INDICATORS AS A TOOL TO HELP CREATE SUSTAINABLE COMMUNITIES: A STUDY OF THE OUTCOMES OF FIVE COMMUNITY INDICATORS PROJECTS

by

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Indicators have become one of the primary tools of the sustainable communities movement and other related community movements that have emerged in the 1990s. While a great deal of resources are being invested in indicators projects, very little has been reported about the outcomes being achieved. This study examined five case studies through a series of 31 structured interviews to explore the outcomes being achieved with indicators and the factors affecting them. Most outcomes found through the study were of the "intangible" variety, such as increased social capital and raised awareness. In a few instances, the indicators influenced decisions, but in virtually no instances did the indicators lead to measurable change or progress toward sustainability, as measured by the indicators. Multiple key factors were identified that can help indicators programs achieve their goals. Of particular importance are the need for better outreach and links to action.

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CHAPTER 1

PROBLEM STATEMENT

Introduction

The sustainable communities movement is a growing movement aimed at addressing environmental, economic, and social issues at the community level in order to increase community well-being and provide for the long term health of human and natural systems. It shares much in common with a number of other "community movements" including healthy communities and quality of life. One of the primary tools of these movements is the use of indicators to measure current trends and conditions in a community and track progress toward goals. Many of these programs use community indicators as their flagship projects and have invested vast amounts of their time and resources in developing them. At the same time, very little has been reported about the outcomes being achieved with indicators (Innes and Booher 1999b; Maclaren 1996). This study is designed to explore those outcomes and the factors affecting them in order to help others better understand what they can realistically expect from their indicators projects and what factors are contributing to successful projects elsewhere.

Background

Sustainability has become a common buzzword. Developed in response to the growing environmental crisis, it has become a slogan of citizen leaders, activists, and policy-makers all over the world concerned with the long-term viability of human activity. The sustainable

communities movement emerged out of efforts to apply the idea of sustainability at the local level. Since 1990, community sustainability has grown to become "a virtual social movement" (Innes and Booher 1999b, page 5). Dozens, if not hundreds of sustainable communities projects have been initiated in cities, counties, and regions across the country.

The Sustainability Concept

The idea of sustainability developed in response to the growing realization that human activity and population growth are causing increasing environmental pressures, and that current levels of resource consumption and waste production can not be sustained over the long-term. The concept of sustainability gained a foothold in popular mainstream thinking following publication of the United Nations' World Commission on Environment and Development Report, *Our Common Future*,[1] in 1987 (Krizek and Power 1996). The report coined the now famous definition of sustainable development as "meet[ing] the needs of the current generation without compromising the ability of future generations to meet their needs" (WCED 1987, page 8). The Brundtland Report primarily dealt with the idea of "sustainable development," but as the term has gained legitimacy, people have applied it to other realms such as sustainable agriculture, sustainable communities, and most recently, sustainable business (Bridger and Luloff 1999). It has catalyzed an enormous amount of dialogue and been incorporated into a wide range of planning efforts, from the global to the local scale.

Sustainability draws heavily from ecology for some of its major concepts. One is the notion of carrying capacity. Applied broadly to human systems, this implies that there are limits

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[1] Otherwise known as the Brundtland Report for the Commission Chair, Prime Minister Gro Harlem Brundtland of Norway.

to growth. Paul Ehrlich's *The Population Bomb* (1968), the Club of Rome's *The Limits to Growth* (1972), and economist Herman Daly's work on the steady-state economy (beginning with *Toward a Steady-State Economy* in 1972) were important influences that provided the foundation for questioning the paradigm of unlimited economic growth (Krizek and Power 1996).

Sustainability redefines the environment-economy relationship, recognizing that the economy is a subset of the environment. This challenges the traditional view of a dichotomy between the environment and economy, with tradeoffs in one benefiting the other. Rather, the two are seen as inextricably linked, with the economy limited by environmental resources, including not just raw materials, but also ecosystem services such as watersheds, airsheds, and natural areas whose capacities can be depleted by pollution and habitat destruction. To sustain activity over the long-term, humans must maintain the stock of natural resources (the principal), and take only as much as can be renewed on a continual basis (the interest) (Daly 1996; Ekins and Jacobs 1998).

Another major concept underlying sustainability is that of interconnectedness. Drawing from one of the principle laws of ecology, "everything is connected to everything else," sustainability emphasizes the relationships and interdependencies between human and natural systems and among their various components (Krizek and Power 1996, page 17). Innes and Booher (1999a and 1999b) extend this thinking by applying complexity theory to describe sustainable human and natural systems as complex self-organizing, adaptive systems, much like living organisms, made up of a web of interactions, linkages, and relationships. This contrasts with the view of systems as machine-like with separable, analyzable parts, as in the traditional, Newtonian, mechanistic view that has dominated western thinking. Innes and Booher assert that viewing systems in this way helps to breakdown the apparent paradox of choosing between economic development and environmental protection.

One of the dominant themes of sustainability is that environmental, economic, and social systems are interdependent parts of a whole (often represented graphically as three interlocking rings). Activities in one area will affect the others, and issues can not be treated separately. Lessons learned in the environmental movement in the 1980s reinforced this notion (Mazmanian and Kraft 1999). Activists discovered that environmental progress often can not be made unless economic and social issues are also addressed. Thus, while sustainability is primarily a product of the environmental movement, and it has moved environmental issues more to the forefront of discussion, its agenda is not strictly environmental. It is primarily concerned with how humans interact with the environment, and it advocates balancing the integrity of all three systems to maintain human well-being.

Definitions of Sustainability

Defining sustainability precisely has proven difficult. Those attempting to apply sustainability in practice have typically found the Brundtland Report's definition too vague and general to be useful. This has led people to develop alternate definitions. Dozens of varied definitions now exist, perhaps as many as there are individual sustainability programs[2]. The vagueness of the term has, in fact, likely contributed to its popularity with international development agencies, government policy makers, academics, and environmental activists (Bridger and Luloff 1999). Hempel (1999) argues that its ambiguity may be its strength and that it is less important to have a precise definition than a recognizable common set of social goals emerging from the sustainability movement:

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[2] Both Krizek and Power (1996) and Bridger and Luloff (1999) list several.

> Like other transformative ideas, the concept of sustainability promises to remake the world through reflection and choice, but its potential to engage people's hopes, imagination, and sense of responsibility may depend more on strategic uses of ambiguity than on conceptual precision and clarity. Mobilizing ideas appears to be most effective when they serve as condensational symbols that defy narrow definition, encourage coalition building among diverse interests, and permit just enough comprehension and social absorption to promote convergent political acts. *The symbol of sustainability, arguably, is sufficiently ambiguous to be embraced by diverse interests, yet coherent enough to inspire movement in a particular direction* [my emphasis]. (Hempel 1999, page 44).

The counter argument is that ambiguity allows for varied interests to use the term as symbolic rhetoric void of meaningful policy implications, or to co-opt it to suit their own political agendas (Campbell 1996 and Andrews 1997 cited in Berke and Conroy 2000). Perhaps even contradictory social goals may emerge.

Defining sustainability and its social goals precisely is difficult partly because the term was originally a concept of the biological and physical sciences and it is not as easily applied to complex socioeconomic systems (Dixon and Fallon 1989). Another difficulty is that sustainability is inherently a normative concept, presenting assertions about where we should be going as a society and what things we should value. It begs the question, *what* should be sustained and *for whom*? In the Brundtland definition, how are *needs* to be defined? It raises several ethical questions, particularly those of social equity: intergenerational, inter-group, and interregional. These are political questions because ultimately they involve issues of social redistribution of resources (Miller 1985, cited in Miller 1999). Whether the focus is to be ecocentric or anthropocentric is another ethical concern. The latter view is most common.

What then does sustainability really mean? Hodge (1997) examined 29 different models of human-ecosystem relationships and distilled that "the idea of *sustainability* is best defined as the persistence over an apparently indefinite future of certain necessary and desired characteristics of both the ecosystem and the human subsystem within," (page 9). The choice of

what is "desired," namely what will be sustained and to what degree, depends on the operating set of values and the unique conditions and circumstances of the population involved. With the diversity of interests and values that exist and their ever-changing nature, there can be no one unique design of a sustainable world (Miller 1999). This is likely one of the major reasons why democratic participation and a bottom-up approach are often emphasized in sustainability programs. (The program is then designed according to the values, interests, and unique characteristics of the community affected.) For some, issues of process are essential to the meaning of sustainability. Campbell (1996, cited in Berke and Conroy 2000) defines sustainability as "the long-term ability of a system to reproduce," (page 22). Sustainability is, then, less about a specific endpoint than a quality of the system itself – its ability to adapt and respond to change[3].

The Sustainable Communities Movement

The sustainable communities movement began as a way to apply the concepts of sustainable development in a community setting. Within the environmental movement, the idea of communities as an effective forum to address environmental problems gained momentum in the 1980's and 90's with the popular slogan, "think globally, act locally". Many environmentalists embraced this concept as a way of effecting meaningful change at a more manageable scale than

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[3] Innes and Booher (1999a and 1999b) develop this idea further in their description of a sustainable system based on complexity theory. They present the concept of "distributed intelligence" whereby the multiple players in a system, with their varied roles and interests are equipped with a flow of meaningful information and the opportunity for joint learning and innovative responses with which to respond constructively to changes and problems that arise in the system. They argue that a sustainable system can only be created by developing this potential because it is impossible to know what kind of responses will be required or even what a sustainable community of the future will look like.

the politically intractable and more distant national or international levels (Bridger and Luloff 1999). It also addresses sustainability at the level where people feel the effects of environmental degradation the most and gives tangible meaning to a relatively abstract concept that people otherwise can not relate to easily in every day life.

Sustainable communities thinking builds on a foundation of past community movements, such as the Garden City movement and the work of Lewis Mumford, as well as current environmental thought (Hempel 1999). It also resonates with a number of current trends in thinking about communities, such as communitarianism[4] and bioregionalism[5]. In many ways it parallels the growth management/Smart Growth movement in responding to the many planning problems accompanying rapid population growth, such as urban sprawl, loss of agricultural land, a degraded environment, and decreased quality of life (Porter 1997). Because it provides a broad framework for addressing these issues, sustainability is becoming a common theme in planning and public policy. Miller (1999) notes evidence of this in its use as a principal organizing theme in the fourth edition of a major planning textbook. Within communities it has been incorporated into numerous comprehensive plans and other local planning activities (Maclaren 1996).

The Earth Summit convened in Rio De Janeiro in 1992 bolstered support for the sustainable communities idea. This gathering to try to collectively address global environmental trends yielded *Agenda 21*, which called for, among other things, development of specific plans

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[4] Communitarianism has been strongly promoted by Amitai Etzioni in *The Spirit of Community* (1994) and other works as a way of regaining the lost sense of community in the modern world. Related to this is the debate about the decline of social capital and the loss of civic engagement, led by the work of Robert Putnam (Hempel 1999).

[5] Bioregionalism has its roots in the planning and design insights of Patrick Geddes (1915), Ian McHarg (1969), Kirkpatrick Sale (1985), and the Regional Planning Association of America (Sussman 1976) (citations from Hempel 1999). It has experienced a revival in the modern environmental movement and is often promoted as part of the idea of local self-reliance.

for achieving sustainability from the local to national level. Habitat II, the second United Nations conference on human settlements held in Istanbul in 1996, further promoted application of the sustainability concept at the local level (Krizek and Power 1996). In response, Agenda 21 processes have been initiated in over 1,500 local governments in 49 countries (Brugmann 1996). In the U.S., the federal government has supported sustainability activity with creation of a President's Council, development of a national blueprint for sustainability, and a series of 10 national goals, one of which is sustainable communities. In 1995 the U.S. EPA created a new program that has provided research, web-based resources, and funding in support of sustainability efforts. Several states have also initiated sustainable development programs to provide guidance and funding for sustainability planning efforts.

At the community level, local governments, non-profits, and citizen groups have initiated sustainable communities projects in hundreds of communities across North America, evidenced by the large number of program web sites now in existence. Hempel (1999) notes more than 400 such sites. One of the first and best-known projects is Seattle, Washington's Sustainable Seattle, started by a group of concerned citizens in 1991. The all-volunteer effort produced indicators of sustainability through a broad-based community participation process. This prompted the city to rename its new comprehensive plan *Toward a Sustainable Seattle* and the indicators garnered international attention, winning the United Nations Centre for Human Settlements award for Excellence in Indicators at the 1996 Habitat II conference. They have since become the model for dozens of other sustainable communities projects.

Other well-known efforts include Chattanooga, Tennessee and Santa Monica, California. Concerned citizens prompted Chattanooga to undertake a visioning process in 1984 to address a host of economic and environmental problems. The visioning process involved the participation of public, private, and citizen leaders who created strategies and set goals for the community.

The results were a dramatic turnaround on a host of issues, reversing Chattanooga's reputation as the worst polluted city in America to being a model for sustainability. Santa Monica's Sustainable City program was initiated by city staff in 1992 in response to Agenda 21. Through a public participation process and coordination between city departments, the city developed goals, actions, and indicators to measure progress, all linked to city programs (Krizek and Power 1996).

The Meaning of Sustainable Communities

The notion of sustainable communities supplies a galvanizing concept for scholars, planners, environmental activists and policy-makers who have all realized the importance of crossing disciplinary boundaries and approaching the management of social and natural systems in a more integrated fashion. According to Hempel (1999):

> It encourages environmentalists to think carefully about the social and economic needs of a community; developers to understand something about ecosystem management; civic leaders to recognize the interdependence of communities in both economic and ecological terms; and ordinary citizens to draw connections between civic engagement and quality of life. As an integration concept, sustainable communities offers a set of mutually enhancing goals for planning and policy making. (page 52)

Like the terms sustainability and sustainable development, the meaning of sustainable communities is broad and integrative, appealing to diverse groups that may define it in different ways. The movement has not generated any clear, unified set of policies or reforms. Each community is left to set its own priorities in deciding what to sustain and for whom. While problematic for some, Bridger and Luloff (1999) view this flexibility as an advantage:

> Communities differ in terms of environmental problems, natural and human resource endowments, levels of economic and social development, and physical and climatic conditions... A community-level approach allows for the design of policies and practices that are sensitive to the opportunities and constraints inherent to particular places. (page 380)

Given this heterogeneity, it may be appropriate for communities to choose to work on different pieces of the comprehensive picture at any given time, depending on their priorities and needs. Specific target areas can include: waste reduction and recycling; energy efficiency and renewables; air quality and climate change; greening the city; water and sewage; transportation planning and traffic management; land use and urban form; housing and community development; community economic development; policy and government; and public participation and civic engagement (Roseland 1998). Despite these varied efforts and the lack of a single definition, several important themes emerge in the literature on sustainable communities. Figure 1 lists some of the most common characteristics and principles distilled from sources reviewed for this paper.

Democratic participation and the attention to process are unique aspects of the sustainable communities movement. Many sustainable communities efforts are "grassroots," either being initiated by citizens and/or involving extensive public participation processes. This approach reflects a line of current social thinking that rejects the past mechanistic model in which "experts" analyze a social problem, and develop a policy to remedy it, which is then applied by administrators in a hierarchical system (Innes and Booher 1999a and 1999b). Greater value is given to local knowledge, citizen empowerment and collaboration. Because they are comprehensive and integrative, sustainability efforts encompass a broad spectrum of community issues and draw linkages between different areas. This requires the involvement of people from diverse sectors and development of collaborative relationships among organizations, government departments, and private groups. Often a visioning process is undertaken to define shared values and goals.

Figure 1 – Themes in Sustainable Communities

CHARACTERISTICS:

1. Future Oriented – considers the long-term consequences of actions and strives for greater intergenerational equity.
2. Place-Based – recognizes fundamental ecological limits and strives to operate within the carrying capacity; considers natural rather than political boundaries.
3. Balanced, Integrative and Holistic – strives for balance among environmental, economic, and social concerns; recognizes the connections between different issues, and; seeks policies, programs, and solutions that bring about multiple objectives.
4. Process/Means Oriented – recognizes that sustainability is a constant dynamic process, requiring continuous evaluation and response.
5. Equitable – strives for intergenerational, intragenerational, and interregional equity
6. Participatory – seeks to engage and empower citizens in formulating and addressing problems.

PRINCIPLES:

1. Harmony with Nature – respects fundamental ecological limits, strives to maintain and improve ecological integrity.
2. Place-Based Economy – recognizes ecological limits; does not deteriorate natural capital; meets local needs and aspirations
3. Livability – provides a built environment that is appropriate, encourages community cohesion and sense of place, enhances and protects special community characteristics and elements of quality of life.
4. Full Cost Accounting – requires polluters to pay; prices of goods and services reflect the true social and environmental cost
5. Social Equity – improves opportunities for all citizens; strives for social justice and fairness; addresses the needs of the poor.
6. Civic Engagement and Participation – encourages informed and meaningful democratic participation.
7. Responsible Regionalism – considers global and regional concerns; minimizes harm imposed on external jurisdictions.

Source: Beatley and Manning 1997; Berke and Conroy 2000; Bridger and Luloff 1999; Hempel 1999; Kline 1995 (cited in Hempel 1999); Krizek and Power 1996; Roseland 1998.

Community Indicators

The sustainable communities movement shares much in common with other contemporary community movements that are comprehensive and integrative. A number of parallel efforts have emerged in the 1990s to address the well-being of communities, including "healthy communities" and "quality of life" initiatives. Like sustainable communities, these efforts try to balance environmental, economic, and social concerns, and emphasize a participatory approach.

The modern healthy communities movement was initiated by the World Health Organization in 1986 as a new community-based approach to public health [6] (Hancock 1997). It's based on the recognition that health is dependent on issues of the physical, environmental, social, and economic environment. Programs have been initiated on the national, state, and local levels. Hundreds of healthy cities projects now exist in communities worldwide and national networks have been established to link programs together. The first healthy communities program in the US was launched in California in 1988. The Colorado Healthy Communities Initiative, begun in 1992, produced a handbook, *The Healthy Communities Handbook* (1993) that is now widely used by other programs (Sawicki and Flynn 1996).

Quality of life is a general approach toward community improvement that avoids the perceived environmental emphasis of sustainability and the health emphasis of healthy communities. Other programs might go by the name of "community vitality" or "community

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[6] The idea of community-based health is not new. The modern healthy communities movement is built on a rich legacy of work on healthy cities, particularly in Europe and Canada, since at least the mid-1800s (Hancock 1997). It developed from the realization by public health workers that addressing inequities in health care delivery required attention to community factors beyond the traditional, individual treatment-based approach. It was also influenced by business leaders recognizing the connections between community factors, health, and employee productivity (Norris 1997; Besleme and Mullin 1997).

livability." In practice, all of the community well-being programs have such similar goals and frameworks, they can be difficult to distinguish. In fact, some initiatives have incorporated ideas of sustainability, but avoid using the term for political reasons:

> ... both the Oregon Progress Board and the Jacksonville Community Council Inc. [JCCI] say they don't call their projects sustainable. 'We don't use the language "sustainable" in Oregon; it's not unifying language,' says [the board's executive director]. 'Some like it, but many are hostile.' JCCI's [former executive director] is more blunt: 'If we started with that word we would have gotten nowhere. Environmentalists are viewed as extremists in the business community.' (Vogel 2000, page 5)

One thing common to all of the community well-being movements is the growing popularity of indicators – sets of measurements that provide data about key components of the community. "Some places call them benchmarks, some call them vital signs. Regardless of the name, indicators are in," declared Andrews (1996, page 14) in an article in *Planning* magazine. "States, cities, even tiny hamlets are using a variety of yardsticks to measure their own economic and social health – and to set future goals." Over 200 communities in the US alone have initiated indicators projects to date (Redefining Progress 2000). The earliest and perhaps best known effort is the Jacksonville (Florida) Community Council, Inc.'s Quality of Life Indicators, begun in 1985. However, most community indicators have been developed since the mid-1990s. Numerous web sites and other resources have been developed to guide these efforts, including two handbooks – *Community Indicators Handbook* (Redefining Progress, et al. 1997) and *Guide to Sustainable Community Indicators* (Hart 1999).

The proliferation of community indicators projects can be seen as part of a popular resurgence in the use of quantitative data. Innes (2000) compares community indicators efforts with the recent trend among local governments to assemble Geographic Information System (GIS) data sets. Vast amounts of resources are being spent in these efforts. Advances in

desktop GIS technology have certainly fueled this trend (Sawicki and Flynn 1996). Development of the Internet has also likely contributed to the availability of data, making community-level information more accessible than ever before.

The recent "benchmarking craze" of performance measurement in government has also contributed to the popularity of indicators, (Walters 1994, page 33). "Governments that used to pay no attention to their performance now seem obsessed with trying to measure everything in sight." This has resulted from citizen demands for greater public accountability and a shift toward outcome-oriented measurement. Benchmarking is a common approach at the state level. Murphey (1999) notes that at least 10 states have created "outcome measurement" or benchmarking programs. Oregon Benchmarks was the first such program and has provided a model for many other state- and community-level projects.

Whatever the framework – sustainable communities, healthy communities, quality of life, or benchmarking - indicators have become an important tool for community well-being and improvement programs. Much of the work of sustainable communities and other community well-being initiatives, to date, has been directed toward developing indicators (Innes and Booher 1999b). A 1998 survey conducted by Redefining Progress of over 100 community indicators projects provides a profile of these projects (Figure 2).

Functions of Indicators

Indicators are attractive for a variety of reasons. They provide a way to measure progress, engage community members in a dialogue about the future, and change community outcomes (Redefining Progress 2000). Indicators are measuring systems, much like an instrument panel (Redefining Progress, et al. 1997). They are representative bits of information that reflect the

Figure 2 – Profile of Community Indicators Projects from Redefining Progress Survey

APPROACHES USED:	41%	Quality of Life
	37%	Sustainability
	12%	Performance Evaluation (Benchmarking)
	10%	Healthy Communities
GEOGRAPHIC SCALE:	33%	City
	25%	County
	24%	Regional
	22%	State
	8%	Rural/Neighborhood
WHO INITIATED:	49%	Nongovernment Organization
	35%	Government
	8%	NGO/Government Partnership
	8%	University
MODELS:	54%	Sustainable Seattle
	46%	Oregon Benchmarks
	36%	Jacksonville Quality Indicators of Progress
GOALS:	64%	Public education
	61%	Inform policy
	32%	Evaluate government performance

Source: 1998 survey of over 100 community indicators programs (Redefining Progress 2000).
Note: Some figures contain overlap between categories.

status of larger systems. They provide information about past trends and current conditions and can reveal target areas for the community to focus on for policy and budgeting. In this way, they not only monitor progress, but can help make it happen by shifting consciousness toward particular areas. And they provide a feedback system for decision-makers to gauge performance and be more accountable.

