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Alberta's Priority Rural Policy Research Questions

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Abstract

In 2012, the Alberta Centre for Sustainable Rural Communities (ACSRC) adapted the collaborative approach taken by Sutherland, Fleishman, Mascia, Pretty, and Rudd (Sutherland et al., 2011) to create a list of Alberta's Priority Rural Policy Research Questions. This approach has primarily been used in the field of environmental conservation, however, it was noted early on that it could be "transferable to a wide range of policy or research areas" (Sutherland et al., 2011, pp. 238). Here, it was adapted to identify what research questions, if answered, could advance the knowledge base for policies and/or management strategies targeting or

supporting the sustainability and development of rural Albertan communities. This project and process were designed to aid rural communities in identifying their research needs and priorities, while creating a list of policy-oriented research questions that could be taken on by researchers. In addition to providing a typological analysis of the questions, we argue that such questions, and indeed this form of exercise, provide a contribution in the form of an agenda for rurally-based knowledge synthesis, translation, and exchange.

Keywords: policy, scanning, priorities, sustainability, decision-making

1.0 Introduction

Rural communities are often limited in their capacity to collect data, access resources, and conduct research to inform their decision and policy making (Caldwell et al., 2010). At the same time, there is increasing interest from funders, governments, and researchers in aligning the activities of researchers with the policy goals and priorities of communities (Caldwell et al., 2010; Beattie & Annis, 2008; Langille et al., 2008). Sutherland et al., (2011) note that prioritization exercises can speak to a number of audiences, including: (a) policy makers (decision-makers and practitioners in private, public and non-governmental organizations); (b) funders of research and programming; and (c) researchers. As this article demonstrates, an additional and potential high-impact audience may also lie with practitioners of knowledge synthesis, translation and exchange (KSTE), rather than researcher or decision-making audiences alone. While the specific uses may differ, the common goal is to better link all three audiences, both with each other, and with the information that can be made available through scientific research. Such linkages can contribute to relevant, timely, and legitimate solutions or initiatives for rural challenges, including both “monitoring for early warnings” and to “seek out and address blind spots and gaps in scientific knowledge” (Sutherland et al. 2011; p. 238).

Given the continued ambiguity and uncertainty in Alberta regarding rural development as a priority and policy domain, this approach was seen as a viable method for fostering collaboration and connections between policy and research communities. As a result, the ACSRC conducted a prioritization exercise in order to identify policy-relevant areas of research concern for rural Alberta in 2012. (Sutherland et al., 2011).

The specific goal of this exercise was to implement a collaborative and communicative process in order to discover what research question(s), if answered, could contribute to the advancement of policies and decision-making capacity at the municipal level for the sustainability and development of rural Albertan communities. In addition to generating a list of relevant and potentially implementable research questions, this project was guided by a series of higher-level objectives and goals. These are:

1. Identifying research questions that could increase or improve the effectiveness of decisions and policies/policy instruments related to rural community development (broadly defined);
2. identifying gaps and potential innovations in public policy that could support rural sustainability in the face of demographic/social change, economic stressors or ecological variation;

3. contributing to “horizon scanning” (Sutherland & Woodroof, 2009; Sutherland et al., 2010, 2011) – the systematic search for potential threats and opportunities within and for these communities; and
4. fostering targeted research (Nutley, 2007) to influence policy or practice related to:
 - rural community and development;
 - rural community capacity (to decide and implement decisions);
 - rural sustainability (environmental, economic, social, and cultural); and
 - rural resilience (defined here as the ability of a community respond to, of limit the effects of, both exogenous and endogenous stressors. These can include demographic change, climate change, economic crises or environmental variability).

This process is not designed to be a way for researchers to write policy, or for policy makers to decide science. Instead, it is designed to identify priority research areas (Sutherland et al., 2011) in order to meet the goals and objectives noted above. The approach is based upon: (1) an organizational process (undertaken by the PI and authorial team) to identify the project objectives and solicit suggested questions; and (2) an iterative editorial process where organizers and participants engage in a workshop in order to reduce the original list of suggests and produce a final list. Such lists are typically not ranked (ranking entails a different process of data collection and analysis – see for example Rudd & Fleishman, 2014), and the results are typically presented on a thematic basis.

