Comparing Rural Sustainability Planning: Catalysts and Causes[1]

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Introduction

Rural development in Canada has both national and international implications, and continues to receive significant scholarly and policy attention. Coincident with this development, since the 1960s there has been an increasing emphasis on the integration of policy, programming and management across rural systems (Brundtland 1987) and on the recognition that the viability, resilience and very existence of rural communities (unlike larger cities) is increasingly subject to a complex of external drivers (such as global market forces and demographic shifts) that are in many ways immune to policy reforms and programming (Sayer and Campbell 2004; Hallstrom et al. 2012). While urbanization and the "rural brain drain" (Carr and Kefalas 2009) are ongoing issues, the technical shifts toward crop improvement and using agriculture as a synonym for rural have given way to greater attention to the interconnection of social, environmental, economic and health systems (Sayer and Campbell 2004; Hallstrom et al. 2013; Marmot 2007), and the importance of inequities and disparities.

The question of whether or not rural communities can be environmentally, social, economically or even culturally sustainable in Canada cuts across many policy domains (DuPuis and Vandergeest 1996; Andreas 2000; Reimer 2006; Kulig, Edge et al. 2008; Wall 2008). In the 2005 Canadian federal strategy supporting integrated and sustainable development in Canada's cities and communities, the goal was to "accelerate the shift in local planning and decision-making toward a more long-term, coherent and participatory approach to achieve sustainable communities" (PMO 2005; 4 – *emphasis in original*). Canada's Federal Gas Tax Fund (GTF) then made sustainability planning a key part of infrastructure and socio-economic development in communities across Canada, and provided support to municipalities for the development of Integrated Community Sustainability Plans (ICSPs) . The importance of including monitoring and evaluation early in the process was also flagged, as was the early and accurate documentation of implementation and subsequent effects. In other words, sustainability could be achieved or improved (as an outcome) via a positivist assessment of cause and effect within and across multiple policy domains (Fischer 1993; Fisher and Forester 1993; DeLeon 1998; Fischer 1998; Howlett and Ramesh 1998).

Many communities in Canada have now completed ICSPs or a provincial variant as part of what was intended to be a structured, linear process of problem-identification, solving and policy design. What has emerged, however, is a wide range of approaches, toolkits, strategies and content from across the country that differ along regional, population, economic and political lines. There was no singular solution or model emerging from sustainability planning, nor is the shift to implementation necessarily present, rational or linear. Instead, preliminary case studies (Hallstrom et al. 2013*)* suggest that early successful practices included dialogue, deliberation, intersectoral integration and citizen engagement with the planning and policy process as necessary conditions for anticipated uptake and long-term success (Bobrow and Dryzek 1987; Maasen and Weingart 2005; Sayer and Campbell 2004; Swanson and Dhandal 2009). Furthermore, there is little known about how the context and complexity of rural environments

impact the definition, meaning, operationalization, implementation and assessment of these plans (Hallstrom, White and Dolan 2012).

Stemming from a national conference hosted by the ACSRC in 2010 at the Augustana Campus of the University of Alberta, the country's largest searchable inventory and archive of community sustainability plans (the Canadian Sustainability Plan Inventory) is now housed at the University of Alberta. In addition to serving as a historical and policy/planning resource for rural communities, it also provides a unique, national dataset of rurally-specific, sustainability oriented data. As a result, it was determined early on that there were research opportunities to examine, compare and link the content of the sustainability plans contained within this inventory (now numbering over 1000 from the 4700 rural communities in Canada[2]), along with extant census and census sub-division data. Such opportunities (for example) could provide us with regionally-specific, as well as comparative information regarding how and possibly even why different regions, communities and types of communities approached, engaged and prioritized different elements of sustainability within their planning. At the same time, these data can also be linked with other existing data sources, including the New Rural Economy project (which assessed rural community capacity in a number of demonstration sites across Canada starting in the late 1990s), and longitudinal datasets based on the census subdivision level of data collection.

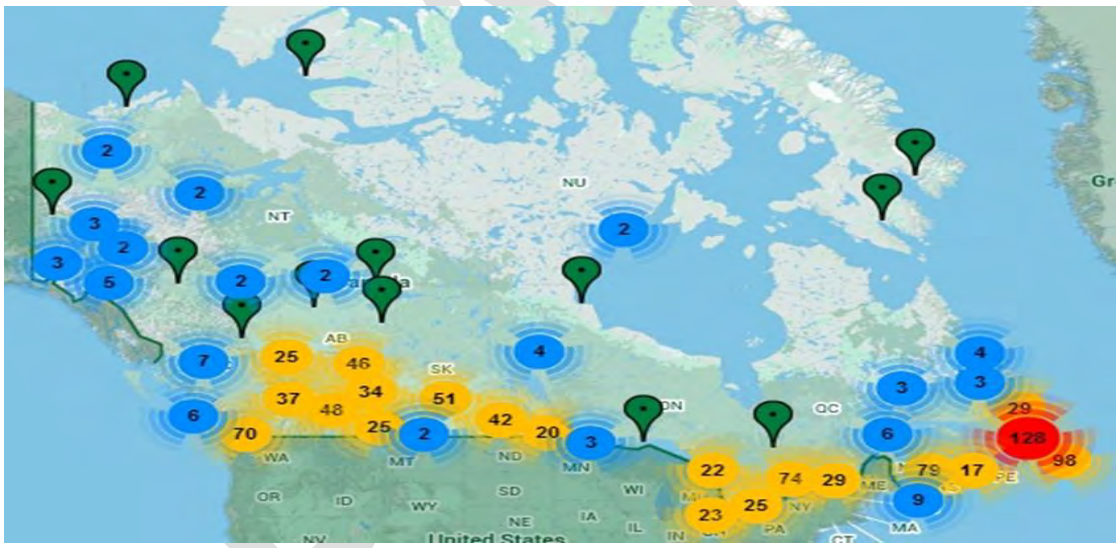

Figure 1.0
Rural Canadian Sustainability Plans

[2] This should not be considered in the light of representative sampling. Federal policy linking sustainability planning to infrastructure funding was delegated to the provinces, and each province established different procedures and practices for planning. As a result, some provinces required all municipalities to complete plans, while others made the exercise totally optional. At the time of writing, over 4000 rural communities have been contacted regarding the existence and/or availability of such plans (many communities still do not have them, are only just beginning to draft them, or are unaware of their existence).

As a result, and following some initial piloting of the validity of such an undertaking in 2011 (and continuing today) the ACSRC has continued to build the CSPI, as well as coding each sustainability plan across a number of different variables. This has led to a current dataset of over 730 coded plans that are linked to a wide range of census subdivision variables in a single datafile. These data permit some initial descriptive, comparative and even causal analytics to be undertaken, with an emphasis on trying to better understand both how the content of sustainability plans differs across provinces, regions and communities, as well as (to the degree possible) what the explanatory variables are for such variation.

