political correctness (Atchison & Palys, 2008). Comparing past events with clear endings also allows me patch together the relationship between a tactic and the political response based on the timeliness of interaction.

Data is displayed in a matrix set up as rows and columns of lists that present information systematically. This format can show analysis more effectively and efficiently than long descriptive texts, as patterns, themes, trends, differences, and comparisons can be made visually (Huberman, Miles, & Saldana, 2013). I have designed this research matrix to highlight campaign groupings, types of activism tactics, whether the case was a war of position or war of movement, and how these categories compare with the six categories of political response. These categories are colour coded so that groupings are easily identifiable, although the specific colours have no additional meaning. The list of possible political responses are also colour coded based on the fulfillment of the response category; either no response (X), a description of the response, or unknown based on the data available (?).

This matrix creates an opportunity the use interdisciplinary methods, rather than narrative methods usually associated with historical case studies in social science, by creating a dataset that captures the complexity of sustainability's 'wicked problems'. Existing civil resistance literature could benefit from this method to help bridge the gap between theory and real-life analysis, as I attempt to, while maintaining the practice of qualitative study.

The matrix does present potential for error or uncertainty in two significant ways. First, the quality of available data may impact the desired depth of result. Where this

occurs in my research I have continued to use the matrix design as intended, but noted the problems and considered how they add uncertainty to related conclusions. The second potential for inaccuracy exists in the matrix's ability to convey complex issues. As Huberman, Miles, and Saldana (2013) describe in their approach to designing matrix and network displays, "credible and trustworthy analysis requires, and is driven by, displays that are focused enough to permit a viewing of a full data set in the same location and are arranged systematically to answer the research question at hand" (Huberman et al., 2013, p.108). I use two matrices to answer my research question, the first to organize information so that the cases maintain their depth and complexity and the second to make comparisons between cases, but where the matrix is incomplete the analysis has increased uncertainty.

The first matrix (see figure 1) will separate the information into the following categories to make the information readily accessible: campaign, source, year, place, stakeholders, event description, tactic, additional factors, and if by Gramsci's standards it would be considered a war of movement or a war of position. The additional information category takes into account factors that could have contributed to or limited success of the case, interesting descriptive information, or quotes in an attempt to maintain complexity.

Campaign	Source	Year	Place	Stakeholders	Event Description	Tactic	War of Position or Movement	Additional Information
Anti-Spruce Budworm in NS	Ecology Action Centre, 1976	1976	Halifax, NS	EAC Concerned Citizens Environmental Groups	EAC began campaigning against pesticide spraying with newsletters about the issue and writing letters to the Minister of Environment.	Awareness Campaign  Call and Letter Writing Campaign	Position	Consideration of Injunction

Figure 1. Sample case study from Information Synthesis Matrix

Each case is further analyzed in a second matrix (figure 2.) that categorizes the political responses to each tactic, and displays them with their campaign and Gramscian distinction. The potential political responses include policy change, legal follow-up, leadership change, platform change, personal consultation, and public statement. The political response options are considered without preference in analyzing the success of a tactic, because the measure of success is the rate of political response not the quality or impact, which could not be measured using this method. Although a court case may be won, a law created, or a policy platform changed, the implementation and enforcement of those changes will further define the success of the activism and the broader environmental movement, which is beyond the scope of this research. This understanding of what tactics appear to be most successful in real life situations, based on the rate of the political responses, will then allow for theoretical comparison.

Campaign	Tactic	War of Position or Movement	Policy Change	Legal Follow-up	Leadership Change	Platform Change	Personal Consultation	Public Statement	Source
Anti-Spray Spruce Budworm in NS	<b>Awareness Campaign</b> <b>Call and Letter Writing Campaign</b>	Position	?	X	X	NS Government decides not to spray for Spruce Budworm	?	?	Globe & Mail, 1982

*Figure 2. Sample case study from Case Comparison Matrix*

The second method this research employs is a theoretical comparison. I assess the case studies for how fully they embody Antonio Gramsci's social change theory of Counter-Hegemony. Gramsci's Counter-Hegemonic theory is widely recognized, despite its age, as contributing to explanations of sociopolitical relationships and social movements (Cox, 1983). This theoretical comparison will explore if, as Gramsci would

suggest, actions that are proactive and include the largest amount of public participation attract the highest rate of political response. Political recognition serves as the impetus to create social change by altering power relations between the public, the polity, and the elite. In this research elite interests are represented by pesticide spraying companies and the forestry industry.

### **3.2 Limitations**

A limitation of the archival method for my case study that must be considered is whether the available data is necessarily the most important or complete data (Atchison & Palys, 2008). Limiting the selected cases to those from five campaigns means those included will likely be the most highly visible and easily accessible sources. As such, it becomes all the more important to consider the ‘context of production’ of my primary sources: meaning I must be aware of and reflect on what purpose the information was originally gathered for and the context in which the source was produced (Atchison & Palys, 2008), often highly politicized documents from anti-spray NGOs.



## 4. FINDINGS

### 4.1 Campaign Reviews

Cases of activism tactics are drawn from five significant campaigns of the Eastern Canada anti-pesticide spraying movement in order to categorize and analyze the political responses received. In order to contextualize these cases, which comprise the events or actions considered an ‘activism tactic’, the following campaign reviews will describe the campaigns to which they contributed. While the matrix attempts to isolate activism events for analytical purposes, it is important to understanding the relationship between actions as a campaign develops over time. While the literature and data both suggest that campaigns do not necessarily become more successful as they grow or develop, it remains important to recognize that the political response to an activism event, or lack thereof, can build momentum, quell further action, or have a neutral effect. Reviewing the campaigns, highlighting the timeline and the relationships between actions, will reflect their intricacy and interconnectedness while adding to the readability and understanding of the matrix. The analysis of cases and tactics will consider their rates of success, as determined by the frequency of political responses, and what the level of success indicates about Gramscian theory.

#### 4.1.1 *Campaign Against Spraying for Spruce Budworm in New Brunswick*

McLaughlin (2011) describes the series of events deemed ‘the Battle of the Budworm’ in his publication “Green Shoots: Aerial Insecticide Spraying and the Growth of Environmental Consciousness in New Brunswick, 1952-1973”. Spraying in New Brunswick forests to control the Spruce Budworm began in 1952. While outbreaks of

Spruce Budworm in eastern Canada historically occurred every 40-70 years, McLaughlin comments that the surging pulp and paper industry did not want to risk another loss in production after the Spruce Budworm epidemic of the 1940s and was eager take controlling the insect into its own hands. It is important to note Post World War II chemical pesticides represented a new era of chemical intelligence and an opportunity to protect the interests of the forestry industry (McLaughlin). Spraying programs used dichlorodiphenyl-trichloroethane (DDT) in a mixture of one-pound or a half-pound DDT per gallon of oil-water solution per acre (McLaughlin), which can be carcinogenic and lethal to wildlife, ecosystems, and human health (Carson, 1962 & Miller, 2004).

