



Cultural Indicators Literature Review

DEVELOPING THE COLUMBIA BASIN RURAL DEVELOPMENT INSTITUTE'S CULTURAL RESEARCH PILLAR

Part of a series of research papers on indicator development for the State of the Basin project in the Columbia Basin Boundary Region

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The Columbia Basin Rural Development Institute, at Selkirk College, is a regional center of excellence in applied research and information provision focused on strengthening rural communities in the Columbia Basin Boundary Region. Visit www.cbrdi.ca for more information.

CONTENTS

THE STATE OF THE BASIN INITIATIVE.....	1
OBJECTIVES	1
HISTORY	1
INDICATOR MODEL.....	2
RESEARCH FRAMEWORK	3
INFORMATION PRODUCTS, TOOLS, AND SUPPORT	3
MEASURING CULTURAL WELL-BEING	4
WHAT IS CULTURE?	5
WHAT IS CULTURAL WELL-BEING?	6
MEASURES OF WELL-BEING	7
INDICATORS OF WELL-BEING	8
CULTURAL INDICATORS.....	8
DEVELOPING CULTURAL INDICATORS	11
APPROACHES	11
INSTRUMENTAL APPROACH	11
INTRINSIC APPROACH	12
INTEGRATED APPROACH.....	13
KEY FACTORS IN DEVELOPING CULTURAL INDICATORS	14
PURPOSE	14
ENGAGEMENT	17
DATA	18
RESOURCES.....	21
CULTURAL MAPPING.....	22
POSSIBILITIES FOR MEASURING AND MAPPING	24
CONCLUSION	28
REFERENCES.....	30

THE STATE OF THE BASIN INITIATIVE

The State of the Basin is an indicator and monitoring program originally developed by Columbia Basin Trust (CBT). Now a project of the Columbia Basin Rural Development Institute (RDI), the State of the Basin initiative involves collecting, analyzing and reporting on indicators in order to build an up-to-date and dynamic picture of the vitality of communities in the Basin Boundary region.

OBJECTIVES

When originally envisioning the State of the Basin, CBT developed the following four goals. These goals collectively define the purpose of the initiative:

- **inform** citizens and organizations about the people, natural environment, communities, and economy of the Basin by providing access to accurate, credible, and timely information,
- **encourage** understanding of complex issues and trends over time, including into the future when possible,
- **signal** whether conditions are similar or different within the Basin, and in comparison to other areas to highlight and celebrate areas of achievement, and to identify significant issues, ideally before they become critical, and
- **motivate** discussion, information sharing, strategic evidence-based decisions and collective action.

HISTORY

In 2006, CBT responded to long-standing requests for information on social, economic, environmental and other trends in the Basin by launching the State of the Basin initiative. Resulting from the work of project consultants, a volunteer working group, CBT staff and more than 50 expert advisors, the first State of the Basin report was released in 2008. This report was accompanied by a website that provided access to updated trend analyses and raw data. In order to support the application of available information, the State of the Basin initiative also provided support to individuals and communities interested in understanding and using the data. The purpose of the 2008 State of the Basin Initiative was to test the concept of indicator reporting in the region by presenting a sample of credible, locally relevant information.

Response to the 2008 project indicated that the State of the Basin initiative addressed an important need for information in the region, and that future iterations would be of benefit to local communities and organizations. Acknowledging the links between the objectives of the State of the Basin project and the mandate of the RDI, CBT transferred responsibility for the project to the RDI in 2011. Because the RDI's service area includes the entire Basin Boundary region of BC, the geographic scope of the State of the Basin has expanded beyond the area defined by CBT as "the Basin" to include a portion of the Regional District of Kootenay Boundary referred to as "the Boundary region" (figure 1).



Figure 1: The Basin Boundary Region

In 2012, the RDI developed an updated State of the Basin report using the same, or similar, indicators that were used in the 2008 version. However, the 2013 State of the Basin project will incorporate a significant revision to the suite of indicators monitored through the initiative. The future focus of the State of the Basin will be on researching and reporting on information that is of the highest value to Basin Boundary communities. In order to ensure the State of the Basin achieves maximum relevance and utility, consultation with key stakeholders and user groups will be an important component of the indicator development and reporting process.

INDICATOR MODEL

The State of the Basin uses an indicator model to report on the status of well-being in the Basin Boundary region. Indicator reporting is a growing trend among organizations that operate at various geographic scales (from global to neighbourhood-specific) and with varying scopes of interest (from those as broad as well-being to those as specific as financial performance). By distilling complex information into easily understandable measures, indicators help diverse audiences, with widely ranging backgrounds, to understand important trends.

As part of the 2013 State of the Basin update, the RDI completed research on best practices in indicator reporting and on lessons learned from the 2008 report development process. This literature review adds context-specific discussion to that research.

RESEARCH FRAMEWORK

The RDI has developed a new State of the Basin research framework which, similar to the 2008 framework, is centred on the concepts of well-being and sustainable development. The new framework organizes research efforts into four “pillars” – society, culture, the environment, and the economy—each of which have several defined sub-themes (figure 2).

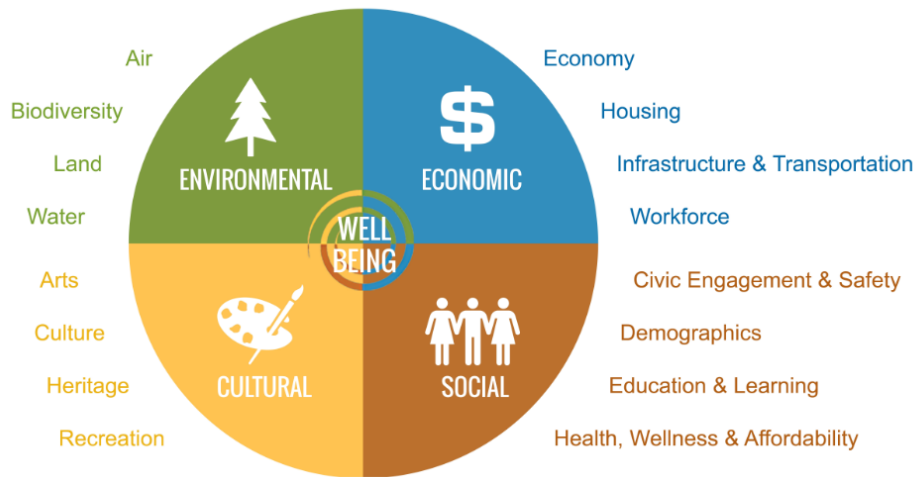


Figure 2: Revised State of the Basin research framework

Many indicator projects adopt a similar approach to research, understanding that “well-being” or “sustainability” are difficult concepts to measure in themselves. Instead, progress toward achieving those goals can be measured through an assessment of conditions in more narrowly-defined realms of influence.

In the literature on indicator reporting, a strong case is made for linking environmental, economic, social, and cultural indicators through a common lens such as well-being or sustainability. By adopting this approach, the State of the Basin initiative explicitly acknowledges that community vitality is dependent on the strength of all four pillars and that the environment, the economy, culture and social systems are very much interconnected. A change in conditions in one pillar or sub-theme not only affects the overall measure of well-being, but it can also affect the status of other pillars or sub-themes. Exploring these inter-pillar relationships will be a priority for State of the Basin research.

INFORMATION PRODUCTS, TOOLS, AND SUPPORT

State of the Basin research will be made available to Basin Boundary communities in a variety of formats:

1. A snapshot report will provide an overview of the project and quick, interesting research findings in a format that will be accessible to a wide audience.
2. A full report will provide in-depth discussion of each indicator, including its relevance, current status and an analysis of regional trends.
3. The “Digital Basin” will provide web-based data tools, including:

- a. an interactive and customizable map displaying spatial features of all relevant indicators, as well as environmental, economic, social and cultural assets in the region,
- b. a customizable data viewer that allows for analysis and comparison of indicator data over time and space, and
- c. a resource library that will allow users to download supporting documents (plans, reports by other organizations, etc.) for independent analysis.

In addition, the RDI will support development and use of State of the Basin research in Basin Boundary communities by:

- liaising with key economic, social, cultural and environmental stakeholders to better understand their information needs and research capacity (such as the ability to collect and use related information),
- identifying opportunities for local data collection by key stakeholder groups,
- providing direct research support, standardized data templates, training and support materials focused on the collection and use of indicator data,
- promoting and facilitating the sharing of information and best practices across key stakeholder groups, and
- exploring opportunities to link the State of the Basin initiative with K-12 and post-secondary student learning.

MEASURING CULTURAL WELL-BEING

Economic, environmental, and social indicators, while continually evolving, are common and have a suite of measures that are widely used. Designed on the concept of the three legs of the sustainable development stool, these three pillars have become familiar measures of well-being and sustainability around the world (World Commission on Environment and Development, 1987). While culture has in the past been considered all-encompassing within each of the three pillars, it is now frequently considered a fourth leg of the stool (Willard, 2010; Hawkes, 2001; Yue et al., 2011; Stanborough, 2011). Economic, environmental, and social indicators were keystone in the 2008 and 2012 State of the Basin reports. Culture is a new pillar, and currently under development.

Some initial cultural data for the Columbia Basin Boundary Region has been collected through the 2012 State of the Basin project. A random sample of 400 residents completed a telephone survey, where they were asked to rate their level of satisfaction with respect to several well-being measures, including economic, environmental, social, and cultural factors. Based on this sample, 42% said they “take advantage of cultural opportunities” and “agree that cultural opportunities generate economic revenue for the region and residents have diverse cultural opportunities”. Results indicate that 76% report “a strong sense of belonging to their community”. RDI’s Business Retention and Expansion project also provides some interesting information about the importance of culture in the region. Based on data analysed thus far 73% of businesses said that “the cultural / recreational amenities of the region are excellent or good”.

We know culture is integral to well-being, and we believe that cultural vitality is of significance to the people of the Columbia Basin Boundary Region. The challenges RDI faces as a research institute include thinking about questions such as: What do residents and community leaders want to know about culture? How do we best monitor our culture, and our cultural resources and assets? What do we need to know in order to make good decisions about culture, and to ensure our culture flourishes into the future? RDI seeks to understand how to best approach cultural research for the region. A critical first step is to conduct a literature review on cultural indicators, cultural development, and cultural policy and planning. This literature reviews aims to inform the development of a robust cultural research pillar.

WHAT IS CULTURE?