Research Questions

Working from the knowledge that the approaches, requirements and uptake of rural sustainability planning in Canada have varied as a result of both endogenous factors (such as the size, location, budgets and public pressures present within communities) as well as exogenous factors such as the provincial approach or linkages between planning and Gas Tax Funds, this project is an initial foray into modelling how these endogenous and exogenous factors work together to shape the form, model and content of sustainability plans in rural Canada. More specifically, it is concerned with answering both a series of broader, descriptive questions about the nature and state of sustainability plans across the country (ie, what do they "look like" and potentially why) as well as more substantive analyses of what factors might predict variation between communities and provinces in terms of the approach or tools used in planning design, the different actors involved in the creation of the plan, conceptions and/or models of sustainability, the degree of integration across different pillars of sustainability, and the core areas of focus, priority or emphasis within the plans.

As a result, we created a three part structure of inquiry through which to better understand sustainability plans in Canada (See Figure 2 below):

1) What are the community-based factors that shape or affect the "form" of sustainability plans? In other words, what factors predict the length of a plan, approach taken toward planning (which can be understood as the type of plan) and when the plan was written?
2) What factors predict variation in terms of the content of the plan, specifically with an emphasis upon the different pillars of sustainability (economic, environmental, social, cultural and governance/institutional)?
3) How do these different factors interact (such as location, community characteristics and when a plan was written) in terms of predicting content of those plans?

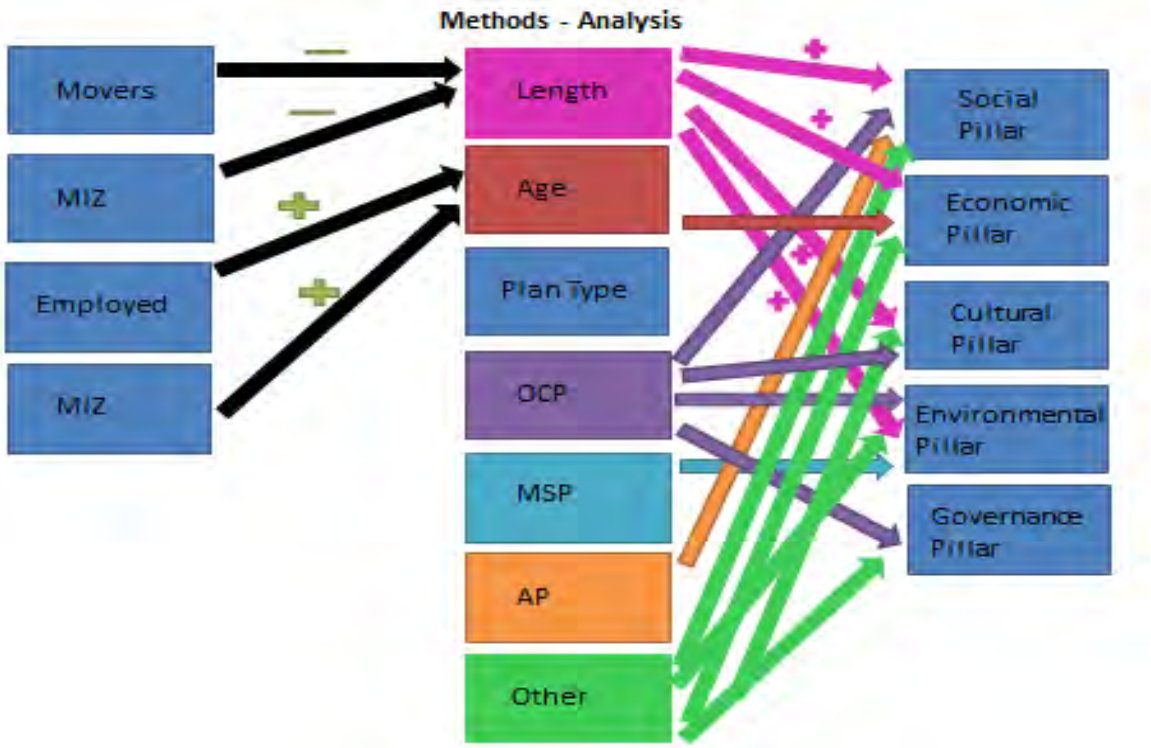

Figure 2.0
General Analytic Model

Rural Sustainability Planning in Canada

It has frequently been suggested that sustainability should be considered as an integral part of the planning process (McDonald, 1996; Hanna, 2005; Fraassen, 2012; Kenny and Meadowcroft, 1999), particularly as a broad and clearly defined planning process can potentially accelerate community sustainability (Berke and Manta-Conroy 2000). Sustainability planning should also be collaborative, wide-ranging, participatory and flexible enough to value the diverse perceptions of individuals (Hanna, 2005; Nelson, 2003; Hanna, 2005; Dryzek, 2001; Calder and Beckie, 2013). Furthermore the inclusiveness, comprehensibility and shared decision-making nature of sustainability planning require appropriate incorporation of the opinions, insights and inputs from citizens and various stakeholders and this collaboration can lead to planning strategies which are resilient (e.g., adaptation capacity) enough for tackling the uncertainties of the future (Hartz-Karp & Marinova, 2011). However, until the 1990s, Canadian community planners did not consider the importance of environmental issues and used to focus upon the maximization of short-term economic development of communities (Roseland, 2000 cited in Sustainable Community Planning in Canada: Status and Best practices, Final Report, 2008). During the energy crisis periods of around 1970s and 1980s, many planners realized the importance of

incorporating environmental aspects into community and emphasis was given on promoting environmental development (e.g., addressing the issues of climate change, loss of bio-diversity, resource depletion, energy consumption, wetlands) rather than focusing on the purely economic interests of communities (Roseland, 2000 cited in Sustainable Community Planning in Canada: Status and Best Practices, Final Report, 2008).

According to the 2008 report "Sustainable Community Planning in Canada: Status and Best Practices," municipalities have to adopt planning processes that are "a collaborative, integrated approach to community planning that steers a community toward the implementation of local and global sustainability goals, using a long-term perspective in an adaptive institutional framework" (p.2). In turn, many municipalities in Canada have made significant investments in formulating and promoting comprehensive sustainable community plans by emphasizing public awareness, education, social learning, participation, equity, knowledge transfer, and mutual learning. Moreover, both larger and smaller municipalities are gradually shifting toward following this practice.

Much of this can be attributed to the creation and promotion of Federal Gas Tax Fund (GTF). For Alberta, this was marked by an agreement signed between the Government of Canada and the Government of Alberta in May 2005 that required an "Integrated Community Sustainability Plan" (ICSP) from any municipality that sought to access this fund (which amount to $15 billion+) . While every province has taken a different approach toward how municipal planning should both integrate sustainability considerations and be linked to federal resources, there is an increasing shift toward a more comprehensive planning program where the term "integrated refers to the practice of bringing diverse, normally separate, concerns and planning processes together, e.g., transportation, land use, environment, housing, waste, water, energy, community health, recreation, culture, municipal finance, and others" (Sustainable Community Planning in Canada: Status and Best Practices, 2008, p.33).

Despite the increasing importance of sustainability planning to rural communities in Canada, the academic literature is rather limited. As Laurian et al (2004) and Berke et al (2006) have noted, the actual implementation of plans has generally been ignored or marginalized in the field of planning. Hull (2011) and others do provide some redress to this issue, but the general emphasis has been on the effects of plan-making, determinants of plan quality, and the characteristics of plan quality (Berke et al 2006).