Wildlife conservationists from sport fishing and hunting groups were the first to express concern about the spray as it noticeably impacted the health of their game. The emerging field of ecology was also prompted research adverse effects of human disturbances like chemical pesticides. Later research confirmed that fish were killed either through direct contact with the poison or a result of eating poisoned insects. (McLaughlin, 2011)

The backlash reached its peak after the spray seeped or drifted, as is quite common, into water supplies for the Northwest Fish Hatchery in South Esk, killing almost one million young fish, costing the hatchery over a quarter of its stocks and anticipated profits (McLaughlin, 2011). Proponents from the government and forestry companies continued to deem spraying necessary for the health of the industry, which, as McLaughlin (2011) points out, was an important sector of the New Brunswick economy.

The passage of time and cumulative scientific evidence eventually changed political positions on the DDT issue, but McLaughlin's (2011) analysis reveals there was

considerable overlap between those in political power and those with vested interests in the spray program. Gramscian theory would interpret this as the elite having secured their interests within the polity, allowing them to maintain hegemony. The actions taken to counter elite authority on this issue were wars of movement because they tried to respond directly to the institutionalized elite power after the spraying programs were already taking place. Additionally, during much of the campaign McLaughlin (2011) describes a lack of scientific certainty or clear information, which is essential for convincing the public to reject the established 'common sense'. Based on this war of movement Gramsci would have correctly predicted that the campaign was not particularly successful at creating the desired social change.

The narrative approach of McLaughlin's (2011) research on the Spruce Budworm anti-spray campaign, although a thorough and complete description, did not provide substantial details on specific cases of activism and only noted protest tactics. As such it is difficult to clearly connect the tactic with the political responses. While eventual changes in political leadership and platform did occur, they cannot be directly linked to the specific case and thus are not considered a response in the matrix.

#### ***4.1.2 Campaign Against Spraying for Spruce Budworm in Nova Scotia***

The Spruce Budworm became an issue for the Nova Scotian forestry industry in the 1970s and the government began to consider controlling the Budworm with pesticide spray (Cape Breton Landowners Against the Spray [CBLAS], 1977). From my archival research it is clear that the campaign against spraying for the Spruce Budworm was led by the Ecology Action Centre (EAC), a newly formed NGO out of Halifax's Dalhousie

University, and the Cape Breton Landowners Against the Spray (CBLAS) community group. The CBLAS (1997) published a report titled “The Forest: Alternative to Spraying” based on research about pesticides to give academic credibility to their campaign, and used these resources in awareness campaigns targeted at other environmental groups and the general public. They also encouraged citizen participation through calling and letter writing campaigns to public officials (Ecology Action Centre [ECA], 1976). Their ongoing effort helped the campaign attain a temporary court injunction followed by an out of court settlement in 1980 against the aerial spraying of 2,4-D in Big Pond, Cape Breton (Herbicide Fund Society [HFS], 1983b & Globe and Mail, 1982). The campaign was not only successful in that the government decided not to spray, but also because the polity responded to each case of activism tactics.

This entire campaign represents what Gramsci would describe as a war of position because not only was the campaign proactive in preventing the spray before it was institutionalized in the government forest management policy, but it also heavily relied on tactics directed at mobilizing the masses to confront the polity with widespread and informed support. The CBLAS report is an example of the introduction of ‘good sense’ into civil society to replace the ‘common sense’ trust in industry and corporations.

Available data on the Nova Scotian Budworm anti-spray campaign provided fewer details on the political responses, but did confirm that the campaign was successful and that the political platform on pesticide spraying was changed.

#### ***4.1.3 Herbicide Trials Campaign***

The early 1980s campaign to prevent herbicide spraying in Cape Breton, often referred to as the 'Herbicide Trials' based on a documentary about it by the same name, remains one of the most publicized Canadian anti-spray campaigns. The first case of anti-spray activism found in the EAC archived sources was the combined effort of the EAC and the CBLAS, who delivered a petition against herbicide spraying with 2500 signatures to Minister of Environment Gregg Kerr on June 14, 1982 (Cape Breton Landowners Against the Spray [CBLAS], 1982). This war of position drew on the collective power of civil society to represent their interests to the polity instead of directly targeting the industry elites. The government responded by agreeing to change spray policy so that notice of upcoming sprays would be given via newspaper, but only after the permits had been issued (CBLAS, 1982 & HFS, 1983b).

Despite continued opposition, the Nova Scotia Department of Environment issued 2,4-D and 2,4,5-T aerial and ground spraying permits to three pulp and paper companies in June 21, 1982 (HFS, 1983b). According to documents from the CBLAS (1982), communities near permitted sites believed spraying would constitute a public health hazard and bad forestry practice. Chief Ryan Googoo of the Mi'kmaq Whycocomagh reservation threatened the pulp companies with non-violent direct action, and when no response was given a group of Mi'kmaq removed 1000 seedlings from conifer plantations on July 7 to protest spraying near their lands and water supply (HFS, 1983b).

This reactionary tactic was a direct attack on the elite, a war of movement, who by Gramsci's description are prepared to withstand this force, yet it received three types of political response. The political responses began with the Member of the Legislative

Assembly bringing the concerns of the band to the Provincial Cabinet (CBLAS, 1982). From this consultation a Royal Commission on Forestry was called to discuss the herbicide issue and the Minister of the Environment suspended the aerial spraying program (CBLAS, 1982 & Chronicle Herald, 1983a). However, political support of the spray remained high as aerial permits were directly converted to ground permits and political figures such as Minister of Lands and Forests George Henley continued to dispute concerns (CBLAS, 1982).

Notes from both the EAC (1983c) and CBLAS (1983) show the groups took advantage of the Royal Commission on Forestry by contributing briefs as part of an ongoing letter writing campaign. They also encouraged citizens to submit to the Royal Commission, and write to the media, local and provincial politician. As a result, community representatives were consulted at public hearings for the ongoing Royal Commission (EAC, 1983a). Based on the inclusion of the general public and the shared political goals of finding truth or 'good sense' within the herbicide debate, this tactic is considered a war of position.

After the August 4<sup>th</sup> newspaper announcement that spraying was to begin in eastern Nova Scotia and Cape Breton, eighteen plaintiffs from twelve sites obtained a temporary injunction on August 10, 1982. On August 31<sup>st</sup> Judge Burchell granted an interlocutory injunction while the plaintiffs brought forward a case seeking permanent ban on the use of 2,H-D and 2,4,5-T on eleven softwood plantations near their properties against Nova Scotia Forest Industries Ltd. (NSFI). Although NSFI appealed the injunction, the Supreme Court maintained the ruling and ordered the case to trial. Justice Nunn denied the plaintiffs request for a jury and the case was heard in Sydney, Nova Scotia, beginning

on May 8, 1983. The plaintiffs brought in international experts, but Justice Munn ruled against them to the order that herbicides are not harmful to human health and that the plaintiffs pay the legal fees of the company. The costs to plaintiffs' time and finances discouraged them from pursuing an appeal, but the NSFI did not seek additional damages. (HFS, 1983b)

Following the nationally significant court case, one political response was a statement made by Lands and Forests Minister George Henley who claimed the province's only mistake was not educating the public to get them on side with the spray (Chronicle Herald, 1983b). Legal action in this example is also considered a war of movement, as the relatively few plaintiffs directly confronted the NSFI company through legal channels in response to the permits already issued by the government. By the time civil society took action on the herbicide issue the government had already begun supporting elite interests, making it more difficult to change their 'common sense' rationale.