It is important to note that, unlike other forms of research, the emphasis here is upon the question, rather than answering the question. This presents a common challenge to the collection, modification, and deliberation of these questions – participants are often pulled toward operationalizing and answering the question, rather than assessing the question against their individual and/or organizational priorities, as well as the selection criteria noted above. As a result, this paper does not make any effort to provide answers or a detailed explanation of how the questions might be answered – to do so is beyond both the scope of the exercise, and the precedent established by multiple other prioritization exercises. Instead, the emphasis is upon the identification, categorization and analyses of these priority questions in order to establish both a research and a KSTE agenda.

2.0 Method

2.1 Overview

As the methods, process, and benefits of this form of initiative are well-documented (see for example Sutherland et al., 2006, 2008, 2010, 2011; Rudd et al., 2011; Rudd & Fleishman, 2014), this paper will not focus upon the methodological or collaborative contributions of this project. Instead, and following the model put forward in publications driven by similar projects (see above), this paper presents the results of this collaborative undertaking. Specifically, based upon a combination of input and engagement from researchers, umbrella and non-governmental/community-based organizations, Aboriginal leaders, practitioner and research associations, as well as representatives from appropriate policy and governmental offices, this paper presents the research questions that, if answered, could inform or improve rural community development and sustainability policies and decisions in Alberta.

This project does differ from previous prioritization and ranking exercises in a number of ways: (1) this paper accepts the challenge extended by Sutherland et al. (2011) to apply the approach to a new policy area; (2) the focus is upon one province (The vast majority of published exercises have sought to establish national, or even international priorities); (3) this project explicitly seeks to link and include both scientific and policy-based questions.; (Some previous exercises have tended to focus on prioritizing research questions (Boxall et al., 2012) thus omitting the policy-based objective noted above); and (4) the unit of analysis is (as noted in item 2 above) focused upon provincial priorities. This project further emphasizes the importance of rural municipalities as a key input, and level of governance, for the generation of such questions. That said, many of the broader demographic, economic, social, and governance-based challenges presented in the province have counterparts in other parts of Canada (Douglas 2010).

2.2 Solicitation of Questions

The general process for determining priority questions hinges first upon a broad, wide-ranging call for content. As in other prioritization exercises, submissions of priority rural research questions were first obtained via a secure web-based interface hosted by the University of Alberta in late 2011. Participants were solicited on the basis of subjective sampling via email from the wide range of organizations working in rural research, policy and development across the province, as well as from public websites from organizations such as the Alberta Rural Development Network (ARDN) and Rural Alberta Development Fund. This included municipal and provincial governmental officials (elected and otherwise), rural research networks and connections, rural sustainability and development organizations, and faculty/researchers working in rural and rurally-linked areas. Participants were encouraged to distribute the call for questions to interested parties within their organizations, institutions and networks, and participants were able to: (a) submit multiple questions; (b) provide submissions multiple times; and (c) provide submissions through-out the 6 week period the website was active.

In order to minimize potential bias in the collection of initial questions, not only were contributors given ample opportunity to think about and submit multiple questions at multiple points in time, but there was no requirement to prioritize or rank-order submissions. As a result, contributions may/could reflect the activities or projects being undertaken by the contributor at that time, but given the snowballing circulation of the request, may either reinforce, or diversify, those priorities. However, since the purpose of this project was to identify important and relevant topics for inquiry, it is not necessarily a liability that the questions submitted are informed or premised upon work being done by policymakers, practitioners and researchers.

Instructions were based on those used in previous projects by Sutherland et al. (2009) and Rudd et al. (2011). Specifically, participants were asked: “What research question, if answered, would substantially advance the development or state of public policies, practices, and management strategies for rural development, sustainability, capacity, and resilience in Alberta?” Additional aspirational criteria for questions required that the questions:

1. be answerable through an implementable and realistic research design;
2. be answerable on the basis of fact;
3. be of a spatial and temporal scale that can be addressed realistically;
4. not be answerable with a yes/no or “it depends”;

5. contain a subject of intervention, an intervention and a measurable/evaluated effect related to that intervention or policy; and
6. increase the efficacy, scope or efficiency of policy related to rural development (Rudd, 2011).