At the more localized level, citizen participation has received enormous attention as an imperative element in successful formulation of sustainability planning for local communities (Day, 1997; Markey et al., 2010; Hanna, 2005, Healey, 2006; Laurian & Shaw, 2009; Koontz, 2006; Gasparatos et al. 2007; Masuda et al., 2008, Fraassen, 2012). The active involvement of citizens into the planning process can foster democratic dialogue, deliberation and mutual trust among citizens, planners, stakeholders, and municipal representatives, all imperative conditions for ensuring the long term success of sustainability planning for communities (Bhadwal &

Swanson, 2009). As a result, various nation states including Canada have undertaken initiatives to involve citizens into the framework of sustainability planning by endorsing and allowing the co-operation and engagement of citizens for ameliorating their socio-economic life and surrounding environment.

In turn, different scholars have conducted studies that have focused upon the participatory elements of sustainability planning in local/rural communities in Canada. This includes Fraassen (2012) who explored the citizen participation aspect of citizen participation in the development of sustainability planning in Alberta by using the method of environmental scanning over 20 small-medium sized Albertan communities. This study showed that one of the main factors behind the success of sustainability planning of those communities is trust among citizens, stakeholders and municipality. Similarly, Calder and Beckie (2013) have described the importance of communication and networking strategies within the context of ICSPs. Citizen and stakeholder participation as well as shared decision-making process have been highlighted as crucial factors for successful implementation of this framework in order to get more environmentally, socially, and economically sustainable local communities. Calder and Beckie (2013) have also explored the significance of communication in citizen participation through comparative case studies of Olds and Chauvin, two rural Albertan communities that were engaged in a sustainability planning pilot project initiated by the Alberta Urban Municipalities Association (AUMA). According to the authors, dialogue plays crucial role in terms of citizen participation in sustainability planning because communication plays an important role for enhancing citizen participation as well as produces common language and understanding of sustainability.

Other scholars have explored the scope, challenges and innovations within local/rural sustainability planning approaches in Canada. For example, Hanna (2005) illustrated the importance of local planning in stimulating the principles of sustainable development, as well as demonstrating how sustainable planning strategies can be used to adapt to the changes occurring due to transitions in natural resource based communities (e.g., decreasing income level because of changes in the timber and fishing industries). Based on two case studies (e.g., Tofino and Ucluelet, two small towns on western Vancouver Island), sustainability planning has been treated as a tool for saving the communities from uncertain impact of economic transition. Though sustainability poses ambiguity in terms of definitions and implications (Dale & Robinson, 1996; Hanna, 2005), it can be a guiding principle for community planners in terms of formulating strategies for facing the uncertainties and challenges posed by social, economic and environmental transitions within a community. Moreover sustainability planning program helps communities to recognize those aspects which are important to improve the overall conditions of local communities (Hanna, 2005). Additionally, Parker and Selman (1997) have pointed out how Canadian researchers and planners have undertaken various innovations for practicing and implementing community sustainability planning such as the “ecological footprints” model has been formulated by researchers at the University of British Columbia, the community planning

framework of City of Richmond which focuses upon how "social capital" can replace "ecological capital" and uptake of the "International Council for Local Environmental Initiatives" situated in Toronto. Similarly, Day et al. (2003) have explored different sustainability strategies within the context of land use planning framework of rural communities in British Columbia (BC). Local land use planning in BC was based on a shared decision making approach named "Collaborative Planning" in which government staff, stakeholders from public and private organizations, NGOs and general public were included for sharing and discussion ideas. This educative and harmonious negotiation process and the inclusive nature of this planning are considered as elements of success for the planning process.

Despite the significant attention that both sustainability more broadly, and sustainability planning have received in Canada, much of the emphasis remains upon the connection of planning to increased, improved or procedurally "accessible" sustainability for communities, and in many cases the different methods and venues available for improving the content, validity and legitimacy of such plans. What is less understood, but perhaps equally important, are the two "surrounding" questions for sustainability planning: (1) Why are sustainability plans the "way" they are, and why do they differ? and (2) How are sustainability plans made into policy, programs, instrument and actions, and what are they subsequent effects. In turn, this paper takes an initial look into some of the answers to question (1).

Methods:

1) Data Collection

Research assistants at the ACSRC began collecting samples of sustainability plans in Alberta in the summer of 2011. Originally intended to be a pilot that considered both the accessibility and volume of plans, several hundred rural municipalities in Alberta were contacted first by email, then by telephone (there are 305 non-metropolitan municipalities in Alberta). Contact information was obtained from the publically available directory for municipalities hosted by the provincial Ministry of Municipal Affairs. As the intention was both to analyze and inventory the plans, digital or hard copies of plans and affiliated documents were requested, which were then converted into searchable PDF (Adobe) format.

Having established that collecting the plans was both a possible and worthwhile undertaking, additional funding was allocated to both the collection and coding of plans. Working with up to 4 research assistants at the same time, the inventory quickly grew to over 1000 plans, with representation from communities across Canada. A notable absence at this particular point (2012) was the under-representation of planning documents from Quebec. This was due largely to limited multi-lingual capacity within the ACSRC staff, and a very poor response rate to initial contacts initiated by email.

As a complement to the data collection, technical staff at the University of Alberta were contracted to create a web-based interface that would enable Boolean and text-based searches of

the inventory. This interface went live in the late fall of 2013, and notice was distributed to all 4700 rural municipalities in Canada, along with a request for additional plans if not already submitted. Since inception, the site has received over 1200 unique visitors, generated over 13,000 pageviews and has had visits from English, US, Russian, French, Canadian and other states.

This work continues today. To date project staff have collected, standardized and inventoried over 1200 plans, and continue to code each plan individually. The analysis for this paper are based upon the plans coded to date (n = 730).

2) Coding of Plans

Plans are coded and inventoried on the basis of a number of variables. In addition to basic plan characteristics (page length, data of publication, location, etc.) plans are coded using a 3-prong strategy that generates raw, weighted and interpretive data.

Raw Data: Each plan is searched on the basis of 10 sustainability linked keywords. These generate simple count data for each plan, which are naturally relatively limited in use given the wide variation in length between plans (the average length is 62 pages, but they range from only a few pages to almost 450 pages). These data also included labels, headings, references, etc.

Adjusted Count Data: The raw data for each plan are adjusted in order to eliminate redundant, graphic or labelling data (headings, etc.). While still only count data, they present a more standardized account of simple content within the plans, which can then be adjusted relevant to length, etc.

Interpretive Coding: Each plan is coded for content related to the five pillars of sustainability (see above). Staff first generated an interpretive count for each pillar, weighting accordingly between pillars that are linked closely to the primary goals of the plans, and pillars linked more with action items or objectives of the plan. This generates a series of scores for each pillar, which are then re-coded into a 0-3 point scale in order to capture the proportional distribution of content without being biased by length. A score of 3 indicates a high level of emphasis, and zero indicating no presence or emphasis.