Poster advertisements from the EAC archives show that additional tactics were employed during the Herbicide Trials, such as the Anti-Spray Coalition Conference held to spread information about the legal case and pesticides, and to gain public support. This action hosted workshops and panels, raised funds to contribute to the substantial legal fees of the plaintiffs, and garnered significant media attention (Cape Breton Landowners Against the Spray [CBLAS], 1983), but no direct political response can be traced to this effort. This action is considered both a war of position, because it attempts to reach and mobilize the general public, and a war movement, because it was a reaction to the confrontation by the forestry industry already in play.

The Herbicide Trials campaign is one with very well documented events and responses because of the serious involvement of the EAC, whose archives were used to conduct this research, and because of the thorough documentation style of the legal system. It is also one of the densest campaigns; with five cases of events that each employed a different tactic. This richness of information allows the matrix to achieve its full potential in facilitating the analysis of events.

#### ***4.1.4 Nova Scotian Local Campaigns***

The series of local anti-pesticide efforts in Nova Scotia is consolidated into one Nova Scotian campaign not only because of the connectedness of the timelines, but also because they EAC archive documents would suggest they shared resources and networks. While the Herbicide Trials campaign received the most attention, the rise in publicity of pesticide issues engaged people across the province and encouraged them to take a stance in this contentious debate.

In some cases it was individuals, such as Wallace Tidd from Digby County, who filed an appeal with the local government against spraying permits issued to Bowater Mersey Paper Company Ltd. for his area (Gorham, n.d). He was supported by his community and with his appeal, delivered a petition signed by those opposing the spray (Gorham), which had grown from 2500 to 3000 signatories since the Herbicide Trials.

Although the petition represented a large portion of ‘good sense’ in civil society, that progress was largely built through the Herbicide Trial campaign. In addition, appealing the permits already issued by the government constitutes a confrontation with elite interests already established within the polity. As such, this case is considered a war



of movement. The newspaper article describing this case only provides a snapshot of the tactic used and has no reference to a response. However, articles of a similar time and location suggest that the political response to these events was contained in a statement by the NDP that they would investigate the pesticide issue further, but the directness of this link remains uncertain.

The community of Amherst, Nova Scotia demonstrated the only example of boycotting as an activism tactic. The Concerned Citizens of Cumberland County encouraged the public to boycott Scott Paper Company Ltd. in September 1983 (McCoag, 1983). They targeted not only Nova Scotians, but also other Maritime communities and even reached out to American connections in Maine and Vermont (McCoag). As representative Gail Fresia described in a Chronicle Herald piece about the boycott by McCoag (1983), though she thought their actions were gaining momentum she recognized they were unlikely to impact the company's profits. Although the campaign received media publicity, the data available does not show what political response, if any, was received for their efforts.

This activism case constitutes a war of movement because it is a direct attack on an elite establishment, Scott Paper Company Ltd, with immeasurable public support. As Gramsci describes, these establishments are designed to repel this type of attack, and although there was no available data to determine the political response it is clear that Scott did not suffer much damage, as it remains a well-established company today.

In 1983 the aforementioned local actions culminated in a protest at Province House. An EAC (1983b) press release illustrates the event, which brought together representatives from ten Nova Scotian anti-spray groups and many other concerned

citizens in Halifax. They delivered the results of a telephone poll showing 90% of responding Nova Scotian residents opposed the spray (Ecology Action Centre [EAC], 1983b).

In response to the protests representative from the ten groups met with officials from the Department of Health, the Department of Fisheries, NDP and Liberal members, as well as the Minister of Development (EAC, 1983a). While the Acting Premier Roland Thornhill confirmed issuing the spray permits was a mistake (Chronicle Herald, 1983b), no official policy changes directly took place and the permitted spray was not stopped. This protest can be interpreted as a war of movement because it was a reaction to the government issuing more spray permits to the forestry industry, which had a well-established hold on government policy. However, the event can also be a war of position because it brought the 'good sense' represented within the masses to the polity in an attempt to shift the government's relationship with industry.

After the end of the Herbicide Trials campaign the former Herbicide Fund Society, whose mission was to support those involved with the case and spread awareness, became the Coalition Against Pesticides (CAP) in order to continue their environmental awareness and advocacy work more broadly (Coalition Against Pesticides [CAP], 1984a). The CAP distributed pamphlets and posters, and facilitated letter-writing campaigns to public officials (Coalition Against Pesticides [CAP], 1984b). They prevailed with the latter efforts and members of the polity agreed to consult the group during a presentation to the House of Commons select committee on Fisheries and Forests in 1985 (Coalition Against Pesticides, n.d.).

In 1986 the *Pest Control Products (Nova Scotia) Act* was a significant regulatory response to the tumultuous pesticide debate. Guy LaBlanc put forward the Act, who had become Environment Minister in 1985 (Pest Control Product (NS) Act, 1986). However, this legislation is likely to have been an answer to the accumulation of pesticide concerns in Nova Scotia since the 1970s. The available data does not suggest any direct relation between the CAP action and this political response so it has not been included in the matrix. The CAP action represents a war of position because of the public awareness component and because its aims were a general continuation of advocacy that did not attack industry programs already being facilitated by the government.

The final example of a local Nova Scotian anti-pesticide campaign takes place in Scotsburn, Pictou County in 1993. Available data describes how a “fiery and successful” (Orton, 1993) demonstration was held by foresters, farmers, and landowners to protest spraying by the Pictou Forest Owners management group. The meeting included a contingent from the forestry industry as well as local media that wrote a follow-up editorial validating their concerns (Orton, 1993). Unfortunately, no reports on this case make reference to any political response, creating a gap in the matrix that makes it difficult to discern if the action was a war of movement or position. Although the media component and description of lively community involvement are indicators of wars of position, the opposition to an established Pictou Forestry Owners group suggests the management power was already spraying in the county. In this regard the case has been considered both types of Gramscian strategy. However, because of the lack of political response data, no response is credited to the case, and thus the interpretation for either strategy is not integral to the overall analysis.

#### **4.1.5 Hudson Pesticide Restriction By-law**

Documentation in 114957 Canada Ltée (Spraytech) v. Hudson (2001) provides a detailed description of Hudson's adoption of by-law 270 to limit the use of pesticides within the town's perimeter in 1991. The by-law was enacted in response to letters, comments, and concerns brought to the Town's Council repeatedly since 1985, and an additional petition with three hundred signatures (114957 Canada Ltée [Spraytech] v. Hudson, 2001). By-law 270 was brought in under Quebec's *Cities and Towns Act* (1998), section 410(1) that gives the municipality the right to "secure peace, order, good governance, health and general welfare in the territory of the municipality" (*Cities and Towns Act*, 1998) and section 412(32) that gives municipalities the power to "regulate or prohibit the use of combustible, explosive, corrosive, toxic, radioactive, or other minerals that are harmful to public health and safety" (*Cities and Towns Act*, 1998). By-law 270 limits the use of pesticides to specific locations and activities, essentially restricting those for non-essential or aesthetic purposes (*Spraytech v. Hudson*, 2001).