One of the reasons for the current popularity of community indicators is the desire to replace traditional measures that may be inadequate or misleading with more meaningful ones (Redefining Progress, et al. 1997). For example, some measures of economic progress, such as housing starts or new roads built do not tell the story of attendant problems of sprawl, traffic, air pollution, or degraded sense of community. New comprehensive indicators can help integrate these different aspects. Sustainability indicators, especially, are focused on linkages between social, economic, and environmental factors. Community members have "raised new issues and concerns, hence challenging the types of information systems in place to monitor and assess economic, social, and environmental conditions," (Sawicki and Flynn 1996, page 167).

Practitioners have discovered that the process of developing indicators yields many benefits as well (Redefining Progress, et al. 1997). It brings people together from many different sectors of the community, fosters new alliances and relationships, and creates shared understanding of community problems and goals. Deciding which indicators to include helps to define abstract and complex concepts such as sustainability in ways that have meaning for the community. It creates a common vision for the future and defines the community's values. Broad-based participation creates connections and synergy for new groups and working relationships to form and builds support for the program. Once the indicators are developed, they can become a launching point for education efforts in the community.

Hart (2000) describes three categories of functions for indicators: tracking progress, raising awareness, and influencing decisions. These parallel Besleme et al.'s (1999) three categories of indicators outcomes: political outcomes, policy outcomes, and change. Raising awareness and political outcomes are both about how indicators bring issues into public attention and shape perceptions. This could occur through community meetings, strategic distribution of reports, media coverage, or incorporation into school curricula. Evidence of this outcome could

include the formation of new coalitions or groups or the use of indicators in political campaigns or speeches. Influencing decisions/policy outcomes includes direct effects on policy decisions, creation or modification of programs, changes in resource allocation, or incorporation of indicators into planning processes. Ultimately, it is hoped that indicators will track progress toward change or success, as defined by the indicator program (sustainability, healthy, government performance, etc.).

Statement of the Problem Situation

As discussed in the previous section, community indicators have become an important tool in many community initiatives such as sustainable communities. But while many groups are investing large amounts of time and resources in indicators projects, relatively little has been reported about their outcomes. No systematic study has been made of the kind of impacts that indicators projects are having, how effective they are, whether they are meeting their intended goals, what factors are contributing to their successes or failures, and ultimately, whether they are helping to create more sustainable, healthy communities. This study is designed to explore those questions.

Purpose of the Study

The purpose of this study is to evaluate the effectiveness of community indicators as a tool to create more sustainable communities by conducting a systematic examination of several community indicators projects to find out what kind of outcomes they are achieving, the conditions and activities that have influenced those outcomes, and areas where indicators programs could be improved or where further efforts are needed. The aim is to produce

information that could help others to better achieve their goals of more sustainable or healthy communities through the use of indicators by better understanding what they can realistically expect from their indicators projects and the conditions and actions that can help them to create more effective indicators projects.

Questions to Be Answered

1) What kind of outcomes have resulted from the indicators?
    - What evidence is there for outcomes in the three areas of raising awareness, influencing decisions, and tracking progress?
    - In which sectors of the community have these outcomes occurred?
    - Is there any phasing over time of different outcomes?
    - Has the project achieved the intended outcomes with respect to the stated purpose of the project?
2) What are the factors affecting those outcomes? (Factors include aspects of process, content, and structure.)
    - What factors have facilitated desired outcomes?
    - What factors have inhibited desired outcomes?
3) What are some general areas where indicators programs could be improved or where further efforts are needed?

Theoretical Framework

This study more closely resembles applied research than pure or basic research, as described by Colin Robson in *Real World Research: A Guide for Social Scientists and Practitioner Researchers*. That is, it is policy-oriented rather than theoretical. Its purpose is more exploratory than explanatory, and it more closely resembles program evaluation than

experiment or hypothesis testing. The primary concern is how effective indicators programs are because this has implications for useful they are as a tool for moving communities toward greater sustainability.

Nevertheless, several theoretical ideas influenced the research. The first draws from Judith Innes' ideas about how knowledge and information become translated into action and meaningful change (Innes 1990; Innes 2000; Innes and Booher 1999b). Innes asserts that the content of the indicators themselves is far less important than how the information is developed and who is involved. Specifically, the collective process of defining a vision and selecting the indicators creates shared meanings, fosters individual investment in the goals, and builds networks of communication and collaboration that will implement meaningful action. "Indicators that are influential are developed with participation of those who are to use them," (Innes and Booher 1999b, page 7). Joint learning occurs in the process of indicator development and the indicators then become linked into community context and issues. The study is partly an investigation into some real life examples to discover whether it is true that process is supreme in determining outcomes.

A second idea comes from Besleme et al. (1999), who assert that indicators programs have for the most part stalled at the point of being able to translate information into meaningful action. They claim that many community indicators projects have achieved success in their primary task of gathering and producing data that is relevant and meaningfully communicates a community's status in relation to its defined goals and values. In addition, the community-building aspect of the process is beginning to yield results as well. However, there is a growing realization that for community indicators projects to reach their full potential for improving communities, they must begin to link more directly into action. They must take more

responsibility for how information is used to promote change. This study investigates this idea of "stalled action" by examining outcomes from a number of indicators projects.

Methodology

This research utilizes a case study approach. Five community indicators programs were selected as case studies. Data was collected through structured interviews and review of written materials. Thirty-one interviews were conducted over a four-month period from November 2000 to March 2001. See Chapter 3 for an expanded discussion of the methods used.

Importance of the Study

This study contributes to the knowledge about the outcomes being achieved with community indicators and the factors that have influenced those outcomes. This could be helpful for community groups and local governments that have recently developed, are currently developing, or are considering developing indicators projects. It could help them to assess the potential success of their programs and consider how they might create more effective programs. It could be helpful for sustainability practitioners concerned with finding where to best focus their resources and efforts in order to achieve more sustainable communities.

Remainder of the Paper

Chapter 2 reviews important literature on the history and functions of indicators. Chapter 3 describes the methods used in the research. Chapter 4 presents descriptions of each

case study and a summary of the findings from the research. Chapter 5 presents overall conclusions from the research and recommendations.

CHAPTER 2

LITERATURE REVIEW

Introduction

The idea of indicators is based on the simple notion of having quantitative, descriptive data on which to base policy. It can reveal current conditions, track trends over time, provide early warning and identify important issues, and in some cases establish cause and effect - a very useful function in policy decisions. Current uses of indicators build on a history of economic, social, urban, and more recently environmental indicator development. The modern use of indicators in community well-being movements owes a significant intellectual debt to the social indicators movement, in particular, which has long advocated for an expanded set of measures of human well-being beyond the traditional economic indicators (Miller 1999). This chapter reviews relevant literature on the history and functions of indicators to illuminate what has been learned about the use of indicators and how it applies to current uses of community indicators.

History of Indicators

Early Efforts

Evidence of interest in quantification in relation to many kinds of issues can be found from as early as the 17th century (Innes 1990). Modern application of indicators to social and health issues can be traced to social reform efforts of the 1830's in Belgium, France, England,

and the United States. Looking for ways to understand the nature of epidemics in industrial cities, physicians and statisticians began using social components of census data, collected for the first time during this period (Cobb and Rixford 1998). The earliest use of indicators to promote social change in the U.S. occurred in the 1810's with prison reform efforts in Philadelphia. By the 1830's, the temperance movement was using statistics to try to prove that alcohol was the cause of numerous social problems.[7]

A study released by the Russell Sage Foundation in 1914, based on a survey of industrial conditions in Pittsburg, represents an early precursor to many of the community indicators efforts of the 1990's (Cobb and Rixford 1998). The study stimulated a wave of interest in other cities for similar studies, resulting in over 2,000 local surveys on education, recreation, public health, crime, and general social conditions. The processes used in these early surveys are a remarkable reflection of modern processes used as well. The surveys were supervised by local citizen or religious organizations or civic groups, much as today's community indicators projects are facilitated by local groups. The information gathered in the surveys was then relayed to the public in the hopes of influencing public opinion and mobilizing people to press for reforms.

Development of National Indicators

The earliest collections of national statistics included demographic data, unemployment rates, crime rates, and consumption levels. Conflicts over wages, unemployment, and the conditions of

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[7] Some temperance advocates also attempted to show that alcohol was economically wasteful by calculating the number of acres of grain devoted to alcohol production, much like a modern Ecological Footprint analysis (Cohen 1982, cited in Cobb and Rixford 1998). Ironically, this backfired when the United States Brewers' Association countered that alcohol was economically and socially beneficial, armed with statistics showing that liquor taxes paid for a great deal of the care of the poor. This was an early lesson in how statistics can be manipulated to advocate for political causes in either direction.

the working class in the latter third of the 19th century led to the creation of the U.S. Bureau of Labor, which provided some of the first social statistics gathered on an official basis (Cobb and Rixford 1998). Efforts to improve national statistics accelerated in the 1920's and 30's. The National Bureau of Economic Research began to amass hundreds of economic measures to be followed over time (Innes 1990). Herbert Hoover established the Research Committee on Social Trends, which, under the directorship of William Ogburn of the University of Chicago, released the 1,600-page tome *Recent Social Trends* in 1933 covering a variety of demographic, health, and education indicators (Rossi and Gilmartin 1980).

The Depression and World War II focused attention on macroeconomic economic indicators. In the 1940's and 50's, the government developed a standardized unemployment measure, continued work on business cycle indicators to better gauge economic downturns, and developed the Gross Domestic Product (GDP) as a means of analyzing and organizing wartime production (Cobb and Rixford 1998).

The late 1950's and early 1960's in the U.S. was a time of rethinking national priorities (Innes 1990). Russian successes in space had spurred increased funding for the U.S. space program and a focus on scientific research and education. A project sponsored by NASA to study the effects of the space program on society led to the publication of *Social Indicators* in 1966, edited by Raymond Bauer. The researchers had found that in order to understand "second-order" effects on social, political, and economic life, a broad set of measures was needed. They did not have the resources to complete the comprehensive data gathering, but the report proved popular and coined the term "social indicators" as a parallel to economic indicators, which were by then well-established in the national consciousness.

The Social Indicators Movement

The call for increased collection of comprehensive social measures dovetailed with increasing public concern in the later 1960's over domestic social problems such as poverty, race, health, environmental pollution, unemployment, and housing (Rossi and Gilmartin 1980). It was felt that describing society quantitatively would help to better understand social problems, their causes, and potential solutions. Momentum for developing a system of national social accounting was fueled in part by the successes of economic indicators in 1963 and 1964 (Innes 1990). Using indicators and models, economists had recommended a tax cut to revive the economy. When President Kennedy took their advice and the economy responded in the predicted way, with GNP increasing by approximately the estimated amount, it lent a great deal of credibility to the use of indicators in policy formation.

Those in the social policy realm advocated for a similar system of social measures parallel to the existing economic measures. Between 1967 and 1973, Senator Walter Mondale and others repeatedly introduced legislation to establish national level social reporting similar to economic reporting, which would serve to further institutionalize the use of social indicators as a guide for policy (Rossi and Gilmartin 1980). The legislation went through the Senate, but never passed the House of Representatives. Many felt that the potential for social indicators was not as great as for economic indicators because social theory was not as well-developed as economic theory and social objectives were more fuzzy than economic ones, such as increasing output (Cobb and Rixford 1998).

However, public and professional interest in comprehensive social indicators did not wane, and a series of publications in the late 1960's encouraged intellectual development in the field. The publication *Toward a Social Report,* issued by the Department of Health and Welfare

on the last day of the Johnson Administration in 1969, further increased public and professional interest in social indicators.

Social indicators work flourished in the 1970s. The journal *Social Indicators Research* was founded in 1974 and thousands of books and articles on the topic were published (Cobb and Rixford 1998). By the end of the decade there was a self-recognized social indicators movement and substantial institutional, conceptual, and methodological advances in the field had been made (Andrews 1989). In the U.S., the effort to produce a comprehensive social indicator report yielded three volumes of *Social Indicators*, published in 1974, 1977, and 1981. Reception to these volumes was mixed. Political pressures in the Nixon Administration had reduced them to "neutral chartbooks, replete with facts but void of interpretation," (Cobb and Rixford 1998, page 11). Their ability to influence policy was deemed minimal and interest in social indicators waned.

In the 1980s, social indicators activity slowed considerably (Andrews 1989; Innes 1990; Land 1992). Social indicators literature dwindled as policy scientists turned their attention elsewhere. The Center for Coordination of Research on Social Indicators in Washington, DC closed down due to lack of funding. Cobb and Rixford (1998) state that by the 1980's, the social indicators movement in the United States was effectively over. Possible explanations for this include: economic anxieties overriding social concerns; an ideological shift toward conservatism and distrust of government; the lack of a theoretical framework comparable to economic theory; the lack of an agreed-upon method of making normative judgments; and a perceived failure of social indicators to demonstrate their usefulness in public policymaking (Cobb and Rixford 1998; Land 1982).

International Indicator Activity

The 1970s brought a surge of social indicator activity internationally as well as in the U.S. Efforts to institutionalize social reporting were more successful in European nations, particularly Great Britain, France, Germany, and the Netherlands, than in the U.S. Noll and Zapf (1994, cited in Cobb and Rixford 1998) attribute these successes to more clearly defined social policies and programs, more interventionist-oriented governments, better statistical agencies, and more centralized geography. Support for social indicators fluctuated in Europe and Canada, as it did in the U.S., but it generally remained more constant. Worldwide, at least 21 countries published national social indicator reports between 1973 and 1977, and several other countries were in preparation stages (Rossi and Gilmartin 1980).

The social indicators movement also influenced international agencies in the 1970s (Cobb and Rixford 1998; Innes 1990). The United Nations began to examine alternate measures to economic growth to describe standards of living in developing countries. The Organization of Economic Co-operation and Development (OECD) initiated a lengthy consensus process among nations to select issues and design indicators, culminating in the publication of *Living Conditions in OECD Countries* in 1986. In the 1980s, many agencies began publishing annual reports on social conditions. The World Bank released its *World Development Report* and *Social Indicators of Development* and the United Nations began work on its Human Development Index. The World Health Organization also initiated its Healthy Cities program at this time, which involved the creation of community-based health indicators.

Environmental Indicators

One of the important legacies of the social indicators movement of the 1960's and 70's was an expanded range of indicators to measure quality of life beyond the traditional economic ones (Andrews 1989). Growing environmental concerns in the 1980's led to the creation of environmental indicators as a new realm of measurement. In the United States, the Council on Environmental Quality published *Environmental Trends* in 1981, and the Environmental Protection Agency also began to develop indicators to monitor and publicize the state of the environment (Cobb and Rixford 1998). For those seeking a comprehensive set of indicators to measure the broad spectrum of human well-being, environmental indicators became a necessary component, in addition to the social and economic (Michalos 1997).

The international development community began to link environmental and development concerns. OECD started developing environmental indicators in the late 1970's, and stepped up efforts in the 1980s. International policy institutes began issuing publications to document environmental trends, such as The WorldWatch Institute with its annual *State of the World* reports and the World Resources Institute with its *World Resources* reports. In 1992, OECD initiated a program of conducting country environmental performance reviews to help nations improve their environmental performance. The program continues today (OECD 2000).

The United Nation's Brundtland Report (1987) ushered in the popular idea of sustainable development, and the subsequent Rio Summit in 1992 introduced a framework for developing indicators of sustainability. As noted in Chapter 1, the idea of sustainability was premised on questioning the traditional ideal of perpetual economic growth. A great deal of literature appeared in the 1970's and 1980's addressing the consequences of population growth, the environmental limitations of sustained economic growth, and the necessity of revising concepts of development.

Many people turned their attention to the notion of revising the GDP, the preeminent indicator of economic well-being. The rationale was that GDP positively registered economic activity related to environmental damage and poor health conditions, and did not take into account degraded natural and human capital. In this way, GDP could not be considered a true measure of economic health, let alone general well-being. In addition, it was recognized that the ability of the economy to produce on an on-going basis depends on these forms of capital as well as manmade capital; therefore, net capital accumulation figures should reflect all of these measures (Steer and Lutz 1993). A wide variety of efforts have been undertaken to "green" the national accounts, or develop new measures of well-being that include social and environmental concerns. However, none have become widely accepted or institutionalized yet.

The idea of more comprehensive national accounting systems became a focus for many international agencies. At the Rio Summit, 178 nations agreed to expand their national accounting systems to incorporate environmental and social dimensions, or to at least create satellite accounts for natural resources, if they were not incorporated directly (Steer and Lutz 1993). The Statistical Division of the United Nations (UNSTAT) developed a revised System of National Accounts and issued a handbook in 1993 (Bartelmus 1995). However, due to lack of international consensus on how to incorporate environmental costs and benefits in national accounts, UNSTAT was subsequently charged with developing a satellite system, rather than modifying the core system itself. This integrated system of economic and environmental accounts (SEEA) has been pilot tested in a number of countries for several years and continues to be a work in progress (OECD 2000).

Sustainability Indicators

In addition to work on national accounting systems, international agencies also began working to develop indicators of sustainability. Pioneering work on environmental indicators in Canada and the Netherlands led to development of the "pressure-state-response" model by OECD (Cobb and Rixford 1998; Lombardi 1998; Farrell and Hart 1998). This provides a framework for analyzing indicators in terms of the factors affecting sustainability (pressures), the resulting environmental conditions (states) , and remedial actions (responses). The United Nation's Commission on Sustainable Development (UNCSD) developed a similar classification system of "driving force-state-response." Both the OECD and the UNCSD developed lists or "menus" of several hundred indicators for users to select from according to their needs, with the idea that not every country would desire the same indicators (World Bank 1997). Other organizations such as the World Bank and the European Union also worked to develop sustainability indicators.

National-level endeavors to develop sustainability indicators have been undertaken in numerous countries, with different levels of effort and sophistication[8] (World Bank 1997; Farrell and Hart 1998). Agenda 21 from the 1992 Rio Summit has been the primary motivation and conceptual guide for many of these efforts, while the OECD pressure-state-response model has influenced many of the indicators frameworks themselves. Canada was one of the early pioneer countries, first initiating its environmental indicators program in 1989 and publishing sustainability plans as early as 1993. Sustainability indicators are now frequently used as a tool by Canadian governmental entities from the local to the national (Farrell and Hart 1998).

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[8] The World Bank (1997) cites advanced efforts in Canada, the Netherlands, and Scandinavia, implicit or explicit indicator work in Australia, the Baltic states, Japan, Latin America, the United Kingdom, and the United States, and initial studies in southern Africa and some Mediterranean countries.

In the U.S., the newly created President's Council on Sustainable Development recommended in 1996 that the federal government, in collaboration with the private sector and non-governmental organizations, develop national indicators of progress toward sustainable development and regularly report on those indicators to the public. In 1998, the U.S. Interagency Working Group on Sustainable Development Indicators (SDI Group) released its first progress report describing an organizational framework for sustainable development indicators and an experimental set of 40 indicators (SDI Group 1998).

A great deal of literature is devoted to describing how sustainability indicators should be constructed and what they should contain. Hundreds of web sites and manuals now exist to guide these efforts. The only general agreement seems to be that they should cover the three aspects of the environmental, economic, and social. The "menu" approach of OECD and UNCSD recognized that different indicators may be applicable in different places. However, at its Rome Conference in 1999, OECD identified a core list of environmental performance indicators for use in member countries (OECD 2000). An important theme at this conference was the need for better indicators of social-environmental aspects in addition to the economic-environmental.

Urban Indicators

The current wave of community indicators has been influenced not only by national and international developments in economic, social, and environmental indicators, reviewed in the previous sections, but also urban indicators. Local indicators have long been of interest to citizens and local leaders interested in data that reflects the state of affairs in the immediate environment where people live and work. International, national, and state indicators have an important role to play, but are, typically, too general to address specific conditions of interest and inform decisions at the local level (Hoffman 2000).

Carley (1981) asserts that "social indicators have found some of their most extensive practical (and impractical) applications in the field of urban analysis – the study of the nature and the workings of cities," (page 130). He identifies three main areas where indicators have been applied to the urban environment: *intra-urban* (examining geographical divisions and population subgroups within a city); *inter-urban* (measures to compare and contrast different cities) and *performance delivery* (of urban services).

Urban indicators work peaked during the 1970s, at the height of the social indicators movement. Indicators were seen as having the potential to help solve national urban problems. Several large studies were undertaken to test indicators and to study and compare quality of life in cities and localities across the country.[9] Government agencies, private research organizations, and academic institutions experimented with economic and social indicators at the local level (Sawicki and Flynn 1996). These took the form of profiles, needs assessments, state-of-the-city report cards, citizen surveys, and socioeconomic data. A review by the Urban Institute of indicators projects during the period 1970 to 1977 identified 58 intracity reports devoted to the description of a single city or metropolitan area (Flax 1978, cited in Sawicki and Flynn 1996).

Support for urban indicators also came from the international level. In 1978, OECD published a report titled *Urban Environmental Indicators*, which became a widely used reference for measuring housing and environmental conditions in urban areas (OECD 1997). However, national and international support for urban indicators seemed to wane along with social

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[9] In the early 1970s, a HUD-funded study was undertaken at the Lyndon Johnson School of Public Affairs to initiate, test, and evaluate an indicator system in six municipalities. The National Science Foundation invested $5.5 million in grants to support 40 indicators projects. The Center for International Studies at Emory University in Atlanta was funded by the Ford Foundation to perform an international study of 40 cities in the US, Canada and Western Europe comparing changes in the quality of life over the past quarter century and relate them to the pattern of urban populations. The Social/Health Indicators Program of the Census Bureau conducted in-depth studies on social well-being in Los Angeles and two rural counties in Mississippi (Lyndon B. Johnson School of Public Affairs 1974).

indicators activity in general until the 1990s. It was not until April of 1995 that OECD held its International Conference on Indicators for Urban Policies, the first opportunity since publication of its 1978 report for observers to gather and "take stock and consider what developments had occurred since the 1970's," (OECD 1997, page 17).

Urban indicators of the 1970s represented a mix of academic endeavors aimed at developing innovative methodologies, theories and complex indices for publication, and efforts by city planners and policy-makers to develop straightforward policy-relevant indicators (Sawicki and Flynn 1996). This conflict made it difficult to institutionalize ongoing indicators to keep the public informed. Academics were not interested in the routine replication of broad data sets over time that might have proved more useful for local decision-makers. In the late 1970s, Flax concluded, "the urban indicators field is quite fragmented. It has attained only limited academic respectability and is of low priority in most cities," (Sawicki and Flynn 1996, page 166).