Census Sub-division Data: In order to obtain community-level data for each plan, data from the Canadian Census were utilized. Collected every 5 years, Census Subdivisions are the lowest level of Geographic Classification in Canada (Province and territory, census division and sub-division). Since data are not collected at the municipal level (which is an often arbitrary geo-political unit determined by provincial governments), the census subdivision contains areas/populations that form a municipality or its equivalent for reporting purposes. As a result, while not ideal, it remains the closest possible, nationally-consistent approximation for municipal characteristics. These data were provided by Statistics Canada, through the Spatial Data Library of the University of Alberta. These data permit inclusion of a huge range of potential factors in

sustainability planning, including community mobility, demographic, employment, ethnic, linguistic and other variables.

3) Data Analysis

As noted above, there are both descriptive as well as more causal elements to this project. As a result, a first step is to generate basic frequencies and descriptive statistics for the plans collected and inventoried/coded to date. This provides us with a general overview of not only the distribution of sustainability plans across and within the provinces of Canada, but also with some basic characteristics of the plans, communities and plan emphases. This data are presented in Tables 1.0 – 5.0

Specifically, in addition to gaining select descriptives and frequencies by province, we also generated cross-tabulations using a different geographic variable, the Metropolitan Influence Zone. Designed to function as a proxy variable for distance from major urban centres, the MIZ is a measure of both distance and the movement of individuals (ie, commuters) between rural and metropolitan areas. Specifically, we were curious to see if the combination of distance/linkages between rural and urban spaces and people reflected any meaningful differences in the content or emphases of plans.

The second phase of analyses for this project is based on the model identified in Figure 1.0, and is based upon regression analyses to better understand the relationships between: (1) core community characteristics and plans; (2) core community characteristics and the type/form of planning undertaking; and (3) how different types and forms of plans are related to the emphasis placed upon different pillars of sustainability within the plans.

1) Multivariate regression I: A wide range of factors, including MIZ, community characteristics such as employment, proportion of migrant populations, etc. were regressed against both the length and age (determined as the year of publication subtracted from 2013). Of the numerous variables originally included, only 6 variables yielded significant results ($p<0.05$). These results are presented in Table 6.0

2) Mulitnomial logistic regression I: Since the dependent variable for this regression (Type of Plan) is categorical (6 categories) a multinomial logit regression was used, with sample size limited to coded data only. Additionally, since this model included MIZ rankings, MIZ categorizations were created as dummy variables, allowing each score to serve as a potential independent variable. Results are presented in Table 7.0

3) Multivariate regression II: A combination of variables determined by items 1 and 2 (above) were then used to assess influence upon sustainability-specific content via multivariate regression analyses. Results are presented in Table 8.0

Results and Discussion

Table 1.0

Rural Canadian Municipalities, Populations and Plans for Communities of Less than 50,000 – Descriptives

Variable	N	Mean	Std. Deviation	Minimum	Maximum
Age of Plan	868	4.6221	2.23118	1	34
Length of document	725	60.56	53.739	1	449
Population in municipality	1120	4738.59	7846.403	25	48184
Social Pillar	672	2.1	0.973	0	3
Economic Pillar	672	2.32	1.462	0	3
Culture Pillar	673	0.98	0.903	0	3
Environment Pillar	673	2.28	0.908	0	3
Governance Pillar	671	1.3	1.069	0	3
Census subdivision within census metropolitan area	363	4.83	1.726	1	7
Population, 2001 - 100% data	1066	5284.9	18546.949	0	545671
Population, 2006 - 100% data	1067	5475.32	19624.946	40	578041
Land area in square kilometres, 2006	1067	1439.85	15894.635	0	465516
Valid N (listwise)	102				

As can be seen from the above table (and has been noted by rural sociologists in other countries such as Flora and Flora (2013), there is significant diversity both between rural communities in Canada, as well as sustainability planning. Specifically (and as would be expected given the varied approaches to planning) there is a wide range in the length, model/type of plan, but most plans are also relatively recent (which is expected, given the linkages to federal policy and incentive programs.

In terms of the content of the plans, there is some modest differentiation between pillars of sustainability, but more noticeably a tendency to rate cultural and environmental sustainability as less important than social, economic or institutional sustainability. However, these results should be interpreted with considerable caution – not only is it possible that how different communities consider, frame and rank different types of sustainability will vary on the basis of both endogenous and exogenous factors (such as population, affordability of planning, etc.)

From a community standpoint, and as might be expected in a state as geographically and economically large and diverse as Canada, the communities in this study tend to be somewhat removed from urban areas (as indicated by a MIZ score of 5/7 – a census subdivision outside of a metropolitan area or census agglomeration area with only moderate metropolitan influence. This influence is determined by Statistics Canada as the sum of the percentages of two variables: (1) the resident employed labour force living in that particular census subdivision; and (2) the labour force working in the census metropolitan area or the census agglomeration. A moderate MIZ includes census subdivisions where at least 5%, but less than 30% of the labour force commute to the CMA or CA) (Statistics Canada 2011). It should also be noted that while the data here are not representative, the proportion of MIZ 5 (moderate influence) communities is broadly consistent with the national ratio.

Similarly, the mean population of these communities (selected from those of less than 50,000) is just under 5000 (while the CSD is slightly larger due to the difference between municipal data (when available) and CSD data from Statistics Canada. This is also consistent with the broader pattern of rural communities in Canada. While there is huge variation in the size and density of rural communities at both the provincial and national levels (for example, the Town of Heisler in Alberta is home to approximately 140 citizens, while the City of Camrose is also considered rural, but has a population of almost 18,000). There is no singular definition of rural in Canada – it varies from population (typically greater than 10,000) to Metropolitan Influence Zones, to policy-oriented definitions that define rural very broadly to include any community that is not considered “metropolitan” (such as Calgary, Edmonton, Toronto, Saskatoon or Montreal). Functionally, such a definition is based on an informal assessment of both population density (CMAs in Canada average 249.6 persons per square kilometer) and gross population (over 100,000) and is designed to (generally) provide a more inclusive and generous criterion for

inclusion or eligibility in rurally-based funding, grant or service programs (see for example the Alberta Rural Development Network and Rural Alberta Development Fund (2009-13).

Pillars of Sustainability

There is also significant diversity in the models, tools and conceptions of sustainability used to inform sustainability planning in Canada ((Hull 2011), with no singular model used, promoted or endorsed by either governments, planners or non-governmental organizations. In Alberta alone, not only were there two toolkits available (one from the Alberta Urban Municipalities Association, the other from the Alberta Association of Municipal Districts and Counties) but multiple approaches and methods adopted by the variety of consultants, communities and NGOs that were engaged in the sustainability planning process. As a result, while the UN has recently expanded its conception of sustainable development to include institutions/governance, conceptions of sustainability varied across the country from a class, 3-pillar model (social, economic and environmental sustainability) to four and five pillar models.

Given this diversity, in this project we code sustainability plans on the basis of a 5 pillar model. Since we are primarily concerned with content, rather than the method of planning, a more inclusive approach permits both a more nuanced, and better comparative perspective on inter-provincial and inter-community plans.

Table 2.0 presents an overview of the aggregated coding of plans by province. More specifically, it illustrates the relative emphasis on each pillar by province, and provides both some general patterns about the relative importance of different pillars in different provinces, as well as the existence of some outlier cases that prompt some interesting questions.