Often one of the first challenges is for an organization to define what is meant by culture. The definition of culture is as diverse as the people and processes it attempts to describe. The variety of definitions relates to the interdisciplinary nature of the study of culture. An anthropological view may see culture as “the whole way of life of a people” (Jenks, 1993, p.157), and includes the study of past cultures and civilizations. Velkey (2002) offers a definition that describes culture as a cultivation of the soul and/or mind. World renowned anthropologist and ethnobotanist, Wade Davis, describes culture as the answer to the question: what does it mean to be human and alive? (Davis, 2007), and argues that our “ethnosphere” is seriously under threat (W. Davis, personal communication, April 3, 2013). We are losing cultures at an unprecedented rate, along with the loss of global biodiversity.

It is possible to define culture broadly to include virtually every aspect of the social, political, intellectual, religious and artistic life of a people (Pattanaik, 1997, p.5). Culture is often regarded as the whole of human experience in relationship, such as “the totality of experiences that provide a coherent identity and sense of common destiny to a people” (Eldridge, n.d., n.p.). These broad definitions illustrate a view of culture as a unifying process; “a way of life” where a shared understanding or social cohesion exists (Bianchini, 1993). Culture can also be defined more narrowly, where it sometimes regards only the creative practices of a few (Jenks, 1993). One definition in the Concise Oxford Dictionary (1990) sees culture as “the arts and other manifestations of human intellectual achievement regarded collectively”.

Government cultural statistics agencies around the world acknowledge there is no standard definition of culture, and Statistics Canada affirms there is no standard definition used for statistical purposes (Statistics Canada, 2011; Ministry for Culture and Heritage, 2002). For the purposes of Statistics Canada’s “Conceptual Framework for Culture Statistics 2011”, culture is defined as the “creative artistic activity and the goods and services produced by it, and the preservation of heritage” (p.9).

By nature, culture is a highly qualitative subject. It can be regarded at scales as small as a group, such as a sporting team, and as big as a nation, such as a distinct aboriginal nation or an entire country. Culture is dynamic, emergent and continually under renewal (Jenks, 1993). The process of culture, along with the manifestation of a diversity of sub-cultures, forms new ways of knowing

and meaning, and creates new norms of behaviour and being. The United Nations Educational, Scientific, and Cultural Organization (UNESCO) says “culture should be regarded as the set of distinctive spiritual, material, intellectual and emotional features of society or a social group... it encompasses, in addition to art and literature, lifestyles, ways of living together, value systems, traditions and beliefs” (Badham, 2010, p. 11). Culture is always evolving, and a major driver of cultural evolution is imagination (Ehrlich and Ehrlich, 2008). The all-encompassing, highly qualitative and active nature of culture makes it fascinating to study, and extremely difficult to ‘measure’.

While it may not be necessary for RDI to decide on a specific definition of culture, it is important to consider that there are many ways to understand culture and residents may perceive what is meant by culture differently. There is the aboriginal culture that was first established in the region. Through colonization, another culture prevailed. Now we have a diversity of sub-cultures within a dominant culture. The term ‘culture’ has been and will continue to be used in a variety of ways, with different meanings (Trewin, 2006, p.3). Using a broad and inclusive definition of culture for cultural research purposes is suggested by several authors, particularly in the early stages of research development.

WHAT IS CULTURAL WELL-BEING?

Another aspect is what is meant by ‘cultural well-being’. RDI will need to decide what is included in the cultural research pillar, and ensure there is a shared understanding by the creators and users of the cultural information generated. At this stage, RDI is approaching culture with a broad view, and is incorporating four main components: arts, heritage, culture, and recreation. The definition of cultural well-being employed by the Ministry for Culture and Heritage in New Zealand (2002) offers an inclusive definition that could be utilized for the Columbia Basin Boundary Region:

“Cultural well-being is the vitality that communities and individuals enjoy through: participation in recreation, creative and cultural activities; and the freedom to retain, interpret and express their arts, history, heritage and traditions.” (n.p.)

The cultural research pillar could include a vast array of activities and initiatives as cultural well-being lies at the heart of a healthy community and society (Ministry for Culture and Heritage, 2002, n.p.). The components in RDI’s cultural research pillar will evolve as research advances and with the engagement of residents, and cultural and community leaders. The integrated nature of culture with environment, economy, and social well-being, and the overlap with these pillars will also have influence.

Recognizing the inherent challenges in describing and monitoring cultural well-being, it is important to survey a broad range of approaches and experiences. This will help to form a suitable approach for the Columbia Basin Boundary Region, meet the goals of RDI’s applied research, and provide residents with useful and meaningful information. We will begin with an overview of approaches to measuring well-being.

MEASURES OF WELL-BEING

Many authors discuss the need for new measures of 'progress' – new ways to monitor well-being. Historically, the Gross Domestic Product (GDP) has been widely used for this purpose and Statistics Canada continues to use it as the basis of various analyses, including relying on it for their cultural statistics framework. Costanza et al. (2009) indicate that GDP fails to measure key aspects of quality of life and “in many ways, it encourages activities that are counter to long-term community well-being” (p.9). This relates to the fact that beyond a certain threshold, further increases in material well-being actually have negative side effects and often counter key elements of cultural development such as community cohesion, healthy relationships, a sense of purpose, connection with nature, and other dimensions of human well-being (McKibben, 2007). The GDP, while appropriate and useful as a measure of economic transactions, is misused as a measure of well-being (Neumayer, 2004). The GDP measures the sum of all economic transactions (spending), but it does not distinguish between transactions that contribute to societal well-being and those that detract from it (Taylor, 2006).

The Genuine Progress Indicator (GPI) is an alternative that uses the GDP in its foundation, but adjusts (adds and subtracts) to address some of the well-being issues of the GDP measure. It is designed to measure whether progress is a result of living off the interest of community capital or spending it down (Costanza et al., 2009). In Alberta, the Pembina Institute has completed the Alberta Genuine Progress Indicator which is a comprehensive framework for measuring total societal well-being, including 51 environmental, social, and economic indicators. The GPI was designed to respond to the shortcomings of the GDP, and is an attempt to integrate the measurement of sustainability into that of well-being (Neumayer, 2004).

There is also the Canadian Index of Well-being (CIW) which aims to provide Canadians with a clear, valid, and regular accounting of what matters to them and the genuine progress of Canada (Taylor, 2006). Much like the Alberta GPI, the CIW is designed to form a more comprehensive measurement of how well society is doing. It includes domains such as: living standards, time allocation, healthy populations, ecosystem health, educated populace, community vitality, and good governance (Taylor, 2006). Each domain has several factors that determine well-being.

Furthermore, there is a growing body of research and work to evaluate well-being based on self-reporting by individuals and groups. Generally referred to as measures of subjective well-being (SWB), these studies attempt to measure 'satisfaction' with quality of life (Diener and Suh, 1999). The intent is to measure the extent to which human needs are actually being met (Costanza et al., 2009). The World Values Survey produces data on subjective well-being and happiness for many countries (Kulkarni, 2012). The World Database of Happiness is a compilation of studies related to satisfaction surveys and happiness (Veenhoven, 2008).

Gross National Happiness is another alternative measure of progress originally suggested in the 1980s by the King of Bhutan. It is not an index, but more of a principle for guiding Bhutanese development in a way that is consistent with their cultural and spiritual values. Bhutan has a Gross

National Happiness commission, but they have yet to define a specific methodology (Ura and Galay, 2004).

The Ecological Footprint, Living Planet Index, Human Development Index, and Happy Planet Index are all other new measures (Costanza et al., 2009). These take an aggregation of a number of variables to form an index which attempts to paint a picture of overall well-being. RDI could consider developing an index for the State of the Basin Initiative. A Columbia Basin Boundary Genuine Progress Indicator, for example, could be developed and could bring together the social, economic, environmental, and cultural variables into one index. Indices are particularly useful because as a composite of indicators they can paint a fuller overall picture of well-being (Costanza et al., 2009). Developing an index would be new for RDI as the current focus, building on CBT's 2008 and RDI's 2012 State of the Basin Initiatives, is to report on a series of indicators.

INDICATORS OF WELL-BEING

Internationally, governments, communities, businesses and non-profits are increasingly using indicators to track and report on well-being (Taylor, 2006). Indicators are understood as “a necessary part of the stream of information we use to understand the world, make decisions, and plan our actions” (Kulkarni, 2012, p. 1). They are tools for learning and for change. They can be a “yardstick to measure results and to assess realization of desired levels of performance in a sustained and objective way” (Madden, 2005, p. 221). According to the Government of Finland, one of the key purposes of indicators is to assist in forecasting future trends and planning (Government of Finland, 2011). Demands for greater accountability of the spending of public funds are another key reason indicators are developed (Madden, 2005; Duxbury, 2007).

At the international level, the United Nations Millennium Declaration, signed by 189 countries in 2000, established eight international goals and developed 48 indicators for improving the ‘global human condition’ (UN DESA, 2007). The Calvert-Henderson Quality of Life Indicators in the US was a six year multidisciplinary study that now maintains an online database of a suite of indicators (Henderson et al., 2000). Alberta was the first provincial government in Canada to adopt publicly reported indicators to track progress on a number of social, economic, and environmental goals (Taylor, 2006). Redefining Progress is a non-profit that has created a handbook for Community Indicators, a guide for communities to pursue their own indicator projects (Redefining Progress, 2013). There is a wealth of information and a diversity of experience with indicators. For this literature review we will focus on cultural indicators.

CULTURAL INDICATORS

Indicators are a tool to help understand and place value on a particular phenomenon or system (Duxbury, 2003). A cultural indicator is therefore a tool to “make sense of, monitor or evaluate some aspect of culture” (Madden, 2005, p. 221). As noted above, culture is incredibly multifaceted and dynamic. While most indicators use quantitative measures, culture is regarded as difficult to quantify through instruments of social science (Badham, 2010). The measurement of ‘cultural value’ involves many complications from an instrumental perspective, and the broader the

concept of culture, the more complex the problem becomes (Ministry of Education and Culture, 2011).