Community Indicators in the 1990s

The wave of local indicators projects that began in the 1980s and early 1990s represents a reemergence of local indicators activity. They are largely concerned with overall measures of well-being and have adopted frameworks of quality of life, healthy communities, sustainable communities, performance measurement (benchmarking) and others. Influenced by the social indicators movement and environmental movement, these initiatives have taken a broad comprehensive approach that incorporates economic, social, and environmental concerns. Chapter 1 provides additional background on the community indicators movement.

Many community indicators projects are grassroots efforts initiated by business leaders, elected officials, nonprofit service providers, educators, church leaders, and concerned citizens. Democratic participation is often emphasized. This bottom-up approach differs from much past

work with indicators that had been top-down, and it represents a new perception of the role of indicators and information in the community. These community indicators efforts are not only about providing information for policy-makers, but empowering and engaging citizens to direct the future of their community. This is illustrated in Donnella Meadows' frequently-cited quote, which has served as inspiration for both the Sustainable Seattle and Sustainable Calgary programs:

> The indicators a society chooses to report to itself about itself are surprisingly powerful. They reflect collective values and inform collective decisions. A nation that keeps a watchful eye on its salmon run or the safety of its streets makes different choices than does a nation that is only paying attention to its GNP. The idea of citizens choosing their own indicators is something new under the sun – something intensely democratic (Donnella Meadows, cited in Sustainable Seattle Indicators of Sustainable Community 1998, page 4).

Political changes in the 1980s that shifted control of social programs from national and state levels to local entities fostered local interest in relevant data to guide decisions. Advances in desktop GIS and the Internet have made local data more available than ever before. The capability of GIS to link data to smaller geographic units has also facilitated the emergence of neighborhood indicators programs. In the mid-90's, the Urban Institute launched the National Neighborhood Indicators Project to develop measures of changing social physical, and economic conditions of neighborhoods in cities throughout the United States (Sawicki and Flynn 1996). The two underlying principles of the project are 1) the indicators must be formulated in a participatory process that includes residents and experts, and 2) the indicators must be capable of affecting citizen action and public policymaking.

Lessons Learned from the History of Indicators

Numerous lessons have been learned from the history of indicators thus far. Those summarized by Innes and Booher (1999b) and Cobb and Rixford (1998) are shown in Figure 3. Because indicators are invariably produced with the aim of effecting some change in society, by far the most frequent criticism of indicators has been their failure to influence policy (Sawicki and Flynn 1996; Innes 1989; Innes and Booher 1999b; Cobb and Rixford 1998). "Millions of dollars and much time of many talented people has been wasted on preparing national, state and local indicator reports that remain on the shelf gathering dust," (Innes and Booher 1999b, page 6). Consequently, much of the literature reflecting on past experiences with indicators deals with trying to explain why indicators have "failed" to influence policy and what is necessary to improve their performance.

Debates About the Nature and Functions of Indicators

The history of social indicators reveals a basic conflict about the nature and purpose of indicators: whether they should be *descriptive* – presenting data without judgment – or *prescriptive* – providing some guidance about what should be done (Cobb and Rixford 1998). Arguments that indicators should be descriptive coincide with the belief that information should be objective and neutral, avoiding partisanship. This is especially the case with government agencies that are supposed to be nonideological and motivated only to serve the good of the people (Cobb 2000). Arguments for this approach also arise from the desire the avoid having the indicators perceived as biased, and the information therefore discredited.

Figure 3- Lessons Learned from the History of Indicators

Cobb and Rixford:

1. Having a number doesn't necessarily mean that you have a good indicator.
2. Effective indicators require a clear conceptual basis.
3. There's no such thing as a value-free indicator.
4. Comprehensiveness may be the enemy of effectiveness.
5. The symbolic value of an indicator may outweigh its value as a literal measure.
6. Don't conflate indicators with reality.
7. A democratic indicators program requires more than good public participation processes.
8. Measurement does not necessarily induce appropriate action.
9. Better information may lead to better decisions and improved outcomes, but not as easily as it might seem.
10. Challenging prevailing wisdom about what causes a problem is often the first step to fixing it.
11. To take action, look for indicators that reveal causes, not symptoms.
12. You are more likely to move from indicators to outcomes if you have control over resources.

Innes and Booher:

1. Indicators do not drive policy.
2. Indicators can be influential under certain conditions
3. Indicators' main influence is not primarily after they are developed and published, but rather during the course of their development.
4. If an indicator is to be useful, it must be clearly associated with a policy or set of possible actions.
5. Indicators influence most through a collaborative learning process.
6. It matters how the indicators are produced.
7. For indicators to be used, there must be not just opportunity, but a requirement to report and publicly discuss the indicators in conjunction with policy decisions that must be made.
8. The development of an influential indicator takes time.

Source: Cobb and Rixford 1998, Innes and Booher 1999b.

In some cases, researchers are forced to adopt a more descriptive approach, with little or no interpretation for policy, when the conclusions reached from the data or the policy implications challenge political interests. For example, when the Massachusetts Bureau of Labor - the first agency in the US to gather and publish labor statistics - was established in 1864, its first appointed directors were labor sympathizers who wanted to demonstrate the terrible conditions of workers and show how entrenched interests perpetuated those conditions (Cobb and Rixford 1998; Cobb 2000). This agenda offended real estate, financial, and manufacturing interests. The directors were replaced in 1873 by Carroll Wright, who later directed the US Bureau of Labor. Wright saw his role purely as a "neutral technician" and advocated for objectivity in the gathering of statistics. His philosophy had a lasting effect on the field of social indicators.

Ironically, Wright's approach carried a subtle anti-labor bias, which was masked by pseudo-objectivity, and effectively helped to preserve the status quo. Today, indicators researchers continue to pursue objectivity, but critics consistently point out that indicators are never value-neutral (Cobb and Rixford 1998; Cobb 2000; Innes 1990). They are inherently biased and inevitably political with respect to both the selection of topics on which to gather data and the data gathering and publication techniques, themselves. Raymond Bauer, who coined the term "social indicators" in the 1960's, defined them as:

> ...statistics, statistical series, and all other forms of evidence ... that enable us to assess where we stand and are going with respect to our values and goals, and to evaluate specific programs and determine their impact, (cited in Sawicki and Flynn 1996, page 165).

This definition illustrates the normative nature of indicators. Decisions are made about what to measure (or omit) according to what people value, and performance is assessed with respect to some desired conditions. In addition, the information provided by indicators represents the power

to judge results, make decisions, and allocate resources (Murphey 1999). This makes them political.

Some early social measurement attempts illustrate how those measurements inevitably reflect the values of the group doing the measurement. Social statistics were referred to as "moral statistics" when they were first introduced by social elites in the 1830s (Cobb 2000).

> Physicians and upper-class social reformers developed measures of social pathology in terms of the incidence of drunkenness, criminal behavior, and other social vices that were observed in working-class households. The researchers hypothesized that individual moral failure was the cause of social problems... They imagined they were simply observing "reality," with no awareness that they were looking through a class-based lens. (page 19)

This effort was not challenged for being biased because their analysis was directed at a relatively powerless group, lower-class households. When, in 1850, the Census Bureau proposed to study the institution of slavery, controversy erupted in the U.S. Senate. Even though the researchers were going to use the same techniques that had previously been used to study social problems, "some of the questions implicitly assumed that slaves were human beings, with family ties, which indirectly undermined the moral premise of slavery," (Cobb 2000, page 19). This threatened powerful interests and consequently, the researchers were prohibited from asking some of the planned questions.

Explanations for the Failure of Indicators

Fueled by the belief that indicators should be descriptive rather than prescriptive, researchers have repeatedly undertaken efforts to amass and compile socially descriptive data in the hope that information will automatically lead to action. Unfortunately, these compendia of data have proven ineffectual at influencing policy in a meaningful way. Several authors attribute

this to a misunderstanding of the relationship between information and action (Carley 1981; Innes 1989 and 1990; Innes and Booher 1999b; Cobb and Rixford 1998; Cobb 2000).

One of Carley's (1981) criticisms of many indicators efforts is that they are too broad in scope:

> Misguided attempts at comprehensiveness which result in "information overload" must be dealt with by attention to synthesis and communication. Researchers seldom wish to camouflage critical issues but sometimes do just that by refusing judiciously to select and highlight data critical to the policy issue. If any criticism can be put to social indicator studies from a policy point of view it must be that many have been too broad and vague and have not concentrated on policy-manipulable variables. (page 110)

The extreme example is general quality-of-life studies, which he describes as "unrelated to any particular policy and too general to satisfy anyone's particular information needs," (page 110). Thus, they are often ignored. Sawicki and Flynn (1996) echo this in their conclusions about neighborhood indicators: "It is imperative that the numbers have a specific policy purpose," (page 179).

These conclusions are supported by Judith Innes, who has been studying and writing about the relationship between information and action since the 1970's. She cites a study of the impact of the US social report that concluded that decision-makers who had expressed interest in the indicators rarely used the reports (Innes 1989). If they used them at all it was as background material for preparing speeches. The indicators were perceived as "out of date, too general in scope, and too lacking in interpretation to be useful," (page 431). Similar findings were made in a study of Canadian social reports. There, teachers and students were the primary users, with the reports functioning as education tools about society.

According to Innes, the problem with most approaches to indicators is that they focus too much on the measurement aspect to the neglect of political and institutional considerations. Her focus is on the *process* rather than the *content* of the indicators themselves. She asserts that

indicators have greater influence in the course of the design – in framing the terms of policy discourse – than in providing answers to policy questions. It's not really the indicators, themselves, or the reports that matter, but the learning and change that takes place during the course of their development and the way this leads to new shared meanings and changed discourses (Innes and Booher 1999b). Influential indicators are those that are developed with the participation of the people who are to use them.

Cobb and Rixford (1998) assert that while the positive results cited by Innes are critical, they will not necessarily flow from the process of doing indicators. They believe the shortcomings of indicators are content-oriented. Only an *analytic* approach to indicators will create the new understandings of problems and solutions described by Innes and provide policy relevance. This involves developing a theory about how the world works rather than simply describing social trends. Indicators that just point to the existence of the problem will not be useful in solving that problem if they don't offer an explanation of how it arose and what sustains it. The theory looks for causal relationships and the indicators help illustrate the validity of the theory. Motivating decision-makers or the public to do something is a key part of creating change, but is insufficient. "Providing evidence about which policies may actually work is perhaps the most crucial step to create change," (Cobb and Rixford 1998, page 3).

Cobb (2000) presents another *content*-related argument that indicators programs have undermined their own effectiveness by attempting to avoid ideological conflicts. Indicators are inherently ideological, yet by trying to mask them in pseudo-objectivity, their creators strip them of any potency and they end up meaningless to everyone. They lack focus and are politically ineffectual:

> An ideology provides a context for understanding social problems and assigning responsibility for them. It generates questions for research and tells where to begin looking for solutions. More important, an ideology enables advocates to give a coherent account of the meaning of statistics; a meaning that would otherwise remain buried in a pile of numbers. (Cobb 2000, page 25)

He argues that we should not shy away from ideology, but embrace it as an inevitable part of public life that makes us stronger. He argues that "contested truths are more reliable than ones reached directly through agreement," (page 26) and this is an important part of democracy.

Whether the weakness of indicators lies in the process or content, all seem to agree that descriptive data are ineffectual at producing the change that is hoped for. The explanations of Innes and Cobb and Rixford may not be mutually exclusive, but rather addressing different components of the picture. Content and process may be equally important in determining outcomes.

It may also be that indicators have not really failed at all, but that perceptions of failure are actually a case of misplaced expectations. Many indicators practitioners have noted that indicators are a tool, but not necessarily a substitute for action. The first comprehensive national indicators project, initiated by President Herbert Hoover in 1929, issued a report that concluded:

> ... knowledge of social trends, such as the Committee has aimed to present, is not a substitute for social action; but such knowledge is an indispensable basis for intelligent action, (cited in Sawicki and Flynn 1996, page 179).

Many current indicators practitioners agree. Marian Chambers, former director of the Jacksonville Community Council Inc., observes:

> Indicators do not change policy,... and change is the goal. 'An indicator is nothing more than a signal. After you get the signal you have to dig deeper to see what it really means.' Only with an action plan and action is the indicator likely to move, (Andrews 1996, page 15).

In a recent on-line forum on performance measurement, this point was made repeatedly, as noted in the summary comments by Paul Epstein, the forum facilitator (Epstein 2000):

> Indicators can not change the world, but they enable us to "see the world". It is up to people – in government, NGOs, and businesses, as well as individual citizens – to *learn from what they "see,"* and *act on it* to make changes that improve their communities and regions. (page 1)

It may take more than a better understanding of the relationship between information and action to achieve the desired outcomes. Improving on the process of developing information, and/or the content of the information itself - its ability to show cause and effect and to point to judicious policy choices - can increase the chances that the information will be put to good use. However, meaningful change requires a focus on action in addition to just developing good indicators in the right way.

Evaluation of Current Indicators Projects

Innes and Booher (1999) and Cobb and Rixford (1998) both warn of current community indicators projects following the same footsteps of past indicators efforts - focusing on producing numbers, without content that is geared toward meaningful policy, and without attention to the process that determines how that information will influence action. So little literature is available documenting the performance of these relatively new indicators projects that it is difficult to ascertain what they have actually achieved and whether these warnings are proving true. Based on review of available literature and web sites, the current wave of community indicators projects generally seem to show agreement with Innes' point about the importance of process. With their emphasis on the value of democratic participation, they often incorporate broad-based public involvement and stakeholder involvement processes.

The contemporary wave of community indicators projects also shows agreement with Cobb's (2000) argument for articulating an ideological basis. Community indicators are constructed within a framework of sustainability, community health, quality of life, or a similar structure, often with an articulated vision, values, and goals – a clear ideology. As far as Cobb and Rixford's point about the need for better analysis, the projects have in some cases tried to draw connections between different issues and offered interpretations of the data, but have perhaps placed less emphasis on theories about cause and effect than Cobb and Rixford would advocate. The intended function of the indicators seems to be more about providing interesting and useful information for citizens who might instigate action on particular issues than identifying specific policy directions for decision-makers based on indicator data.

Current indicators projects also indicate consciousness of the need for an additional action component. Indicators are frequently part of an overall program that includes education and outreach, and strategies for translating indicator data into action. However, the need for better links to action is a common theme. Besleme et al. (1999) conducted a study of two quality of life projects, Quality of Life in Jacksonville: Indicators for Progress, and Quality of Life in the Truckee Meadows. Their primary conclusion is that these projects are achieving success in terms of gathering and producing high-quality information and in community-building, but that further efforts are needed to effectively translate knowledge and commitment into action if indicators are to reach their full potential for improving communities.

In a recent article on Vermont's experience with presenting community-level data in an "outcomes and indicators" framework, David Murphey, the program manager, cites many barriers to communities making use of the data available (Murphey 1999). This includes suspicion and fear of quantitative data, and political concerns about what the data might reveal in particular jurisdictions. In response, the agency has developed a curriculum around using data for

community assessment to foster better use of the data. This curriculum is made available for any interested communities. So far, feedback from those who have used it has been positive. The primary lesson was that the job is not finished with "getting the data out."

A recent report on a Canadian survey of 21 community and citizen-driven quality of life and societal indicator projects noted outcomes in two categories: 1) impacts, and 2) how the indicators are being used (Legowski 2000). The former relates to processes of framework development. The latter is about decision-makers being informed and influenced by the indicator findings to the extent that they take action that will ultimately have a positive effect on a particular situation that is measurable by an indicator. The report noted the following "impacts":

- citizen and community animation
- raised awareness of personal, neighborhood and community values, issues and concerns
- individual and community empowerment to monitor progress, voice opinions and engage in debate
- improvement in community choices and responses to issues

Not all of the projects surveyed consistently achieved the impacts or they may have had partial success.

In terms of the second category of outcomes - how the indicators are being used - the report noted a relationship between the purpose and context of indicator development and how they are being used. Specifically, social indicator or quality of life projects launched and maintained outside the locus of control where policies are made and resources assigned may be limited to being monitoring, information and advocacy tools. Their recognition or uptake by institutions that control policy and resources is dependent on the credibility of the project and whether the values framework underpinning the project corresponds to that of the institution (e.g. Sustainable Calgary). Projects that are undertaken within structures or institutions that control

policy and resources, in addition to being information tools, can actively direct policies and programs and monitor results for feedback purposes.

The results of the Canada survey indicate that community indicators projects have so far been much more effective as community engagement and education tools than as devices for specific policy-making, but that direct influence on policy and the allocation of resources is possible under certain circumstances. This corresponds with Innes' findings about the past results of indicators efforts as being primarily education devices. The survey findings that indicators can influence policy when developed under the control of decision-makers are consistent with Innes' emphasis on the need to develop indicators with the involvement of those who will use them. The survey finding that decision-makers, though not involved in the *process* of developing the indicators, may still utilize the indicators if the *content* is credible and consistent with their values points to the importance of ideology, cited by Cobb (2000) and the importance of indicator content, generally emphasized by Cobb and Rixford (1998).

Based on the results of these few evaluations of indicators programs, it seems that the success of indicators depends upon political/process factors, the content of the indicators, and supplemental strategies linking the indicators to action.

CHAPTER 3

METHODOLOGY

Overview

The outcomes of indicators projects were examined using a case study approach. Five case studies were selected based on several criteria, including regional or quasi-regional jurisdiction, length of time in operation, and evidence of success. Structured interviews were conducted to gather qualitative information from both primary and secondary contacts. A total of 31 interviews were conducted by telephone over a four-month period in the fall and winter of 2000-01. Responses were compared among the respondents for each case study, and across all of the programs examined.

Description of Research Approach

This research is primarily concerned with evaluating the outcomes of community indicators programs. A case study approach was selected as "a strategy for doing research which involves an empirical investigation of a particular contemporary phenomenon within its real life context using multiple sources of evidence," (Robson 1993, page 5). Structured interviews were used to gather qualitative information about the outcomes of selected programs. Multiple case studies allow for comparisons among programs. The number of case studies was determined by time and resource constraints.

The technique of interviewing was selected over surveying to allow for gathering more detailed in-depth information. "The fundamental principle of qualitative interviewing is to provide a framework within which respondents can express their own understandings in their own terms," (Patton 1980, page 196). Interviews allow for exploration of people's perspectives, to find out what is in and on their minds. Particularly for program evaluation, interviews enable the researcher to capture the perspectives of participants, staff, and others associated with the program. Anecdotes about their experiences and opinions, expressed in their own words, convey information in a way that could not be captured in a survey. The purpose was to make analytical generalizations, rather than statistical generalizations about indicators programs, as would more easily be done with a survey. The rationale was that by examining in-depth the outcomes being achieved by a few programs that show some evidence of success, something might be said about indicators programs in general – what they might or might not be achieving.

Structured interviews were selected to focus responses around the research topics and collect the maximum amount of information in the limited amount of time. Structured interviews involve creating a script of questions that is posed to each interviewee. This allows for comparison of answers to the same or similar questions among respondents for the same program, as well as comparisons among programs. The approach for this research is more specifically termed the "semi-structured interview," by Robson (1993). This means that a structured set of questions is used, but the interviewer may modify the specific wording or the order of the questions, or omit or add questions, according to what seems appropriate in the context of each interview. For this research, interview questions were adaptively modified in this way depending on the history and experience of the interviewee with the indicator program.

Selection of Case Studies

It was determined that approximately three to six case studies would be feasible, given time and resource constraints. The research began with a literature review of web resources. This included both organization web sites that contained lists and descriptions of local indicators programs, as well as specific program web sites. (Appendix A lists some of the sources used.) Case studies were selected according to the following criteria:

- Size. The geographical area covered by the indicators program should be relatively large, preferably regional or quasi-regional.[10]
- Length of Time Running. In order to be able to assess possible outcomes, the program needs to have been in operation for a while. The first indicators report should be at least 2 years old.
- Ability to Gather Data. Key persons must be available and willing to participate in interviews. They must also be able to identify other suitable persons connected with the project for interviews.
- Evidence of Success. Participants must be able to identify some outcomes achieved with the project so that the findings can illustrate the types of outcomes possible and the factors affecting those outcomes, to serve as a possible model or lesson for other indicators programs.
- Geographic Variety. Ideally, programs are selected to represent a variety of geographic areas within the U.S.

Program web sites and available literature were examined for information about potential projects. A short list of nine case studies was generated. Two projects (the Jacksonville Quality of Life Indicators and Truckee Meadows Quality of Life Indicators) were eliminated because they had already been examined and evaluated in an in-depth study conducted by Besleme, et al.

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[10] Numerous indicators projects exist at the small-city and mid-sized city scale. The bias for programs covering regional or quasi-regional areas is based on an interest in regional approaches to community issues, as well as an interest in projects potentially impacting more people, with more resources, and perhaps a greater potential to gain attention as a model for other areas.

(1999). The remaining seven were contacted to introduce the research project and explore their willingness to participate. Screening interviews were then conducted either by phone or email with program directors to assess each indicators program according to the selection criteria.

Two of the programs were eliminated from the list because of barriers to gathering data (dwindling program resources and lack of time to participate in interviews), and short length of time in existence. The four remaining were selected as case studies. Time allowed for addition of a fifth case study later in the research. New web resources were examined for potential case studies, an additional short list was generated, and screening interviews were conducted. A fifth case study was selected from these. The final five case studies were:

1) Sustainable Seattle – Washington
2) The Sierra Business Council – California and Nevada
3) The Boulder County Civic Forum (formerly the Boulder County Healthy Communities Initiative) – Colorado
4) Vital Communities of the Upper Valley – Vermont and New Hampshire
5) Sustainable San Mateo County - California

Two of these were structured around the theme of sustainable communities, one healthy communities, one vital communities, and one - the Sierra Business Council - a unique business-based approach of preserving wealth in the form of natural, financial, and social capital in the region. In terms of size, two are regional and three county-based. Geographically, the case studies represent a variety of different types of areas (coastal, urban, suburban, rural, etc.), but are more biased toward the western U.S. Although projects from the Mid-west, Southwest, South and East were included in the short lists, no suitable projects from these regions could be identified. Background information on the case studies was gathered through web sites and literature requests.

Selection of Interviewees

The goal for each case study was to interview one or two key contacts very familiar with the history and current activities of the project (primary contacts) and three to five additional people who either had some involvement with the indicators or used them in some way in their work or in the community (secondary contacts). The current directors of the programs, who had already been introduced to the project and gone through the initial screening, were the first primary contacts. They then provided referrals for other potential primary and secondary contacts, who in turn provided referrals for additional potential contacts.