Table 2.0
Count Data: Pillars of Sustainability by Province

Province	Social Pillar				Economic Pillar				Cultural Pillar				Environmental Pillar				Governace Pillar			
Coded Ranking	*0*	*1*	*2*	*3*	*0*	*1*	*2*	*3*	*0*	*1*	*2*	*3*	*0*	*1*	*2*	*3*	*0*	*1*	*2*	*3*
Alberta	2	17	56	73	0	18	56	74	30	47	50	21	3	31	62	52	15	33	65	35
BC	1	13	44	63	0	5	35	80	19	68	25	10	1	13	24	84	23	61	29	9
Manitoba	19	16	21	10	11	36	3	16	54	10	2	0	1	14	8	43	50	7	7	2
New Brunswick	1	5	13	16	0	6	5	24	9	25	1	0	0	1	10	24	8	16	8	4
NFL & Labrador	0	2	38	42	0	9	18	55	13	31	32	6	6	15	31	30	2	15	32	32
Nova Scotia	1	0	14	21	1	0	10	26	2	31	2	2	1	0	8	28	6	19	12	0
Nunavut	0	0	1	3	1	0	0	3	1	3	0	0	0	1	3	0	1	2	1	0
NW Territories	0	0	2	9	0	2	2	7	5	4	2	0	0	0	7	4	0	6	3	2
Ontario	34	40	13	14	12	15	29	45	71	16	11	3	15	2	29	55	87	12	1	1
PE Island	0	0	6	13	0	1	2	16	6	12	1	0	0	0	2	17	2	9	6	2
Saskatchewan	9	8	23	31	14	13	19	25	37	19	14	1	15	13	11	32	17	8	13	32
Yukon	3	1	6	14	1	0	11	12	2	14	5	3	2	1	8	13	5	12	4	3
Total	**70**	**102**	**237**	**309**	**40**	**105**	**190**	**383**	**249**	**280**	**145**	**46**	**44**	**91**	**203**	**382**	**216**	**200**	**181**	**122**

Table 3.0
Mean Score – Pillars of Sustainability by Province (Top 3 in Bold)

province name		Social	Economic	Cultural	Environmental	Governance
Alberta	Mean	2.35	2.38	**1.42**	2.10	**1.81**
	N	148	148	148	148	148
	Std. Deviation	.734	.694	.969	.793	.910
BC	Mean	2.40	**2.63**	1.21	**2.57**	1.20
	N	121	120	122	122	122
	Std. Deviation	.713	.566	.805	.716	.830
Manitoba	Mean	1.33	1.36	.21	2.41	.41
	N	66	66	66	66	66
	Std. Deviation	1.057	1.032	.481	.877	.803
NewBrunswick	Mean	2.26	2.51	.77	**2.66**	1.22
	N	35	35	35	35	36
	Std. Deviation	.817	.781	.490	.539	.929
NFL&Labrador	Mean	2.49	2.56	**1.38**	2.04	**2.16**
	N	82	82	82	82	81
	Std. Deviation	.550	.687	.841	.922	.813
Novascotia	Mean	2.53	**2.65**	1.11	**2.70**	1.16
	N	36	37	37	37	37
	Std. Deviation	.654	.633	.567	.618	.688
Nunavut	Mean	**2.75**	2.25	.75	1.75	1.00
	N	4	4	4	4	4
	Std. Deviation	.500	1.500	.500	.500	.816
NW Territories	Mean	**2.82**	2.45	.73	2.36	**1.64**
	N	11	11	11	11	11
	Std. Deviation	.405	.820	.786	.505	.809
Ontario	Mean	1.07	2.06	.47	2.23	.17
	N	101	101	101	101	101
	Std. Deviation	1.012	1.038	.807	1.057	.471
PE Island	Mean	**2.68**	**2.79**	.74	2.89	1.42
	N	19	19	19	19	19
	Std. Deviation	.478	.535	.562	.315	.838
Saskatchewan	Mean	2.07	1.77	.70	1.85	1.86
	N	71	71	71	71	70
	Std. Deviation	1.033	1.136	.835	1.215	1.243
Yukon	Mean	2.29	2.42	**1.38**	2.33	1.21
	N	24	24	24	24	24
	Std. Deviation	1.042	.717	.824	.917	.932
Total	Mean	2.09	2.28	.98	2.28	1.29
	N	718	718	720	720	719
	Std. Deviation	.977	.910	.896	.906	1.071

The first, and perhaps least surprising result from Table 2.0 is the relative weighting of the different pillars across the country. As might perhaps be expected given the historical trajectory of sustainable development since the Brundtland Report (1982), both economic and environmental pillars received the highest weighting, indicating that (for the communities included in this dataset at least) both pillars are recognized as critical or important for the future of these communities. Naturally, this may also be somewhat of an artefact from the significant emphasis that has been placed upon reconciling economic and environmental concerns (particularly in Canada) over recent decades, and particularly for historically resource-dependent provinces (such as the Maritimes and Alberta) finding a balance between the needs and costs of economic development and growth have presented significant policy and social challenges.

This potential influence of economic and developmental history is reflected in these data – it is notable that Albertan communities tend to prioritize economic sustainability over environmental, while the smaller (and fisheries/forestry dependent) provinces in the Maritimes (with the exception of New Brunswick) tend to have more diversified priorities (with communities in PEI, for example placing environmental sustainability ahead of economic, and Nova Scotian communities ranking economic and environmental sustainability equally. This may be the result of failed industries in these provinces – both Nova Scotia and Newfoundland/Labrador suffered significant economic losses with the closure of multiple fisheries over the past 20 years, which may have attenuated the public or community's awareness of how environmental degradation can directly impact economic growth.

Other notable results include the importance of social sustainability as a strong "second place" pillar of sustainability for rural communities. While again varied between provinces (Ontario, for example, also ranks social sustainability as third (behind the environmental and economic pillars) but also demonstrates a fairly pronounced tendency for communities to emphasize the more conventional 3-pillar models of sustainability, and to place relatively little (or NO) emphasis upon governance or cultural sustainability. This may be explained by both the tools used to support sustainability planning in the province (such as the Association of Municipalities of Ontario Sustainability Planning Toolkit, which does not mention or account for governance/institutional sustainability), or the distinction between privately contracted plans (over 2/3 of the plans for Ontario used in this study were completed by private consulting firms) and community-based (ie, public) planning exercises.

Other factors may also account for these differences, both within and across provinces. Of particular concern, based in part upon the increased vulnerability of remote, Aboriginal and northern communities to economic, environmental and cultural disruption, is how such factors may influence or correlate with the content of sustainability plans. Specifically, the MIZ (Metropolitan Influence Zone) has been demonstrated to be a significant factor in both the capacity (Hallstrom 2012) and human/social capital (Flora and Flora 2013) of rural communities, and accordingly a potential factor in the resilience and adaptability of such communities. As a

result, we present in Table 4.0 the distribution of content across sustainability pillars cross-tabulated with MIZ for all communities included in this dataset.