90 questions were submitted through this process, and these questions were edited or removed prior to the workshop on the basis of: (a) the aspirational criteria noted above; and (b) redundancy and repetition. This created 45 questions for review and consolidation at the workshop phase, held in early 2012. 55 people were then invited to attend a selection and synthesis workshop from various organizations and communities across the province. Of those invited, 17 participants attended a one day workshop in Camrose, Alberta. Participants included members of the research community (n=3), representation from provincial government (n=2), representation from municipal government (n=8) and representation from umbrella and non-governmental organizations (n=4). A team of 4 staff from ACSRC brought the total to 21.¹

There are naturally some limitations to this approach. In addition to the breadth of the “rural development and policy” as subject matter, there is a very diverse and broad range of potential inputs. As Sutherland et al. (2012) note in their examination of a science-policy research agenda, (and unlike conservation biology, for example) there is no pre-defined or set research or policy community. Similarly, the outcomes of this process are influenced both by the subject matter and its current provincial salience, as well as the participants, process, and (to a lesser degree) organization of that process. While seeking to replicate the process and validity of similar prioritization exercises as much as possible, the scope, focus, and duration of this exercise (as in other exercises) are not “reproducible.” In other words, the priorities identified here are the result of not only the interests, concerns, and work of those who self-selected to respond and submit questions. The identical process (but with different participants) could produce a different set of questions. That said, as Sutherland (2012; pp. 2) notes, it is “highly likely that broadly similar general themes would emerge.”

2.3 Selecting the Priority Research Questions

In the second phase of this project, a workshop was designed to select the priority questions, based upon the process developed during the UK and US-based conservation priority-setting exercises. It began with a plenary session to provide an overview, explanation and context of the process to date. The majority of the workshop was then spent in two breakout sessions (90 minutes each) composed of two concurrent groups, creating four sessions in total as well as the introductory and concluding plenaries. Participants changed groups between the two breakout sessions in an attempt to ensure a relatively even distribution of participants throughout the review of the full set.

Each breakout group was provided with a topically grouped set of 10-15 questions, and participants were asked to consider/narrow/modify the questions to generate a set of five candidate questions for the ‘Top 20’, as well as two “back-up” questions. Participants were able to combine questions, develop alternative questions that draw from key themes or issues present, and refer back to the original submissions. This

¹ All 45 questions are available upon request from the authors.

created a list of “core questions” as well as 8 back-up questions, which then formed the subject matter for the deliberative process of the final plenary session.

The concluding plenary session was a facilitated² consensus-based exercise in which the final priority questions were edited and selected. Again, questions were reviewed and discussed against both the aspirational criteria noted above, as well as the paired criteria of scientific plausibility and feasibility, and policy-based relevance and applicability. As an informal guide to question scope, participants were asked to consider how the question might work as a starting point for a \$1 million, five-year research project. After much discussion, re-writing and synthesis, the final results present 17 top research questions.

3.0 Results

3.1 Priority Questions:

1. What are the (sustainability) effects of piping water to outlying communities (e.g., Edmonton water to Viking)?
2. What are the barriers, and how do we overcome them to the development of alternative energy resources?
3. What is the value (economic, social, cultural) of natural capital in rural Alberta (wetlands, carbon sequestration, biodiversity, nature related recreation and tourism, open spaces, scenic vistas, etc.)?
4. What provincial funding mechanisms would best serve rural municipalities and communities?
5. What are the implications/effects (economic, social, community, etc.) of enhancing (or costs of doing nothing) lifelong educational opportunities in rural (Alberta)?
6. What regulatory policies and structures need to be developed or changed to enable a safe, Alberta food system that supports local food production and distribution?
7. What infrastructure is necessary to maintain the long-term sustainability of rural communities (at an individual community level)?
8. In what ways can rural businesses be supported? E.g., reducing leakage, local procurement, buy local, taxation, etc.
9. What model for continuing care is most appropriate to small communities?
10. How do we enhance/increase volunteerism in rural communities?
11. What are the other incentives (financial, cultural, social, professional status, etc.) that attract and retain health care providers?
12. How do you attract people to your community in order to ensure vibrancy and resilience?
13. What is the social value in having local businesses?
14. What are the challenges for formal and informal leadership in rural communities? (regional collaboration, centralization, retention of leaders, legislation, and community engagement)
15. How can technology and (with) policies be used to improve rural quality of life?
16. Is it important to keep farm families farming (e.g., for food sovereignty, rural development, etc.)?
17. Why do some rural communities thrive while others fail? What are the changeable characteristics or attributes (of success and failure)?