In addition to current directors, primary contacts included former directors and founders of the indicators program. Secondary contacts included board members, elected officials, agency representatives, non-profit directors, foundation leaders, and business owners and spokespersons. Preference was given, when possible, to individuals who had used the indicators directly in their work in some way, rather than just being familiar with the program. The number of interviews conducted for each case study ranged from five to eight, for a total of 31 interviews. Appendix B lists the individuals contacted for each case study.

Design of Interview Questions

Interview questions were designed to specifically address the research questions presented in Chapter 1. Primary contacts were asked a series of questions regarding the history and organizational structure of the indicators program. Both primary and secondary contacts were asked a series of questions regarding their perception of the outcomes resulting from the indicators. Primary and secondary interview transcripts are included in Appendix C.

Questions about the outcomes focused on specific circumstances or events that would provide concrete evidence of the three types of outcomes - raising awareness, influencing decisions, and tracking progress – and who they are affecting. Several open ended questions were included to allow people to express their overall impressions of what the indicators program has achieved and what they feel the weaknesses and strengths are.

Information about factors affecting the outcomes was obtained through direct and indirect questions. Historical and organizational information obtained through primary contacts (and the review of program literature) indirectly provided information about how these factors might have affected the outcomes. Primary and secondary contacts were also asked direct questions regarding factors, including open-ended questions and ones that asked them to compare the importance of several factors.

Conducting and Analyzing the Interviews

The 31 interviews were conducted over a four-month period from November 29, 2000 to March 28, 2001. All interviews were conducted by telephone, except one that was conducted in person. For the phone interviews, notes were typed on a computer during the interview and transcripts were completed and edited following the interview. The interview conducted in person was tape recorded and later transcribed. The questions were modified slightly following the first primary and secondary interviews. Effort was made to maintain similar wording, phrasing, and order of the questions across all interviews, but modifications were made when appropriate, depending on the interviewee's level and type of experience with the indicators.

Interview data was analyzed by compiling all of the responses into a matrix for each case study. Responses to the same questions were then compared across each row. All of the

responses for each case study were summarized and the results for each case study were compared.

Limitations

Selection of interviewees was inherently biased because referrals were obtained primarily from program directors, who are likely to select contacts that would describe the program favorably. Interviewees were also biased toward staff, volunteers, board members, and funders. While more likely to have a positive perspective on the outcomes, they are also the people who know the most about the program, its potential outcomes, and who it might be affecting.

Questions were not perfectly uniform among all interviews. Some questions were reworded after several interviews were conducted, in some cases to eliminate leading questions, and in other cases to refine open-ended questions to focus more on the desired topic. Some of the questions targeting the same material were worded slightly differently on the primary and secondary question lists. All of these factors made comparisons among answers more difficult.

Finally, as in any interview situation, a balance needs to be struck between avoiding leading or dichotomous questions and not having questions so open-ended that responses do not focus on the desired material. In the effort to focus, some of the questions were inherently dichotomous or leading, setting up some answers that may have been too predictable or easy. The inevitable interviewer bias also likely influenced the interviewing process, thought the effect was not apparent to the interviewer.

CHAPTER 4

FINDINGS

Introduction

This chapter presents the findings from research on the five case studies: Sustainable Seattle, the Sierra Business Council, Vital Communities of the Upper Valley, the Boulder County Civic Forum, and Sustainable San Mateo County. Each case study report begins with a profile that includes the overview and mission, history and process of developing the indicators, current activities, and funding and staff. Responses to interview questions are summarized in the following sections:

- General response to the indicators
- Ways the indicators are being used
- New contacts, working relationships, organizations, and programs
- Raising awareness
- Influencing decisions
- Tracking progress
- Successes and benefits
- Meeting project goals
- Content of the indicators
- Factors influencing success
- Obstacles, weaknesses and areas for improvement

Note: The findings summaries contain many quoted comments from respondents. In all cases, these represent *paraphrasings only*. Comments were replicated as closely as possible in the process of note-taking during the interviews; however, it would be impossible to ensure that any comments had been quoted completely accurately unless the interview had been tape recorded.

Sustainable Seattle – Indicators of Sustainable Community

Profile

Overview and Mission

Sustainable Seattle's Indicators of Sustainable Community are one of the earliest and perhaps the best-known community sustainability indicators project. Sustainable Seattle was founded in 1991 by a group of concerned citizens interested in the long-term health and vitality of the Seattle/King County region. The organization is a self-defined volunteer network and civic forum with the mission to advocate for sustainability in Seattle/King County. The group's primary activity has been producing and updating a "report card" of indicators on long-term trends in the region. The purpose of the indicators was two-fold: 1) to provide a feedback mechanism on progress towards sustainability, integrating characteristics of the economy, environment, and society, and; 2) to provide a new framework for decision-making.

Citizen involvement and broad participation have been hallmarks of the indicators development process. The first indicators report, published in 1993, earned international attention and served as a model for community efforts around the world. The updated report, issued in 1995, received an "Excellence in Indicators" award from the United Nations Centre for Human Settlements at the 1996 Habitat II conference. The report also received a Vision 2020 award from the Puget Sound Regional Council in spring of 1996. Another updated indicators report was issued in 1998. Sustainable Seattle has sold approximately 12,000 copies of its reports in over 50 different countries.

History and Process of Developing the Indicators

Sustainable Seattle evolved from a gathering at a November 1990 conference sponsored by the Global Tomorrow Coalition, a now-defunct organization that was traveling the country sponsoring conferences on sustainability. A small group of people gathered after the conference for a series of informal discussions and decided to form an ad hoc group to try to implement sustainability locally. The Sustainable Seattle Network formed in February 1991, and after considering a few ideas, the group chose to work on developing indicators of sustainability to measure the community's long-term health. Starting with a group of about 15 people, the volunteer network grew to include close to a hundred people doing research on the indicators. The group worked as an "unofficial" organization until 1997, when it registered as a non-profit. From 1995 to 1997 it was a program of the YMCA.

Defining sustainability was a central part of the group's early work. Sustainability was a relatively new concept at the time, although a few things had been written about it, including the Brundtland Commission report that coined the popular definition of sustainable development as "meet[ing] the needs of the present without compromising the ability of future generations to meet their own needs," (WCED 1987, page 8). The Sustainable Seattle Board of Trustees was established to create a mission statement and a set of goals. The resulting group mission was "to explore, clarify, and promote sustainable practices in all areas of life," (Krizek and Power 1996, page 34). The Board also crafted a definition of sustainability as "long-term health and vitality – cultural, economic, environmental, and social" (ibid, page 34) – a variation on the Brundtland definition. The process of selecting the indicators helped to further define what sustainability means by putting it in more tangible terms that people could relate to and providing a common understanding of its meaning.

An Indicators Task Force made up of individuals from diverse backgrounds developed an initial list of 29 indicators in the first year. Then the group decided that a broad-based community involvement effort was needed to give the project additional legitimacy and to enhance the quality of the indicators themselves (Sustainable Seattle 2000). Invitations to participate in a series of civic panels were sent to 300 citizen leaders in business, environmental groups, government, the religious community, social activism and academia. Efforts were made to balance representation of gender, ages, cultures, and lifestyles. Ultimately, 150 people attended four participatory workshops over a six-month period. The 99 indicators generated through this process were later culled to 40 key indicators by the Task Force, based on measurability, data availability, and professional credibility. Hundreds of volunteers participated in the research and data gathering process. A public opinion survey was conducted to gather data for three of the indicators.

The first indicators report was published in 1993, with data for 20 of the 40 selected indicators. The report prompted interest from communities around the world as a groundbreaking, model effort. Over the next two years, Sustainable Seattle gave numerous public presentations at domestic and international forums, and responded to inquiries from cities all over the world. Meanwhile, work continued on the next set of 20 indicators, as well as updating the first 20, leading to the publication of the 1995 report. Another update was released in 1998. Each round took less time and required fewer volunteers. Approximately 70 volunteers were involved in the 1995 report. The 1998 required only about 20 volunteers and took a year to produce.

Current Activities

Sustainable Seattle is currently at a point of transition. The indicators have become fairly well established, and there's a sense that Sustainable Seattle has in many ways accomplished what it set out to do with the indicators. But the question remains of how to apply them. Sustainable Seattle is now looking for other ways to promote sustainability or develop a methodology for using the indicators. Issues of how the indicators will be used and who will use them are being considered. The board is in a process of strategic planning and is exploring several options, including the possibility of having a governmental entity officially adopt the indicators and take on the responsibility to update and maintain them, as well as incorporate them into decision-making.

Funding and Staff

The two-year process of developing the initial indicators was funded by a total of approximately $20,000 in small grants from the United States Environmental Protection Agency, the New Road map Foundation, and The Boeing Corporation (Sustainable Seattle 2000). Approximately $30,000 was spent in the two-year process of producing the 1995 report, most of which was generated from sale of the reports. Funding since then has been sporadic and has been one of the group's main difficulties. Boeing has been a staunch contributor. Other funding includes grants and contributions from the Bullit Foundation, Bank of America, Triangle Associates, and other private businesses and individuals. Sustainable Seattle has also earned income from consulting fees and partnerships to help other cities and organizations develop indicators. A substantial portion of the director's salary has been covered in this way.

Volunteers have been the main staffing engine of the organization. The group operated with only a quarter-time staff person from 1991 to mid-1995, with all other activities conducted by volunteers. A full-time staff person was hired in 1995. Occasionally, program managers have been hired on a short-term basis to assist with particular projects.

Findings

General Response to the Indicators

Overall, respondents thought the indicators had been well-received. One respondent said, "Basically everybody who's been exposed that I'm aware of has been very enthusiastic." Another said, "People have been very impressed that it was done by volunteers and presents information on such a wide range of topics. "

Most respondents indicated that public officials had shown the most interest. The influence of the indicators in other realms, including the business sector and the general public, was more limited. Said one respondent, "Indicators are not that helpful for the public. They're good for policy-makers." Two respondents commented that not enough people know about them. The indicators received press attention around release of the report, and then not much after that. One respondent said, "It's unclear how many people out there heard about them then and know about them now. Sustainable Seattle was always on a low budget. We could get attention for a day (like when we released the report), but it was hard to go beyond that." Another commented, "They're well known to a circle of people but not outside." Another said, "It has gotten into government administration a lot. Some of the policy makers were also very aware. It didn't achieve as much traction into the community as we'd hoped. It didn't get out into the business community or the realm of the average citizen."

Ways the Indicators are Being Used

Very few specific uses of the indicators were cited. Most reported uses of the indicators were related to the cross-pollination that occurred as some of the individuals involved in developing the Sustainable Seattle indicators carried the ideas out into their work as public officials or in other realms. Most respondents thought that government had made the most use of the indicators of any sector, with private groups such as non-profits, volunteer groups, and environmental organizations second. However, two respondents ranked private groups first and downplayed the impact on local decision-makers, commenting that very few public officials were likely to be using the indicators. All seemed to agree that businesses were the least influenced by the indicators, and the general public perhaps even to a lesser extent.

The indicators have been used by at least two local elected officials in their decision-making. One example is Ron Simms, the King County Executive, who was reported in the local newspaper to have responded to a question following his election by pulling out a copy of Sustainable Seattle's indicators report and saying, "This is my textbook. I think I will have been successful if at the end of the year, we've moved all these indicators up," (Sustainable Seattle 1998). A current city council member who has been very involved with the indicators since the beginning reported, "For me personally, I use them as a check with what I'm doing to see if it will move the indicators in the right direction. So it's definitely provided me with policy guidance."

One non-government related use of the indicators was mentioned. The Chamber of Commerce has a staff team called the Business and Industry Resource Venture team that helps business members and other businesses improve its recycling, water use, etc. The Chamber director reports that this team "keeps an eye on the measures," as part of its work.

The indicators have provided an information source and a model for four other indicators efforts in the region: 1) the city's indicators for its comprehensive plan; 2) the county's growth management indicators; 3) a set of county social and health indicators developed in partnership with the Children and Families Commission and the United Way to complement the growth management indicators; and 4) a set of information and technology indicators developed in partnership with the Department of Information Technology in Seattle. Sustainable Seattle's indicators have also been used as a model for countless indicators efforts outside the region, and around the world. A survey of over 170 sustainability indicator projects by Redefining Progress found that 90 of them used Sustainable Seattle's approach and indicators as a model for their own initiatives (Sustainable Seattle 2000). In fact, Sustainable Seattle staff observe "with some chagrin" that the indicators have had more influence outside the region than inside. In this way, the indicators largest use has been as a model for other programs.

New Contacts, Working Relationships, Organizations, and Programs

The process of developing the indicators definitely created new contacts and working relationships among those involved. One respondent said, "There's no question about that. The process was intensive and really inclusive and really brought folks from different areas... You had businesses, government, environmental groups. No question that new relationships were started." Another respondent said, "I think it did build some interesting connections between labor, environment, and elements of the business community." A city official reported having developed new contacts through working with Sustainable Seattle's volunteer network for assistance in developing the city's indicators.

The Communities Count steering committee is a separate group that formed when Sustainable Seattle partnered with the Commission on Children and Families to develop social

and health indicators for the county. Another related entity is the newly created city directorship position in the Office of Sustainability and the Environment, renamed and reconstructed from the former Office of Environmental Management While not a direct result of Sustainable Seattle's efforts, some respondents felt that it might have been influenced by them. It was created largely through the efforts of the city council member who was involved with the Sustainable Seattle indicators.

Raising Awareness

Respondents thought that the indicators had helped to raise awareness primarily in terms of getting people to think more about sustainability and what it means, rather than particular issues. The indicators also helped people to understand the linkages between issues. Only two specific issues were cited. Several respondents mentioned the indicator for number of salmon returning to spawn, which was included prior to the endangered species listing. Said one respondent, "I think that particular measure did have a resonance here. There's kind of a cultural identity with salmon here so the fact that somebody was measuring that as a way to talk about community and environmental health did capture people's imagination." One respondent also mentioned recycling: "Certainly the whole recycling side of life in Seattle has undergone a dramatic turn over the past 15 years. Part of that has to be attributed to the continued awareness the indicators brought to the table."

Again, the main impact in terms of raising awareness has been on public officials, with little or no effect on businesses or the general public. One respondent thought that it has had an effect on the general public "only to the effect that it's been filtered through the city, maybe - through the neighborhood councils and things like that - but not directly from Sustainable Seattle to the public." Some public officials have also mentioned it in public speeches or campaigns.

Another respondent said, "It's slowly percolating into the general public, but it's not a huge impact."

In terms of raising awareness with public officials, one respondent commented, "The indicators have helped to get sustainability on the agenda. It's something you see referenced in a lot of policy discussions." A few respondents talked about how the effect is subtle and difficult to measure. One gave the following explanation: "A lot of the things that have been promoted or identified by Sustainable Seattle have entered the vocabulary of discussion for public policy. I think in other places as well. In fact there has been a kind of consciousness raising that people are often not even aware of. We're talking a new language and new ways to measure results of our approaches to problems. Sometimes I meet someone who I don't think is connected and I hear the ideas coming back. Maybe they came from other sources. I don't know. But it seems like there has been an influence."

Lack of funding has inhibited public outreach efforts and kept the indicators from reaching more people. One respondent said, "I don't think that the information in there was as widely disseminated as it might have been. I have the sense that the information went more to the choir and not necessarily to any new congregation." Each version of the report has been presented officially to the city at a city council meeting, accompanied by a press release. The first report received no newspaper coverage, but some radio. Report releases since then have typically generated good press coverage in local papers; however, interim press has been extremely sparse. The indicators have been used in school curriculum; teachers have voluntarily used them in a variety of different classes. Sustainable Seattle is also working on a curriculum program for high schools.

Other than that, Sustainable Seattle relies on report distribution and its web site to get the word out. The group has likely been much more effective at reaching audiences outside the

community than inside. The group sold approximately 12,000 copies of their 1998 report, over half of which were distributed outside the region, including over 50 different countries.

Influencing Decisions

The indicators have influenced public decisions in a variety of ways. While none of the respondents could cite particular decisions that had been made as a result of the indicators, it clearly has influenced the thinking of several city and county officials, some of whom were involved in the process of developing the indicators. A Seattle City Council Member reports, "I'm not sure I could off the top of my head pull out specific examples. It's been influential in several different areas. I remember several times pulling out the document with other council members and saying here's what we should be thinking about." Another respondent thought that leaders such as the City Council Member and the King County Executive had actively promoted sustainability within their staffs as a result of their exposure to the indicators and their growing awareness about sustainability.

Sustainable Seattle's indicators may have influenced the city's comprehensive plan to some extent, again through cross-pollination between people working on the plan who were also involved with developing the indicators. The City of Seattle was working on its comprehensive plan at the time the 1993 indicators report was released. Ultimately, the city renamed the plan, *Toward a Sustainable Seattle*. How much influence there was exactly is not clear. One official who was involved reports, "The indicators brought articulation and focus to the issue for city folks – for the city's growth management plan. The indicators and the process we were engaged in at the time was pretty instrumental in building city officials' awareness." Another said, "We had people working on the development of the plan and the development of the indicators at the same time. There was definitely some synergy. No question there was some influence."

Another respondent said that the concepts underlying the plan were already a lot about sustainability, and that the title was added after the document was written: "I don't think Sustainable Seattle influenced the content of the Comp Plan. A lot of the content was driven by what the state law mandated and a whole separate process [referring to the state of Washington's growth management rules]. Maybe some of the same people were involved, but it was not a direct lift. It was not overt if there was some influence on the Comp Plan."

When the city undertook to create its own indicators related to monitoring for the Comprehensive Plan, there was definite synergy between Sustainable Seattle's indicators and the city's effort. Says one respondent, "The city council member who was most interested in that was also involved with Sustainable Seattle. There was lots of cross-fertilization – people on city staff volunteering outside of work time." Sustainable Seattle's indicators were used as a guide in developing the city's indicators. According to one respondent, "When the city adopted its set of indicators, we consciously looked at Sustainable Seattle's to make sure that if we were trying to capture the same concept or similar, we'd use the same measure." Sustainable Seattle's indicators also provided a guide for the county's growth management indicators. Sustainable Seattle wasn't the only influence on these efforts. One respondent said, "The city and county started on their own with indicators. It was percolating up from various sources. The Sustainable Seattle indicators gave strength to that but weren't necessarily the source."

Sustainable Seattle's indicators have influenced other local indicators efforts, as well. Using techniques learned in the Sustainable Seattle process, staff have assisted with efforts to create a set of social and health indicators for the county, called Communities Count, as well as a set of information and technology indicators. Of the four other major sets of indicators in the region, Sustainable Seattle has been involved in creating two of them, and was the model for the other two, so they have had a significant influence on how the area is measuring its success.

An offshoot of the city's comprehensive planning process was a neighborhood planning process involving 37 different neighborhood groups to help them figure out what they wanted within the context of the broader city plan. Sustainable Seattle had some influence on this planning process through workshops it held for the neighborhood committees to give them some training in sustainability and the indicators.

Several respondents felt certain that the indicators had influenced people's thinking and decision-making in an indirect way that was difficult to pinpoint. One respondent said that they had not influenced anything directly that they were aware of, "but the fact that they're out there, maybe has some subliminal influence on what happens in the city." Many thought the indicators indirectly lead to the creation of the Office of Sustainability and the Environment. Another respondent said, "There's no question that during the Rice administration we shaped a number of our environmental policies around the indicators, especially around our water and solid waste departments, because it gave us something to measure ourselves against. " Sustainable Seattle's director said, "Everybody - pretty much everybody, and especially at director level - knows about the indicators, has a copy of them. So I think it's having an influence. But do I have something where somebody's come to me and said I did this because of the indicators? Not really."

The indicators' influence on private business and organizational decisions was described in a similar way. Respondents thought they had had some influence, but could not point to specific instances. One respondent said, "I know that people in the business community have been impressed with the indicators... Whether it's influenced their behavior, it's hard for me to say. I haven't seen a lot of evidence of it." Another said, "It would be hard to point your finger directly at anything." The Chamber's Business and Industry Recycling Venture program probably predates the indicators, but may have been influenced by them. Business interest in Sustainable Seattle's activities has been sporadic. When Sustainable Seattle produced a

workshop for the EPA, in 1996, to use to promote sustainability around the country, banks and other businesses participated in developing it. Some of Sustainable Seattle's funders are part of the Products Stewardship Council, an on-going group that looks for ways to "close the loop" on products. The president of Sustainable Seattle's board is the director of construction and land use for Seattle, which has a sustainable building program.

Tracking Progress

Sustainable Seattle's director reports that in general, every category is headed downwards (away from sustainability). In some cases it's difficult to determine because they do not have enough data yet. Some indicators are neutral, some are heading up, but more are headed down, so, in general, things are getting worse. He suspects that this is particularly true for the environment, even though progress may be occurring elsewhere. Crime, for example, is down. The Chamber director notes progress with the solid waste indicator – more is going into the recycling stream.

Successes and Benefits

Respondents cited numerous successes and benefits of the indicators. Some mentioned that the indicators had helped to define and articulate sustainability. One respondent said, "We used the indicators as a surrogate for a vision." It became a tool for communicating the concept and its key components of focusing on the long-term and being holistic. The indicators have also been useful for showing linkages. In general, they have helped to make the concept of sustainability more real for people and illustrate it in a way they can understand. Another respondent commented, "In a world that is often very difficult to understand whether you're

making progress or not, they at least give you an idea of these are the things we care about and provide feedback on whether we're doing any good or not."

Many respondents thought the indicators had helped to raise awareness of issues and of the idea of sustainability in general. One respondent said, "Something just about the data – that was valuable for people. It gave them stuff they didn't have before. Putting it all together in one package helped people make connections. It showed that you could actually measure some of this stuff." Another said, "The effect has been to raise awareness among a broader community about some lifestyle and environmental factors in the area… I think among some people it's helped heighten awareness about environmental change – mostly environmental change - and maybe that's led to some lifestyle changes or people to become more involved in a public realm. Having the information out there can motivate people to act."

The influence in city and county policy circles was a frequently-cited benefit. One respondent said, "They have brought considerably more awareness around the issues, more attention to the issues. If you were to randomly poll all the department directors in the City of Seattle, I would bet that all of them have at least heard about [the indicators]. Some large percentage have read and considered what they mean for their department. They are very well known in public policy circles at this point." Another said, "I think that they've raised the issues of sustainability and put them on the public policy agenda and helped stimulate a discussion about the issues and the idea." The indicators have served as a reference guide for some policy-makers: "It gives something to look at and ask the question if this is an important measurement. Is the policy going to move the indicator in the right way?"