Table 4.0
Pillars of Sustainability by MIZ (Metropolitan Influence Zone)

MIZ Zones	Social Pillar				Economic Pillar				Cultural Pillar				Environmental Pillar				Governance Pillar			
Coded Ranking	*0*	*1*	*2*	*3*	*0*	*1*	*2*	*3*	*0*	*1*	*2*	*3*	*0*	*1*	*2*	*3*	*0*	*1*	*2*	*3*
Census subdivision within census metropolitan area	1	2	8	11	1	0	10	11	5	11	6	0	0	5	9	8	3	5	9	6
Census subdivision within census agglomeration with at least one census tract	1	0	2	4	0	2	3	2	1	2	2	2	0	0	4	3	2	3	2	0
Census subdivision within census agglomeration having no census tracts	0	1	5	14	0	2	5	13	6	5	6	3	2	0	6	12	4	4	8	4
Census subdivision outside of census metropolitan area or census agglomeration area having strong metropolitan influence	0	1	7	17	0	2	9	14	5	9	8	3	0	5	9	11	0	8	6	11
Census subdivision outside of census metropolitan area or census agglomeration area having moderate metropolitan influence	0	4	24	24	0	7	11	34	12	17	17	6	2	15	16	19	3	13	23	12
Census subdivision outside of census metropolitan area or census agglomeration area having weak metropolitan influence	0	1	15	30	0	0	14	32	7	18	15	6	2	4	17	23	3	10	24	9
Census subdivision outside of census metropolitan area or census agglomeration area having no metropolitan influence	0	2	7	4	0	2	2	9	3	3	7	0	2	4	4	3	1	4	5	3
Total	**2**	**11**	**68**	**104**	**1**	**15**	**54**	**115**	**39**	**65**	**61**	**20**	**8**	**33**	**65**	**79**	**16**	**47**	**77**	**45**

(NOTE: At this time only 392 communities have been coded for MIZ)

As was the case when sustainability content is compared between provinces, there is both a broad range of emphasis between different MIZ communities. However, there are also some notable correlations present that at first blush are somewhat counter-intuitive.

As might be expected, the majority of communities continue to emphasize economic, environmental and social sustainability. Interestingly, social sustainability scores higher than environmental sustainability, and while economic sustainability remains paramount overall, communities of greater distance from urban areas tend to weight social sustainability more highly. That said, it should be repeated that many rural communities in Canada fall into this MIZ category (5 and 6) so these cross-tabulations should be considered in that light.

Sustainability Planning in Canada

As Table 5.0 shows, there is an (expected) range in the different models and types of plans that were created and submitted in order to qualify for GTF-eligible status. Table 4.0 presents the calculated results of the more than 70 different forms/labelled plans that have been submitted to the CSPI. These data reflect an attempt to fit this diversity into an ordinal scale based on the (admittedly ambiguous) concept of integration. Specifically, we have re-coded and categorized plans into a "scaled" list with Integrated Community Sustainability Plans (by definition) being the plans intended to best reflect the integrative and "holistic" model of sustainability and sustainability planning, with Action Plans at the other end of the continuum. These plans are typically oriented toward domain (often economic) specific activities, and are not necessarily

constructed with sustainability, integration or community engagement in mind. These plans are also often internal products of municipal government, rather than a broader output of engagement, deliberation and iteration (as is intended to be the case with ICSPs).

Table 5.0
Types of Plans in Canada

Type of plan found (coded)		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Integrated Community Sustainable Plan	463	37	47.3	47.3
	Official Community Plan	177	14.1	18.1	65.4
	Municipal Sustainability Plan	131	10.5	13.4	78.8
	Strategic Plan	58	4.6	5.9	84.7
	Action Plan	41	3.3	4.2	88.9
	Other	109	8.7	11.1	100
	Total	979	78.2	100	
Missing	System	273	21.8		
Total		**1252**	**100**		

Table 6.0
Type of Plan by Province

province name * type of plan found (coded) Crosstabulation

Count

		type of plan found (coded)						
		Integrated COmmunity Sustainable Plan	Official Community Plan	Municipal Sustainability Plan	Strategic Plan	Action Plan	Other	Total
province name	Alberta	66	1	75	8	0	1	151
	BC	20	60	23	9	6	17	135
	Manitoba	2	1	2	4	3	41	53
	NewBrunswick	9	0	8	2	1	10	30
	NFL&Labrador	262	0	8	3	0	2	275
	Novascotia	44	0	0	4	0	2	50
	Nunavut	2	0	0	0	0	1	3
	NW Territories	11	0	0	1	0	0	12
	Ontario	18	85	9	20	4	9	145
	PE Island	6	12	1	0	0	0	19
	Quebec	0	0	1	3	5	1	10
	Saskatchewan	0	18	4	4	22	24	72
	Yukon	23	0	0	0	0	1	24
Total		463	177	131	58	41	109	979

As can be seen by Table 6.0, these differences are also driven (in part) by provincial engagement in the sustainability planning process. As was the case in Newfoundland and Labrador, the provincial government issued explicit guidelines about the form and nature of plans that would qualify for GTF, while in Alberta, similar yet more flexible guidelines were issue (explaining the

high numbers of ICSPs and MSPs in these provinces). Similarly, both Ontario and BC emphasized Community Planning (OCPs), while New Brunswick (which did not require any form of municipal plan in order to qualify for GTF) has a small number of plans, distributed over a number of categories.

Regression Analyses

Having established some of the interesting and relevant patterns and correlations at a fairly general level for rural Canada, the question(s) remain as to whether there are key factors or variables that predict either/both: (a) the characteristics of a plan itself, including length, age and type of plan; and (b) the content of the plan. In turn, we see that there are some generally predictive patterns that emerge from the (admittedly) still developing dataset:

Table 7.0
How do community characteristics predict the length and age of a sustainability plan?

VARIABLES	Length	Plan Age
Census subdivision outside of census metropolitan area or census agglomeration area having moderate metropolitan influence	**33.07*** **	0.28
	-11.89	-0.296
Census subdivision outside of census metropolitan area or census agglomeration area having weak metropolitan influence	**37.16*** **	0.323
	-12.3	-0.304
Census subdivision outside of census metropolitan area or census agglomeration area having no metropolitan influence	**27.32** **	0.589*
	-13.32	-0.329
Total number of census families in private households - 20% sample data	0.0375	**-0.00156*** **
	-0.0238	-0.000556
Rented	0.00728	**-0.000740*** **
	-0.0106	-2.49E-04
Non-migrants	0.00136	**0.00132*** **
	-0.0127	-0.000298
Canadian citizens under age 18	-0.00801	**0.000992*** **
	-0.0142	-0.000335
Canadian citizens age 18 and over	-0.00331	**0.000654*** **
	-0.00808	-0.000191
Employed	-0.0041	**-0.000304*** **
	-0.00412	-9.61E-05
Province	**8.552*** **	-0.00176
	-1.216	-0.0291
Constant	2.521	**29.45*** **
	-12.15	-0.302
Observations	391	373
R-squared	0.193	0.202

Notes
Standard errors in parentheses *** p<0.01, ** p<0.05, * p<0.1
Census subdivision within census agglomeration with at least one census tract to Census subdivision outside of census metropolitan area or census agglomeration area having no metropolitan influence are dummy variables. Census subdivision within census metropolitan area is the base category. Regression method used is ordinary least squares (OLS) since the dependant variables are continuous

The results presented in Table 7.0 illustrate the importance of location as a factor in determining the length and age of a sustainability plan. While limited in terms of generalizability, it is telling that (especially when considered in light of the other results presented above), MIZ is a consistent predictor of how rural communities approach and engage with sustainability planning. Specifically, both MIZ 5 and 6 are positive predictors of plan length (ie, longer plans). While this could be attributed to who actually completed the planning project (public vs. private source), supplemental analysis show that this is not likely a fact.