² The facilitator has served in a similar role at other prioritization exercises.

3.2 Policy, Research and Knowledge Transfer for Rural Canada

The seventeen questions produced by this workshop can be categorized in three different ways: (1) distribution across different geographic scales; (2) emphasis upon research vs. practice/policy; and (3) variable content regarding the different dimensions of sustainability. Given these three different categorizations, some broader trends emerge from these data: (1) These seventeen questions are exclusive to Alberta, but are likely applicable to rural communities across Canada, as variants of many of these questions have sparked research activity in the past; (2) the majority of questions emphasize the practitioner/policy perspective. This is (in part) an anticipated result given the purpose of the exercise and the distribution of participants, but it also reflects a nuance of identifying knowledge gaps. Although this workshop was designed to identify research gaps in rural development, our results instead indicate a “knowledge transfer gap”, where existing research can be brought to bear upon many of these questions; and (3) the distribution of questions across a 5 pillar model of sustainability provides some insight into the broader priorities for rural communities in Alberta (with the most common questions being social, then economic, then governance-based). Such results are consistent with other analyses of sustainability in rural Canada, which also show a tendency of rural communities to emphasize socio-cultural and environmental dimensions of sustainability (Dipa & Hallstrom, 2014; Hallstrom et al., 2014).

3.3 Distribution and Content of Questions

Table 1 categorizes the seventeen questions by two variables: dimension of sustainability and geographic focus. This cross-tabulation serves two purposes: (1) to indicate the application or focus of the questions; and (2) to demonstrate the distribution of questions across both content and geographic scale. As can be seen from the questions themselves and Table 1, the majority of questions are not specific to Alberta, nor to any single province or region. While there will naturally be some variation between provinces in terms of which questions are selected as priorities, what is notable about these results is less their generalizability, and more how they serve as an indicator of a potentially broader pattern facing rural communities in Canada.

Specifically, this distribution of questions across local, provincial, and national scales may be indicative of a broader pattern of differentiation that is applicable to rural communities. While typically conceptualized as a factor in experimental design, considering between and within-group differentiation may provide some insight into both of these results, and the broader pattern of rural community sustainability in Canada. While a number of rural authors have emphasized the uniqueness or singularity of rural communities (see for example Douglas, 2010; Flora et al., 1992), those differences should be conceptualized and framed within two different comparative scales: within group (in this case, Alberta) and between group (hypothetically, in this case, the rest of Canada). While a national scale prioritization exercise has not yet taken place (and only a small number of comparable provincial exercises – see for example Caldwell et al., 2010), the general applicability of these questions to other regions points to the possibility of: (1) potentially high levels of within-group differentiation (as would be expected given the geographic, economic, demographic and environmental/resource differences across the Province of Alberta): and (2) relatively low between-group differentiation between Alberta and other provinces/regions of the country.

This should not be taken as an argument for the homogeneity of rural communities across Canada – far from it. Although the questions from this process point towards a common core of sustainability-related interests nationally, the differences at the local, regional and provincial level must still be acknowledged. Therefore policy makers, government and planner need to acknowledge local difference and empower local government to make evidence informed decision making. Evidence does not only include academic research but also local knowledge that when combined will allow rural communities to make locally-based evidence informed decisions.

Such results suggest both the need and benefits for provincial and national versions of this exercise, as well as the realization that such a combination of between and within-group differentiation raises distinct and important possibilities for comparative and inter-regional research and knowledge transfer work. Thus, if these broader patterns do hold (and acknowledging that there will always be unique factors at play in each region, whether the challenges present in coastal communities, energy industry dependent communities or Northern, remote, and Aboriginal communities) much may be gained by formulating research and knowledge exchange that recognizes and compares not just across provincial systems (i.e., what is often an implicit most different systems design) but rather pursues research, knowledge exchange, and comparisons across issue areas (i.e., most similar system design). As a starting point for understanding where those issue areas fall, we may, in turn, examine how many of these issue areas can be categorized under a 5 pillar model of community sustainability.