Respondents noted several specific benefits, including impacts on particular officials, influence on the city's comprehensive plan, the creation of the new directorship for the Office of Sustainability and the Environment, and the influence on other local indicators efforts. One

respondent who had worked on the city's indicators said, "They did give us ideas about ways to collect and present data and helped influence the particular measures we chose when selecting an indicator area. For the work that I was doing, the most valuable piece was that once we selected a topical area, knowing that Sustainable Seattle had already addressed it helped us hone in on something to count, to measure. And so that we didn't choose to collect the data in different ways."

One respondent cited the benefits of the indicators process bringing people together. It involved people from different areas, such as business, labor, and the environment. "It helped bring the ideas of sustainability to being something that was talked about and was on the agenda and was a way in which people related to each other on those issues." The process also influenced a lot of people who have gone on to do other things and to promote the idea of sustainability.

Sustainable Seattle's director notes that one of the most unexpected results from the project was its influence nationwide and internationally. "It was astonishing. It continues to be astonishing."

Meeting Project Goals

Respondents had varying opinions about how much the indicators project has met its goals. Some thought that the indicators have not reached enough people. One respondent said, "I think they're helping. We're not doing as well as a lot of people including me wish we were. I don't think they're in enough people's bones, if you know what I mean." Another respondent thought that the indicators project has probably achieved some of all of its goals. He said, "You always want to do more. It hasn't resulted in a total transformation of society, which it was intended to do. But give it time!" Another thought they had had a profound effect: "They have

affected planning processes, who's getting elected, how government is organizing itself, etc. I would be surprised if you found an example of a project that has been more effective. Looking back 10 years later, I'm pretty amazed at some things that have changed. There are things that haven't changed at all, but it takes time."

The director talked about how they have probably accomplished what they wanted to accomplish. He said, "For the city or even the county we've probably gone about as far as we can go with trying to influence people with indicators. And it's time for them to be adopted officially and to really get some more political power behind them." This is why Sustainable Seattle is at a turning point, trying to figure out what to do with the indicators and where to turn their attention to next. The indicators are close to being institutionalized by the city and county, which is one thing they wanted to do. It's time to move on to something else. The director commented, "We were really out on the edge when we created these indicators. And now that edge has moved out. And indicators aren't such an edgy thing anymore."

Content of the Indicators

Most respondents thought that the salmon indicator has been the most influential for the way it captured people's imaginations, and the fact that the salmon were later named as a threatened species. Other indicators mentioned include the number of children in poverty, the distribution of income, impervious surface, wetlands, and social connections. One indicator that stimulated some controversy was juvenile crime, which was linked to ethnicity. The indicator showed that Native Americans and African Americans were six times more likely to get in trouble. This stimulated a lot of questions about why. No particular categories of indicators have stood out more than others.

Respondents considered the indicators complete insofar as their scope and breadth. They are intended to be a snapshot, not comprehensive, so they do not cover everything, but no categories are missing. The director notes the absence of an indicator for spirituality, which had been considered in many discussions during the process of developing the indicators, but no satisfactory measure could be identified. The indicators are considered an evolving document. Some have changed through updates of the report. In some cases, they have realized that better data exists, partly because more statisticians are involved. But as far as the overall, general concept, the director feels that the indicators are providing a pretty good representation.

Factors Influencing Success

Respondents mentioned a variety of factors that have contributed to the success of the indicators; however, those related to process and the people involved were emphasized the most. Several considered the widespread community involvement process to be important. One respondent said that this broad involvement and the number of people who participated gave a sense that "there was sort of a common vision that they were aiming at. Together they understood what things help define a sustainable or positive urban community." The dedication and commitment of the core group was also emphasized. One respondent described them as "incredibly bright and committed people." Collectively, the participants also had a wide range of expertise in relevant areas. This was a huge asset. Said one respondent, "Almost everybody was working in some profession that they could bring to this. And that expertise would feed into it. And that I think was more special than we realized at the beginning."

Institutionally, the group's decision to focus on the indicators as its flagship project was noted to be a wise move. This allowed them to really get something accomplished. And then, simply getting the first report out contributed a great deal. It grabbed a lot of attention and

generated a momentum that kept the group going. People wanted to see the next update. Having an organization (the YMCA) willing to be a sponsor institution was also noted to contribute to the development of the organization. Another factor cited was the fact that Sustainable Seattle was an outside group, not associated with government or a particular interest group, which gave it credibility.

The project benefited from factors of time and place, as well. Sustainability was a new concept that really inspired people. One respondent thought that it generated a level of involvement and dedication that could be hard to repeat somewhere else. The project was also initiated in a community that was already conscious of the environment. With its geographic setting of ocean and mountains and terrain ranging from alpine protected wilderness to an international seaport, people were quite aware of the conflicts and concerns being considered. Says the director, "It was the right place to nurture such an effort."

Factors related to content were also mentioned as important. A couple of respondents commented that the indicators report presents information in a way that is clear, and the framework makes sense. One respondent said, "It makes logical sense to people. While there are some that are controversial, most of them a generally wise human being would support. They were smartly done in that sense." Another commented that the publications themselves were very high quality. "We did good research. We had good data. They're well written. The graphics were good."

Obstacles, Weaknesses, and Areas for Improvement

The organization's biggest obstacle has been funding. This has been a big struggle for Sustainable Seattle. The director notes that this is a problem for many groups of their nature

because it is difficult to identify specific projects with specific outcomes for funders. Lack of funding has limited Sustainable Seattle's ability to do other things, particularly public outreach. The only other stumbling block or mistake mentioned was not incorporating sooner. The group spent a lot of time experimenting with a flat, non-hierarchical structure. According to the director, this also meant not having a very good decision-making process. "And particularly if you're going to run a bunch of projects, which we started to do, you can't do it. So if we had incorporated earlier and taken on a normal organizational structure, I think we probably would have accomplished more. We would have been more efficient and probably more productive in our other programs."

Several challenges were encountered in the process of developing the indicators. According to one respondent, the group first had to educate itself about what data was out there and about what an indicator was. "Then it was a massive effort to start gathering information. It really took all our energy for a couple years." Another respondent also mentioned data gathering and analysis as a challenge. Another cited the difficulty of capturing the complexity of sustainability in a set of discrete measurements. Coordinating people in the process was also difficult. The director said, "We didn't have an issue of getting people involved. We had an issue of trying to deal with everybody who wanted to get involved!"

A few respondents mentioned the challenge of getting good representation and being inclusive, and making sure the indicators reflected community values. One respondent described the importance of "designing and carrying out a credible process that had technical integrity and participation from the different sectors." According to the director, at first it was difficult to get any environmental groups or businesses to participate because they viewed one another as enemies. Then when they became involved, the challenge was to facilitate those conversations

between people on opposite sides talking about issues they're very passionate about, and to try to find some commonality.

The most commonly cited weakness of the indicators was the difficulty of getting the word out and getting the indicators used. Said one respondent, "Getting the indicators out there in the media, getting them as much exposure as possible and getting them addressed and attended to by government, business, and individuals. That's the on-going challenge." Another said, "I think that it would be better to have a more explicit policy connection. That's clear. That was the one thing that Sustainable Seattle was unable to muster the energy to do – to take the indicators and try to use them to influence policy. That's probably the main issue that I would say is problematic." Another agrees, "It needs to have that tie to action."

A couple of people pointed out some inherent difficulties with indicators in translating them into action. One respondent pointed out that it's difficult to select indicators that will have staying power with current *and* future elected officials, as well as to anticipate what the hot issues are going to be a few years from now. The city is already looking to amend its indicators because some of the current elected officials think they don't represent everything that's important, and some of the things they chose to measure haven't shown very much change. So there hasn't been much of a compelling story that has come out of them. It often takes time for the indicators to reveal meaningful trends. "A snapshot doesn't tell you much, but by the time you have trend data, it might no longer be important to people." Officials might have different priorities, or values may have evolved.

Another respondent talked about the inherent difficulty with sustainability indicators in that they focus on broad themes (the environment, economy, and social equity), they're long-term, and cover a large geographic scale. "It's very hard for any single person or organization to step up and take responsibility for moving an indicator in the 'right' direction because it's

everybody's job and everybody's responsibility. We end up getting stuck in the 'so what?' question a lot." For example, to move the juvenile crime rate indicator in the right direction takes a lot of things to go right. It's a complex issue that requires a lot of cooperation from people (agencies and organizations) across the region. "Things grind down a little bit there because it's not easy. That's one of the core challenges of sustainability. It's easier to say than to do."

Sierra Business Council – Sierra Nevada Wealth Index

Profile

Overview and Mission

The Sierra Nevada Wealth Index is a project of the Sierra Business Council (SBC), a unique non-profit association of more than five hundred businesses, agencies, and individuals in the Sierra Nevada Region. The region spans twenty-one counties (the Wealth Index covers twelve of those counties) along the Sierra Nevada Mountain range, located on the eastern flank of California and the western edge of Nevada. The area contains a rich natural landscape of mountains, forests, rivers, lakes and a large number of tourist recreation areas, including Lake Tahoe, Yosemite National Park, Mono Lake, and Mt. Whitney. The area is predominantly rural with small towns and natural resource-based and tourism economies. The culture is generally very politically conservative. Some areas of the region have experienced rapid growth associated with population influxes and spillover from the booming economy of the Silicon Valley. Other areas have grown very little.

The mission of SBC is to help "secure the economic and environmental health of the Sierra Nevada," (SBC 2000a). They promote a view that environmental quality is key to the Sierra Nevada's economic prosperity, and that natural resource conservation is essential to

building regional wealth, rather than the traditional view that communities must choose between economic and environmental health. The Wealth Index is a set of indicators built on the idea that there are three kinds of wealth: social, natural, and financial. The Wealth Index is intended to provide a comprehensive assessment of those assets and to track changes over the long-term in order to assess performance and take action to protect and prevent diminishment of those assets. It is meant to be a tool for public and private decision-makers to help them understand and track the assets underlying the wealth of the region; to provide them with a comprehensive and integrative view; and to spur people to discussion, action and innovation in communities throughout the region.

History and Process of Developing the Indicators

SBC was founded in 1994 by a group of forward-thinking business leaders. The organization developed during the height of the spotted owl controversy in which communities were deeply divided into either pro-job or pro-environment camps. The organization was consciously trying to occupy the middle ground in the debate and give voice to an alternate perspective. The indicators project was conceived as a way to gauge how the region was doing and where it was headed, in order to figure out where to go from there. The concept of the three types of wealth was drawn from work the World Bank was doing at the time on sustainable development.

One thing that distinguishes the project from many other indicators projects is the enormous size of the region. Given the geographic scale, the community collaboration and meeting processes that a lot of other indicators projects use would not have worked. To develop the indicators, they invited business leaders throughout the Sierra Nevada to be on an advisory committee, making efforts to ensure diverse representation from different geographic areas and

business sectors (e.g. timber companies, white water rafting companies, sports equipment, banks, etc.). With the advisory committee, they held a series of meetings to brainstorm which indicators would be helpful to have in the report. The committee determined which issues were of concern and SBC staff did the footwork to find information sources for the indicators. SBC would then present its findings to the committee for feedback. It was an iterative process that involved balancing important issues with data availability. SBC made efforts to keep meetings very efficient and to minimize the number of meetings. Packets were sent out ahead of time so that people could be prepared for each meeting and time was not wasted. This approach seems to have been very effective. One participant commented, "I've been on all kinds of boards and I don't last long because I lose attention. It was different with SBC."

It took about a year to develop the first Wealth Index, which was published in 1996. SBC took great care to produce a report that would be appealing and easy to read. Language for the report was selected very carefully to be consistent with the values and culture of the region. A lot of effort went into creating high quality graphics and printing so that people would want to read it. A second report was published in 1999-2000, expanding and updating the first one. The new report included some new areas, answered some questions that had been raised, and addressed some criticisms and suggestions. Air quality, internet infrastructure, and better health indicators were added. Survey information on a number of things such as community health and volunteerism were included in the first report but not in the second, because the survey was not repeated. An entire section was added with information by county.

SBC has made extensive efforts to publicize the Wealth Index. Each report is released with huge press releases to newspapers and media of all kinds, at scales ranging from national markets down to very small local community newspapers. They provide free copies of the report to all of their members, county supervisors, and other leaders of various kinds throughout the

region. Staff also put a lot of time and effort into making presentations. They developed a 30 to 45-minute PowerPoint presentation, using graphs and photos directly from the Wealth Index, and have traveled widely to meetings, workshops, and gatherings throughout the region. The first focus is on presenting to SBC's membership and all of the county boards of supervisors. Then they hold forums in larger communities, often in partnership with civic organizations, and invite members to come. They also respond to requests for presentations. In 1999, SBC staff made 30 presentations, reaching approximately 1,200 people in a two-month period.

Current Activities

SBC plans to complete an update of the Wealth Index every few years. The next one is planned for 2002. In the meantime, staff work on other SBC projects. In addition to the Wealth Index, SBC has produced an award-winning document, *Planning for Prosperity: Building Successful Communities in the Sierra Nevada*, a guide for planning and development in the region. They also hold an annual conference, regional forums, and leadership seminars.

Funding and Staff

SBC has derived its support from the W. Alton Jones Foundation and the Ford Foundation. The organization is governed by a nine-member Board of Directors. Work is carried out through collaboration between volunteer business leaders and over a dozen staff members, including a full-time research director overseeing the Wealth Index.

Findings

General Response to the Indicators

Many respondents reported that the reception to the indicators has been very positive, but response has varied by community. The research director, who has given many public presentations, says the reception has been "very enthusiastic, very positive." There are places where people are more resistant to the message than others, but the vast majority is very open. "People are grateful for the information and the clear picture we present. I've been amazed because going into communities where I think I'm going to run into suspicion or rejection, and instead I get wildly enthusiastic reception." Other respondents commented that the Wealth Index was "hugely successful. It was very embraced." Another said it was "highly regarded, well-received."

Other responses were more tempered. One respondent thought that the indicators were well-received by people who see it as a tool that works for them. If the tool indicates that they shouldn't develop something they want to develop because of what happened in another neighborhood, etc., then people don't like it. Another said that people interpret it for themselves and find it valuable in their own terms. In another case, the indicators were well received on the whole, but some people were skeptical about the accuracy of the information in some of the indicators. Another respondent thought that people working on economic issues found them very useful and the indicators were well-received by those folks, but that lots of people in her community don't know they exist or don't pay much attention to them.

Ways the Indicators are Being Used

Respondents gave mixed reports about how much the Wealth Index was being used. In some communities, very few people know about it or pay attention to it, often because of a political climate in which "anything new and different is not taken very well." In other communities, the index has been used a lot. As far as which sectors have made the most use of it, most people cited government first and business secondarily. According to a respondent in one community "The county board of supervisors have it on their table at every meeting. The city council, the planning department, all of the county and city administration… and all the little unincorporated areas… I think that is the biggest use." A respondent in another community reported that the town council and town manager have obtained a lot of information from the index. The town has recently begun to grow very rapidly and the index is helping them to see how values have changed in the town and to learn how to deal with the influx of growth. In other places, respondents reported that public officials have not paid attention to the index.

Business owners have also used the Wealth Index as a source of information to deal with growth. In one tourist-based community, it has given people ideas about how they want to expand and who to direct their business to. For example, a bank representative reported using indicator data in the bank's marketing plans. As a result, the next year they processed more loans than any other branch of their bank. The index also helped them answer questions about the local economy for businesses they were trying to attract to the area. Other respondents reported using the index as a reference guide, as well, including the director of an economic development corporation, and a representative of an environmental group, who had used the indicator data in regular newspaper columns and guest commentaries, and in their newsletter.

Some respondents talked about how the Wealth Index and the concepts behind it have influenced them. A bank representative reported that the indicators have shaped his thinking in

many ways. The idea of paying attention to all three forms of capital – natural, social, and financial - has influenced the way he views development proposals and the criteria he uses to evaluate them. He now considers how each proposal will impact the three types of wealth in the community.

Another respondent reported that he has used the indicators as a teaching aid to various groups in the communities he works in, such as the County Board of Supervisors, the Chamber of Commerce, Rotary Clubs, Economic Development Corporations, etc. He uses them as the basis of a speech about the importance of planning for growth in order to preserve quality of life. The speeches have provided a jumping off point to bring others into the community, such as participants from the Wealth Index and experts who could provide data. As part of his efforts, he initiated a county visioning process two years ago. He invested a lot of time and money in the project, obtained some funding from the Forest Service, and hired an outside consultant to facilitate it. The process engaged a wide range of community members in a series of very well-attended community meetings. Although many people were supportive, a small but vocal group opposed to the project eventually caused enough political stir to undermine it. The visioning process was not completed, but some remaining participants are working on rewriting the general plan, and some committees continue to meet to discuss issues such as transportation.

The Wealth Index has also provided the inspiration for two significant local planning efforts. In Inyo County, one of the county supervisors had attended an SBC workshop on the indicators. She reports that she was so impressed that when she and another supervisor decided to do a 20-year planning forum, they contracted with SBC to develop and implement it. In introducing the concept of the Inyo 2020 Forum, they utilized the philosophy behind the wealth index (i.e. natural, social, and financial capital) to broaden people's thinking about the future of the county. SBC used a variety of facilitation and discussion techniques, and also created an

expanded version of the Wealth Index specifically for Inyo County, which they presented prior to the work groups at the forum. "This helped set baseline information for where we had been and where we were now," said the supervisor.

In Placer County, the fastest growing county in California, data from the Wealth Index showed a dramatic loss of farmland, prompting concern from public officials. They approached SBC for help in designing a process to address open space. It has been a complicated, on-going effort involving citizen advisory committees and technical experts on species distribution, habitat needs, etc. Eventually, the board of supervisors adopted an open space plan and placed it on the ballot. Voters approved the policy, but not the funding, which means that a plan is in place, but it will take longer to implement or may only be partially implemented.

New Contacts, Working Relationships, Organizations, and Programs

Respondents who had participated on the Advisory Committee for the Wealth Index reported having developed new contacts through that process. According to one respondent, it gave people who did not know each other before a basis of communication, a common ground. It facilitated good communication. "We had the president of Sierra College get involved with a hospital in an outreach program because of it. We had the sheriff get involved in the United Way because of it." Other respondents mentioned developing stronger ties with SBC.

In Inyo County where the visioning process took place, one of the county supervisors was invited to take part in a statewide process relating to conservation easements and conservancies in California as a result of the relationship that had begun between the Executive Director of SBC (Lucy Blake) and she. Another supervisor was asked to facilitate a presentation at one of their conferences and was able to work with one of the directors of an art project in Reno, Nevada that led to some collaborative ideas that were shared between art councils. SBC at one time had a

staff person in the community, as well, and she facilitated several meetings between local government representatives here and other state agencies. Through SBC's involvement in the community with the wealth index and other work, they brought in people from other organizations for workshops; this may have facilitated some new working relationships.

Raising Awareness

Responses varied about how much the Wealth Index has raised awareness. Some thought that it has had a tremendous impact. One respondent said, "On a scale of 1 to 10, I would say 9." Many respondents thought that it had an impact simply as a consolidated source of information, not with any indicators in particular. " I think what the report does more than anything, it doesn't raise awareness about specific issues. It moves people from getting mired in the details to seeing the big picture." Another said, "It was just the item itself – that's the first time we had something like that up here." In places where the index has not had much visibility, or people have had little interest in it, it has done little to raise awareness except among a few individuals.

Respondents also mentioned particular issues that the Wealth Index had raised awareness about. In one of SBC's presentations in Plumas County, a group of citizens learned that their community's teenage pregnancy rate was extremely high compared to the rest of the region, and higher than the state average. In response, citizens took action to address the problem. The following year, the same community had the lowest rate in the Sierra, earning them a special award from SBC. In another community, a high poverty rate among children in the 0 to 17 age group captured some attention, but no public or policy response has occurred. Also, the rate of adults having poor literacy skills caused some controversy in one community, with some people questioning the validity of the statistic.

One respondent reported that the environmental indicators had an impact on him, personally. He was shocked at the water quality issues, and the impacts on tree species. He also thought the index had helped raise awareness for the community that they are unique in that they are not experiencing growth as the other communities in the region are. They realized that they did not have a lot of the growth-related benefits of other places, but they also enjoyed low crime rates. In another community, the Wealth Index did not raise awareness of a particular issue, but it added information to a discussion about resource management and resource use at a time when lots of plans were being developed by the Forest Service and federal government. In Placer County, indicator data raised awareness about open space issues, leading to the planning initiative described previously. The indicators have also highlighted the need for high speed internet infrastructure throughout the region.

In addition to SBC's presentations, the Wealth Index has been introduced into the public consciousness through articles in local newspapers and in the speech of public officials. According to the research director, "Several of the supervisors use the language of the wealth index, use that perspective in their decision making." It's also been used in political campaigns. "There was one supervisor race where both were quoting from the wealth index." The index has not been used in school curricula in the Sierra, but professors at Humboldt State University have incorporated it into courses.

Influencing Decisions

Responses again varied. Some respondents said they did not think the Wealth Index had influenced any public decisions or agendas. Others thought it had, but couldn't give specific examples. Some gave dramatic examples. In Inyo County, the planning forum was not initiated by the index, but the framework and process was greatly influenced by it. This has had a lasting

impact on the county. A supervisor reports, "It has absolutely influenced agendas. We look at the different requests that come before the board of supervisors now – mostly for funding, sometimes for policy – in light of the results of the 2020 Forum, which is a natural outgrowth of the Sierra Wealth Index." In turn, constituents who lobby for funding use it to make their case about how it fits into the bigger picture.

The Wealth Index has also influenced decisions about resource allocation in the county. It bolstered support for funding a grants and supports program for the arts council, the children's council, the women's services organization, senior services, and other programs. According to the supervisor, "the wealth index made us look at the importance of all the different types of capital in our communities and expanded everyone's outlook on that – the importance of having a holistic approach for the way we look at our communities." It also influenced efforts to try to retain a business that was considering relocating out of the community. In SBC's *Planning for Prosperity* framework, one of the premises is to encourage the expansion and or retention of local businesses. The county's efforts were aided by data from the Wealth Index and assistance from SBC staff.

The Wealth Index has generally had less influence on the decisions and agendas of businesses and organizations. Some thought that it had had some influence but could not cite specific examples. One respondent mentioned that the index had helped raise awareness among businesses in the community about the importance of preserving quality of life. In particular, real estate developers realized the value in keeping the ambience of the community, with its historic gold rush buildings. More care has been taken in the past few years to preserve those buildings and to keep new construction consistent with the gold rush theme. This is preserving the character of the community, which has value to businesses. In another community, the index helped shape the marketing strategies of a bank, which resulted in significantly expanded

business. In another case, a bank manager has adjusted his criteria for evaluating loans according to how the proposed project will affect the three forms of capital described in the Wealth Index.