At the same time, Table 7.0 also illustrates that demographic variables can be related to when a plan was conducted. Although both positive and negative in effect, factors such as the population growth (perceived or otherwise), employment opportunities and the presence of transitory labour populations (often an issue in resource-dependent rural communities) may have all influenced the relative priority and urgency given to the act of engaging with, and completing, some form of sustainability plan.

Table 8.0
Multinomial Logistic Regression: How do community characteristics predict the type of plan?

VARIABLES	Integrated Community Sustainability Plan	Official Community Plan	Municipal Sustainability Plan	Strategic Plan	Action Plan	Other
Population, 2006 - 100% data		0.0199	**0.0105****	0.00729	0.0609	0.355
		-0.0143	-0.00437	-0.00947	-47.24	-52.17
Total number of census families in private households - 20% sample data		**-0.0578*****	-0.0023	0.00435	-0.154	-0.34
		-0.0185	-0.00327	-0.0104	-114.6	-80.12
Owned		**0.0115*****	-0.00217	0.00031	-0.115	0.353
		-0.00439	-0.00173	-0.00605	-74.37	-145.2
Rented		**-0.00658****	-0.000503	0.00433	-0.00133	0.369
		-0.00308	-0.00145	-0.00581	-40.73	-149.8
English		**0.00217****	-0.00037	**-0.00291*****	-0.000812	-0.00111
		-0.00095	-0.000327	-0.00108	-2.952	-8.969
Non-movers		**0.155****	-0.0158	0.0117	-0.829	1.755
		-0.0633	-0.0112	-0.0373	-571	-245.8
Movers		**0.154****	-0.0173	0.0114	-0.868	1.649
		-0.0653	-0.0117	-0.038	-595.1	-277.8
Canadian citizens under age 18		-0.00389	-0.000203	**0.0173****	0.134	0.7
		-0.00649	-0.00195	-0.00765	-30.61	-77.68
Canadian citizens age 18 and over		**-0.0166*****	0.00146	**0.0103****	0.0906	-0.0404
		-0.00496	-0.00125	-0.00512	-40.53	-85.48
Total population by Aboriginal and non-Aboriginal identity population - 20% sample data		**-0.151****	0.00615	-0.0296	0.727	-2.242
		-0.0594	-0.0104	-0.0375	-542.1	-304
Province		**1.437*****	**-0.812*****	-0.2	6.834	17.5
		-0.402	-0.125	-0.203	-6,463	-3,152
Constant		**-11.50*****	1.287*	-0.978	-85.12	-193.3
		-3.598	-0.66	-1.14	-61,211	-59,586

Notes
Standard errors in parentheses *** p<0.01, ** p<0.05, * p<0.1
SAC type 2 to 9 are dummy variables. SAC type 1 is the base category hence omitted from the regression.
Regression method used in multinomial logit since the dependent variable is categorical (i.e. there are 6 categories for the type of plan). The first category is the reference category. Sample size limited to observations with coded data. Province is included as a control variable only.

Table 8.0 provides some insight into the factors (other than provincial policy and resources) that have influenced the type of plan selected, completed or identified as qualifying for GTF resources. Notably (using ICSPs as the reference category), a number of community characteristics do influence the probability of completing an official community plan, including both economic factors (home ownership), the size of the community (measured by population) age, distribution of a/the Aboriginal population, and the proportion of non-movers (those at the same address as five years previously during the prior census) as well as movers (those at a different address). This does not include external migrants (those who lived in a different census subdivision, province or country.

Table 9.0
Multivariate OLS Regression: How do plan characteristics predict the sustainability-based content of sustainability plans?

VARIABLES	Social Pillar	Economic Pillar	Cultural Pillar	Environmental Pillar	Governance Pillar
Plan age	0.0159	**0.0475****	-0.00226	**0.0316****	0.0136
	-0.0148	-0.0238	-0.0133	-0.0143	-0.0165
Length	0.00069	0.00198*	**-0.00226*****	**0.00197*****	0.000261
	-0.000656	-0.00106	-0.000589	-0.000634	-0.000731
Official Community Plan	**1.409*****	**1.098*****	**0.911*****	-0.00381	**0.875*****
	-0.111	-0.178	-0.0993	-0.107	-0.123
Municipal Sustainability Plan	**0.751*****	**0.917*****	0.207*	**0.242****	0.158
	-0.122	-0.197	-0.11	-0.118	-0.136
Strategic Plan	**1.268*****	**0.881*****	**0.668*****	0.0391	**0.797*****
	-0.133	-0.214	-0.12	-0.129	-0.149
Action Plan	**0.801*****	**0.720*****	**0.508*****	**-0.855*****	**0.708*****
	-0.173	-0.278	-0.155	-0.167	-0.192
Other	**1.222*****	-0.639*	**0.913*****	**-1.266*****	-0.105
	-0.211	-0.34	-0.19	-0.204	-0.236
Province	**-0.0266*****	-0.0218	**-0.0221****	-0.00919	**-0.0228****
	-0.0102	-0.0164	-0.00917	-0.00986	-0.0114
Constant	0.701	0.139	**0.828****	**1.270*****	0.467
	-0.459	-0.739	-0.412	-0.444	-0.512
Observations	624	624	624	624	624
R-squared	0.255	0.103	0.235	0.156	0.154

Notes
Standard errors in parentheses. *** p<0.01, ** p<0.05, * p<0.1
Regression method used in ordinary least squares (OLS). A Tobit regression yields results similar to OLS for this model.
Sample size limited to observations with coded data. Province in included as a control variable only.

Ultimately, as noted above one of the primary questions driving this project is whether there are factors that are influential in determining the content of sustainability plans. While participatory and other socially-based factors have been flagged as important (Dipa 2014), the results from Table 8.0 indicate that the type of plan undertaken and filed by a rural community, as well as the characteristics of the plan itself, can be telling indicators of how sustainability is prioritized and presented within those plans.

While there are numerous statistically significant results present in Table 8.0, the first and perhaps most intuitive is in the relationship between the age of the plan (ie, when it was written/filed) and the varied emphases upon different pillars of sustainability. Given the evolution of the concept of sustainability and sustainable development since 1982, it is somewhat logical that older plans would tend to prioritize economic and environmental considerations, and our results reflect this.

Additionally, we note that the type of plan does actually have an influence upon the sustainability content of plans, and that this influence is generally positive. Structured as dichotomous dummy variables based upon ICSP as reference category, these data do demonstrate that different types of plans have significant variation in content, that this variation can be somewhat reliably predicted, and that more integrated planning approaches may not necessarily result in more integrated, or equally weighted sustainability content. Ultimately, and as might be expected, these data represent the diversity of planning and planning approaches undertaken in Canada, but they do point to an interesting relationship between the approach and method taken toward sustainability planning (assuming that such variables do in fact translate into the type of plan that ultimately emerges) and the content of the plan. Such findings have potential implications for sustainability planning in the future – as rural communities continue to revise, examine and develop adaptive instruments and strategies, knowing that the tools and outputs created will actually have an effect upon the content of the outputs itself may inform the evaluation, selection and implementation of those very tools and outputs.