Agencies and individuals in a number of countries are developing and working on improving cultural indicators, and literature suggests that cultural indicators have been under investigation since the early 1970s (IFACCA, 2005). “Pressure to develop indicators typically originates from two directions: program review/evaluation/efficiency measures and the growing prevalence of quality of life/community indicator projects” (Duxbury, 2003, p. 8). Theories on cultural measurement are well-developed because the development of indicators has been integral to cultural planning and policy development (Madden, 2005). This policy-oriented work began to emerge in the 1990s, particularly with papers commissioned by UNESCO (Yue et al., 2011). The application of cultural indicators, however, appears to be not as widespread. Authors suggest that despite a long history of theory and commentary on cultural indicators, the practical implementation of cultural indicators remains uneven (Madden, 2005); both for developed countries where there is a supply of cultural data and for developing countries where data is sparse (IFACCA, 2005). In addition, with growing pressures on cultural planners and administrators to develop indicators quickly, projects are being launched prematurely (Duxbury, 2003).

Badham (2010) argues that “while the field of cultural indicators has been an important conceptual tool for considering the role of arts and culture in human development for international agencies since the 1980s, there is little progress in putting them into action... the field is under-theorized, lacks interagency coordination, data lacks quality, existing frameworks are unwieldy, and many government reports on indicators sit gathering dust on shelves” (p. 4). Other authors affirm, noting that many community indicator systems are poorly developed and designed, and are “doomed to be ignored” (Sawicki, 2002, p. 14).

The International Federation of Arts Councils and Culture Agencies (IFACCA) warns that there are many reasons to be wary of cultural indicator frameworks that have been developed to date as there are many analytical and theoretical issues (IFACCA, 2005). IFACCA (2005) confirms the lack of data and proper use of existing data, and that frameworks are unwieldy. Other authors note the same challenges and barriers (Costanza et al., 2009). IFACCA (2005) indicates there is confusion about how cultural indicators should be used, and that processes often generate long lists of indicators which are not particularly useful.

While there are many different classes of potential cultural indicators, there is no generally accepted categorization (Ministry of Education and Culture, 2011). Several authors proclaim that fewer indicators are more powerful (Costanza et al., 2009; Ministry of Education and Culture, 2011; Duxbury, 2007). The Government of Finland recently reported on the effectiveness of indicators, and states there is little systematic or reliable information to develop indicators for issues such as cultural diversity, participation in culture, and the well-being benefits of culture (Ministry of Education and Culture, 2011). Madden’s (2005) literature review supports this, and outlines several problems and issues from authors around the world.

Despite a relatively new field of practice, and some obvious challenges yet to be overcome, there are lessons to be learned. Simons and Dang (2006) reviewed and compiled cultural indicators used in selected projects in English-speaking countries (outside of Canada) as a way to inform cultural indicator development. Their work is cited by many authors. The cultural indicators within the projects reviewed were categorized into six commonly emerging themes which included:

1. cultural indicators of environmental enhancement and regeneration of place,
2. cultural indicators of individual well-being and personal development,
3. cultural indicators of social capital and community building,
4. cultural indicators of economic development,
5. indicators of cultural vitality and community, and
6. indicators of health and sustainability of the cultural sector.

Examples of quantitative and qualitative indicators within each of these categories are outlined. It is evident that many countries – the UK, Australia and New Zealand in particular, are making concerted efforts to develop cultural indicators as arts and cultural policies become integrated into broader policy initiatives (Simons and Dang, 2006). It is also apparent that indicators tend to depend on available, mostly quantitative, data, and are often built through an economic approach (Duxbury, 2003).

While Madden's (2005) literature review on cultural indicators outlines the problems and difficulties, he also explains there is considerable work being done, particularly in light of a wider movement in developing public policy. Cultural indicator development is also influenced by related areas of research, namely the social impacts of the arts, cultural statistics programmes, and indicator theory (Madden, 2005; Duxbury, 2003). Like Simons and Dang, Madden's (2005) review focussed on English-speaking countries. Madden (2005) notes that if Spanish and French resources were considered, the bibliography would expand significantly. Madden (2005) states that for manageability, his review was restricted to statistical or quantitative indicators only (p. 218).

Nancy Duxbury (2003), Chief Editor and Researcher for the Creative City Network of Canada, is another notable author who is following the evolving world of cultural indicators. She remarks that arts and culture are gaining increasing prominence, and that The Urban Institute in the United States has played an important role in exemplary cultural indicator projects (Duxbury, 2003). Cultural Initiatives Silicon Valley's Creative Community Index is presented as a unique demonstration project that may inspire and offer insight for RDI. This project conducted surveys that focussed on the breadth and frequency of cultural participation and the health and vitality of non-profit arts and culture organizations in the region (Cultural Initiatives Silicon Valley, 2013).

A review of literature and projects is important for the development of cultural indicators in the Columbia Basin Boundary Region. We will now discuss the process of developing cultural indicators gleaned from this review, including a consideration of different approaches that can be taken. An examination of the essential steps in choosing cultural indicators is included, with key questions and ideas for RDI to consider.

DEVELOPING CULTURAL INDICATORS

APPROACHES

INSTRUMENTAL APPROACH

Several authors (Kulkarni, 2012; Madden, 2005; Pattanaik, 1997) argue that it is critical to identify why indicators are being constructed and decide on the approach that will be taken. An *instrumental*, or *economic*, approach is common. This type of approach is used for exploring causal links, such as investigating the economic impacts of cultural activities. This may be of interest to the Columbia Basin Boundary Region, and particularly for policy and decision-makers. A key reason cultural indicators are developed is for accountability and cultural policy; to understand, evaluate and communicate the effectiveness and importance of policies and programs (IFACCA, 2005; Ministry of Education and Culture, 2011; Ferres et al., 2010). Funders within (and outside) the region may appreciate these measures as they may influence if and how money is spent on culture.

Statistics Canada (2011) takes an instrumental approach to measuring culture. Statistics Canada has produced a framework based on the goods and services in the cultural sector, which includes six domains: 1) heritage and libraries, 2) live performance, 3) visual and applied arts, 4) written and published works, 5) audio-visual and interactive media, and 6) sound recording. Each domain is used to group and describe industries, products, and occupations related to that particular industry. Each domain includes sub-domains. The Conceptual Framework for Culture Statistics was first published in 2004 and evolved considerably with the 2011 version. Statistics Canada recognizes that monitoring the cultural sector is a new and challenging endeavour with no prescribed methods. Their framework is based on measuring culture from an industry perspective. It includes the work force and occupations of the cultural industry. Cultural occupations are defined by Statistics Canada, in line with the UNESCO 2009 definition, as the occupations in which “the bulk of the work undertaken is related to the creative chain for a culture good or service” (Statistics Canada, 2011, p.63). It also measures culture from a product approach where research focuses on “measuring the total supply and demand of culture products, including both production and import” (Statistics Canada, 2011, p.58). This approach employs exclusively quantitative data.

The culture sector has been identified as a driver of economic prosperity (Stanborough, 2011), including the creation of new jobs, as well as a means to attract new residents, tourists, and investors (Singh, 2006). Research also suggests that investments in culture contribute to the development of a healthy ‘creative economy’, and can increase the chances of success of an economic development strategy (Singh, 2006). The economic contributions of arts and culture are being increasingly recognized (Simons and Dang, 2006), and RDI will need to manage this obvious overlap of the economic and cultural research pillars.

There are several economic statistical indicators that may be useful. However, as with all indicators, these will need to be considered carefully. The Government of Finland (2011) notes

that “it is nearly impossible to prove how much added value culture... produce[s] in exchange processes that are determined on a financial basis...”(p. 18). Cultural indicators that are economic can provide important information, but the use of indicators to determine the economic significance of the creative industries is still under development (Ministry of Education and Culture, 2011; Brooks et al., 2004). Colin Mercer (2004), well-known in the field of cultural research, contends that “arts and culture should not be viewed only as products to be consumed but also as processes and systems that are part of the life of the community” (n.p.). This leads us to the second major approach to cultural indicators: an intrinsic approach.

INTRINSIC APPROACH

While most cultural indicators are developed from a utilitarian perspective, it is recognized by many authors that culture has significant benefits intrinsically (Jeannotte, 2003; Brooks et al., 2004). Participation in cultural activities contributes to strengthening social cohesion, citizen empowerment, community building, value and behaviour change, and a sense of shared identity (Statistics Canada, 2011). Many authors argue there needs to be increased emphasis on the intrinsic value of the arts (Brooks et al., 2004). Such an approach may interest providers of cultural and arts experiences in the region, as well as community leaders working to improve community relationships, cohesion, and sustainability. An intrinsic approach goes beyond statistical indicators, and employs qualitative assessments.

How does the public feel about our culture? How do cultural activities impact social connections and community belonging? How do the arts contribute to a healthy vibrant life in the Columbia Basin Boundary Region? How does outdoor recreation contribute to a sense of place? These are the much less tangible and much more difficult aspects of culture to evaluate. Cultural activities are creative and spirited, and their impact is tied to human experiences and interpretations (Ministry of Education and Culture, 2011). Statistics Canada (2011) acknowledges that “very little is known about the nature and scope of these effects and much work is necessary before the links can be explained in a coherent fashion” (p.75). More research is needed on the intrinsic value of arts and culture (Badham, 2010). Indicator theory in general is evolving, and related research on the social impacts of arts and culture plays an important role in cultural indicator development. RDI will want to stay apprised of new research and efforts in cultural indicator development, particularly with respect to the intrinsic valuing of culture.

In light of the challenge of measuring links between cultural activities and social cohesion and community, and in response to a prevailing economic discourse about culture, Jeannotte (2003) investigated the role of cultural capital in helping to maintain social cohesion and promote well-being. Her study indicates that cultural capital clearly has a role in both individual and collective well-being, and concludes that investing in cultural capital has collective benefits, noting a specific example of an associated higher rate of community volunteerism. There is a “virtuous circle” at play (Jeannotte, 2003, p. 45). While the Canadian General Social Survey from 1998 was useful for her study, Jeannotte (2003) states that approaches to evaluating the social impacts of culture are in their infancy because better information is required.

Counting New Beans is a recently published book produced by the Theatre Bay Area (2013) in San Francisco, USA which is charting new ground in measuring the intrinsic impact of the arts, including offering organizations their own custom-built online surveying tool. Their research looks at the intrinsic impact and value of the arts based on evaluative feedback of arts experiences (Theatre Bay Area, 2013). In Australia, the City of Whittlesea has developed an indicator framework that acknowledges the contribution of community-based arts and cultural activities to the formation of social capital (Yue et al., 2011). Their 'Community Cultural Development' framework is built to cultivate a range of non-economic outcomes.

Literature suggests that arts and culture are deserving of more research into their intrinsic value, for both individuals and the public, particularly with respect to the relationship between culture and the building of social capital (Brooks et al., 2004; Simons and Dang, 2006). This is where there is an obvious intersection of the cultural and social research at RDI, with extensive opportunities to explore connections. It is also well acknowledged that many benefits of culture are intangible and difficult to quantify (Ferres et al., 2010), and that new and creative approaches are needed.