In 1992 the company Spraytech was charged for using pesticides in their lawncare and landscaping business, effectively breaking by-law 270. Spraytech's response was to bring a motion to declare the by-law in conflict with existing federal and provincial legislation and beyond the authority of the municipality before the Quebec Superior Court. All pesticides used by Spraytech were registered and approved by the federal *Pest Control Products Act* of 1969 and Quebec's 1985 *Pesticide Act*. As both of these pieces of legislation do not consider pesticides a 'toxic' substance, section 412(32) was ruled not to apply. However, section 410(1) protected the municipalities right to enact bylaws in the interest of the general welfare of the town, as the by-law was also deemed compatible

with provincial and federal legislation. The Superior Court thus denied Spraytech's motion, as well as their following appeal. (Spraytech v. Hudson, 2001)

Gramscian theory would consider this narrative to be a war of position, both because there is reference to a 300 person petition that suggests a wide ranging influence of 'good sense' within Hudson's general public, and because civil society was proactive in garnering political recognition for its cause. Once pesticide concerns had been recognized by and incorporated into the polity, the government and community shared the same understanding of 'good sense'. Attempts by spraying companies to re-assert elite influence failed because a counter-hegemonic system ensured that the local government's position was defending the peoples' interests by regulating the elite industrial interests. This example would suggest validity of Gramscian theory in that it the war of position approach successfully managed to see powerful political response in the form of regulatory policy and create counter-hegemonic change.

The available data on this campaign presented a very complete understanding of the case, due to the nature of legal documentation, which allowed for thorough analysis within the matrix and confidence when making direct connections and preliminary conclusions.

## 4.2 Information Synthesis Matrix

Campaign	Source	Year	Place	Stakeholders	Event Description	Tactic	War of Position or Movement	Additional Information
Anti-Spray for Spruce Budworm in NB	McLaughlin, 2011	1952-1969	New Brunswick	Richard Hatfield (Progressive Conservative Provincial government leader 70-74)  Conservation Council of NB (CCNB) est. 1969	Concern arose from sportsmen organizations about the Atlantic salmon populations, who began to protest the spray. Ecological science community brought concerns to the public in the late 1950s early 1960s, but this was countered by government assurance that spraying was necessary for the forestry industry and economy. People generally accepted this.	Protest	Movement	The spray program began in early 1952, initiated by the NB government and pulp and paper companies  NB International Paper Company NBIP based out of Dal was the first to spray crown land  “One of the largest and longest sustained aerial insecticide spraying programs in the world” – McLaughlin, 2011, p. 4  Scientists associated with Fisheries Research Board of Canada and UNB encouraged environmental awareness and was an important factor in establishing of the CCNB
Anti-Spruce Budworm in NS	Ecology Action Centre, 1976	1976	Halifax, NS	EAC  Concerned Citizens  Environmental Groups	EAC began campaigning against pesticide spraying with newsletters about the issue and writing letters to the Minister of Environment.	Awareness Campaign  Call and Letter Writing Campaign	Position	Consideration of Injunction
Anti-Spruce Budworm in NS	Cape Breton Landowners Against the Spray (n.d.)	1976	Cape Breton, NS	Cape Breton Landowners Against the Spray (CBLAS)	CBLAS distributed a poster encouraging awareness about spraying and increased citizen involvement, which directs people to write letters to provincial officials.	Awareness Campaign  Letter Writing Campaign	Position	
Anti-Spruce Budworm in NS	Cape Breton Landowners Against the Spray, 1977	1977 - 1980	Big Pond, Cape Breton, NS	CBLAS	The CBLAS published and distributed a report called “The Forest: Alternatives to Spraying”, and began a “Citizens Public Information Programme” with Free telephone hotline. The CBLAS also applied for a temporary court injunction against 2,4-D aerial spray in Big Pond, CB.	Awareness Campaign  Legal Action	Position	“ We strongly feel that spraying is no solution to the problem facing our forests” - CBLAS, 1977, p.13  “[Environmental groups] successful campaign in the mid 1970s to prevent insecticide spraying for spruce budworm infestation” - Globe & Mail, 1982
Herbicide Trials	Cape Breton Landowners Against the Spray, 1982	1982	Halifax, NS	EAC  CBLAS  Minister of Environment	Groups delivered anti-herbicide petition with 2500 signatures from around the province to Minister of Environment Greg Kerr on June 14, 1982.	Petition	Position	Preparations were also made for a letter writing campaign and mass public protest Forest Practices Improvement Board Chairman Hugh Fair was fired – which he wasn't.

## Information Synthesis Matrix continued (2)

Herbicide Trials	Globe & Mail, 1982  The Herbicide Fund Society, 1983	June-December 1982	Cape Breton, NS	Landowners  Dept. of Environment  Nova Scotia Forest Industries Ltd.  NS Supreme Court	The province's Department of Environment granted permits for the areal spray of the herbicide in June. Community concerns were ignored by Government until Mi'kmaq from the Whycocomagh reservation in Cape Breton removed conifer plantation seedlings to be sprayed near their lands and water supply on July 7, 1982. Chief Ryan Googoo had threatened this non-violent disruptive action to no avail first.	<b>Protest</b>	Movement	Landowners nearby and concerned community members believed that spraying would constitute a public health hazard and bad forestry practice  First court case in Canada questioning the use of herbicide sprays
Herbicide Trials	The Herbicide Fund Society, 1983	August 10, 1982  Court Case March-May 1983	Spraying in Point Tupper, Cape Breton  Court Case in Sydney, NS	Landowners/Plaintiffs  NS Forestry Industries Ltd. – sub company of Swedish based Stora Forest Industries	15 Landowners went to court seeking a permanent ban on the use of 2,H-D and 2,4,5-T on eleven softwood plantations near their properties owned by the NSFI	<b>Legal Action</b>	Movement	Ruling was herbicides not harmful to human health. Landowners to pay court costs of company. Plaintiffs unable to pursue appeal but company doesn't seek damages
Herbicide Trials	Cape Breton Landowners Against the Spray, 1983  The Herbicide Fund Society, 1983a	1983	Lord Nelson, Halifax, NS	CBLAS  Plaintiffs in Herbicide Trial  Herbicide Fund Society: Public Relations Committee  General Public	The Anti-Spray Coalition Conference was held to gain public support and disseminate information. There were workshops and panels, and money was fundraised to contribute to the substantial legal fees of the Plaintiffs.	<b>Awareness Campaign</b>	Movement and Position	Groups were successful in gaining public attention and raising money
Herbicide Trials	Ecology Action Centre, 1983c	1893	N.A	CBLAS  Royal Commission on Forestry	Groups encourage people to write briefs for the NS Royal Commission on Forestry and to continue letter writing to local officials.	<b>Letter Writing Campaign</b>	Position	CBLAS also requests letters to the editor and money for court case
NS Local Campaign	Ecology Action Centre, 1983b	1983	Halifax, NS	NS Citizens  Representatives of 10+ anti-spray groups	Citizens and environmental groups protested at Province House and delivered results of a poll saying 90% of Nova Scotians oppose pesticide spraying.	<b>Protest</b>	Position and Movement	Culmination of some local campaigns considered below
NS Local Campaign	Gorham, n.d.	1983 - implied by content	Corberrie, Digby County, NS	Individual citizen  Bowater Mersey Paper Company Ltd.	Local resident Wallace Tidd filed an appeal with the local government against spraying permits issued to Bowater Mersey Paper Company Ltd. A petition with 3000 + signatures was presented in support.	<b>Petition</b>	Movement	Would likely have representatives at Province House Protest
NS Local Campaign	McCoag, 1983	Sept 1983	Amherst, Cumberland County, NS	Scott Paper Company Ltd.  Concerned Citizens of Cumberland County	Concerned Citizens of Cumberland County began a boycott of Scott Paper Company Ltd. and encouraged other Maritime communities to join them.	<b>Boycott</b>	Movement	CCC would likely have representatives at Province House Protest