3.4 Community Sustainability and Rural Priorities

The Government of Canada has identified municipal sustainability as a core policy priority since 2005, and has undertaken a number of strategies to encourage municipalities across Canada to embrace sustainability as a driver for municipal planning, decision-making, and operations (Hallstrom et al., 2015; Hallstrom & Dipa, 2014). Since 2005, the Government of Canada has offered municipalities the possibility of conditional funding through the Gas Tax Fund, tied to the development of municipal sustainability plans (or some variant thereof). This funding is designed to invest in municipal infrastructure and to “provide predictable and long-term funding for Canadian Municipalities” (Infrastructure Canada, n.d.), with the broader policy goal of engaging municipalities in a more holistic, forward thinking approach to planning and policy. As such planning is, by definition, intended to be integrated, integrative, and ideally participatory, such activities present both a priming opportunity for Albertan rural communities in terms of this exercise (in order to qualify for Gas Tax Fund support, communities had to file their plans in late 2011), as well as potentially sparking a greater awareness of the need for multi-domain policy and research at the municipal level.

Such levels of integration across policy domains, while relatively new, are consistent with both a broader recognition of just how complex socially-relevant policy problems can be, how inter-sectoral many issues are, and how targeting single-sector issues (such as economic development or homelessness) often neglects the “upstream” or distal causes of that problem. Beginning with the energy crisis periods of around 1970s and 1980s, many planners realized the importance of incorporating environmental aspects into community planning, and greater attention was given to 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). 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. These plans are intended to speak to many, if not all of the pillars of sustainability, yet as our results demonstrate for Alberta, the priorities for research (and knowledge transfer) are not as equally distributed as the shift toward sustainability planning might indicate.

Table 1. *Priority Questions Matrix: Pillars of Sustainability and Scale*

| Sustainability | Geographic Focus/Scale | | |
|----------------|------------------------|------------|----------|
| | Local | Provincial | National |
| Social | | 1 | 5 |
| Environmental | 1 | 1 | |
| Economic | | 2 | 2 |
| Cultural | | | 1 |
| Governance | | 1 | 2 |
| All Dimensions | | | 1 |

The table above illustrates the distribution of the seventeen questions over all five dimensions of sustainability. Although all five dimensions of sustainability are represented in these seventeen questions, the distribution across pillars is far from equal, and demonstrates that social and economic concerns are among the most pressing issues within rural communities in Alberta. In fact, socially-targeted concerns (6 in total) are equal to all questions addressing environmental, cultural, and governance pillars combined.

Although relatively minor in comparison, it is interesting to note the content of questions targeting governance concerns in rural communities. Focused on funding (fiscal policy), leadership and regulatory policy/capacity (for food systems), this combination of questions in many ways embodies some of the core sustainability challenges for rural communities, namely: (1) the difficulty of actually leading and governing rural communities (present in terms of developing/recruiting both elected and un-elected leaders in aging and often shrinking populations; (2) accessing and maintaining funds for infrastructure, municipal operations, new initiatives and programming in the face of declining program budgets, increased responsibility and increased competition for resources (Federation of Canadian Municipalities [FCM] 2012; Honadle, 2001); and (3) gaining the authority and capacity to regulate or modify industrial practices (here agriculture) in order to improve or ensure quality of life and sustainability of the community. These challenges, while local and operational in nature, also speak to the larger context of rural governance in Canada, where the combination of shrinking populations (Irshad, 2013), single or dual sector industrial dependency (Stedman, Parkins, & Beckley, 2004), declining social

networks, and diminishing federal and provincial funds for municipalities further complicate both municipal governance and sustainability.