However, an interesting exception to this exists in terms of environmental sustainability content – both action plans and plans that fall outside our categorization scheme have a negative effect upon the presence of environmental content. As noted above, this may be consistent with the nature and general differences between these often domain specific and operationally-focused plans, vs. the usually more integrated and holistic approaches (and especially Municipal Sustainability Plans, which do have a positive relationship with environmental sustainability content).

This relationship should be considered in two lights: (1) There is the reality and possibility that the process, tools and structures of certain planning types are (whether deliberate or not) biased toward certain models or forms of sustainability; and (2) that there is an inherent relationship between the form of these broader categories of plans, and their content.

This relationship should be considered in two lights: (1) There is the reality and possibility that the process, tools and structures of certain planning types are (whether deliberately or not) biased toward certain models or forms of sustainability; and (2) that there is an inherent relationship between the form of these broader categories of plans, and their content. Such variation may be informed by a more qualitative examination of the text of these plans, and in particular may benefit from an examination of how sustainability is framed both by plans, and by the approach and tools utilized. A similar approach may be derived from semantic prosody, insomuch as research in corpus linguistics examining collocation and discourse prosody uncover hidden associations within the structure of language, and in particularly the effects of planning "style" from a linguistic standpoint upon the content of sustainability plans.

Overall, we see that different plans do predict differences in content, and somewhat surprisingly we note that Action Plans (which are typically oriented toward implementation) are the only category of plan that predict significant variance in all 5 pillars of sustainability (but, as noted

above, predicting decreased, rather than increased environmental content). Similarly, and perhaps somewhat surprisingly, all types of planning included in this dataset to date positively predict increased social sustainability content – this is somewhat contrary to the general discourse of sustainability in rural Canada, which is historically (and politically) oriented toward first economic development and sustainability, then environmental sustainability. Social sustainability presents a significant challenge for planning and policy, as it is not clearly defined nor operationalized may include multiple sub-categories or conceptions, and (depending on the province or region) may reflect widely differing perspectives on social and related equity considerations.

Table 10.0
Multivariate OLS Regression: How do community-based variables influence sustainability plan content?

Variable		Social	Economic	Cultural	Environmental	Governance
Population (2006)		.002**				
Owned Homes			-.001**			
English Speaking					7.131**	

*** p<0.01, ** p<0.05, * p<0.1
Regression method used in ordinary least squares (OLS). Sample size limited to observations with coded data

Finally, as a precautionary step, we sought to determine if there are community-based characteristics that also predict the content of sustainability plans. As can be seen from Table 9.0, factors such as population size and number of respondents who owned their homes are statistically significant, but largely "clinically insignificant." More interesting, perhaps, is the result that communities with higher numbers of English speaking respondents tended to produce plans with greater environmental emphasis. Communities with larger French-speaking communities did not generate any statistically significant results (although the data from Quebec are not yet complete – this may change as those data come online), and it is important to note that an additional variable that might have had an effect (the ratio of English to French speakers in a community) was not a predictor of content.

Conclusion

This is a preliminary study of a large collection of text that seeks to link the content of that text to the source communities, processes and demographic characteristics of those communities. As such, it is a new and highly tentative foray into relatively uncharted waters. In addition to working with highly variable units for analysis (communities and their plans), we are also working with potential issues of coder reliability (although multiple steps and validation tests have been undertaken through-out the coding process to ensure inter-coder reliability), the

inherent inaccuracy of layering census sub-division data (which is a Statistics Canada, population-based unit) over those of municipalities (which are geo-political units), and the difficulty of building (somewhat) predictive models of type and content using still developing data sets that are not/cannot be truly representative. Similarly, as more plans are added and coded (particularly from Quebec), the distributive bias currently possible may become more apparent.

That said, our initial analyses do point to some patterns and relationships. While it may not be possible to truly model the content of sustainability plans, we have been able to identify and assess some of the linkages present. Specifically, we can now point to the importance of better understanding how distance (as a core defining factor in rural policy) can influence the structure (length) of sustainability-types plans. Perhaps more importantly, we can also begin to examine in greater detail the different ways in which community demographic and economic variables predict the form and content of plans (thus opening up much broader questions about the role, nature and effects of related factors not assessed here, such as the participatory and engagement strategies and behaviours present during the planning process), as well as how the differences between types of plans may present either a proximal or distal influence upon the content of plans themselves.

This point is perhaps the most interesting result from this study – that there is a statistically significant set of relationships between broad categories of different plans (and presumably the ways in which they were created) that could potentially extend beyond the tools, toolkits or processes used. While difficult to account for with these data, questions of framing, integration, prioritization and the style of plan content may all be worthy of additional investigation.

Ultimately, it is possible to draw a few general conclusions based on this study. As might be expected, we see that community characteristics do in fact matter, as do provincial variations and shifts in community population in determining plans and their content. This is a result of both policy choices (in some cases) but also of endogenous factors like population and mobility influencing process, content and style.

Additionally, we see some broader patterns of how rural community sustainability is framed and prioritized in Canada. Although ideally intended to be an integrative and integrated plan that covers multiple policy domains and sectors, not all plans give equal attention to the different pillars of sustainability. As might be expected from new, and relatively ambiguous elements of sustainability and sustainable development, cultural and governance-based sustainability tend to be lower priorities for rural communities. At the same time, social sustainability is often surprisingly important for many rural communities, and emphasized by many different forms of planning. While environmental and economic sustainability are highly ranked in general, there is significant variation between provinces (based on both a comparison of means and regression analyses), and perhaps not surprisingly, the plans from northern communities in the NW Territories and Nunavut (with very small n's) tend to favor social sustainability.

Overall, there is no clear provincial "winner" in terms of sustainability – the population, size or economic strength of a province is not a clear predictor of either engagement with sustainability planning, nor with any specific emphasis or priority for sustainability. Similarly, no one province stands out (see Table 2.0) as a leader in terms of emphasizing multiple pillars of sustainability. That said, a number of provinces do rank in the top 3 for more than 1 pillar (but never more than 2). Thus, Alberta, BC, Newfoundland and Labrador, Nova Scotia, the NW Territories and Prince Edward Island do have a somewhat more integrated set of priorities for sustainability (and this may reflect the tools and mandates driven by the different provincial governments). Notably, only 2 provinces emphasize the same pillars "equally" – both BC and Nova Scotia (forestry, shipping and fisheries dependent provinces) both rank highly for economic and environmental sustainability when compared to other provinces.

Naturally, these results need to be taken with significant skepticism. In addition to some of the methodological and operational issues noted above, these data are trying to capture broader patterns through still incomplete data. The continued construction of this data set (including additional variables not made available through Statistics Canada, such as the type of planning tool used, the addition of regional geographic data, the policy requirements for planning, indicators of capacity and well-being) may all add nuance to these results. These are, therefore, at best preliminary results, and even at their best, not necessarily very "good."

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