INTEGRATED APPROACH

Throughout the literature, there is a strong argument for an integrated approach (Badham, 2010; Mercer, 2002; Jackson et al., 2006; Duxbury, 2003). An integrated approach is based on a broader understanding of the myriad of benefits, instrumental and intrinsic, of cultural experiences (Brooks et al., 2004). Cultural indicator development does not need to take one approach or the other. For RDI, this may mean recognizing the intrinsic value of culture and finding ways to assess those benefits, while also employing a utilitarian approach, as this is what may be needed to protect cultural assets and resources, and to justify cultural spending. Approaching cultural indicator development in this way allows for a more encompassing view and a diversity of indicators to value both the intrinsic and economic aspects of culture (Jackson et al., 2006).

Badham (2010) details six approaches to arts and cultural indicators, which is founded on a larger theoretical framework seeking to be applied for a practical framework. These categories are built on a broad understanding of culture and a wide literature review of ways of approaching cultural indicators. The categories of approaches include:

- culture as a way of life (freedoms and dialogue),
- culture as a resource (investment and relatedness),
- high culture (professional arts, excellence and democratization),
- cultural vitality (participation, access, support),
- creative vitality (arts occupations and community arts), and
- cultural industries (production and consumption cycles).

Badham (2010) elaborates on each of these approaches, outlining the resources and experiences of others, and highlighting the blending of an intrinsic and instrumental approach. RDI could choose to focus on one of these categories, or may use a few depending on the identified needs and interests of the cultural research.

Leading cultural indicator expert, Namenwirth explains that cultural indicators “tap the structure of beliefs and values serving to maintain society” (Badham, 2010, p. 8). What we measure indicates what we value and what we think is important (Center for Whole Communities, 2007). *How* we measure is also important as values are embedded in methodologies. Leading authors in this field indicate that cultural indicators require conceptual frameworks linked to values and strong methodology (Badham, 2010). The process of developing a cultural research framework is just as important as the indicators themselves (Sustainable Calgary, 2013; Badham, 2010). Cultural research frameworks are not “one-size-fits-all” and need to be developed in context (Badham, 2010; Duxbury, 2007). RDI will need to develop a “made in the Basin-Boundary” approach.

KEY FACTORS IN DEVELOPING CULTURAL INDICATORS

Based on a review of literature, four important factors in developing cultural indicators have emerged. These include: 1) purpose, 2) engagement, 3) data, and 4) resources. Each is discussed with consideration of key questions and potential impacts for RDI.

PURPOSE

The goal or purpose of the cultural research is of utmost importance. What is it that RDI wants to investigate? Do we seek to understand the importance of culture in our lives? Do we seek to ensure that our cultural resources and industries stay healthy and well-funded? Do we intend to develop a cultural plan and policy for the Columbia Basin Boundary Region? What are the needs and issues of our communities? What is the vision for the cultural research pillar?

The Quebec Observatory on Culture and Communications is developing indicators and has asked themselves similar questions. They identified one particular overarching question: What are the economic and social aspects of the culture and communications sector in Quebec (Allaire, 2006)? This organization is looking for a description of cultural development in Quebec, with the intention of making international comparisons where possible (Allaire, 2006). To address this research goal they decided on conducting an ‘informed synthesis’ of existing, and possibly new, data, which has led to a system of 14 priority indicators, each falling either in an economic or social category.

Australia is developing cultural indicators, and a current proposal “aims to monitor the health of the sector and to enable international comparison” (Ferres et al., 2010). It is an ambitious endeavour, especially given there is no national cultural policy, and that all levels of government presently provide support for arts and culture (Ferres et al., 2010). Australia’s approach incorporates both instrumental and intrinsic values of culture, and artists are central to the research and policy development. Rather than emphasizing impacts, the framework focuses on cultural vitality.

The United States on the other hand has focussed on the impacts of arts and culture on regional economic development, urban revitalization, and quality of life (Ferres et al., 2010). Researchers at The Urban Institute have been at the forefront, and created a framework based on three interconnected aspects: 1) presence (provision of opportunities to participate in cultural activities), 2) participation (in the multiple cultural dimensions), and 3) support (public and private expenditures on culture). The purpose of the research helps to create a conceptual framework

that grounds the processes of developing indicators. New Zealand, as another example, has two main goals for its cultural indicators framework, which is to “measure the contribution the arts and cultural sector makes to the national economy and its role in fostering and expressing the values of pluralistic national identity” (Ferres et al., 2010, p. 264).

In 2006, a full day workshop was held by the Creative City Network of Canada bringing together individuals and organizations working on cultural indicators. It was evident that three conceptual frameworks are currently typical in Canada: sustainability, quality of life, and societal communications (Duxbury, 2007). Workshop participants identified several practical uses of cultural indicators such as: defending the culture budget, leveraging funds from other levels of government or philanthropic sources, influencing policy, program development and raising awareness about cultural issues. The author of the report states that it is critical to be clear about: 1) why we are collecting information, 2) who/what we are collecting it for, and 3) what we are going to do with it. As indicated by the Government of Finland, if the setting of goals is unclear, it is impossible to identify key indicator categories and define the indicators related to them (Ministry of Education and Culture, 2011).

Several authors stress that indicators should meet some specific need, generally some policy or analytical information need (Madden, 2005). Indicators must serve some purpose. Madden (2005) outlines four common purposes of cultural indicators:

1. **Monitoring and evaluation:** Monitoring is the observation of cultural phenomenon and evaluation is the measuring of the efficacy of cultural policies and programmes. Monitoring can be used to track outcomes that may require policy intervention.
2. **Learning:** Indicators are a tool for organizations to learn, adapt, and change.
3. **Influencing behaviour and attitudes:** Indicators are used for strategic purposes, particularly during development where they can influence the behaviour of institutions and build public confidence in institutions. These can be desirable or undesirable effects.
4. **Advocacy:** These may differ from analytical indicators, but are generally used for justifying cultural activities, often to argue for intervention by government, such as subsidies to the arts.

The ‘monitoring’ and ‘learning’ uses are relevant to RDI as the current goal is to understand and monitor the cultural well-being of the Columbia Basin Boundary Region. As suggested by Ferres et al. (2010), RDI will want to embed cultural research in a conceptual framework which helps to capture and communicate the personal, interpersonal, and wider benefits and values associated with culture. Well-being is appropriate as a central research frame, or goal, and is currently applied to all four research pillars: social, economic, environmental, and cultural. RDI seeks to understand and monitor each of these key areas to ensure the region’s vitality into the future.

Categories of Interest

Within the frame of well-being, RDI has selected categories of interest for each pillar. At this stage, the cultural research includes arts, heritage, culture, and recreation. Arts, heritage, and culture are generally established across the literature. Recreation is not as consistent. Many countries around

the world recognize the important link between recreation and culture, and parks are included in some cultural indicator projects (Jackson et al., 2006). The Conceptual Framework for Culture Statistics in Canada does not include sports, yet Statistics Canada (2011) acknowledges the association. Many Canadians would argue that hockey [or canoeing] is integral to Canadian culture (Statistics Canada, 2011).

In the Columbia Basin Boundary Region, and in many mountainous regions of the world, citizens identify with 'mountain culture'. RDI's current approach is to incorporate recreation as a category of culture. This is acknowledged as a value choice, and may be a category researchers will want to test. Depending on what aspects of recreation are important to our research interests, recreation could also fall within social indicators (such as health and exercise) and/or environmental indicators (such as existence and access to wild and natural landscapes) and/or economic indicators (as recreation facilities are sometimes considered infrastructure). Recreation contributes to well-being, and time in nature in particular nurtures a sense of place and identity (Thomashow, 1995).

Simons and Dang (2006) state that indicators are notoriously difficult to operationalize, and that every indicator is developed with certain assumptions. RDI has a suitable starting point with well-being as a conceptual frame, and four key categories to consider within a broad definition of culture. This begins the process with an inclusive approach, which is identified as important by many (Duxbury, 2007). RDI's framework can evolve depending on what is important and relevant to the people and communities of the region.

Throughout the review of literature, it is curious that there is no specific mention of aboriginal cultures and issues. Culture within the field of cultural indicators seems to be defined through the perspective and assumptions of our current dominant western culture; although culture is also understood in the broadest sense, and perhaps native peoples are inherent within the realm of 'culture'. It is also likely that it simply has not been an emphasis, like arts has been, within this evolving field. The Centre for Native Policy and Research is a B.C. based non-profit think tank focussed on the social, economic, and environmental policy and research concerns of Aboriginal people in British Columbia and Canada (CNPR, 2013). This research organization may be a good contact for RDI. The Columbia Basin Boundary Region includes native groups who RDI will want to engage to discuss needs and interests in the context of the cultural research.

Another aspect is the discussion of cultures of minority groups, particularly in Canada where 250,000 immigrants and refugees immigrate annually (Hiebert, 2011). People with disabilities are discussed in the literature, particularly with respect to access to cultural activities; however another area of interest and research is the influence and impact of cultural diversity, cross-cultural relations, and community cohesion. Metropolis is a prominent research and public policy organization working in this field (Metropolis, 2013). While immigrants primarily settle in Canada's larger cities, some do settle in rural areas. RDI will want to be sure to engage the diversity of residents.

As indicated by Rosenstrom et al. (2006), “the most significant problem that indicators face is their relevance” (p. 188). This was a key finding in the process in the City of Whittlesea in Australia where a local cultural indicator framework was developed (Yue et al., 2011). The research body needed to be very clear about why the indicators were being developed and how they would be used within the community. RDI must develop indicators that are relevant to the people of the region or it will be a waste of time, energy, and resources. The best way to ensure a clear purpose and relevance is to engage people from the beginning.

ENGAGEMENT

If RDI’s goal is to conduct research that is important and valued to residents, residents will have to be involved in the process of cultural indicator development. A common thread in the literature of what makes a good indicator is that it is designed through consultation (Brugmann, 1997; Duxbury, 2007). Whether an instrumental, intrinsic, or integrated approach, it is critical to engage people in the process. The Quebec Observatory on Culture and Communications used an iterative process in developing their cultural indicators, noting the “essential contribution from... decision makers in the public cultural sector and representatives of the cultural sector” (Allaire, 2006, p. 15). An on-going interchange between the researchers and end-users was maintained.