4.0 Priority Questions—Dimensions of Sustainability

4.1 Social Sustainability

This dimension focuses on the role of people and society in building sustainable communities (Redclift, 1992). Social sustainability is most commonly defined by its focus on social equity, social justice, and welfare between citizens today and future generations (Partridge, 2005; Vifell & Soneryd, 2012; Scott, Park & Cocklin, 2000). The social dimension of sustainable development is often the most ambiguous within the three dimension of sustainability (Partridge, 2005; Vifell & Soneryd, 2012; Scott et al., 2000). Nurse (2006) further identifies that a key element of the social dimension of sustainability is equitable resource distribution—this could entail equal distribution of economic resources, as well as social resources such as health care and education.

Questions:

1. What are the implications/effects (economic, social, community, etc.) of enhancing (or costs of doing nothing) lifelong educational opportunities in rural (Alberta)?
2. What model for continuing care is most appropriate to small communities?
3. How do we enhance/increase volunteerism in rural communities?
4. What are the other incentives (financial, cultural, social, professional status, etc.) that attract and retain health care providers?
5. How do you attract people to your community in order to ensure vibrancy and resilience?
6. What is the social value in having local businesses?

4.2 Economic Sustainability

Although the discussion of sustainable development began with a focus on the environment, it did not take long for this focus to shift. It is now common for economic development to be seen as the top priority for sustainable development (Drexhage & Murphy, 2010; Partridge, 2005; Scott et al., 2000; George, 2007). This dimension focuses on finding a balance between the costs and benefits associated with economic activity and development (Nurse, 2006).

Four priority questions were generated that speak directly to economic sustainability and development. This ranges from issues of fiscal policy (i.e., infrastructure and funding transfers) to the development of the private sector:

Questions:

1. What provincial funding mechanisms would best serve rural municipalities and communities?
2. What infrastructure is necessary to maintain the long-term sustainability of rural communities (at an individual community level)?
3. In what ways can rural businesses be supported? E.g., reducing leakage, local procurement, buy local, taxation, etc.
4. What are the barriers and how do we overcome them to the development of alternative energy resources?

4.3 Governance

When considering governance as a dimension of sustainability, it is important to recognize that the focus is not only on the institutionalized political structure (such as town council, legislature, etc.), but that it also includes the informal structures such as the volunteer sector and community groups within a community (Goodwin, 1998). This becomes particularly important in rural communities where the lines between the states and civil society are not as clearly drawn (Milligan & Conradson, 2006). Governance has been added (along with culture) to Brundtland's three dimensions of sustainability because "governance touches all aspects of our lives" (Goodwin, 1998, pp. 1). It reflects (unlike the term government) the ACT of governing – an activity that engages (and excludes) a wide variety of actors, organizations and agendas in rural Alberta.

Rural communities may often face different governance challenges than larger communities (Jacob, Lipton, Hagens, & Reimer, 2008). In order to address these challenges, different networks spanning both social and political jurisdictions are required, and their successful creation and operation often hinges on social capital (Hajer, 2003). Trust, interdependence, and institutional capacity are key elements of social capital that must exist in order for rural communities to govern successfully (Hajer & Wagenaar, 2003).

Three governance/policy specific questions were identified:

1. What regulatory policies and structures need to be developed or changed to enable a safe Alberta food system that supports local food production and distribution?
2. What are the challenges for formal and informal leadership in rural communities? (regional collaboration, centralization, retention of leaders, legislation, and community engagement)
3. How can technology and (with) policies be used to improve rural quality of life?

4.4 Environmental Sustainability

The concept of sustainable development first emerged from discussions held by the international community regarding the state of the environment. Specifically, the Rio Earth Summit in 1992 first publically recognized the dire state of the global environment (Drexhage & Murphy, 2010). Not long after, the United Nations released Agenda 21, a global plan of action for sustainable development. This document recognized the responsibility of every country to help end global environmental degradation. It also outlined how society and the economy both need a healthy environment to survive, that it should be our goal to "to restore and maintain the health, sustainability and biological diversity of ecosystems while supporting sustainable economies and ecosystems" (O'Riordan & Stoll-Kleemann, 2002, pp. 298).