Tracking Progress

SBC's research director summarized several trends captured by the indicators: "The economy has improved in the past decade. Most of social capital is doing very well. Natural capital is declining. Prosperity hasn't reached everyone. We have equity issues. Some places are booming, but not every place. Some types of people are doing well, but not everyone."

Successes and Benefits

Several respondents cited the value of the Wealth Index as a source of local and regional information. Many communities did not have access to this kind of data before. One respondent commented, "I think they've been exceedingly useful by providing good hard data in one place, comparative data, that was not available before without doing huge amounts of research." Another respondent said, "It's given us a basis of understanding of where we are." Another respondent thought it had contributed to a sense of being part of something larger. Communities on the eastern side of the Sierra tend to be isolated. "The Wealth Index drew us all more closely together because of the shared information." The comprehensiveness of the information was also valued, covering the three areas of financial, natural, and social capital. Another respondent appreciated the full picture painted by the indicators, the fact that it was not just data, but that it told a story about what was going on in the region.

Many respondents also mentioned that the Wealth Index had helped to raise awareness about particular issues and the importance of planning. Comments include, "It's raised

awareness. It's been educational, " "I think it's made us aware of our strengths and our weaknesses," and "I really believe it's opened a lot of eyes – for the people who have seen it." A respondent in one community noted how it was helping the town to become more sophisticated and to deal with growth. The respondent who conducted extensive outreach using the indicators to advocate for planning in his community said of his efforts, "At the very least, it did enlighten people to strategic planning. Before, nobody wanted any change and didn't want to do anything. This time people did think we needed to do something about economic development." In several communities, the Wealth Index has also directly or indirectly lead to new planning efforts, such as in Inyo County with its visioning process and Placer County with its open space initiative.

The other major benefit of the Wealth Index cited by respondents is the way it has changed the nature of the debate in many communities throughout the region. The report provides a factual basis to help overcome myths about the state of the economy or other issues. One respondent said, "It documents positions where we've had people in the past blindly or irrationally trying to support projects." People don't get stuck arguing about the facts as much. It provides a shared language and enables the community to get on a similar platform of understanding.

One respondent described it as, "a tool that encouraged dialogue between different segments of the community (i.e., environmentalist, ranchers, business people), a tool that everybody had a shared interest in." It helped tone down arguments by enabling people see the other side of the picture. "It's raised the argument to a level that is more respectful. We have laid the foundation for some expanded relationships for people of diverse interests." Another respondent thought the most important thing the Wealth Index has done was "to allow the developers and the no growth people to communicate effectively and reach some sort of common ground." The research director feels the index has helped to change the political environment in

the Sierra Nevada. This is being fed by other activities of SBC, such as the leadership seminars it conducts with an expert on mediation and collaboration skills. They have graduated approximately 100 people, most of whom tend to be leaders in their communities.

The Wealth Index has also had important benefits for the organization itself. It has given SBC a lot of credibility and visibility.

Meeting Project Goals

The research director believes that the Wealth Index has completely met its goals and that it will continue to do so. The initial impact is to give people a common understanding of the trends and conditions in the Sierra Nevada. Some of the other outcomes take time to develop, such as the partnerships with counties to work on particular issues. Another respondent thought that the Index is improving over time. The second report was an improvement over the first because it incorporated suggestions and comments from the readers. The third version is likely to be even better.

Respondents gave mixed answers about whether the Wealth Index was helping to achieve the overall goals of securing the economic and environmental health of the region. Some people thought it was definitely helping. One respondent emphasized that it was designed to measure and to help recognize and acknowledge change, while SBC's other activities are more geared toward action. Some respondents were not sure if it was making a difference. One respondent thought it was not making a difference because of the political barriers. People have too much self-interest, and those with money and power are going to resist real change.

Content of the Indicators

Which indicators are influential varies from place to place. In Plumas County, it was the teenage birthrate. In Placer County, it was land use (related to open space). In another county, a low figure for doctors per 1000 people began a discussion about how to attract more medical professionals to the area. In Inyo County, indicators on education and the percentage of public land captured some attention. The public land statistics contributed to a current discussion about resource management in the county. The education statistics validated that youth in the county earn high test scores, something the community was already aware of. However, the supervisor believes it may have contributed to community pride and influenced the approval of two school bonds in a typically fiscally conservative county. The indicator for SAT scores has been popular in other counties as well.

Economic indicators have also been influential. In one community, the economic indicators helped the community realize the extent to which they had been "left behind" compared to other counties that had been growing. SBC's research director reports that economic diversity, a new indicator in the second report, has attracted some interest. In the rural areas there are basically two kinds of economies: timber/mining and wilderness/tourism. Both are not very diverse. The economic diversity indicator is beginning to shift people's attention from trying to do timber or tourism more, to how they can be more diverse.

In terms of which categories have attracted the most interest overall, respondents mentioned all three, but mostly social and economic.

A couple of the indicators have been controversial and have attracted some criticism. Crime statistics are often very controversial. The rate of adults with poor literacy skills was challenged in one community, where citizens felt it was too high to be accurate.

Factors Influencing Success

Respondents identified several key factors that have contributed to the success of the Wealth Index. Being objective, neutral, and credible was an important factor mentioned. SBC made a lot of effort to present the information in a neutral and objective way and to make the data sources as transparent as possible. They made the raw data available on CD-ROM, with links to data sources, for anyone looking for verification. Many respondents conveyed the perception that the data is neutral and unbiased, and comes from reliable sources. The interpretations were also perceived as unbiased. One respondent thought the fact that it includes the three components (financial, natural, social) gained respect from a variety of groups.

The fact that SBC is a business organization gave it a tremendous amount of credibility in the politically conservative region. One respondent said, "The reason I didn't have a problem with it is because of the names of who was on the committees. There were a lot of the big business owners on the committee who have been around for a long time and have seen what's been going on in the community." This allowed many people to trust the Wealth Index and be open to its message and goals. One respondent thought that SBC's efforts to gain feedback from the community and follow-up with comments also lent to their credibility. It fostered a sense of ownership that communities have in the wealth index – a sense of it belonging partly to them.

Several respondents mentioned that the reports and presentations were very professionally done. SBC's emphasis on design and printing results in an appealing report. The presentations to the communities were described by one respondent as "very well-organized, very informative." People also appreciated that the information is presented very clearly and tells a story. One respondent said, "You could access the information quickly and easily and didn't need to understand statistics. It was the only consolidated document that was easy to read. The chart format was really important. You could look at a few pages and gather the impact."

Another said, "I appreciate the presentation and the way it's put together and presented – it makes it easy to use and a pleasure to use." Another said, "It's easily used, easily utilized. The format is laid out really nicely. You don't have to be a brain scientist to figure it out."

The fact that SBC does the presentations was mentioned by a couple of respondents as an important factor of success. One said it was valuable to have SBC come out and present to important people in the community. Another said that many indicators programs lack a component to publicize it and get the word out, and that "SBC has done a really excellent job of making presentations and starting to get the word on the ground."

Respondents who have been involved with SBC mentioned several internal factors that were important. Having the full-time staff position of research director that is totally committed and responsible for the indicators was essential. She could adopt and champion the indicators, and do the necessary work to complete them, without having to make decisions about what would be in them – that was left to the committee. The mix of people on the advisory committee was also mentioned as being important, as well as the process that was followed of minimizing meeting time and being extremely efficient. Another respondent mentioned the leadership of Lucy Blake as a key factor: "I'd say SBC was just really extremely fortunate to have an executive director in Lucy Blake. It had the potential to degenerate into a community process that gets watered down. This works because there was leadership."

Obstacles, Weaknesses and Areas for Improvement

Most of the obstacles and weaknesses people mentioned were related to the data itself. SBC's research director talked about the difficulty of finding data for the natural capital area. And without good data, it's difficult to make a compelling case. She notes, "With the social and financial indicators, we've been collecting data in a routine way for a long period of time. There

are good time trends… With the natural capital indicators – forest health, water quality, air quality - even those areas where you'd think we have time trend data, we don't. The scientists keep changing their definitions and measurement protocols, or they're not gathered along political boundaries." It was also difficult to find data that is uniform across the region. For example, information about bighorn sheep might be available for one county, but not for others, so it is not included in the report. Another respondent agreed that the natural capital data had weaknesses: "With the natural capital data, it's hard to find quantifiable useful measures. They have certain things they're using as indicators. I'm not sure they're the right things. But I'm not sure how they'd find the right things. I'm not sure if they reflect the total natural capital."

Some respondents mentioned the need for more data that is county-specific. According to one respondent, "For it's ability to influence policy on a local level, you need more local data." Another pointed out that even county data is not specific enough. For example, Placer County contains Lake Tahoe and Roseville, two very different places that don't even have the same ecosystems. Another issue was using regional data to extrapolate down to the county level. One respondent thought, "It can present a misleading picture. For example, the student teacher ratio - I have questions about how useful the averages are – regional or local… That may not be the most useful way to look at the data. There may be differences in the upper grades vs. the lower grades."

Time lags in the data were also cited as a drawback by two of the respondents. For example, the census data that was included was eight years old. With employment data, because of the way it's collected and released, the economic trends can change before it's reflected in the data. This is not necessarily the fault of SBC. It's just the way the data is made available. Another noted that it was necessary to leave out a lot of good information in order to achieve "a

balance of something that would maintain people's interest but not overwhelm them." The only specific omission mentioned by respondents was that taxable sales should be included.

One respondent thought that more interpretations should have been included. When SBC presented the Wealth Index, they tried to keep the interpretations down in order to let people make their own interpretations. "If you're trying to sell a program, yes, you have to make some interpretations and be able to defend those, because surely you're going to be attacked. The other danger is if you don't do any interpretations everybody is going to walk away with their own interpretations, and then what have you accomplished? " The respondent thought it might be better if they did some interpretations, even if they got into arguments.

A couple of respondents mentioned the need for better outreach in their communities. One talked about the value of the seminars he had participated in: "I've been to quite a few of these and I get really charged up. They have national speakers. We get a lot of good ideas for planning and land use issues. And then you come home and you're back up against the same kind of closed-mind thinking. I guess I would like them to put some of that in a road show and bring it down here so people would have to go to it because it's right under their nose. I'd like to see really good, dynamic folks presenting it to our leadership." Another said, "I think the only drawback is that not more people know about it. It's really invaluable. The only way I've seen some of the organizations even see it is if I brought them a copy… More people need to be made aware of it."

Another respondent mentioned the price of the report as a drawback: "I'm not sure what you do about that. To get it out in my community, I bought copies."

The only obstacle mentioned about the process of developing the indicators was the difficulty in getting the individuals to "stop talking about their special interests and start asking about other people's special interests."

Vital Communities of the Upper Valley – Valley VitalSigns

Profile

Overview and Mission

Valley VitalSigns is one of three projects of Vital Communities of the Upper Valley, a non-profit organization serving the Upper Connecticut River Valley region of Vermont and New Hampshire. The VitalSigns are an index of citizen-selected indicators to help monitor the long-term health of the region by tracking economic, environmental and social data (Vital Communities 2000a). A primary part of the organization's mission is to engage citizens in community life and to help revitalize a sense of community in the region. The indicators were conceived as an educational tool and a way of empowering citizens with data that would help them to see where their efforts were needed.

History and Process of Developing the Indicators

The project was started in 1994 by the League of Women Voters over concern for the quality of life and loss of community in the small towns of the region. After hearing about Sustainable Seattle's indicators project, the group's founders decided to initiate an indicators project for the Upper Valley. They hired a professor at Antioch College skilled in facilitation methods to be the director. Alan AtKisson, one of the co-founders of Sustainable Seattle, was invited to speak, and a community visioning process was developed. Over 150 people from 25 different towns attended. Participants included people from all walks of life: farmers, artists, teachers, public officials, students, business leaders, etc. Efforts were made to assemble as broad and diverse a group as possible. Subgroups for 15 topic areas met independently and developed 5

indicators each. The 80 or so indicators were printed in the newsletter and feedback was requested to try to narrow the list to a target of 20 or 30 indicators.

Over the next two years, numerous public meetings were held to try to cull the list, but the process stalled. Alan AtKisson was invited back for additional consultation. Based on his recent experiences with indicators processes around the country, he advised that a wide-scale citizen process was too cumbersome. A small committee to develop the indicators, with follow-up feedback requested from the community would be more effective. Vital Communities pared down its group and finalized its list in a subsequent series of four meetings.

In order to gather and monitor data for the indicators, Vital Communities developed the unique concept of having community partners adopt each indicator. They have sought out individuals, businesses, and organizations with interest in particular indicators. Some of the more significant partnerships include a local hospital, which lent some of its indicators to the project, and the Vermont Institute of Natural Science, which does environmental education and bird monitoring. Vital Communities also has done some information sharing with cooperative extension, state agricultural agencies, etc. Gathering and assembling the data proved to be a lengthy process. The web site for the organization lists a series of values and suggested indicators in four categories (Nature/Environment, Ecoomy, Well-Being, and Society/Community), but to date, no comprehensive indicator report has been published.

Current Activities

In April of 2000 a new director was hired, and subsequent efforts have focused on publishing data for individual indicators. In the fall of 2000, brief reports on 13 of the indicators were released in the form of 2-4 page brochures with graphs and a series of open-ended questions designed to spur the reader into action. The brochures are distributed at community meetings and

other appropriate places. Rather than compiling data for all of the indicators into a single report, the organization focuses on one indicator at a time, releasing the data at a planned community event designed to attract media attention. For example, the recent release of the traffic indicator was held at a car dealership, with over 100 people in attendance and good press coverage. The organization plans to hold public meetings and panels on specific topics to gather experts on the issues and stimulate public dialogue and action. In November, the board voted to focus on just two indicators/issues for the next 18 months – transportation and town center vitality. A public meeting on transportation was planned for April 2001.

Funding and Staff

Initial funding for the indicators project came principally from donors to the League of Women Voters, although some fundraising and grant writing was also conducted. In its indicator development phase, the project also won a $47,000 grant from the EPA's Sustainable Development Grants Program. This highly competitive grant earned them a great deal of visibility and press, including an article in the Boston Globe. The EPA grant terminated in fall 2000. Now all of the program's funding comes from foundations and individuals. Paid staff consists of the director and a half time staff person who coordinates teams of volunteers to gather information for the indicators. The program depends a great deal on the work of volunteers to gather data. Text and graphs are compiled by staff.

Findings

General Response to the Indicators

Respondents reported that the general response to the indicators in the community has been favorable among those who have been exposed to them; people have found them to be interesting, credible and accurate. However, Vital Communities has struggled somewhat to get the word out, and, therefore, the main response has been from people involved in the project. Several respondents noted that the indicators have been more effective when individual ones have been articulated well. It has spurred an informed conversation about specific issues of interest and people have responded more in terms of wanting to take action. One respondent thought that "people have either not gotten it – it was too technical, it wasn't grabbing their imagination – or they're frustrated with how long it's taken." Another said the impact of the indicators is tempered by the fact that indicators have become pervasive. Indicator information provided by the state and federal government has proliferated, so they don't have the impact now that they did five years ago.

Ways the Indicators are Being Used

When asked which sectors are benefiting or making the most use of the indicators, respondents mentioned government, but could not cite specific examples. It was thought that other sectors have been impacted to various degrees, but that business has not been exposed to the indicators very much. Aside from the organization's own forums around the indicators, one use of the indicators was mentioned. The representative of the Vermont Institute of Natural Science who helped develop the songbird indicator has used this indicator and the farmland indicator (to show land use conversion) in public presentations, slide talks, etc. Audiences have in the past

included members of conservation commissions and local environmental organizations. In the talks, he has advocated for appropriate land use and decision-making at the town level.

New Contacts, Working Relationships, Organizations, and Programs

When asked about new contacts, partnerships, and working relationships formed, some respondents mentioned developing a stronger connection with the organization Vital Communities. Two participants attested to having developed a broader set of personal contacts. They believed other participants had had the same experience. In the case of the Vermont Institute of Natural Science, new contacts led to a new funding source. In the process of doing outreach on the songbird indicator (independent of Vital Communities), the Institute also began working with other local bird conservation groups and developed new contacts that way.

The process of developing the indicators also spawned a new organization. In the endeavor to create a trails indicator, Vital Communities convened representatives from different trails related groups, including snowmobilers, cross-country skiers, etc. This began a conversation among groups that were formerly at odds with one another. They discovered how they could benefit from one another's resources and efforts and eventually formed a new non-profit group, The Trails Alliance, to advocate for trails in the region. (Ironically, the trails indicator did not get included in the final indicator set.)

Raising Awareness

One respondent cited raised awareness about traffic and trails. Another felt that awareness has been raised among a small core group, but not among the general public. The positive side of this is that the core group who were involved with the indicators were an influential group of people

in the community who have likely carried the information out into the rest of their lives and had an impact that way. In general, respondents thought that the indicators have not necessarily aroused concern about particular issues – no issues have come to the forefront as a result of the indicators - but they have dovetailed with issues of concern in the community such as traffic and sprawl. In this way, the indicators have been able to contribute to the conversation about those issues and about town planning and development in the region.

The individual indicators that Vital Communities has presented have received a lot of media attention. The traffic indicators event made the front page news, with headlines and pictures. The Vermont Institute of Natural Science has made several public presentations on songbird issues, incorporating indicator data. The indicators have not been incorporated into school curricula. A grant was written to incorporate them into an existing program, but it didn't get funded. Vital Communities might try to resubmit this grant in the future.

Influencing Decisions

Respondents generally agreed that the indicators have not had much direct influence on public or private decisions or agendas. However, several thought that they were beginning to have an impact on community planning efforts by providing useful information and contributing to discussions about sprawl. One respondent noted that a lot of public officials were present when the traffic indicator was presented, and this might have had an influence. One respondent commented that the indicators haven't had much influence because they haven't been very focused. With the new approach of focusing on single issues, they might have more impact.

With the songbird indicator, one respondent thought that the presentations on songbirds may have led to some changed actions on the part of some people, but no evaluation mechanism

was in place to track that. It might have resulted in changed practices around trying to keep some grassland and mow at a different time of year.

Tracking Progress

Respondents felt that the indicators were too new and not enough data over time had been assembled to show any particular trends; however, a couple of trends were mentioned. The indicators have shown a shift from dairy farms to local small market centered crops. For the songbird indicator, 30 years of data have been compiled, which shows how populations have gone up and down. In some cases, it's possible to see why this has occurred; but changes in land uses often affect some species negatively and others positively, so the overall results are not clear.

Successes and Benefits

Respondents noted several successes and benefits of the Upper Valley Vital Signs. One respondent said, "It brought different people together who had never gotten together before – farmers of different kinds and people in agriculture who had never sat down together before. That was really meaningful to see that." Another said, "It has provided the opportunity for folks to come together and consider issues that might not receive attention otherwise." For example, with transportation, it created a meeting place for various interest groups or stakeholders and fostered personal and professional relationships around those subjects. It also led to the creation of the Trails Alliance. Another respondent observed, "It coalesced an interesting group of people who in intangible ways carried it out to the rest of the community."

Respondents also commented that the indicators have raised awareness about the importance of thinking regionally, and the concept that aspects of quality of life can be measured,

and therefore can be planned for and managed. Another respondent valued the holistic approach of addressing issues of environmental, economic, and social concern in one project. "That's a very important role that Vital Communities has played and one that is not filled by other organizations. We're all operating in our own spheres and for our own causes. This allows for that cross-fertilization."

One important benefit cited is that the indicators provide a focus for civic debate. They transform rumors into quantified reality. They give concrete information to focus people's attention and to help make better decisions. For example, with traffic, it has provided numbers to describe exactly how much it's increasing, transforming it from a general concern into something the community can actually plan around. With songbirds, it has provided a context for discussing the effect of human land use on bird populations. In this way it has added to the set of educational tools in the Institute's efforts to engage citizens in protecting Vermont's natural heritage. It has also helped to point out where the lack of data exists in the community, and where it is needed to help inform decisions.

In terms of the organization, the indicators have been a real keystone of Vital Communities' work and the project has given them a place at the table where issues are being discussed. It has also helped to give them credibility with the business community.

Meeting Project Goals

One respondent thought that the indicators have been successful in terms of the goal of making information available to people. However, the general consensus is that it hasn't reached very many people yet. One respondent said, "On a scale of 1 to 10, it might have a 3 by now, but it has way more to go... We haven't reached very many people yet because we haven't tried. I

think that it's poised to jump up. It's all been groundwork so far." Another said, "I think we have a ways to go on that. I think it's happened in small pockets."

In terms of helping to achieve the overall goal of more vital communities, one respondent said, "Used selectively they are." Another said, "I'm skeptical. I think it's possible that in small ways it has. I'm sure some people would say that that's all we have – small examples that combine for a whole. But there has been no transformational result. I mean on a really recognizable and substantial scale. Probably it has spurred individuals to small actions but maybe not much beyond that." Another observed, "Some community members feel the indicators have done nothing to change problems such as transportation and sprawl." Respondents generally regard it as a work in progress and feel that it hasn't been out there long enough.

Content of the Indicators

In terms of content, respondents indicated that the indicators paint a fairly good portion of the picture they are trying to address, but that some holes exist – for example, safety. Three reasons were mentioned for this: 1) the size of the indicators set had to be limited; 2) with some things, no data currently exists, but the indicator is kept as a bookmark for the future; and 3) some things are just very hard to measure. It's difficult to quantify social capital, safety, or sustainable living practices.

The indicators also tend to beget more questions. As people learn about one aspect of the community, they find other things of interest to measure. For example, with water quality, it isn't enough that the rivers appear to be running clear and clean. Other problems may exist such as heavy metals content or streambank erosion. The indicators are being developed in stages, focusing on the ones that are most important and easiest to measure for now, with the hope that as the public gets to know the indicators, they will let Vital Communities know where the holes are

to fill in. One respondent mentioned that linking the indicators with sustainability is also important.

The indicators that have been most influential have been those that resonate with particular issues of concern in the community and ones that have been released at the publicity events. These include traffic, the disappearance of farmland, and town center vitality. No particular categories were indicated as being more influential than others. One respondent thought that the social and environmental indicators had been more influential because the economy is in good shape. Another thought that the economic indicators had attracted a lot of interest in the business community. A couple of respondents noted that anything related to quality of life, neighborliness, and town center vitality has received more attention.