The literature indicates that often a problem with indicators is there is a gap between those who develop the indicators and the end-users (Bell and Morse, 2001; Gudmundsson, 2003; Macnaghten and Jacobs, 1997). This has resulted in little impact to decision-making (Rosenstrom et al., 2006), and reiterates comments regarding indicator reports collecting dust on shelves. A critical component of developing RDI’s cultural research pillar will be to engage a wide range of people from the Columbia Basin Boundary Region. RDI will want to involve a diversity of citizens and stakeholders from arts, heritage, recreation, and culture in its broadest sense.

The Urban Institute’s Arts and Culture Project (ACIP) suggests involving a wide range of people including: presenters of professional artwork, organizations involved in cultural events, relationships with local artists as well as large cultural venues, long standing connections with local parks, schools, community centres, sponsors of community arts and cultural activities, as well as recreational artists; essentially all those who contribute to cultural vitality, including practitioners, teachers, students, critics, supporters, and consumers (Jackson et al., 2006). The Finnish Environment Institute explored regional sustainability initiatives with a focus on participation and empowerment, and their methodology involved engagement through three workshops, as well as having a steering committee (Rosenstrom et al., 2006). Researchers outline steps taken that RDI could use as a model for engagement. A key finding in this project is that a participatory process must be combined with an expert knowledge base (Rosenstrom et al., 2006). Kulkarni (2012) makes a similar statement, asserting that indicator development works best with a combination of expert and grassroots participation. A common challenge for Canadian communities, however, is the availability of expertise on indicator development, analysis, and interpretation (Duxbury, 2007). This will be a challenge for RDI. Ideally, RDI could hire a specialist to offer their advice at key stages of the process.

It is also imperative to have excellent facilitation for any engagement. Cultural metrics is inherently a challenging subject, and often elicits resistance from those in the arts and cultural community itself (Badham, 2010). Poor processes, and processes that do not involve the 'right' people and players, can burn bridges. Good leadership, communication, and knowledge sharing are essential. As the Creative City Network says, one should proceed "patiently, transparently and flexibly, testing any ideas presented..." (Duxbury, 2007, p. 7).

Madden's (2005) literature review found several arguments for holistic and participatory approaches to the development of cultural indicators. RDI will need to be adaptive and iterative, adjusting as more is learned. It will be important to understand who will use the data and how, and key needs and interests. Relationship building from the beginning will create a shared understanding and shared ownership. RDI will want to be sure to not leave anyone out; to be as inclusive as possible. As stakeholders may be involved in data collection, RDI will want to investigate if and who may be collecting any cultural data so that efforts can be coordinated. It is also suggested that stakeholders be involved in indicator interpretation to help ensure accurate analysis (Duxbury, 2007). Developing and implementing cultural indicators is a collaborative endeavour.

DATA

Data is the third key factor to consider in developing cultural indicators. Lack of quality data, as well as the lack of the proper use of data, is a common theme with cultural indicators (Madden, 2005; Duxbury, 2006). Discussions about any type of indicator frequently emphasize what makes a good indicator, with a focus on data. A number of criteria recur regularly, such as relevancy, validity, credibility, measurability, consistency, reliability, and sensitivity. We will not focus on this discussion here, but acknowledge there are plenty of resources to inform the development of good indicators (cultural or otherwise). A simple and summative way to consider data in light of fundamental issues for developing cultural indicators is to review three main criteria: 1) relevance, 2) measurability, and 3) availability.

Relevance

Relevance relates to the intended purpose and engagement of people in developing indicators. There needs to be consistency between the purpose of measurement and the choice of indicator (Madden, 2005), and the indicators must be valued by the people who will use them (Allaire, 2006). If a clear goal is established, and a wide range of people are involved, then the indicators and associated data should be relevant. It is exactly the process of engagement already discussed that results in meeting the relevance criteria.

Measurability

Measurability is difficult because of the inherently challenging and subjective nature of culture. Madden (2005) aptly quotes Albert Einstein who said, "not everything that can be counted counts, and not everything that counts can be counted" (p. 217). RDI must carefully consider what will be measured, and as Duxbury (2003) states as a fundamental question, "can what we want to measure be measured?" (p. 9).

Furthermore, developing cultural indicators is not a neutral process. As Kulkarni (2012), as well as other authors, notes “we try to measure what we value [and] we come to value what we measure” (p. 3). The act of measurement itself can influence the system being measured. This inevitable feedback loop reiterates the necessity for engagement to ensure that citizens and stakeholders contribute to the process of deciding what and how we evaluate culture in the region.

This reinforces what RDI already values, which is to employ mixed methods. Mercer (2004) says that cultural indicators should be selected to reflect both quantitative and qualitative measures, and the underlying purpose will determine which is developed and utilized (Simons and Dang, 2006). While quantitative data is arguably easier to collect and appears to be much more commonly used, there seems to be a general consensus that quantitative and qualitative indicators should be used for indicators of well-being (Kulkarni, 2012). The Creative City Network states in their workshop report that quantitative and qualitative data are equally important (Duxbury, 2007). The quantitative indicators are those that are more easily measured and can provide answers to the ‘how much’ and ‘when’ (Ministry of Education and Culture, 2011). The qualitative assessments of culture can provide insight into questions such as the ‘what’, ‘where’, and ‘how’, describing issues that are difficult to split into measurable elements, and using methods such as interviews, surveys and discussions (Ministry of Education and Culture, 2011).

Availability

The most common problem with cultural indicators is data availability and accessibility (Morrone and Hawley, 1998), as well as timeliness (Rosenstrom et al., 2006). Jackson et al. (2006) suggest using tier one and tier two data because these are quantitative, publicly available, free or of minimal cost, collected annually, and can be disaggregated. This makes them basically ready for indicator development. Tier three and four (single point in time quantitative data and qualitative data) are important for the development of indicators, but are much more difficult to obtain.

The 2008 State of the Basin report by Columbia Basin Trust (CBT) identified indicators under a ‘Community and Society’ category, namely crime rates and charitable giving. Other potential indicators were highlighted in Appendix 4 and included arts, culture, and recreation workers with a note that census data could be used. There were also indicators identified where primary data collection would be required, specifically: heritage, arts, and culture measures (possibly via cultural scans); a connectedness / sense of place survey; leadership, teamwork, networking assessment; and volunteer contributions. These all fit with the cultural research pillar and are likely as important now as they were in 2008 when CBT reported on the summary of their research and possibilities for future reporting. CBT notes that residents repeatedly reminded the project team of the importance of arts and culture to life in the region. According to CBT, substantial effort was made to identify indicators with readily available data, but none were found.

A key step for RDI will be to assess any and all potential data sources for cultural research. An initial list of sources to investigate includes:

- Statistics Canada Cultural Statistics,

- National Occupation Classification of Statistics Canada,
- Department of Canadian Heritage (Canadian Cultural Observatory),
- Citizenship and Immigration Canada,
- Environment Museum (Environment Canada),
- North American Product Classification System,
- Canadian General Social Survey (Jeannotte (2003) references a 1998 survey),
- Federation of Canadian Municipalities, Quality of Life Reporting System (Cultural Working Group),
- Creative City Network,
- BC Stats Socio-Economic Profiles and Indices,
- Institute for Social Research and Evaluation at the University of Northern British Columbia,
- Centre for Native Policy and Research,
- Municipalities and Regional Districts within the Columbia Basin Boundary Region, and
- Arts, heritage, culture, and recreation organizations and businesses across the region.

These potential sources range from national to local data. Upon review of data availability, and considering the region in which the cultural phenomenon will be studied, RDI will want to carefully deliberate its approach to data collection. The Creative City Network indicates that having the right geographic line drawn around the issue being analyzed means the “difference between being relevant and merely interesting” (Duxbury, 2007, p. 8). RDI is committed to the Columbia Basin Boundary Region as the area of study; however as a substantially large area it may be appropriate to choose a more localized approach.

Collecting Data at the Local Level

Many authors see cultural well-being linked to the engagement and development of citizenship, especially at the local level (Ministry for Culture and Heritage, 2002). Municipalities are often the main providers and supporters of cultural activities such as libraries, museums, heritage buildings, parks and trail development. Indicators have also become a requirement in governance and program administration, and there is a growing realization that indicators should be meaningful at the local level to be most effective (Duxbury, 2007). Relevance at the local community level is felt to be crucial for quality of life indicators because the opportunity for action by citizens is greatest (CPRN, 2003). The Federation of Canadian Municipalities is beginning development of a suite of indicators on culture as part of the Quality of Life Reporting System (Duxbury, 2007). Municipalities are perhaps also best situated to shape community by regulating land use (Stanborough, 2011).

Furthermore, municipalities are the bodies that may have cultural plans and policies, particularly through Official Community Plans (OCP) or Integrated Community Sustainability Plans (ICSP). RDI may want to investigate the municipalities, and regional districts, in the Columbia Basin Boundary Region, and find out if culture is referenced in the OCPs or in any other policies or plans. Kelowna, as an example, has an entire chapter on ‘Culture, Arts and Heritage’ in their OCP where culture is recognized as part of community building (Stanborough, 2011). This municipality recently revised

their Council Cultural Policy, which established policies to integrate culture throughout city departments, including cultural sustainability in the city's assessment of infrastructure projects.

Organizing at a local level also allows for comparisons across communities, which is often a motivator in the development of indicators. Although, RDI may want to be careful about doing such comparisons, because as Badham (2010) asserts, culture is an open system always in change, and doing comparisons is an ethical judgement about the state of a culture. Comparison can also lead to competition. This will be a choice to make, and underscores the importance of having a good understanding of the purpose of the indicators being used and the community dynamics in which they are being developed.

Data, as with many indicator initiatives, will be a major criterion in developing the indicators for the State of the Basin. Cultural indicators are generally based on data that already exists and there has been little attention to creating new data (Duxbury, 2007). This is due in large part to the costs associated with original data collection (Duxbury, 2003), which leads us to the fourth key factor in developing indicators: resources.

RESOURCES

“One of the problems with asking questions about cultural activity... is that there is almost no end to the interesting things one would like to know [and therefore] it is essential to decide what level of information about the cultural sector can usefully and sustainably be collected” (Matarasso, 2001, p. 6). A significant factor in developing indicators depends on the resources available to conceptualize, select, define, develop, collect, interpret, evaluate, revise, maintain, and report. Mercer (2004) outlines some important considerations including the need for indicators to rest on a robust quantitative and qualitative knowledge base that is continually refreshed. This demands significant resources.