## Information Synthesis Matrix continued (3)

NS Local Campaign	Coalition Against Pesticides, 1984a & 1984b	1984	Gabarus, NS	Formerly the Herbicide Fund Society, now Coalition Against Pesticides (CAP)	Distributed pamphlets to the public and encourage a letter writing.	<b>Awareness Campaign</b>  <b>Letters Writing Campaign</b>	Position	
NS Local Campaign	Orton, D. 1993	1993	Scotsburn, Pictou County, NS	Pictou Forest Owners management group  Local foresters, farmers, and land owners	A demonstration was held to protest forest spraying and the Pictou Forest Owners management group. The successful public meeting had over 100 people in attendance. Prior to the meeting the community had been trying to disseminate information about pesticides.	<b>Protest</b>  <b>Awareness Campaign</b>	Position and Movement	“Any pesticide information made available to the public is promotional, company-generated, and normally <i>only concerns the active ingredient</i> ” - Orton  A local newspaper did an editorial piece after the protests validating their concerns raised.
Hudson Pesticide Restriction By-law	114957 Canada Ltée Spraytech, Société d'arrosage) v. Hudson (Town), 2001	1985-1992	Hudson, Quebec	Spraytech Company  Town of Hudson municipal government  Community Members	In 1991 the municipal government created by-law 270 in response to community concerns including, 300 + person petition and letters to councilors, evidence of which appears in the council meeting minutes. Spraytech was charged for breaking the by-law in 1992. Spraytech took the by-law to the Superior court. Superior Court ruled in favour of the Town of Hudson, that the by-law does not conflict with federal or provincial policy, was enacted in the public interest and was a legitimate use of power in response to health concerns expressed by residents. By-law 270 used the precautionary principle and did not restrict all pesticide use. Spraytech also lost the its appeal.	<b>Petition</b>  <b>Letter Writing Campaign</b>	Position	“ A tradition of strong local government has become an important part of the Canadian democratic experience. This level of government usually appears more attuned to the immediate needs and concerns of the citizens” – Spraytech v. Hudson, 2001, par 49  “The context of this appeal includes the realization that our common future, that of every Canadian community, depends on a healthy environment” - Spraytech v. Hudson, 2001, par 1.



## 4.3 Case Comparison Matrix

Campaign	Tactic	War of Position or Movement	Policy Change	Legal Follow-up	Leadership Change	Platform Change	Personal Consultation	Public Statement	Source
Anti-Spray for Spruce Budworm in NB	Protest	Movement	X	X	Leadership change occurred but not as a result of action	Platforms eventually changed as a result of time and research, not because of protest	?	Statements supporting the necessity of spraying	McLaughlin, 2011
Anti-Spray Spruce Budworm in NS	Awareness Campaign Call and Letter Writing Campaign	Position	?	X	X	NS Government decides not to spray for Spruce Budworm	?	?	Globe & Mail, 1982
Anti-Spray Spruce Budworm in NS	Awareness Campaign Letter Writing Campaign	Position	?	X	X	NS Government decides not to spray for Spruce Budworm	?	?	Globe & Mail, 1982
Anti-Spray Spruce Budworm in NS	Awareness Campaign Legal Action	Position	X	Temporary Court Injunction and out of court settlement in 1980	X	X	?	?	Herbicide Fund Society, 1983
Herbicide Trials	Petition	Position	Government agrees to give notice before spraying, but after permit is issued	X	X	X	X	?	Cape Breton Landowners Against the Spray (CBLAS), 1982
Herbicide Trials	Protest	M	X	X	X	Minister of Environment Gregg Kerr suspends aerial spray program, but permits are secretively transitioned to ground spray program	Member of Legislative Assembly for Band takes concerns to provincial Cabinet	Herbicide question is referred to new Royal Commission on Forestry  Minister of Lands and Forests George Henley disputes concerns and says herbicides are safe	CBLAS, 1982  Chronicle Herald, 1983a

## Case Comparison Matrix continued

Herbicide Trials	<b>Legal Action</b>	Movement	X	Mr. Justice Burchell grants interlocutory injunction during the trial  Is appealed by N.S.F.I, but is not overturned by Supreme Court  Internationally recognized expert witnesses called in court in case with national significance	X	X	X	Not directly after case, but in August 1983 the Provincial department of Lands and Forests claims “biggest mistake” was not educating the public about herbicide spraying (George Henley)	Ecology Action Centre, 1983a  Chronicle Herald, 1983b
Herbicide Trials	<b>Awareness Campaign</b>	Movement and Position	X	X	X	X	X	X	
Herbicide Trials	<b>Letter Writing Campaign</b>	Position	X	X	X	X	Public Hearings and spray site visits by Commission members	X	Chronicle Herald 1983a
NS Local Campaign	<b>Protest</b>	Position and Movement	X	X	X	?	Meeting with government officials and representatives, except Minister of the Environment	Apology from Minister for misallocation of permits, but spray was already being conducted	Chronicle Herald, 1983b  Ecology Action Centre, 1983a
NS Local Campaign	<b>Petition</b>	Movement	X	?	X	X	X	NDP says they will investigate the pesticide issue further	Chronicle Herald 1983c
NS Local Campaign	<b>Boycott</b>	Movement	X	X	X	X	X	?	
NS Local Campaign	<b>Awareness Campaign</b>  <b>Letters Writing Campaign</b>	Position	?	N	?	?	Presentation to the House of Commons select committee on Fisheries and Forests (1985)	?	Coalition Against Pesticides n.d
NS Local Campaign	<b>Protest</b>  <b>Awareness Campaign</b>	Position and Movement	?	?	?	?	?	?	
Hudson Pesticide Restriction By-law	<b>Petition</b>  <b>Letter Writing Campaign</b>	Position	Implementation of by-law 270	Won against appeal by Spraytech	X	Local government responded to community concerns	?	Statement by local government	114957 Canada Ltée (Spraytech, Société d’arrosage) v. Hudson (Town), 2001

## 5. ANALYSIS & DISCUSSION

### 5.1 Gramscian Analysis

Visual groupings within the matrix identify cases for comparison and allow preliminary conclusions to be drawn with varying degrees of certainty. Of the fifteen cases drawn from five anti-pesticide campaigns, seven cases are straightforward examples of wars of position and five wars of movement, with three cases that represented aspects of both or were indiscernible based on available data. The examples that use both position and movement have relatively low impact on the overall study because only one received any form of political response. Where dual categorization occurs the case is counted in calculations for both Gramscian strategies.