Factors Influencing Success

Vital Communities' credibility as an organization was cited as an important factor of success. One respondent thought the group had established credibility through its efforts to balance geographic representation, extending beyond the few towns in the immediate vicinity. Also, "Vital Communities itself has walked the walk, for example, by acquiring office space in an economically depressed part of town." The fact that the project crossed so many sectors and could attract people from many areas and engage them was also seen as a factor of success. Having leaders from across the spectrum gave it potency, and partnering and linking with organizations was beneficial. Using volunteers to gather the data slowed down the process, but also meant that more people were educated. Having the events to publicize specific indicators was another important contributor to success.

In terms of the content, one respondent commented that Vital Communities made a huge effort to avoid controversial indicators so that the public wouldn't perceive that they had an

agenda – that they were tree-huggers or anti-development. This kept more people on board, but it might also have diminished the impact they might have had if they had created a little controversy. One respondent noted that the project benefited from people's enthusiasm about the overall concept. "It's a really cool concept. It's a wonderful idea. It's such pure democracy – that people would decide what they care about and then gather their own data. People get excited." Also, the fact that the idea was gaining momentum nationally meant that funding was available.

When asked to compare factors that influenced success, some commented that the process was most important because the main point was to engage people. Others thought that an overbalance of process got in the way. Two people strongly felt that the individual efforts and commitments of those involved were the most important.

Obstacles, Weaknesses and Areas for Improvement

Respondents noted several weaknesses of the indicators or indicators program. The biggest weakness cited was that the process of developing the indicators was too long and involved. They spent almost two years trying to decide which indicators to include and another two to three years (and counting) gathering data. This diffused interest in the project and frustrated many participants. Citizen involvement was a highly valued aspect of the project, but trying to make all of the decisions come directly from the citizens made the process overwhelming. They could have had a small committee making decisions, with the community providing feedback.

One respondent thought that the lack of a focused, targeted audience made it overwhelming. "We tried to be too idealistic, asked for too much for the indicators to do instead of keeping it simple and having more realistic goals." Another respondent noted problems with

the later stages of the project. Cutting back on the core group size and limiting discussions was a disappointment for one participant. This eroded the team element and reduced the level of involvement. The lack of consistent leadership was also noted as a problem.

Several obstacles have been encountered with the indicators. One respondent observed that some things in the social realm just can not be easily measured, and that the group tried too hard to emulate social scientists in their efforts to develop quantitative measurements for social phenomenon on par with those of finance and economics. It's difficult to measure quality of life. Taking that tool and trying to make it fit is clumsy. Also, because the valley covers a bi-state region, it was difficult to find data at the appropriate geographic scale. Another respondent noted, "A lot of people just don't connect with this stuff - don't see how it relates to their lives, personally… In general, a lot of people who are drawn to indicators aren't the same people who would know how to make it meaningful to the public. So they don't get used, don't get broadly disseminated." The respondent suggests that more partnering is needed with outreach, PR, and educational kinds of people.

One respondent commented that Vital Communities has achieved the goal of putting more information into the hands of the public and they now need to think about the next phase. The production of information is not as critical now. They need to figure out how to make the information come off the page and come alive. Local indicators are still a worthwhile educational tool and should be continued. The "how" question still hasn't been answered – how to get people to do certain things. The indicators leave those questions unanswered. Another respondent commented that a good process is needed for encouraging public reflection about the importance of any given indicator. A way for eliciting people's feelings about what the indicators say should be coupled with the indicators.

Boulder County Civic Forum – Quality of Life in Boulder County Community Indicators Report

Profile

Overview and Mission

The Quality of Life in Boulder County Community Indicators Report is one of several programs of the Boulder County Civic Forum (BCCF), formerly known as the Boulder County Healthy Communities Initiative. The BCCF exists under the umbrella of the non-profit Community Foundation Serving Boulder County. Boulder County is situated along Colorado's northern Front Range of the Rocky Mountains, straddling both the eastern plains and the mountains to the west. The county contains urban, suburban, and rural areas; Boulder is the main city in the region. The area has experienced extremely rapid growth since 1970. The BCCF was conceived as a regional approach for addressing many of the growth-related issues in the county. BCCF's mission is "to promote healthy decision-making that will sustain the environmental quality, livability, and economic vibrancy of the Boulder County region," (BCCF 2001b). The purpose of the indicators is to measure progress toward a vision of healthy communities and to identify important issues. They are intended to be a useful information resource and planning tool for public officials, business leaders, grantmakers, community organizations, and the general public.

History and Process of Developing the Indicators

The BCCF project was initiated by a representative of the University Corporation for Atmospheric Research (UCAR), a non-profit research institute in Boulder, who wanted to create a project in honor of the founder of the institute. She convened a committee of about 40

individuals from the community from academia, business, government, and community groups to discuss the idea of sustainability and how it could be implemented in the community. Around the same time, the Colorado Trust issued a request for proposals to fund healthy communities initiatives. They applied for and received the grant and, in 1995, launched the Boulder County Healthy Communities Initiative.

The group facilitated a year-long community visioning process, first with a selected stakeholder group, and later in open forums. The result was an articulated vision of a healthy community and a list of 5 or 6 proposed activities, one of which was the indicators report. To create the indicators, they engaged in another two years of a broad, inclusive public involvement process to select indicators. By the end of the two years, over 400 citizens had participated. An additional grant allowed them to hire a facilitator to complete the process and collect the data. The first report was published in 1998, with 34 indicators in 4 categories: people, environment, economy, and culture and society. A second report was published in 2000 with 50 indicators; a few indicators were eliminated from the 1998 report and some were added.

Current Activities

The 2000 report represents a new approach by the BCCF to focus on issues, rather than data. Instead of issuing a single report with all of the indicators and also trying to identify issue areas for people to focus on, they decided to focus the report on highlighted issues related to quality of life and to go into depth on those. They selected four key issues: affordability, child and youth development, social capital (a "sense of community"), and regionalism and regional cooperation. The report was released in January 2001, along with a new web site that contains the report with icons in text to reference the data. This approach was designed to allow them to

update the data over time and give the document a longer shelf life. They also plan to hold focus groups around the four issue areas.

Funding and Staff

The initial Healthy Communities project was funded by a 5-year grant of several million dollars from the Colorado Trust. Additional grant funding was obtained later to complete the indicators. In addition to the grants, funding expanded to include municipal and county sources, local businesses, and private charitable organizations. Colorado Trust funding terminated at the end of 2000 and BCCF now relies solely on its other sources. BCCF has a full-time paid director, an executive committee of 6 people that provides overall guidance and direction, and an advisory body called the Community Council, a group of about 12 key constituents who were part of the original committee of 40 that started the organization. BCCF has strong partnerships with the United Way, the Boulder Chamber of Commerce, the Boulder County Health Department, and a local hospital.

Indicator data has been gathered by a combination of people on the indicators committee, including the director, representatives from local agencies and organizations such as the Health Department and the Boulder Energy Conservation Center, interns from the University of Colorado at Boulder, and volunteers. BCCF's strategies for action are to publish the indicators report and take it out into the community to foster dialogue around the issues in the hope that it will result in citizen activism. They reach established groups that meet regularly, such as land use planning groups, and also serve as a non-biased convener of forums, large-scale community meetings, and seminars. They consider themselves information providers and facilitators, not problem solvers.

Findings

General Response to the Indicators

Respondents indicated that the people who have seen the indicators have responded positively. The report has been presented in public meetings, as well as breakfast meetings with business leaders. People have expressed appreciation for how unbiased and balanced the text is and have commented that it gives a good snapshot of the community. One respondent said that it's taken time for people to learn about the indicators, and that the second report will likely have a more immediate impact. General citizens have responded positively, though it has not reached very much of the public yet.

Ways the Indicators are Being Used

Respondents agreed that the report had been of most use to private organizations. It has been a very important resource for the Community Foundation to determine funding priorities. A lot of philanthropists in the community channel their donations through the Community Foundation. It helps them determine where the community's needs are and where to focus their grants, etc. The Avista Ventura hospital uses the indicators as part of their partnership with the indigent care clinic to help determine how many people don't have access to health care and to figure out if they're reaching the right people. However, it was noted that the data provided by the indicators probably would have been obtained from another source if the BCCF indicators report didn't exist.

The indicators have not been used much by the business community. Part of the problem is that the business community is very action oriented and many business leaders were frustrated by the lengthy process of developing the indicators. If anything, the indicators have been used by businesses as a general snapshot of the community. Realtors have found the indicators very useful in this way, and have probably made more requests for copies of the report than any other group. Economic development agencies have also shown interest. The Roche Colorado Corporation reports using the indicators in a general way to keep abreast of the business climate and the potential challenges they might face as a business. In addition, as donors to BCCF, the program allows them to channel resources into something they feel is a positive community project.

Respondents gave mixed replies about whether it had been of use to public officials. Some thought that it had been of some use to government. One respondent thought that the indicators had been used by public officials with the City of Boulder on youth service committees, land use committees, and school boards. The current director, who has spent a great deal of time asking people what they think about the indicators, did not think that public officials have found the report very useful. They liked the concept of the indicators, but not necessarily specific ones. Local government in the area has 32 master plans and their own sets of indicators; BCCF's indicators are not specific enough for them. For the 2000 report, public officials were specifically asked how the report could be made more useful for them, so BCCF is hopeful that it will be of more use to them.

New Contacts, Working Relationships, Organizations, and Programs

The indicators have facilitated the formation of new relationships for participants and those who have used the indicators. The Community Foundation reports using the indicators as a

vehicle to develop new partnerships. Recently, they hosted a breakfast for all of the family foundations and mailed the indicators report to all of the Denver Foundations serving Boulder County. They use the report with businesses who want to do some gifting through the foundation and use it as a tool to bring together other groups to address some of the issues. The hospital reports building new working relationships as a result of the indicators process. They have become much more involved with the Health Department, building stronger ties with the director there. The Roche Colorado Corporation indicated having developed a better relationship with the community through working with the community partners and the BCCF.

Some new groups and programs are also associated with the indicators. The visioning and community involvement process that preceded the community indicators resulted in the formation of YouthNet. This effort was funded by a grant from the Knight Foundation to do a study and needs assessment on youth development and violence prevention. The YouthNet report, published in 1999, was released six weeks before the violent incident at Columbine High School, and consequently served as an important resource for those interested in addressing youth violence issues in the community. It has been used to convene grantmakers and donors to fund after-school programs for pre-schoolers and middle-schoolers and to develop a K-12 health curriculum. The Neighborhood Initiatives program is another initiative that came directly out of the planning process. This program was designed to help form neighborhood organizations and provide support for the groups, but the program ran out of funding after a year.

Several other new programs and organizations may be indirectly attributable to the BCCF planning process. While not directly responsible for their creation, the Healthy Communities process provided a forum to convene people, built energy and momentum behind existing efforts underway, and served as a catalyst for new coalitions to form. Among these are WindSource, a partnership that has encouraged residential energy users and corporations to pay a little more to

invest in alternative energy sources, and Resource 2000, a warehouse for recycled building supplies. A special committee on youth issues, convened in summer 1995, resulted in the creation of the Boulder County Youth Service Corps, funded by the Boulder County Commissioners starting in 1996. The program was designed to give young people employment, community service opportunities, and ultimately, a greater sense of community belonging.

Raising Awareness

Respondents report that the indicators have not raised much awareness or brought any issues to the forefront. The first report contained all previously existing data so it was not a new introduction to particular issues. General citizens might have found some things of interest, such as homelessness and teen pregnancy, if they were not familiar with those issues. The main thing the indicators have done is encourage better dialogue and force people to look at the issues more broadly. The indicators packaged the information in an integrated, holistic way that was simple and logical and showed linkages.

The indicators have been cited in the media. The local newspaper, *The Daily Camera*, has used them as a basis for talking about local issues. They have provided a credible source of information for people who want to focus on particular issues. One respondent thought the report had helped affirm problems associated with growth and the lack of affordable housing and had provided continuing information about such issues as drug and alcohol abuse, diversity in schools, and the dropout rate, so that people were reminded those issues still exist and need addressing. Another respondent thought that the affordable wage data in the new report would have an impact.

Influencing Decisions

The indicators have definitely influenced the grantmaking of the Community Foundation. They are also beginning to shape donor recommendations for priority areas to channel funding in the community. Last year, the Community Foundation established the Millennium Trust, in which residents were encouraged to contribute their last hour's wage to address the future needs of the community, with Wild Oats providing a matching grant. BCCF was invited as a neutral facilitator of the meeting and the indicators were used to educate people about issues and trends they might want to work on. The indicators have also helped to guide the Social Ventures Partnership of 20 to 30 dot com's interested in philanthropy activities. The Community Foundation recently distributed the report to 50 family foundations. This will likely influence the grantmaking of these foundations, as well.

Respondents could not point to any public decisions or agendas influenced by the indicators, other than the indirect influence on the county's funding of the Boulder County Youth Corps. Last year, BCCF participated in the Boulder County United Way needs assessment by providing affordable wage data. This generated a lot of community interest, and will likely have some ripple effects on planning in the community.

Tracking Progress

According to one respondent, the indicators have shown some trends, but they are difficult to generalize. The affordability data has shown some important trends. Commute times and vehicle miles traveled are increasing. Per capita income is increasing, but housing prices are increasing faster, and therefore, affordability is decreasing. The overall picture is one of increasing jobs-housing imbalance, a key issue in the area.

Successes and Benefits

Some respondents thought that the fact that the organization has been able to survive and persist and has continued to obtain funding has been a major success. The indicators have also contributed a great deal to the organization; they are the main way that the organization is identified now and they have provided an important project base. Other activities have all started from that base. One respondent said, "We wouldn't be much without it. We would just be another League of Women Voters or community facilitation group. The indicators have been absolutely central."

The indicators have helped to identify and focus attention on important issues in the community such as youth, affordable housing, and transportation. They have given concrete definition to problems that people often just talk about theoretically and provide a benchmark against which to measure. They have also illuminated some issues and community characteristics that people may not have been aware of otherwise. For example, poverty rates have not changed even though the economy is roaring, the Hispanic drop-out rate is higher than state and national levels, and ethnic diversity in the county is increasing. The indicators help to bring issues more into the public's attention and point out areas that need to be addressed. One respondent commented, "We live in a pretty pleasant place and it's easy for us to be complacent. [The indicators] are a wake up call... It's in your face." They have become an important tool for local human service agencies and philanthropic agencies to determine where to target their resources. They have also helped political leaders recognize where they need to start focusing their energies.

A number of respondents commented that one of the main benefits of the indicators is that they force people to view issues more broadly. They package information in an integrated and holistic way and illustrate the linkages between issues.

They show overlapping contributions of different problems – draw linkages between issues. According to one respondent, "It has served to educate people about the large picture of the community. It has provided a more integrated view of the community that was previously missing."

Many respondents also cited the community building aspect as a major benefit. It has helped to build relationships in the community, encouraged better dialogue, and established forums for on-going public discussions. It brought people together who might never have met before to discuss important regional issues. One respondent said, "Our success has been preparing the groundwork for raising awareness on issues and bringing together groups to work on them." Several specific projects have emerged out of this, including the YouthNet report, the Neighborhood Initiative, and the Boulder County Youth Corps.

Outcomes are phased over time. Issues are identified over time and the work is done in waves, following the publication schedule. It may be too early for BCCF to see many results. One respondent noted, "Those of us who have been around all agree that after you put out your first report, you're still in diapers. You need to be out three to eight years. There have to be long-term commitments."

Meeting Project Goals

One respondent thought that the project had met its goals to a significant degree, but that it is a developmental process. They have met some goals and not others. With its current focus on being more action oriented and trying to make issues more central to community conversations, the organization is positioning itself to meet its goals more directly and intentionally. A year from now, they will know more about how that's worked. Another respondent thought the project has tracked very consistently, but is just partially to the goal

because it is very ambitious. The goal is to have a healthy and sustainable future and they have had huge setbacks because the economy is booming on the Front Range. That has downsides in terms of community size and loss of natural assets.

When asked if they thought the indicators were helping to achieve the overall goal of a more healthy community, people responded positively. One respondent said, "Definitely. I think it's really given us an area for focus in a time when it would be easy to think everything's great." Another said, "I do, but I'm very biased. If you are an environmentalist you would say, no, we're not going far enough." Another said, "They're helping. It will become more and more strategically critical for folks."

Content of the Indicators

Respondents believe that the indicators are providing a good overall picture of the community. The indicator set was expanded and improved from the 1998 to the 2000 version, including using more standardized health measures, but the director comments that the indicator set can never be complete. In the process of trying to capture the health of the community with data points, every item of information "raises four more questions." He believes they are probably good enough for purposes of raising awareness and mobilizing people, but there are always other measures to work on – for example, the ecological footprint. This would be a great measure, but it would be difficult to find data at a consistent geographic scale to tell a coherent story.

Respondents mentioned several indicators that have been influential. The most commonly cited were youth violence and affordability (wages and housing costs). Others mentioned include vehicle miles traveled, air quality, extirpated and declining species, low birth weight, and child care costs. Respondents generally agreed that no particular categories have

attracted more interest than others; people from different sectors respond to different ones. People in education are interested in the education indicators. Environmental groups are interested in the environmental indicators. One respondent thought that the social indicators have attracted the most interest, because the people that BCCF is working with are primarily interested in who's benefiting and who's being left behind in the community.

Factors Influencing Success

Respondents cited a range of structural, substantive, and process factors that have contributed to the success of the indicators. Structurally, moving the project from UCAR to the Community Foundation helped them to survive and continue. It allowed them to develop a broad constituency, to include issue-oriented groups, and bring together groups that don't usually work together. Businesses, environmentalists, and human service types are all invested in the idea. Staying true to their mission, values, and the way they do business was cited as another important factor. This is particularly true with respect to maintaining credibility as a group that is neutral, nonpartisan, and non-governmental. They haven't taken up a political cause or supported any particular candidates. This has helped to build their credibility, which is a key foundation.

Having a consistent group of people who have been involved since the beginning, and who have had a strong commitment to see it succeed has been very important. One respondent commented, "Longevity matters a lot to how people perceive a project. The longer we maintain it, the more people buy into it." The respondent also thought that current work to build a broad base of support around the project and to work with others who collect data in the county is strengthening the organization. One respondent mentioned the importance of having a few key strategic funders who stuck with it and believed in it and kept it going. Support from the

newspaper, buy-in from one of the major hospitals and the Health Department Director, and the commissioner's funding it and seeing it as a resource were all cited as well.

The community involvement process to develop the indicators was considered an important factor. Reaching a broad constituency group in the three-year process provided a very comprehensive picture. Using focus groups and having people identify what the issues are and what the indicators should be helped to personalize the data and allowed people to respond to trends. One respondent mentioned the importance of getting people together to talk about their community in a nonpartisan way. "We've never had a strong interaction between business and environmentalists before and we've had that [with the indicators]. That's been real healthy." Reaching out to diverse populations, and not just the "true believers" was also considered important.

In terms of the content, having the indicators presented in an attractive way that is easy to use is important. One respondent commented, "They're current and presented in a way that you can really understand what it means and what you might be able to do about it." Other contributing factors are the accuracy of the indicators, their usefulness to certain sectors, and the ability to adapt them over the past couple of years to meet different needs. For example, a lot of communities provided feedback to BCCF that they could use a lot more data that is community by community and that it needs to be more relevant (the "so what" question). Being flexible in responding to those comments has helped the project to have some staying power.

Obstacles, Weaknesses and Areas for Improvement

The main obstacle for the program has been funding, a common challenge for many non-profits. The director commented, "We have a long-term view and a 12-month budget." It has been difficult for BCCF to stabilize its operations in order to move forward with significantly

ambitious projects. The former director and current member of the executive committee noted that it is challenging "to do something visionary, long-term, and with high impact in the community with limited funds and resources."

Some significant challenges were encountered in the process of developing the indicators. The amount of information available and the many opinions that people had made winnowing down the indicators difficult. Another significant challenge was keeping participants engaged through the duration of the process. People would often come to three or four meetings and then drop off. Some people, particularly those in the business community, were frustrated with the lengthy community involvement process, and were interested in seeing a product more quickly. Time constraints kept many from participating consistently. Both evening forums and meetings during business hours presented problems for low-income citizens, who had to deal with child care issues, rigid work hours, and lack of time and energy.

Respondents cited several weaknesses of the indicators. One respondent said that the indicators didn't have enough original research. The data can be found in other places. For example, people interested in environmental factors already have environmental data. People are not necessarily learning anything new. The data on affordability in the new report has provided some original information and people have shown a lot of interest in it. Another respondent thought the main weakness was the "so what" question, meaning that people don't always know what the statistics mean, how to interpret them. The new document is considered an improvement because it attempts to answer that question, focusing on particular issues. Another respondent felt that the indicators really need to be accompanied by an action plan. The data is only a start. A couple of action plans have been developed, focusing on youth violence issues. However, better public distribution of the indicators information is needed, perhaps by community TV.

Sustainable San Mateo County – Indicators for a Sustainable San Mateo County

Profile

Overview and Mission

Indicators for a Sustainable San Mateo County is a project of Sustainable San Mateo County (SSMC), a sustainability education organization dedicated to the long-term health and vitality of the region. The group exists under the umbrella of the non-profit organization, The Tides Center. San Mateo County is located on the peninsula just south of San Francisco. It's an urban/suburban area bordering San Francisco to the north and Silicon Valley to the south. It has 20 cities and a population of approximately 727,000. Sustainable San Mateo County is a self-described volunteer-based community group working to "enhance [the] region's long-term social, economic, and environmental vitality through the promotion of sustainable practices," (SSMC 2001a). The indicators were designed to provide a comprehensive picture of the county's sustainability and quality of life in the areas of the environment, the economy, and social equity; to identify and highlight significant trends taking place in the county; and to provide a tool for city and county decision-makers, businesses and citizens.

History and Process of Developing the Indicators

Sustainable San Mateo County was started by a core group of about five local residents who were part of the Foundation for Global Community, located in Palo Alto. The group formed around the idea of doing indicators, and indicators have always been central to the group's work, though other activities have been added over time. The first meetings were held in 1992, and it took five years to develop the first indicators report. They began by conducting an informal

survey of both friends and strangers – people at bus depots, in waiting rooms, and other public areas – to gain insight into what people thought the problems were in the county, and what they were worried about. Then the group began researching other indicators projects, including Jacksonville Quality of Life Indicators, Pasadena's Healthy Cities project, and Sustainable Seattle's report.

They developed an initial list of indicators, and then conducted interviews with approximately 30 influential people in the county, including the sheriff, city managers, police department heads, people in education (assistant superintendents, etc.), people who dealt with the homeless, the head of the county's human service agency, etc. Interviewees were asked whether they thought an indicators project would be of value to them, and what indicators would be most important for their field of expertise. The draft list of indicators was compiled and mailed out to participants for feedback. They created a second draft of the list and held two public workshops in the fall of 1996. Based on suggestions from the workshop, the indicators were revised and the first report, including approximately 30 indicators, was published in 1997.