Collaboration is a key element of successful indicator development and implementation (Duxbury, 2007), and citizen data collection and monitoring may be an option for RDI. It can provide excellent information at low cost, while contributing to the education of residents and building an appreciation for the cultural aspects being researched (Kulkarni, 2012). Several authors identify, however, that coordination issues are a challenge (Madden, 2005). If RDI intends to collect data across the large region of the Columbia Basin Boundary, there may be several players who will need and want to be involved. This requires good leadership and management. Knowledge sharing across all the regional players will be critical to ensure that people are empowered and have access to information (Rosenstrom et al., 2006). Successful collaboration requires financial resources from the lead organization, as well as the participants involved – many of whom may not have the time or money. With a seemingly strong ethos of volunteerism in the region, volunteers could be drawn upon, but this also presents management questions.

RDI will need to decide early on what resources can be committed. It is critical to have a lead institution and a working group that has a long-term commitment (Kulkarni, 2012). “When a system is extremely complex, it takes trial, error, and learning to produce a serviceable set of indicators” (Kulkarni, 2012, p. 7). RDI will need to be flexible and adaptive. Developing a suite of

good cultural indicators for the Columbia Basin Boundary Region will take effort, time, and considerable resources.

CULTURAL MAPPING

To get started in the process of indicator development, a generative process of mapping the cultural landscape is encouraged (Bianchini, 1993; Badham, 2010; Mercer, 2004). This involves assessing the cultural sector, including finding out what the skills, talents, resources, and assets are in the region, and assessing what condition they are in. We hear that culture is important to people, and that we have a rich cultural history. Some people say art is thriving, while heritage groups are dying. Others identify with our 'mountain culture' and rich recreational opportunities. But what really are our cultural strengths, and how do people relate to our cultural resources? Who are the institutions and organizations involved, and how are they doing? A mapping exercise allows for an inventory of the cultural assets and resources, and gives researchers a foundation on which to build.

Cultural mapping is not a new concept and is widely used as a planning and development tool by different levels of government as well as non-governmental organizations (Legacies Now, 2010; Bianchini, 1993). Thorough mapping of cultural resources and issues are seen as an important companion to cultural indicator development, and mapping is regarded as the first step in any cultural planning and policy development undertaking (Duxbury, 2007). If RDI aims to help strengthen the cultural foundation of the Columbia Basin Boundary Region, we will want to increase our 'cultural literacy' and understand our 'cultural capital' (Government of Finland, 2011). Mapping can help increase knowledge, gain new perspective, identify key players and networks, locate gaps, needs, and overlaps, and assess the distribution of resources (Stewart, 2007). Having a good understanding of the cultural landscape provides for the application of resources in a range of spheres including RDI's other areas of interest, namely economic, social, and environmental (Bianchini, 1993). "Similar to how preserving a wetland requires examining the surrounding landscape, preserving culture's longevity and prominence requires a sensitivity and appreciation of the surrounding terrain to ensure its place in the landscape" (Stanborough, 2011, p. 98). Mapping cultural assets also increases the accessibility of cultural activities by residents, and is especially valuable when cultural participation is an objective (Government of Finland, 2011). Furthermore, generating a baseline allows for potential tracking of change over time (Duxbury, 2003).

A cultural mapping exercise can help define the purpose and strategy of RDI's cultural research, and ensure it has meaning. The participatory nature of cultural mapping includes the significant benefit of engaging community members in a research project of which they are the subject. Mercer (2004) argues that there is a 'qualitative baseline' that must be engaged before the quantitative baseline can be constructed. "Prior to the actual process of data collection and analysis, it is necessary to be conceptually informed – a mapping of the cultural field, in order to determine what actually counts as culture to the stakeholder communities" Mercer (2004, n.p.). Cultural mapping is a stakeholder research process as it involves the identification and recording of a region's resources by engaging those who are living and active in that region. It can also bring

together diverse groups of people. “What is indisputable is that involvement in the process as the principal source of information gives community members a sense of ownership and makes them feel, quite rightly, that they influence the outcome of the project” (Stewart, 2007. p.71).

The Creative City Network of Canada, in partnership with 2010 Legacies Now, has developed a ‘Cultural Mapping Toolkit’. It outlines in detail the main stages, steps, and key aspects of completing a cultural mapping exercise. Table 1: Cultural Mapping Broad Strokes gives an overview of the process, synthesized from this toolkit. The examples and resources in the Cultural Mapping Toolkit will be useful if RDI chooses to conduct cultural mapping as part of the development of the cultural research pillar.

Table 1: Cultural Mapping Broad Strokes

Stage	Steps	Key questions and tasks
Stage 1: Planning	Step 1 – <i>Determine Objectives</i>	Form an advisory committee and/or host a community meeting.
	Step 2 – <i>State the Objectives</i>	What do we need to know? Who needs to know? Maintaining the map?
	Step 3 – <i>Set Parameters</i>	Determine scale and scope; be flexible as information grows.
	Step 4 – <i>Estimate Readiness</i>	Do key stakeholders and community support the process? Do we have the time, financial and human resources?
	Step 5 – <i>Assemble Resources</i>	Who is the project team and what tasks will each take on? Who are partners and collaborators? What is our timeline? Create a budget.
Stage 2: Project Design	Step 6 – <i>Frame the Fundamental Questions</i>	Frame your objectives as questions. What are we trying to do?
	Step 7 – <i>The Inventory</i>	Collect initial information. Create a basic list then create data categories. Structure database.
	Step 8 – <i>Design Survey and Interview Questions</i>	Identify supporting respondents and core respondents. Goal is to collect essential baseline data to complete an inventory.
Stage 3: Implementation-Explore	Step 9 – <i>Contacting the Community</i>	Announce process and inform public. Identify key individuals, organizations, networks.
	Step 10 – <i>Tallying and Entering Results</i>	Tally survey and interview results (quantitative and qualitative).
Stage 4: Synthesis-Make Sense	Step 11 – <i>Roughing out the Map(s)</i>	Review information, sort data, match data with objectives, begin interpretation, and determine levels of information.
	Step 12 – <i>Converting an Inventory to a Map</i>	Determine categories of visual keys and structural elements of map (technical assistance from SGRC). Think about narratives to include.
	Step 13 – <i>Analysis and Interpretation</i>	Use draft map to draw conclusions and test validity with the community: look for overviews and urgencies, distribution of usage within

		sectors, gaps, bonuses, surprises, interconnections, and opportunities.
Stage 5: Finalizing the Report	Step 14 – <i>Speaking to Different Audiences</i>	Examine levels of detail and subjective elements to communicate. Finalize report. Decide who will have custody and be responsible for succession.
Stage 6: Going Public	Step 15 – <i>Getting the Word Out</i>	Communications strategy and unveiling. Celebration!

There are also many other resources and examples of community mapping to learn from. There is expertise that could be drawn upon from the University of Victoria Community Mapping Collaboratory (University of Victoria Geography, 2013). Thompson Rivers University was a lead partner with the Institute for Social Research and Evaluation at the University of Northern British Columbia on the Mapping Quality of Life and the Culture of Small Cities project (CPCC, 2013). This project included surveying households in five BC communities, and mapping points of entry, community and cultural assets, community stories, and cultural intersections and processes (CPCC, 2013). The Chicago Cultural Indicators project is another example where data on arts and culture in Chicago’s 77 community areas has been compiled and mapped with community profiles made easily available to residents, researchers, advocates, and decision-makers (Chicago Cultural Indicators, 2013). Creative Blueprint offers research and analysis for the creative and cultural industries in the UK, and recently completed a mapping project of the Heritage Craft sector in England (Creative Blueprint, 2013).

The literature indicates that mapping is an appropriate and important way to begin applied cultural research. UNESCO recognizes cultural mapping “as a crucial tool and technique in preserving the world’s intangible and tangible cultural assets” (Stewart, 2007, p.41). A mapping process would leverage the valuable expertise and partnership RDI has with the Selkirk College Geospatial Research Centre. Cultural mapping also fits well with the development of the proposed State of the Basin portal for information dissemination. An interactive online map could be extremely useful for cultural leaders and residents, and people could contribute and update the map over time. As encouraged by Kulkarni (2012) it is important to be creative in your process and reporting. Maps are extremely versatile, communicate rapidly and in a holistic fashion, and have much greater potential than an inventory (Stewart, 2007). Cultural mapping does take significant time and resources; however the investment pays off in a variety of longer-term benefits (Stewart, 2007).

POSSIBILITIES FOR MEASURING AND MAPPING

The literature is teeming with possibilities for developing cultural indicators. There are quantitative indicators that are being used, mostly economic in nature, and based on available data. There are also suggestions for qualitative assessments where primary data collection is required. Cultural mapping allows for an exhaustive review of all the existing and potential content (Badham, 2010), which can generate a large list of possible indicators. These potentials can then be narrowed to a manageable list, which is argued to be much more powerful (Cobb and

Rixford, 1998). As discussed, development and final selection of cultural indicators is based on a range of factors, and requires a well-thought out process to ensure relevancy and meaning.

Throughout the review of literature, possibilities for measuring and mapping were noted. These are organized in Table 2: Possible Cultural Indicators based on the four categories currently proposed for the cultural research pillar: arts, heritage, recreation, and culture. Each category includes aspects that could be mapped, and the quantitative and qualitative characteristics that could be measured. This list is by no means exhaustive, but provides an indication of the breadth and depth of possibilities.