Two priority questions emphasized environmental sustainability in Alberta—the first concerned with the movement of a core natural resource (water) the second with the valuation of natural capital:

1. What are the (sustainability) effects of piping water to outlying communities (e.g., Edmonton water to Viking)?
2. What is the value (economic, social, cultural) of natural capital in rural Alberta (wetlands, carbon sequestration, biodiversity, nature related recreation and tourism, open spaces, scenic vistas, etc.)?

4.5 Cultural Sustainability

Culture is an important aspect for all communities, including both rural and urban. To create sustainable communities we must recognize the role of culture, not only in the arts and heritage but also in the broader definition of culture as a “way of life” (Nurse, 2006). Culture “covers both the values upon which a society is based and the embodiments and expressions of these values in the day-to-day world of that society” (Hawkes, 2001, pp. 3). Although culture is not one of the three original dimensions of sustainability, arguments have been made for its inclusion (Duxbury & Jeannotes, 2010; Hawkes, 2001).

Despite often being included within the social dimension of sustainability, Duxbury & Gillette (2007), Nurse (2006), and Hawkes (2001) have all made a case for culture inclusion as a distinct and separate dimension of sustainability. The problem with seeing culture as a distinct dimension lies in the narrow definition that we often assign to the term culture, a definition that views it as nothing more than cultural capital, a commodity that can be used (Duxbury & Gillette, 2007; Nurse, 2006). However, culture is more than simple capital. Culture is art, tradition, and values. It has the ability to create purpose and meaning; it brings people together and gives them identity (Nurse, 2006; Hawkes, 2001; Duxbury & Gillette, 2007).

Only one question fell within this category, and it emphasizes the cultural importance of agriculture to rural Alberta (although it may also be interpreted as an economic, social, and even environmental question):

1. Is it important to keep farm families farming (e.g., for food sovereignty, rural development, etc.)?

5.0 Other Questions

The last question identified by this process does not fit into one particular dimension of sustainability; instead it encompasses all five dimensions of sustainability:

1. Why do some rural communities thrive while others fail? What are the changeable characteristics or attributes (of success and failure)?

This question is focused on the resilience of rural communities. Often defined as the ability to come back or return to “normal” after an external disturbance, (which can be environmental, economic, or social - see for example Shaw & Maythorne, 2012). How communities respond to these disturbances will determine whether they will thrive or fail. Dollevoet & Parkins (2010) write that communities can respond in a positive manner by “accessing information, taking advantage of opportunities, building on local assets and resources, and forging a new future” (Dollevoet & Parkins, 2010, p. 3). Or, they can choose to do nothing. This question ultimately encompasses all of the questions before it, and acknowledges the fact that all dimensions of sustainability must be considered for this question to be effectively answered.

6.0 An Agenda for Knowledge Translation and Transfer?

Although the original impetus for this project was to identify both research and policy questions for rural communities in Alberta, the results also demonstrate a knowledge gap between research communities and rural municipalities. The seventeen questions produced here show that new research is not necessarily a panacea for rural community sustainability and development. Rather, the commonalities, applicability, and scale of such questions points to the possibility and importance of maximizing the

impact of existing research. In other words, pronounced efforts are required to identify, synthesize, and mobilize research that can be translated to municipalities in order to support evidence-informed decision making in rural communities. As has been noted by Beckley et al. (2008), Kulig (2008) and others, capacity (across a number of different dimensions) is often limited in rural communities, and this issue is often particularly notable in terms of community and municipal planning, policymaking and design, policy analysis, and program evaluation. Providing evidence to support both decision-making, and implementation, is a potentially significant addition to rural community capacity-building.

The results of this exercise, therefore, may also be interpreted as setting out a preliminary agenda for knowledge transfer, both within Alberta, and potentially beyond. As noted by Kiefer et al. (2005, pp. I-6) “knowledge exchange and uptake strategies are... critical components... to support evidence-based decision making”. Such components hinge upon an interactive process of engagement and exchange between research producers and research users, and in particular the realization that: (1) successful uptake of research into practice and decision-making requires more than a one-way “supply” of research results and analyses (and often hinges upon significant interaction and often inter-personal contact (Lavis et al., 2003); and (2) the simple provision of evidence is in no way a guarantee or indicator of uptake (Lawton, 2007). While the complexity of rural development and rural communities greatly inhibits the probability of a successful, linear model of evidence-based or evidence-informed policy (Pielke & Rayner, 2004), this exercise may still serve to support a number of different, knowledge exchange functions:

1. Agenda-setting: As noted in the benefits and objectives for this and similar prioritization exercises (see above), the questions provided here give some indication as to provincially-based needs for research, evidence, and knowledge transfer;
2. Policy capacity-building: The 17 questions generated by this exercise speak to numerous points along the policy process, including problem identification, policy design, implementation, and evaluation. As a result, these questions can serve as more granular indicators of where in the policy process both gaps and strengths exist in terms of research activity, evidence, interventions, and knowledge transfer; and
3. Indirect and cumulative effects: As noted by Owens (2005), science-based results are very rarely adopted directly into political decision-making. Instead, there may be gradual, indirect, and even unanticipated diffusion or absorption of scientific knowledge into public policy. While such absorption may have little to no immediate impact, it may generate additional benefits, such as:
 - a. Changing contemporary political wisdom;
 - b. Encouraging greater interaction between the research, practitioner and decision-making communities;
 - c. Increasing trust and understanding between research, practitioner and decision-making communities; and
 - d. Increasing opportunities for partnerships, collaborative research and capacity-building for both research and decision-making communities, particularly in terms of implementation, evaluation, and policy/program design.

Such benefits are particularly important for, and well-suited, to knowledge transfer and rural communities. Despite the presence of rural research centres, non-governmental organizations and networks across Canada (as well as internationally), as well as various agenda-setting, knowledge transfer and networking initiatives conducted at the local and regional scale, there has been only limited attention, energy, and funding dedicated to rural knowledge transfer and exchange. Other fields of policy and practice in Canada (such as public health) have undertaken pronounced efforts to improve the uptake of research and evidence-based practice in the field—such an initiative may also yield benefits for rural decision-making.

7.0 Conclusion

This project was designed to identify priority research areas (Sutherland et al., 2011) in order to meet the goals and objectives of: (1) identifying research questions, (2) identifying gaps and potential innovations in public policy, (3) contributing to horizon scanning, (4) fostering targeted research related to rural municipalities in Alberta.

As stated above, this project differs from previous prioritization and ranking exercises in a number of ways: (1) this paper focuses on rural policy; (2) the focus is upon one province (Alberta); (3) it includes both policy and research dimensions. The results presented here confirm that issues such as water (Young, Okada, and Hashimoto, 1980), alternative energy (Caldwell et al., 2010), provincial funding (Honadle, 2001), resiliency (Albertan Urban Municipalities Association [AUMA], 2006; Clutterbuck & Novick, 2003), infrastructure (Canadian Infrastructure Report Card [CIRC], 2012, FCM, 2012), rural business development (Bosworth, 2009; Lowe & Talbot, 2000), health care (Dandy & Bollman, 2008; Alberta Health and Wellness [AHW], 2008; Institute for Continuing Care Education and Research [ICCE], 2012; Irshad, 2013; Torgerson, Lait, Armitage, Linder, Hepp, Jackson, & Suter 2012), volunteerism (Mireille & Crompton, 2012) and life-long learning (Benseman, 2006) are priorities for rural development in Alberta, and may have application in other regions of Canada.

Although the process is designed to emphasize and generate research questions, we found that twice as many policy and practitioner-oriented questions were drafted as opposed to research questions. This, particularly in combination with the applicability of many of the questions to communities and regions beyond Alberta, points to both the importance and potential of not only replicating this study in other provinces (and potentially at the national level), but also targeting efforts upon knowledge synthesis, translation, and exchange (KSTE) activities.

In keeping with this, as early as 2000, the Government of Canada identified six general principles to guide the application of science to governmental decisions. These principles include communication, diversity of thought and opinion, rigorous review, maintaining openness and transparency, assessing, communicating and managing risk, and reviewing key decisions in light of new or advancing knowledge (Government of Canada 2000; see also Rudd et al., 2011). This process, and others like it, align with these broader principles, and the results (as presented here) have the potential to not only support rural community development, but to do so in a way that links the social, natural, and applied sciences, and to foster better alignment and trust between the research and policy communities in rural Canada.

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