Wars of position received twelve examples of political response, whereas wars of movement received nine. Because wars of position appear ten times throughout all campaigns, it means there were 60 opportunities for political response based on the six categories. The twelve political responses received by wars of position tactics equate to a 20% success rate of response. Alternatively, the seven wars of movement provide 42 opportunities for political response, with a 21% response rate. This basic observation would suggest that Gramsci's theory of Counter-Hegemony and strategic recommendations are not a pivotal factor in the success of activism tactics. This calculation also highlights the relatively low response rate given to both types of action, as only four cases linked to multiple categories of response. Further study would be required to add certainty to these observations, and may consider that some cases saw more than one response in the same category, which in my observations was calculated as completing one category of response.

## 5.2 Highly Successful Cases

The case with the most successful rate of political response, as determined by the number of categories of response to be filled and not the results or ramifications of responses, was the Town of Hudson's anti-pesticide spray by-law 270. The Hudson case used positional tactics like a petition and letter writing campaigns to represent concerns of the masses to the local government. The four categories of response filled were public statements, platform change within the local government that led to policy creation. The legal follow-up that ensued Spraytech's appeal is considered an additional response because the legal stance of the government was a reaction to the initial use of activism tactics. If we are to look deeper at the quality or success of the political response, the war of position taken by the Hudson community is considered extremely successful in that their interpretation of 'good sense' was legally recognized and in the end the community successfully achieved their campaign goals. By this regard Gramscian theory appears relevant, however, in general, wars of position were not more likely to receive more responses.

The second most successful case was the Herbicide Trials' protest tactic, where Mi'kmaq peoples uprooted seedlings on plantations of the Nova Scotia Forestry Industries Ltd. This confrontational tactic was a war of movement that directly attacked the elite establishment and did relatively little to spread or demonstrate 'good sense' within the masses. As Gramsci would predict, this action sparked elite retaliation, but it also saw three types of political response: statements for and against the campaign, consultation on multiple political levels, and a temporary platform change that suspended the aerial spray. The temporary success of this case did not carry through the rest of the

campaign as the final result was a legal loss with great personal and financial costs, and continued spraying in Cape Breton. Without determining quality of response, this shows the diversity in successful cases and reinforces the idea that Gramsci's distinction between wars of position and wars of movement are unlikely to affect the rate of political response.

### **5.3 Success of Tactics**

Some tactics received a response in every instance, including letter writing campaigns, legal actions, and petitions. On the opposite end of the spectrum the boycott case had no response, although some uncertainty exists in the quality of the data. Gramsci would support this evidence because the nature of boycotts is to directly attack the institutions of the elite, and while they have been successful in other historic cases, boycotts underutilize the power of the polity to constrain the elite by removing them from the equation. It should also be noted that awareness campaigns and protests were also used in cases that received no political response.

Of those that did receive a political response, the rate of successful response can be calculated by considering how often a response occurred out of the potential opportunities for response. For example, the four cases that used protest tactics had twenty-four political response opportunities, of which 6 were filled. This equates to a 25% successful response rate. Replicating this process for the other tactics, we find success rates of ~ 27% for letter writing campaigns, 25% for legal action, 11% for awareness campaigns, 33% for petitions, and 0% for boycotts. Similar to the boycott, there is also an increased degree of uncertainty for calculations of awareness campaigns

and protests because a lack of response data created gaps in the matrix. These findings indicate that petitions, followed by letter writing campaigns, protests, and legal actions, respectively, are the tactics with the highest rate of political response. Although information about the relative success of tactics is valuable, it is important to also note that all response rates are considerably low, most often hovering around 25%.

Not only did awareness campaigns receive a relatively low response rate, but in cases where a response was received, the awareness campaign was used in combination with another tactic. Although initial interpretation would counter Gramsci's theory that the 'good sense' injected into civil society from awareness campaigns is a key factor in counter-hegemonic change, these findings may also reflect that awareness alone is not enough, it must lead to action. This sentiment is recognized by the other qualities associated with war of position, such as proactivity. That cases simultaneously employing more than one tactic garnered an increased response rate is also relevant. Every case where more than one tactic was employed, with the exception of inconclusive data from the local NS campaign events in Pictou County, there was some form of response.

Overall this analysis is a comparison of each tactic's success, an examination of quality of available data and its impacts, as well as a discussion of the relevance of Gramscian theory. Further analysis of the matrix method will more deeply discuss the causes that yield ambiguous results and reflect on why, despite the uncertainty, designing a visual matrix remains a valuable research approach.

#### 5.4 Critical Analysis of Method

The challenge of creating a matrix to organize complex events so they may be understood and compared visually also merits reflection. Matrices which isolate activism tactics within campaigns were in many ways successful at balancing depth of detail with simplicity of form to maintain a robust and capable organizational system. However, there is room for improvement and a need for further research and experimentation. A matrix with the ability to form a complete dataset would lessen the uncertainty of my preliminary calculations and findings and could also support quantitative statistical analysis.

Although the design of the matrix is flexible, the most common limiting factors in this research can be associated with the type of usable data. Of first note is that the archival data often lacked complete cases, creating empty or inconclusive sections of the matrix. Although the narratives of campaigns were readily available, detailed accounts beyond the specific action were not always chronicled within the archives. In some cases matching responses to actions was possible by connecting their timelines, but combining separate documents to piece together a case at times represents a subjective interpretation of the data. In some cases the response was not available at all, and even scanning for alternative data did not provide suitable results to complete the matrix.

Another issue within the data was the affect of temporal scale. The matrix attempts to capture and analyze specific events within a campaign, but in some cases the campaign had to be considered in full. In this scenario, uncertainty arises from drawing conclusions from data without comparable timelines. Some campaigns, such as New Brunswick's campaign against spraying for the Spruce Budworm, had long timelines but could only be

analyzed as a single case, because of the quality of the data. Alternatively, some campaigns, such as the Herbicide Trials that spanned two years, had short timelines but many examples of tactics that could be categorized and compared as separate cases. It is difficult to say what impact this variation had on the analysis, other than to note that the ability to divide campaigns into more events was usually based on more thorough data. Frequency of cases within a contained time period also influenced the certainty of the relationship between tactic and response. Using campaigns or events with comparable temporal scales would be an interesting step for further study; however, this discrepancy did not appear to shape the success of the cases.

A final critique of using archived material is the inherent political bias within the sources available. Archived sources from the Ecology Action Centre and supplemental sources included many types of documentation (media, correspondence, reports, minutes, posters, etc.) that present narrative description and detail specific cases to give body to the context of campaigns. However, these documents are innately political because of the political nature of the collector, encompassing political language and views of only one side. The politicization of activism narratives exists in the work of the government, elite, and activist, and researchers must be aware of its implications. While narrative qualitative analysis uses description to address these biases, the organizational matrix works to depoliticize the data through categorization of facts and events. While this method creates potential error in its simplification, it also lays the groundwork for transitioning data to be understood and analyzed both qualitatively and quantitatively.

In order to gain a better understanding of the functionality of the matrix it was important to test the method using all cases, despite gaps in the data. However, the matrix



method could be modified to make results more conclusive. One possible adaptation I considered was focusing on a single campaign with complete and detailed data like the Herbicide Trails. This would have unified the scope and allowed for the cases to be well compared within the campaign. Momentum building throughout the campaign process, as well as increased interdependence between activism events, would then require greater consideration. This approach was not as suitable for my research because exploring only one campaign does not provide the same variety of tactics for comparison, and would change the goals of the research. Another modification that would increase certainty in the findings would be to use only cases whose data could complete the matrix, but this too presents some issues. Not only would it eliminate some cases of important tactics, but it would be a situation of manipulating data fit the matrix design, rather than designing around the data. Although the matrix may function better with more similar data, instead of comparing dissimilar campaigns and cases, I am confident in the choices made to represent the data honestly and fully.