Table 2: Possible Cultural Indicators

Things to map		Examples of things to measure	
		Quantitative aspects	Qualitative aspects
Arts	Local government offices	allocation of budget; consideration in planning; existence of municipally owned facilities	sense of value and commitment; internal and external perceptions; leadership
	Art galleries	# of galleries; attendance; # of exhibitions; funding; diversity of artists	evaluation of exhibitions; feedback from attendees and artists; perceived quality and impact
	Public works of art	# of locations; # of installations; funding	evaluation; perceived quality and impact; diversity of artists involved
	Art education institutions	# of institutions; participation; funding	evaluation of programs
	Community based arts facilities and programs	# of facilities; # of programs; # of adult, youth, and children participating	leisure time spent on art; art hobbies; diversity of audience; sense of importance
	Arts programs in schools	# of programs; participation rates; funding allocated	appreciation of arts by children and youth; impact
	Art industry	# of businesses; # of workers (F/T, P/T, contract); # of jobs requiring training; wages	impact on livelihood; internal and external perceptions of art industry
	Art organizations	# of organizations; # of members; # volunteer hours; budget; capacity; outreach policies; strategies	perceived importance, capacity and vitality; quality of programs; quality of leadership; quality of plans and policies; community perception
Heritage	Local government offices	allocation of budget; consideration in planning; # of heritage buildings owned	sense of value and commitment; internal and external perceptions; leadership
	Heritage buildings	# of buildings; # visitors; funding	quality; perceived importance
	Heritage sites	# of buildings; # visitors; funding	quality; perceived importance
	Archaeological sites and indigenous sites	# of sites; # visitors; funding; consideration in planning	quality; perceived importance; value to protect
	Heritage organizations	# of organizations; # of members; # volunteer hours; budget; capacity; outreach policies; strategies	perceived importance, capacity and vitality; quality of programs; quality of leadership; community perception

	Heritage programs in schools	# of programs; participation rates; funding allocated	appreciation of heritage by children and youth; impact
Recreation	Local government offices	allocation of budget; consideration in planning; # of parks and trails	sense of value and commitment; internal and external perceptions; leadership; impact
	Recreation centres	# of centres; # and variety of programs; # of visitors	quality of experiences; leisure time spent on recreation; diversity of participants; impact
	Community based recreation programs	# of locations; # of programs; participation rates by adults, children and youth	leisure time spent on outdoor recreation / time in nature; quality of experiences; importance to sense of identity; impact
	Waterfront walkways	# of public access and walkways; length; # of users	quality of experience; perceived importance
	Municipal and regional parks	# of parks; visitation; funding allocated; maintenance committed	quality; leisure time spent on recreation; importance to sense of place
	Iconic natural features or locations	# of locations; frequency of visits	quality of experience; importance; impact
	Recreation organizations	# of organizations; # of members; # of volunteer hours; budget; capacity; outreach policies; plans	perceived importance, capacity and vitality; quality of programs; quality of leadership; community perception; impact
	Trails and trailheads	# and length of trails; maintenance hours and funding; signage	quality of trails and trailhead amenities; perception of trails; value and impact
	Recreation industry	# of businesses; sales; # and variety of workers (F/T, P/T, contract); wages	quality of stores; impact; importance to livelihoods
	Recreation programs in schools	# of programs; participation rates; funding allocated; community support	interest in outdoors by children and youth; impacts of programming; quality of programming
Culture	Local government offices	allocation of budget; consideration in planning; # of cultural facilities owned by municipality	sense of value and commitment; internal and external perceptions; leadership
	Libraries	# of user; # of books; frequency of loans; hours of operation	quality of selection; leisure time spent reading
	Community halls	# of halls; frequency of use; funding; community support	quality of building; quality of programming; perception of importance; impact
	Museums	# of museums; visitation; funding	quality of displays and experience; evaluation
	Churches	# of churches; participation rates; # and frequency of programs; budget	quality of programming; importance to sense of spiritual well-being
	Other spiritual gathering places	# of locations; frequency of use; budget; level of establishment	quality of experiences; importance to sense of spiritual well-being
	Bookstores	# of stores; sales; hours of operation	quality of selection; leisure time spent reading; importance of local

		store
Literary festivals	# of events; participation; frequency; funding	quality of experience; external perceptions; diversity of audience; impact
Literary societies and book clubs	# of groups; # of members; frequency of programs	capacity; level of activity; quality of experiences; importance to sense of belonging; impact
Movie theatres	# of theatres; attendance; costs; wheelchair accessibility	time spent watching movies; importance as leisure activity
Video rental shops	# of shops; # of rentals; users	time spent watching movies; importance as leisure activity; online versus local access
Cultural industry	# and variety of businesses; # of workers (F/T, P/T, contract); # of jobs requiring training; wages	impact on livelihood; community perceptions; impact
Cultural organizations	# of organizations; # of members; # volunteer hours; budget; capacity; outreach policies; strategies and plans	perceived importance, capacity and vitality; quality of programs; quality of leadership
Photography and film festivals	# of festivals; funding; participation rates; # of productions	capacity; quality of experience; community perceptions; diversity of audience and productions
Music festivals / Live performances	# of festivals and performances; funding; participation rates; economic impact	quality of experience; community perceptions; external perceptions; impact
Radio	# of stations; # of programs; # of listeners	quality of programming
Theatre, opera, dance productions	# locations; attendance; frequency	quality of programming
Community gardens	# of gardens; # of plots; funding; community support	quality of gardens and experience; community perceptions; impact
Farmers' markets	# of markets; # of booths; frequency; sales; economic impact	quality and uniqueness of goods; importance to sense of place; diversity of providers; accessibility
Culinary arts	# of programs; participation rates	quality of experiences; impact
Cultural education institutions	# of locations; participation; funding	evaluation of programs
Community based cultural facilities and programs	# of locations; # of programs; participation by adults, youth and children	leisure time spent on culture; culture hobbies; impact of programs
Cultural programs in schools	# of programs; participation; funding allocated	interest in culture by children and youth; impacts of programming; quality
Community / cultural events or gatherings	# and frequency; participation; funding	quality of experiences; community impact; diversity of audience; importance to sense of belonging and social cohesion
Cultural tourism	# of cultural tourists; spending by tourists	quality of experiences; community perceptions of cultural tourism

CONCLUSION

Culture is dynamic and multi-faceted, embracing a wide range of aspects that describe and shape the way of life and quality of life of people. Maintaining a broad and inclusive understanding of culture and cultural well-being is advised (Jackson et al., 2006). As an all-encompassing feature of community vitality, cultural research overlaps significantly with the economic, social, and environmental pillars (Mercer, 2004), and there are many opportunities for integrated research endeavours.

As indicated in the review of literature, there is no prescribed method to develop cultural indicators. The many approaches, possible uses, multiple dimensions, and diversity of participants make it complex. The cultural indicator field is relatively new and evolving, and rife with challenges. There are however, increasingly more and more lessons learned from the pioneering efforts of researchers and practitioners around the world (Duxbury, 2003). Developing cultural indicators is an involved process that must be completed in context. RDI should be prepared to develop a 'made in the Basin-Boundary' approach, and ideally this approach will be an integrated one; one that values culture from an instrumental and intrinsic perspective.

Cultural indicators are a tool to help understand and place value on a particular phenomenon. What can be 'measured' within the cultural realm is under development. RDI must be careful to measure what is important, not just what is easy. It is also essential to recognize that the things we choose to measure can have an impact of the very subject being measured. The process of developing cultural indicators is as important as the data itself (Badham, 2010; Sustainable Calgary, 2013).

After a review of academic literature and cultural indicator projects from around the world, there is advice on how to proceed with the development of the cultural research pillar. First, RDI will need to clearly define the purpose of the cultural research pillar. A good starting place is to put effort into mapping the cultural resources and strengths that exist in the region, building a foundation on which to work from. Inherent in the process of understanding the cultural landscape is the engagement of a diverse group of people from within the initial four areas of interest (arts, heritage, culture, and recreation), including both leaders and experts as well as citizens and grassroots organizations. Having a solid understanding of the needs of the end users is critical, as is building relationships with stakeholders from the beginning to ensure relevancy and meaning. Another key factor in developing cultural indicators is data availability. RDI will want to identify any and all existing and potential data sources, and a localized approach to data collection should be considered. An essential concern is the resources that may be available for cultural research as adequate staff time and significant financial resources are required in order to embark on a successful cultural indicator development process.

More and more communities are constructing indicator processes and documents to track the well-being of their region. A challenge with cultural indicators in particular is that people are taking different approaches, which is understandable because of the highly subjective and sensitive nature of the subject. However, this results in a lack of standardization in the field, and

creates an inability to find solutions for some common problems. RDI will want to stay apprised of new research in this evolving field, and can be a participant in contributing to the learning curve. It will be important to stay in contact with key authors and contributors.

Developing cultural indicators for the Columbia Basin Boundary Region is a daunting task, but also an extremely exciting one. As indicated by the Vital Signs report for the City of Calgary (2009), arts and culture inspires innovation and creativity while shaping how we commemorate our past, understand our present, and imagine our future. Culture is an integral part of who we are and how life in the region may change over time. A “healthy place to live includes opportunities for and the presence of arts, culture and creative expression” (Jackson et al., 2006, p.2), and as stated in a final report by the Canadian Prime Minister’s External Advisory Committee on Cities and Communities, “...strong cultural engagement can substantially improve the cohesiveness, confidence and international image and attractiveness of places, with attendant economic, environmental and social benefits” (Schimpf and Sereda, 2007, p. 8). Culture relates to overall health, to collective beliefs and values, and to the roles people play in building and nurturing vibrant communities.

Just as culture is tantamount to creativity, RDI will need to be inventive and adaptive in the process of building an understanding of the culture and cultural well-being of the Columbia Basin Boundary Region. RDI can craft a process to understand our current cultural landscape and to envision our cultural vitality into the future. As renowned thinkers and scientists Paul and Anne Ehrlich (2008) declare, creativity and imagination is the foundation for cultural resilience and evolution. Culture is “a driver of innovation, enterprise and quality of life” (Ferres et al., 2010, p. 261). The quantity and quality of cultural resources is connected to community development, and ultimately community sustainability (Jeannotte, 2003). RDI is on the verge of a process that could play an integral role in helping the region identify its strengths and support the development of creative, resourceful, and resilient rural communities.

REFERENCES

- Allaire, B. (2006). *Analysis of methodologies used by cultural observatories and statistical centres, Guidelines for Trainers and Researchers. Counting Culture in Quebec: a system of indicators for culture and communications*. Bologna: Quebec Observatory on Culture and Communications, Institut de la Statistique du Quebec.
- Badham, C. (2010). *The Menace of Measurement: A discussion about arts indicators*. University of Melbourne: Saskatchewan Arts Alliance.
- Bell, S. & Morse, S. (2001). Breaking through the glass ceiling: Who really cares about sustainability indicators? *Local Environment*, 6(3), 291 – 309.
- Bianchini, F. (1993). *Urban Cultural Policy in Britain and Europe: Towards Cultural Planning*. Griffith University: Institute for Cultural Policy Studies.
- Brooks, A., McCarthy, K., Ondaatje, E. & Zakaras, L. (2004). *Gifts of the Muse, Reframing the Debate About the Benefits of the Arts*. Santa Monica: Research in the Arts.
- Brugmann, J. (1997). Is there a method in our measurement? The use of indicators in local sustainable development planning. *Local Environment*, 2(1), 59 – 72.
- Canadian Policy Research Networks (CPRN). (2003). *Workshop on quality of life, February 19, 2003*. Ottawa: CPRN.
- Center for Whole Communities. (2007). *Whole Measures: Transforming our Vision of Success*. Vermont: Center for Whole Communities.
- Centre for Native Policy and Research (CNPR). (2013). *What is the Centre for Native Policy and Research (CNPR)?* Retrieved April 4, 2013, from <http://www.cnpr.ca/About.aspx>.
- Centre for Policy Studies on Culture and Communities (CPCC). (2013). *Research Directory: Cultural Indicators*. Retrieved April 8, 2013, from http://www.cultureandcommunities.ca/resources_indicators.html.
- Chicago Cultural Indicators. (2013). *Intro*. Retrieved April 9, 2013, from <http://www.culturalindicators.org/home>.
- Cobb, C., & Rixford, C. (1998). *Lessons learned from the history of social indicators*. Retrieved March 25, 2013, from <http://rprogress.org/publications/1998/SocIndHist.pdf>.
- Columbia Basin Rural Development Institute. (2012). *2012 State of the Basin Snapshot Report*. Retrieved February 25, 2013, from http://www.cbrdi.ca/wp-content/uploads/StateoftheBasinReport2012_web.pdf.

- Columbia Basin Trust. (2008). *2008 State of the Basin Report*. Retrieved February 24, 2013, from http://www.cbt.org/uploads/pdf/StateOfTheBasinReportNov7_2008FINAL.pdf.
- Costanza, R., Hart, M., Posner, S. & Talberth, J. (2009). *Beyond GDP: The Need for New Measures of Progress. The Pardee Papers, No. 4*. Boston University: The Frederick S. Pardee Center for the Study of the Longer-Range Future.
- Creative Blueprint. (2013). *Mapping Heritage Craft: The Economic Contribution of the Heritage Craft Sector in England*. Retrieved April 9, 2013, from <http://creative-blueprint.co.uk/library/item/mapping-heritage-craft>.
- Cultural Initiatives Silicon Valley. (2013). Creative Community Index. Retrieved April 4, 2013, from <http://www.cpanda.org/stage/studies/c00019?view=summary>.
- Davis, W. (2007). *Light at the Edge of the World, a Journey through the Realm of Vanishing Cultures*. Vancouver: Douglas & McIntyre Ltd.
- Duxbury, N. (2003). *Cultural Indicators and Benchmarks in Community Indicator Projects: Performance Measures for Cultural Investment?* Prepared for Accounting for Culture: Examining the Building Blocks of Cultural Citizenship. Gatineau: Creative City Network of Canada.
- Duxbury, N. (2007). *Cities and Communities: Cultural Indicators at the Local Level. Workshop Report*. Vancouver: Creative City Network of Canada, Centre of Expertise on Culture and Communities.
- Ehrlich, P. & Ehrlich, A. (2008). *The Dominant Animal: Human Evolution and the Environment*. Washington: Island Press / Shearwater Books.
- Eldridge, M. (n.d.) *The German Bildung Tradition*. Retrieved February 17, 2013, from <http://www.philosophy.uncc.edu/mleldrid/SAAP/USC/pbt1.html>.
- Ferres, K., Adair, D., & Jones, R. (2010). Cultural indicators: Assessing the state of the arts in Australia. *Cultural Trends*, 19(4), 261 – 272.
- Gudmundsson, H. (2003). The policy use of environmental indicators – Learning from evaluation research. *Journal of Transdisciplinary Environmental Studies* 2(2), 1 – 12.
- Hawkes, J. (2001). *The Fourth Pillar of Sustainability: Culture's Essential Role in Public Planning*. Melbourne: Cultural Development Network of Victoria in association with Common Ground Publishing.
- Henderson, H., Lickerman, J. & Flynn, P. (2000). *Calvert-Henderson Quality of Life Indicators: A New Tool for Assessing National Trends*. Bethesda, Maryland: Calvert Group.

- Hiebert, D. (2011). *Our diverse cities. Number 8, Spring 2011, British Columbia*. Ottawa: Citizenship and Immigration Canada.
- International Federation of Arts Councils and Culture Agencies (IFACCA). (2005). *Statistical Indicators for Arts Policy. D'Art report number 18*. Sydney: IFACCA.
- Jackson, M.R., Kabwasa-Green, F., & Herranz, J. (2006). *Cultural Vitality in Communities: Interpretation and Indicators*. Washington, DC: The Urban Institute.
- Jeannotte, S. (2003). Singing Alone? The contribution of cultural capital to social cohesion and sustainable communities. *The International Journal of Cultural Policy*, 9(1), 35-49.
- Jenks, C. (1993). *Culture*. London: Routledge.
- Metropolis. (2013). About Us. Retrieved April 9, 2013, from http://canada.metropolis.net/aboutus/aboutus_e.html.
- Kulkarni, V.V. (2012). Discourse on social indicators – Its nature and significance. *Indian Streams Research Journal*, 2(8), 1 – 12.
- Stewart, S. (2007). *Cultural Mapping Toolkit*. Vancouver: 2010 Legacies Now and Creative City Network of Canada.
- Macnaghten, P., & Jacobs, M. (1997). Public identification with sustainable development: Investigating cultural barriers to participation. *Global Environmental Change* 7(1), 5 – 24.
- Madden, C. (2005). Indicators for Arts and Cultural Policy: A Global Perspective. *Cultural Trends*, 14(3), 217 – 247.
- Matarasso, F. (2001) *Cultural Indicators: A preliminary review of issues raised by current approaches*. Stroud: Comedia.
- Mercer, C. (2002). *Towards Cultural Citizenship: Tools for Cultural Policy and Development*. Hedemora: Bank of Sweden Tercentenary Foundation and Gidlunds Forlag.
- Mercer, C. (2004). From data to wisdom: Building the knowledge base for cultural policy. *Insight*, 3. Retrieved March 25, 2013, from http://www.policiesforculture.org/insight/insight3_mercer.html.
- Ministry for Culture and Heritage. (2002). *Cultural Well-Being and Local Government. Report 1: Definitions and contexts of cultural well-being*. Temanatu Taonga, New Zealand: Ministry for Culture and Heritage.

- Ministry of Education and Culture. (2011). *Effectiveness indicators to strengthen the knowledge base for cultural policy. Publications of the Ministry of Education and Culture 2011(16)*. Government Finland: Department for Cultural, Sport and Youth Policy.
- Morrone, M. & Hawley, M. (1998). Improving environmental indicators through involvement of experts, stakeholders, and the public. *Ohio Journal of Science, 98 (2)*, 52 – 58.
- Morton, J. (1996). Measuring the arts in Victoria. *Culture and Policy, 7(3)*, 119 – 122.
- Neumayer, N. (2004). *Sustainability and Well-being Indicators. Research Paper No. 2004/23*. United Nations University: World Institute for Development Economics Research.
- Pattanaik, P. (1997). *Cultural Indicators of Well-Being, Some Conceptual Issues. Occasional Paper Series on Culture and Development*. Paris: United Nations Educational, Scientific and Cultural Organization.
- Redefining Progress. (2013). *Community Indicators*. Retrieved March 10, 2013, from http://rprogress.org/sustainability_indicators/community_indicators.htm.
- Rosenstrom, U., Mickwitz, P., & Melanen, M. (2006). Participation and empowerment-based development of socio-cultural indicators supporting regional decision-making for eco-efficiency. *Local Environment, 11(2)*, 183 – 200.
- Sawicki, D. (2002). Improving community indicator systems: Injecting more social science into the folk movement. *Planning Theory and Practice, 3(1)*, 13 – 32.
- Schimpf, M. & Sereda, P. (2007). *Towards a Geography of Culture: Culture Occupations Across the Canadian Urban-Rural Divide*. Ottawa: Culture, Tourism and the Centre for Education Statistics Division, Statistics Canada.
- Simons, D. & Dang, S. (2006). *International Perspectives on Cultural Indicators, A review and compilation of cultural indicators used in selected projects*. Creative City Network, Simon Fraser University: Centre of Expertise on Culture and Communities.
- Singh, V. (2006). Rural Employment in the Culture Sector. *Rural and Small Town Canada Analysis Bulletin, 6(8)*, 1 – 16.
- Statistics Canada (2011). *Conceptual Framework for Culture Statistics 2011*. Ottawa: Ministry of Industry.
- Sustainable Calgary. (2013). *Sustainability Indicator Research*. Retrieved March 10, 2013, from <http://sustainablecalgary.org/home/sustainability-indicator-research/>.
- Taylor, A. (2006). *Sustainability Indicator Frameworks in Alberta: Setting the Context and Identifying Opportunities*. Drayton Valley: The Pembina Institute.

- Theatre Bay Area. (2013). *Intrinsic Impact*. Retrieved March 18, 2013, from <http://theatrebayarea.org/Programs/Intrinsic-Impact.cfm#study>.
- The Calgary Foundation. (2009). *Thriving Critical: Calgary's Vital Signs, 2009 Citizen's Report Card*. Calgary: The Calgary Foundation.
- Thomashow, M. (1995). *Ecological Identity: becoming a reflective environmentalist*. Massachusetts: MIT Press.
- Trewin, D. (2006). *Arts and Cultural Heritage in Australia – Key Issues for an Information Development Plan*. Discussion Paper, Australian Bureau of Statistics.
- UN DESA. (2007). *The Millennium Development Goals Report*. New York: United Nations Department of Economic and Social Affairs.
- Ura, K. & K. Galay (eds). (2004). *Gross National Happiness and Development. First International Seminar on Operationalization of Gross National Happiness*. Thimphu, Bhutan: The Centre for Bhutan Studies.
- University of Victoria Geography. (2013). *The UVic Community Mapping Collaboratory*. Retrieved April 2, 2013, from <http://mapping.uvic.ca/welcome/about>.
- Veenhoven, R. (2008). *World Database of Happiness: Continuous Register of Scientific Research on Subjective Appreciation of Life*. Rotterdam: Erasmus University.
- Velkley, R. (2002). *Being after Rousseau: Philosophy and Culture in Question*. Chicago: The University of Chicago Press.
- Willard, B. (2010). *3 Sustainability Models*. Retrieved February 26, 2013, from <http://sustainabilityadvantage.com/2010/07/20/3-sustainability-models/>.
- World Commission on Environment and Development (1987). *Our Common Future*. Geneva: Oxford University Press.