Recognizing the inconsistency within the available data used to calculate preliminary findings means that the conclusions drawn about Gramscian theory and an individual tactic's rate of success can only be made with some degree of uncertainty. Rather than discrediting the research however, I believe this has been a successful first application of method that has made clear the areas of necessary improvement. The content of the matrix retains the essence of the anti-pesticide spraying movement and has led to valuable insight about using systematic categorization to analyze complex issues.

## 6. CONCLUSIONS

The environmental movement encompasses a range of campaigns that use a variety of activism tactics to promote its causes and fight for change. Often this change is consolidated through political bodies, or as Gramsci's Counter-Hegemonic theory would suggest, the direction of the polity is reversed as political bodies respond to the masses and govern the elite. As such, the rate of political response to activism tactics is a good measure of a campaign's success. Analysis of these tactics historically takes narrative form, which makes it difficult to concisely compare the effectiveness of each tactic. This research has created a matrix to effectively organize and compare the narrative data available on case studies of environmental activism, drawing on campaigns' tactics from the anti-pesticide spraying movement in eastern Canada. It further considered the relevance of Gramscian theory based on these real life instances; demonstrating that classification as a war of position or movement does not appear to affect the overall likelihood of receiving political response.

Not only did both wars of position and movement receive close to the same political response rate, 20% and 21% respectively, the two cases with the most fulfilled political response categories represent both of the Gramsci's strategies. While the town of Hudson's implementation of anti-pesticide spray by-law 270 used war of position-like strategies to successfully instill 'good sense' within their local polity, the war of movement by Mi'kmaq protesters of the Herbicide Trials campaign that directly confronted an elite organization also saw significant political responses and temporary achievement of their overall goals. Although Gramsci's distinction between wars of position and wars of movement appear unlikely to have affected the rates of political

response, using Counter-Hegemonic theory remains a good framework for analyzing the strengths and weaknesses of each case's tactical strategy. It may also contribute to the rationale for why a campaign may have succeeded in rousing a political response or why actions against elite institutions of hegemonic systems fail.

The comparative analysis of specific tactics shows that petitions, letter writing campaigns, protests, and legal actions, respectively, were the most successful at receiving political responses. Deconstructing the lesser success of other tactics with Gramscian theory might predict that boycotts are less successful because their intention is to directly assault the elite institution rather than mobilizing civil society to influence the polity. While awareness campaigns' injection of 'good sense' into civil society is important, Gramsci would argue that this is a first step in creating counter-hegemony and that further action is required. In this regard it is important to recognize that, based on cases with adequate available data, some form of political response was granted to every case that simultaneously employed more than one tactic.

The matrices used to conduct this analysis provide a unique, visual organizational system that allowed for efficient preliminary calculations and clear findings while maintaining the depth of complex cases. Using archived data led to some weakness within the matrices' analysis because some sources were incomplete, had unmatched temporal scales, or relied heavily on narrative description, which reduces the certainty of the findings. Of additional consideration is the inherent political bias within the available sources, which the matrices attempt remove through categorization and elimination of subjective narrative descriptors. The flexibility of matrix design allows for potential adaptations to the method in order to address these issues. Additional research could alter

the scope of the environmental issue, response categories, timescale, level of government, and types of activist organizations involved. However, staying true to the intended method despite incompleteness in the available data has helped to understand the functionality of the matrix and reveal areas for potential improvement. Recreating the matrix using different categories would also serve as an interesting comparison to this study. Although the findings from this application have some degree of uncertainty, a robust dataset examined with this method may one day be able to produce significant research on different activism tactics while simultaneously maintaining the depth and detail of these complex situations.

This research draws out problems within the separation of academic disciplines wherein there is little crossover between approaches, while also testing the applicability of acclaimed historic political theory in the twentieth century. Bringing a new design of analysis method to the field of political activism study, which often uses narrative or historical description, creates an opportunity to try interdisciplinary approaches within qualitative social science research on society's 'wicked problems' like sustainability. This research presents valuable information to the growing field of sustainability in its analysis of environmental activism tactics' success, and additionally contributes to political science's understanding of the role of activism and the importance of the relationship between action and political response.

Using this type of categorical analysis is an important step for understanding the relationship between activism and politics, which may help evolve activism strategies that succeed at fostering political action on environmental issues.

## 7. RESOURCES

### Works Cited

- Atchison, C. & Palys, T. (2008). *Research Decisions: Quantitative and Qualitative Perspectives, Fourth Edition*. Vancouver: Nelson Education
- Carson, R. (1962). *Silent Spring*. New York: First Mariner Books
- Christie, M. (2010). Private Property Pesticide By-laws In Canada, Population statistics by municipality. <http://www.flora.org/healthyottawa/BylawList.pdf>
- Cox, R. (1983). Gramsci, Hegemony and International Relations: an essay in method. *Millennium - A Journal of International Studies*. 12(2), 162-175.
- Docherty, I. & Marsden, G. (2013). Insights on disruptions as opportunities for transport policy change. *Transportation Research Part A: Policy and Practice*, 51, 46-55
- Gramsci, A. (1999). *Selections from the Prison Notebooks 'The State and Civil Society'*. London: Elecbook
- Health Canada. (2009). The Regulation of Pesticides in Canada. Retrieved from [http://www.hc-sc.gc.ca/cps-spc/pubs/pest/\\_fact-fiche/reg-pesticide/index-eng.php](http://www.hc-sc.gc.ca/cps-spc/pubs/pest/_fact-fiche/reg-pesticide/index-eng.php)
- Health Canada. (2006). The Pest Control Products Act. Retrieved from <http://laws-lois.justice.gc.ca/eng/acts/P%2D9.01/>
- Huberman, M., Miles, M. & Saldana J. (2013). "Designing Matrix and Network Displays" in *Qualitative Data Analysis: A Methods Sourcebook* (3<sup>rd</sup> ed.). Los Angeles: Sage - Arizona State University
- Hulme, M. (2009). "Beyond Climate Change" in *Why We Disagree About Climate Change: Understanding Controversy, Inaction, and Opportunity*. Cambridge, UK: Cambridge University Press
- Hunt, A. (1990). Rights and Social Movements: Counter-Hegemonic Strategies. *Journal of Law and Society* 17(3), 309-328
- Jenkins, J.C. (1995). "Chapter 2: Social Movements, Political Representation, and the State: An Agenda and Comparative Framework" in *The Politics of Social Protest: Comparative Perspectives on State and Social Movements*. Minneapolis: University of Minnesota
- Kebede, A. (2004). Grassroots Environmental Organizations in the United States: A Gramscian Analysis. *Sociological Inquiry*, 75(1) 81-108

- Leeming, M.R. (2013). In Defense of Home Places: Environmental activism in Nova Scotia 1970 -1985. (Unpublished doctoral dissertation). Dalhousie University, Halifax, Nova Scotia.
- Lutts, R. H. (1985). Chemical Fallout: Rachel Carson's *Silent Spring*, Radioactive Fallout, and the Environmental Movement. *Forest History Society: Environmental Review*, 9(3) p. 210-225
- Miller, G.T. (2004), "Chapter 9" in *Sustaining the Earth*, 6th edition. Pacific Grove, California: Thompson Learning, Inc. p. 211-216
- Nordhaus, T. & Shellenberger, M. (2004). The Death of Environmentalism: Global warming politics in a post-environmental world. *Organization and Environment*, 19(1), 74-81
- Norris, P. (2002). "Chapter 2: Theories of Political Activism" in *Democratic Phoenix: Political Activism Worldwide*
- Schock, K. (2013). The Practice and Study of Civil Resistance. *Journal of Peace Research*, 50(3), p. 277-290
- Shaw, R. (2001). *The Activist's Handbook: a Primer Updated Edition*. Berkeley: University of California Press
- Smith, T. (2012, February 13). UN Report: Lack of Political Will Hindering Sustainable Development. Responding to Climate Change. Retrieved from <http://www.rtcc.org/2012/01/30/un-report-lack-of-political-will-hindering-sustainable-development/>
- U.S. Environmental Protection Agency. (2012). About Pesticides. Retrieved from <http://www.epa.gov/pesticides/about/index.htm>
- Zinn, H. (2007). *A Power Governments Cannot Suppress*. San Francisco: City Light Books

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114957 Canada Ltée (Spraytech, Société d'arrosage) v. Hudson (Town), [2001] 2 S.C.R. 241, 2001 SCC 40

Cape Breton Landowners Against the Spray (January, 1977) *The Forest: Alternative to Spraying*. (Box 22, Folder 16). Ecology Action Centre Records, Department of Special Collections and University Archives, Dalhousie University, Halifax, NS

Cape Breton Landowners Against the Spray (June, 1982) *CPLAS Newsletter*. (Box 22, Folder 16). Ecology Action Centre Records, Department of Special Collections and University Archives, Dalhousie University, Halifax, NS

Cape Breton Landowners Against the Spray (December 8, 1983) *Press Release: Anti-Spray Coalition Conference* (Box 22, Folder 16). Ecology Action Centre Records, Department of Special Collections and University Archives, Dalhousie University, Halifax, NS

Cape Breton Landowners Against the Spray (n.d.). *Poster: "Cape Breton Landowners Reply to Pulp Company Threat"* (Box 22, Folder 16). Ecology Action Centre Records, Department of Special Collections and University Archives, Dalhousie University, Halifax, NS

Chronicle Herald (August 7, 1983a). "Forestry Commission to Resume Hearings", Chronicle Herald (Box 50, Folder 1). Ecology Action Centre Records, Department of Special Collections and University Archives, Dalhousie University, Halifax, NS

Chronicle Herald (August 25, 1983b). "Provincial News: Public should have been educated on spraying earlier", Chronicle Herald, Yarmouth (Box 50, Folder 1). Ecology Action Centre Records, Department of Special Collections and University Archives, Dalhousie University, Halifax, NS

Chronicle Herald (August 26, 1983c). "NDP protest spray plans", Chronicle Herald, Kentville (Box 50, Folder 1). Ecology Action Centre Records, Department of Special Collections and University Archives, Dalhousie University, Halifax, NS

Cities and Towns Act, R.S.Q., c. C-19, ss. 410 [am. 1982, c. 64, s. 5; am. 1996, c. 2, s. 150], 412(32) [am. 1984, c. 47, s. 213; am. 1986, c. 31, s. 5; am. 1996, c. 2, s. 151], 463.1 [ad. 1998, c. 31, s. 15]

Coalition Against Pesticides (January 1, 1984a). *Coalition Against Pesticides Newsletter* (Box 46, Folder 1). Ecology Action Centre Records, Department of Special Collections and University Archives, Dalhousie University, Halifax, NS

- Coalition Against Pesticides (1984b). *CAP RAP III*. (Box 50, Folder 8). Ecology Action Centre Records, Department of Special Collections and University Archives, Dalhousie University, Halifax, NS
- Coalition Against Pesticides (March 28, n.d.). *CAP Delegation Lobby Review*. (Box 50, Folder 8). Ecology Action Centre Records, Department of Special Collections and University Archives, Dalhousie University, Halifax, NS
- Ecology Action Centre (1976). *EAC Meeting Minutes*. (Box 22, Folder 16). Ecology Action Centre Records, Department of Special Collections and University Archives, Dalhousie University, Halifax, NS
- Ecology Action Centre. (August 12, 1983a). *EAC Press Release* (Box 24, Folder 7). Ecology Action Centre Records, Department of Special Collections and University Archives, Dalhousie University, Halifax, NS
- Ecology Action Centre (1983b). *EAC Press Release*. (Box 24, Folder 7). Ecology Action Centre Records, Department of Special Collections and University Archives, Dalhousie University, Halifax, NS
- Ecology Action Centre (1983c). *Letter from EAC to CBLAS* (Box 22, Folder 16). Ecology Action Centre Records, Department of Special Collections and University Archives, Dalhousie University, Halifax, NS
- Gorham, R. (n.d.). *Unidentified newspaper clipping, Yarmouth Bureau*. (Box 50, Folder 1). Ecology Action Centre Records, Department of Special Collections and University Archives, Dalhousie University, Halifax, NS
- Herbicide Fund Society (March 29, 1983a). *Press release* (Box 50, Folder 2). Ecology Action Centre Records, Department of Special Collections and University Archives, Dalhousie University, Halifax, NS
- Herbicide Fund Society (May, 1983b) *Forest Herbicides on Trial*. Halifax: Cummings, P. (Box 24, Folder 7). Ecology Action Centre Records, Department of Special Collections and University Archives, Dalhousie University, Halifax, NS
- Herbicide Fund Society (October 9, 1983c). *Press release: Anti-Spray Coalition Press Conference* (Box 24, Folder 7). Ecology Action Centre Records, Department of Special Collections and University Archives, Dalhousie University, Halifax, NS
- Globe & Mail (December 6, 1982) *Globe & Mail newspaper clipping* (Box 24, Folder 7). Ecology Action Centre Records, Department of Special Collections and University Archives, Dalhousie University, Halifax, NS
- McCoag, T. (September 15, 1983). "CCC says Scott Boycott Gaining Momentum", Chronicle Herald, Amherst Bureau (Box 50, Folder 1) Ecology Action Centre



Records, Department of Special Collections and University Archives, Dalhousie University, Halifax, NS

McLaughlin, M. (2011). Green Shoots: Aerial Insecticide Spraying and the Growth of Environmental Consciousness in New Brunswick, 1952-1973. *Acadiensis: Journal of the History of the Atlantic Region*, 40(1) 3-23

Orton, D. (1993). *Fighting Forest Spraying in Nova Scotia*. Earth First! Yule 1993. Retrieved from [http://home.ca.inter.net/~greenweb/Fighting\\_Forest\\_Spraying.pdf](http://home.ca.inter.net/~greenweb/Fighting_Forest_Spraying.pdf)

Pest Control Product (NS) Act. (1986). (Box 48, Folder 5) Ecology Action Centre Records, Department of Special Collections and University Archives, Dalhousie University, Halifax, NS