Volunteers gathered information for most of the indicators. The group obtained funding to hire an intern for three months to complete four of the indicators. Sustainable San Mateo County has released an updated report every year since then, and was working on its fifth report when this research was conducted. On-going help with gathering indicator data has been provided by staff from the Child Care Coordinating Council, the Volunteer Center in San Mateo County, and the county's health services agency or human services agency. They have also set up intern programs with a local high school and a group at Stanford University to have students participate in the indicators and receive credit in return.

Current Activities

In addition to working on its annual indicators report updates, the group conducts a number of other activities. An Education Task Force is working on a series of workshops for K-12 teachers on how to teach sustainability in the classroom. A Business Task Force works on forums for the business community. In 1999, a forum was held for the hospitality industry to talk about ways to reduce environmental impacts. In 2000 the task force was planning a forum for builders and developers. Every year the group holds an annual town hall meeting for the release of its indicators, in conjunction with Earth Day at the College of Notre Dame. Each year has a theme: in 1999 it was energy; in 2000, water issues. The reports are also distributed at the Progress Seminar, a two day annual event put on by the Redwood Chamber of Commerce that is attended by government and business representatives from all across the North and South Bay region. In addition, Sustainable San Mateo gives out an annual sustainability award in the community and works on other small projects, including publication of its newsletter.

Funding and Staff

The group's first funding was a grant from the Peninsula Community Foundation for just under $10,000 to hire someone to help complete the first report. Funding since then has grown to annual budget of approximately $50,000. Sustainable San Mateo County asks each of the cities and the county to contribute funding. Each year, more cities opt to support the project; currently approximately 85 percent of the region's cities support it, and the county gives $5,000 per year. This local government funding covers much of the work on the indicators report, but not the group's other activities. Most funding comes from a variety of other sources, including supporters of individual projects, businesses, PG&E, PacBell, and in-kind contributions from

individuals and groups for functions that they've held. They also obtained a second grant from the Peninsula Community Foundation for $5,000, and a three-year grant from the San Francisco Foundation for $20,000.

Sustainable San Mateo County's activities are mostly volunteer run. Starting from the original core group of five or six, the group has grown to approximately 30 volunteers that are active today. In addition, local businesses such as BFI and Oracle Corporation, and agencies such as the San Mateo County Department of Education, have representatives working on SSMC's task forces. The group has a 3/4 time paid executive director, who coordinates the volunteers and edits the report. Guidance is provided by a 20-member Advisory Council and a 10-member Steering Committee, both of which include a broad range of people - public officials, business owners, activists, organization leaders, and citizens. The group does not yet have a board, but a subcommittee is working on setting one up.

Findings

General Response to the Indicators

Respondents report that the indicators have generally been well-received, particularly among local governments, who appreciate the data it provides and its usefulness as a tool that provides benchmarks on performance. The response among the business community has been positive, but more limited. Said one respondent, "With business it's been much harder to disseminate the report. I would say that the reception there is not bad but it's not good because not enough people have seen it."

Several respondents noted that response has grown over time, evidenced by the fact that more cities opt to support it financially every year. One respondent commented that year by year,

the idea of sustainability has become more well-known, and people are becoming more receptive to it. "The idea has become current in the past three to four years. This year we've reached a point where sustainability is on everyone's tongue, including the developers." At the annual forum attended by city and county officials and business people, where they release the report every year, reception has grown. One respondent said, "More and more it seems that the reports have been looked forward to. We actually see people in the seminars reading it." Another said, "People do find it useful and we get anecdotes about that." Another respondent had a more tempered opinion: "For those that care, it's well received. For those that don't it's not."

Ways the Indicators are Being Used

All respondents thought that government was the sector making the most use of the indicators. This includes county agencies, city managers, mayors, and council members. The indicators have not reached the other sectors as much. One respondent who has worked both as a city council member for the City of San Mateo and as a County Supervisor reported having used the indicators in his decision-making. He said, "I've become familiar with the indicators and have used them regularly as an indicator of where we are and where we need to go as far as sustainability." He also reports using them to help in decision-making around particular issues such as land use, housing affordability, and child care.

SSMC's indicators have been very valuable as an information source for local entities. The City of Half Moon Bay reportedly saved $100,000 by having the indicators when approaching a particular issue. The indicators provided necessary data that the city would have had to collect on its own. SSMC's indicators provided support and validation for the San Mateo County Vision Project. It was one set of indicators that the county looked at in the process of developing its own set of progress measures. The project manager reports, "It became clear to

me that there were several ways that the Sustainable San Mateo County indicators paralleled the county vision project. I can't say that they impacted so much as they reinforced what the county's project identified."

A local business organization, the San Mateo County Economic Development Association (SAMCEDA), has also used the indicators as an information source in its strategic planning project called the Peninsula Planning Partnership, which focuses on broad-based policy development in a variety of areas including land use planning and housing. A SAMCEDA representative said, " We've used their indicators in some of our documentation, just as data, in order to present a factual context for discussion... Otherwise we would have had to get the data ourselves." While SAMCEDA has used the indicators as an information source, they haven't necessarily used any of the ideas presented in the report.

A local business leader who has been active on SSMC subcommittees and task forces has used the indicators as a tool in trying to educate the business and development community about sprawl and smart growth. He works as the environment and safety manager for two local companies, both of which depend on the ease of distributing to be successful and are very much impacted by transportation issues and sprawl. Part of his job is to attend meetings with the planning commission, city council, chamber of commerce, etc. to advocate for smart growth. He has worked with the chamber of commerce economic development committee and SAMCEDA, two traditionally pro-development and anti-environment groups, to try to get them to integrate SSMC's quality of life indicators into their planning. He has also helped SSMC connect with environmental groups throughout the Silicon Valley and integrate the indicators into their thinking.

New Contacts, Working Relationship, Organizations, and Programs

The indicators have helped facilitate some new working relationships and contacts, though respondents did not mention many specific examples. One respondent thought that the town hall event that SSMC sponsors every year probably facilitated some contacts. A county official said that his relationship with SSMC has grown. "They have more credibility in the community from my standpoint."

A business leader reported that the indicators have helped him in his community affairs work, which is helping to protect the future of his company. "A few years ago, everyone was ready to bulldoze this neighborhood. Now in the general plan process, it's accepted that this neighborhood will stay because we provide good tax revenue and other things." A major reason for this is because SSMC's contacts with other leaders through the indicators is building a synergy and momentum that is increasing the appreciation in the community for its work. The manager's involvement with SSMC has also led to some additional business. Working on the school curricula program increased contacts with a lot of schools. When they were refurbishing their ball fields, the schools came to his company for garden materials.

Raising Awareness

Some respondents thought the indicators had helped to raise awareness, particularly among public officials. One respondent said, "More and more we are hearing the word sustainability come into conversation. It's more a part of the common vocabulary than it was four or five years ago." The respondent thought that the indicators have played a role in that shift in consciousness. "When we attend community events and various programs, we are actually asked to engage now and speak up on behalf of the interest of sustainability and give our take on

a certain issue. Those types of responses are a really good indication that this approach and indicators are becoming more a part of the way people think." Another respondent said, "I think to those it may be preaching to the choir... For business and other areas that need it, it may not reach them."

One respondent thought that the indicators were helping people to understand and articulate the idea of smart growth, particularly in the environmental community. With businesses this is beginning to happen to some extent also. "Businesses are just now beginning to understand that quality of life is the way that you're going to be able to retain your talent pool." Overall, the indicators seem to have raised awareness about general concepts such as sustainability and smart growth. As far as particular issues, the indicators have not necessarily raised awareness, but perhaps have contributed to the discussion. One respondent thought that the indicators had contributed to discussion about housing and transportation, and the situation of less fortunate people in the economy. Another said, "Our worst problems on the peninsula are affordable housing and traffic. We've been pointing it out for five years but people knew about it anyway. It does give people statistics that are readily available."

Besides releasing its indicators at the annual town hall event at the College of Notre Dame and the Progress Seminar, SSMC makes an effort to distribute the report to every local elected official, including city council members, county supervisors, planning commissioners, city and county managers, and state assembly representatives. The remaining reports are distributed at other various functions that SSMC attends or holds. The indicators have received some press coverage in the local papers, mostly around release of the report or other events. A columnist for the San Francisco Chronicle quoted some of their land use statistics. KQED provided some radio coverage of the report and some of the pertinent issues it presented. At the time this research was conducted, SSMC was going through a round of questions to be

televised as part of a roundtable discussion on community sustainability organizations. Some work is being done to incorporate the indicators into local school curricula.

Influencing Decisions

Most respondents thought the indicators had probably influenced local city and county decision-makers to some extent. One county official reported using the indicators to evaluate land use decisions to understand the location and amount of land resources available and to look at development densities. He also reports looking at the indicators in a number of ways in terms of housing affordability, and to help with approving projects and prioritizing funding for child care. "When you see the need identified in the indicators, that gives you some focus and rationale for the prioritization." San Mateo is one of the only counties with a state-funded program to identify the population at risk for Hepatitis C, a rising concern in the county. SSMC's indicator for communicable diseases did not necessarily lead to this response, but has helped provide the rationale and support for the program.

Though respondents disagreed on the level of impact, the indicators did have some influence on the San Mateo County Vision Project. The county official who initiated the project reports that the indicators did not give him the idea for the visioning process, but they reinforced the idea that a vision was needed. "We had five supervisors going in five different directions... What the indicators have done for me is given me the real understanding that we need to act in concert as a governmental agency. We need to work as one body because of the problems that have been identified and the direction that we've gone through the indicators." The indicators also had some influence on the type of process used to create the vision and the system used to measure progress toward the vision.

Businesses and private organizations have been influenced much less than government. However, one respondent thought that chambers of commerce, county policy development groups, education groups, and school boards were starting to pay attention to the indicators. He also thought that the indicators and SSMC's programs have helped to educate business leaders. "The indicators are educating and giving ammunition to the executives when they're making decisions." The indicators helped motivate a senior manager in one company to actively lobby for an education program to incorporate sustainability topics into their curriculum. Though not necessarily a direct result of the indicators, the company has also formed a "Green Team" that the managers take part in, to reduce environmental impacts. "The report didn't cause that but it helped convince the leaders of our company that they should pay attention to the broader picture." The company also makes more donations in the community. In another company, the indicators have helped motivate them "to care about environmental issues more and to understand that there's value in lobbying for quality of life besides profitability."

Tracking Progress

SSMC has not done a trends analysis and could not report on progress overall. However, one respondent made the general observations that congestion, housing affordability, and child care have gotten worse; the incidence of Hepatitis C has grown; other communicable diseases have gone down; a lot of the other indicators are about the same.

Successes and Benefits

Raising awareness was the main benefit respondents cited. One respondent commented, "I think it's really raised the consciousness level of the whole thing about sustainability. People

seem to be not as querulous when you talk about sustainability. They seem to know what you're talking about." Another said, "They have highlighted and drawn attention to the sustainability of our environment and society and that that can be measured on an on-going basis and how important it is to do that." One respondent thought that the indicators provide a good sense of where the community is and what direction it's going, particularly with the historical data provided with some of the indicators. "It gives a sense of the direction that we've been going and will be helpful in figuring out if we're headed in the right direction or should we be doing something else."

As an education tool, the indicators have helped provide an overall perspective and have aided in decision-making. A public official commented, "The most value has been the overall perspective that it has given me to be a better educated, more informed decision-maker." Another respondent said that the indicators have provided "overall education on the things that are taking place in the county in order for people to take those into consideration when making decisions and the concept and consciousness of sustainability." Another said, "It's a model of how to measure more than just economic growth - how to measure the broad impact of growth in the community. Being a model, it then leads other organizations."

One respondent talked about how the indicators have been a tool to promote smart growth. Focusing on quality of life issues is giving people something to rally around and is engaging more people in the decision-making process. The indicators have provided something tangible. "You can hand a book to someone and say this is quality of life. It's something tangible that everyone can rally around and compare to and use. It's a benchmark for smart growth."

A couple of respondents also mentioned how the indicators have contributed to the organization of SSMC by giving them more respectability in the community. "It's our flagship

document. It gave us our name," said one respondent, "After that,... attendance at our other programs increased." Another said, "It's helped establish us as a viable organization in the county and people will come and attend things because they've read the indicators report."

Meeting Project Goals

The founder of SSMC is "very pleased" with how well the indicators project has met its goals. "I think it's done pretty much what I'd hoped it would do, which is raise awareness in the community." Other respondents agree that the program has raised consciousness and is helping to achieve the overall goal of sustainability in San Mateo County. One respondent commented, "You see a lot of different attitudes coming up among the city council people and other decision-makers." Another said, "As time goes by, the consciousness and the support of what it is that we're trying to impress on people has increased." Another said, "There's a definite momentum."

Content of the Indicators

One respondent thought that the indicators were providing a good overall picture. Another thought they were not complete. Shortcomings are due mainly to the lack of resources (time and personnel) to gather data and unavailability of the information. For example, one indicator identified early on was the number of people who don't have health insurance. So far, they have not been able to get that information. This occurred with a couple of other indicators also. SSMC is aware of some of the gaps and tries to build things in over time, as shortcomings are identified. Some things are not addressed, however. One respondent commented on concerns about how the community fits into the regional and planetary picture in terms of population and

resource consumption. "There are issues about what we do here locally in relation to the bigger picture. We just aren't big enough to deal with that now."

As far as which indicators were most popular or influential, most respondents named the housing, transportation, and land use indicators. Said one respondent, "The influx of people for work in the area is creating extraordinary amounts of congestion and buildup on the roads. The cost of living because of Silicon Valley is high." Another said, "The whole issue of affordable housing – if it's germane to social equity – that comes up." Several respondents also mentioned environmental and resource conservation indicators, including air and water quality, and energy consumption. Said one respondent, "They spoke to things like the energy crisis, but also other things not necessarily on the crisis list, like water." Other indicators mentioned include education and child care. One policy maker said he appreciated having a broad set of indicators that included ones outside of the county government realm, such as teacher ratios, high school dropout rates, the arts. They were helpful because they provided awareness of problems they might be dealing with tangentially, even though not directly within their purview of responsibility.

None of the indicators were necessarily controversial, though one respondent reported some "anti-environmental snipping," in the business community, for example with the Christmas Bird Count. He commented, "Businessmen just don't get biology, and that's too bad."

Factors Influencing Success

Respondents unanimously agreed that factors related to the content of the indicators were the most important, followed by organizational and leadership factors. The process of developing the indicators was considered least important.

In terms of the content, respondents described the indicators as clear, understandable, and practical for anyone to use. One respondent praised the "good writing" of the reports. The fact

that the indicators cover a spectrum of issues – environment, economics, social equity – all in one report was also considered valuable. One respondent said, "People don't have to pick up 3 different volumes. It's a really efficient and effective tool." Another thought the mere existence of the indicators was its greatest value because indicators allow people engaging in community discussions to come from a factual base, rather than an emotional base. "That makes planning more meaningful rather than emotional." Another noted the importance and timeliness of the topic itself. "There was a need. There was a vacuum in this area in the county."

A number of respondents mentioned the objectivity and credibility of the organization as a critical factor in its success. SSMC tries to present the indicators in as neutral and factual manner as possible. "The indicators are condensed to basically just the essentials - the fundamentals of what the figures are and what the figures represent." One respondent described SSMC as an "apolitical organization" that presents accurate and unbiased information. Another described the indicators as "very science based, data based, and therefore trusted."

A couple of respondents mentioned that the people involved have been important to the indicators' success. One respondent said, "I think having a core group that was really dedicated to getting it done. It would have been impossible without that. They've put in a lot of effort." Another said, "The leaders of the group trying to publicize it are very good, caring people who have pushed it." In addition, the network of "good people in the business and community organizations" who have responded have also contributed to success. Press coverage and publicity were also cited as important. One respondent said, "I think the press has been very helpful because they realize this is an important issue – quality of life for next generations." Another said they had received "half-way decent publicity," and had done a good job of getting it into the hands of the decision-makers - city officials, county government, city government, etc.

Obstacles, Weaknesses, and Areas for Improvement

The main obstacle respondents mentioned was the lack of resources – both funding and personnel. The group depends heavily on volunteers, and currently the only paid staff is ¾ time. This person is overburdened with trying to manage programs, coordinate volunteers of various skill levels, and write and edit the reports, as well as trying to give back to the community so that people benefit from their involvement. One of the hopes in forming a board is that they might help with funding. The biggest challenge in the process of developing the indicators was, according to one respondent, "keeping at the task." It took a lot of determination to keep it going because it was a slow process and it was volunteer-driven; people had jobs, too.

A related issue is the difficulty of getting the word out, getting attention, and getting the indicators used. According to one respondent, "It doesn't get as much media attention and business attention as it should." This respondent felt that it's not being used enough. The problem is not so much that it's not being distributed, but that it's not being integrated into strategic thinking enough. It's hoped that a board of directors would be able to help figure out ways to have more publication of the ideas, etc. The respondent thought that the nature of the indicators is one thing that makes it difficult to capture attention with them. "Probably because they are so data based, they don't reach out and grab people. They're boring. They're only interesting to bureaucrats – people who really do care – but the regular citizen...."

Another respondent thought that the indicators have not been more effective because even though they describe the issues well, they don't address what to do to change things. Comparing SSMC's indicators with the county's, for example with voter participation, the county is going one step further to talk about what needs to be done. The respondent admits, however, that, "Finding out how to accomplish the goals may not be so easy." It takes getting people to rise above their political and special interests.

One respondent noted a weakness in sometimes having to use outdated material for the indicators. "We don't have enough source material and current material to base them on." SSMC has been working on an indicator for homelessness, but the data is from 1998.

CHAPTER 5

CONCLUSIONS

Introduction

A summary of each case study is presented in Figure 4, including when the indicators program was started, the reports published, unique features of the program, primary uses of the indicators, the main sectors affected, and notable functions and outcomes. The remainder of the chapter summarizes the research findings for outcomes and factors affecting outcomes and answers the questions presented in Chapter 1. The chapter concludes with a summary of key findings, recommendations, theoretical implications, and areas for further research.

Summary of Outcomes

Overview of Types of Outcomes

Outcomes were found to be a result of three general categories of activities: 1) *the process of developing the indicators*, which brings different people in the community together for discussion, serves as a visioning process to identify shared values and goals, and helps to define concepts such as sustainability in terms more meaningful for the community; 2) *publishing and distributing the indicators*, including report distribution, release events, presentations in the community, and media coverage; and 3) *next steps*, including on-going forums based around the indicators, focusing on specific issues, linking to action steps, efforts for local government adoption of the indicators, and mobilizing/organizing citizen action (see Figure 5).

Figure 4 – Case Study Summaries

Sustainable Seattle
Indicators of Sustainable Community

Year Indicators Program Started: 1991
Reports Published: 1993, 1995, 1998

Unique Features:

- One of the first and most well-known indicators programs
- Extensive citizen involvement process
- Earned U.N. award for "Excellence in Indicators" at 1996 Habitat II Conference
- Model for dozens of other programs nationally and internationally
- Currently at a point of transition regarding ownership and use of the indicators

Primary Uses:

- Helped define and articulate the concept of sustainability for the region
- Model for other indicators efforts in and outside the community

Main Sectors Affected:

- Groups outside the region
- Government

Notable Functions and Outcomes:

- Articulated and raised awareness about the concept of sustainability
- Influenced the decision-making of a city council member, county executive, possibly other current city officials, and the former mayoral administration
- Benchmarks for the chamber of commerce's Business and Industry Resource Venture program
- Indirect influence as a conceptual guide for Seattle's Comprehensive Plan (cross-fertilization of ideas from people working on both projects)
- Model and information source for Seattle's Comprehensive Plan indicators and King County's growth management plan indicators
- Model for Communities Count social and health indicators and Information and Technology indicators
- Indirect influence on the creation of Seattle's Office of Sustainability and the Environment (city official who helped create the office participated in Sustainable Seattle)
- Education tool in workshops for Seattle's Neighborhood Planning process
- Model for dozens of other indicator efforts outside the region, nationally and internationally

Figure 4 – Case Study Summaries (cont.)

Sierra Business Council
The Wealth Index

Year Indicators Program Started: 1994
Reports Published: 1996, 1999-2000

Unique Features:

- Business-based organization
- Uses the concept of three types of capital: natural, social, financial
- Spans 12 counties in the Sierra Nevada region of California and Nevada
- Rural, conservative region
- Streamlined, efficient process for developing the indicators
- Has conducted extensive public outreach

Primary Uses:

- Data source
- Broadening people's views about what's important

Main Sectors Affected:

- Government
- Businesses

Notable Functions and Outcomes:

- Data source for a variety of city and county officials in several communities, businesses, an economic development corporation, and an environmental group
- Conceptual guide for a bank manager's loan evaluation criteria
- Helped a bank to improve its loan marketing strategies
- Education tool for a citizen leader's advocacy efforts to promote planning and initiate a visioning process in his community
- Conceptual guide for the Inyo County 20-year planning forum
- Information source that lead to Placer County open space planning process and ballot initiative
- Information source that led to a successful effort to reduce teen birth rates in Plumas County
- Influenced county decisions in Inyo County regarding resource allocation for social programs and the arts and business retention efforts
- Contributed to discussions about resource management and resource use in Inyo County
- Information source for a town dealing with growth

Figure 4 - Case Study Summaries (cont.)

Vital Communities of the Upper Valley
Valley Vital Signs

Year Indicators Program Started: 1994
Reports Published: 13 individual indicators released 2000

Unique Features:

- Geographic region is the Upper Connecticut River Valley in Vermont and New Hampshire
- Strong democratic, citizen-empowerment theme
- Broad-based community-driven process
- "Adopt an Indicator" program with community partners for gathering data
- Release of individual indicators at planned community events

Primary Uses:

- Vehicle for community dialogue

Main Sectors Affected:

- Government

Notable Functions and Outcomes:

- Process led to formation of a new organization, the Trails Alliance
- Raised awareness about the importance of thinking regionally and planning for quality of life
- Education tool for a representative of the Vermont Institute of Natural Science, used in presentations on songbirds
- Contributed to discussion of issues around transportation, sprawl, and town center vitality

Figure 4 - Case Study Summaries (cont.)

Boulder County Civic Forum
Quality of Life in Boulder County Community Indicators Report

Year Indicators Program Started: 1995
Reports Published: 1998, 2000

Unique Features:

- Partnership with the Community Foundation Serving Boulder County
- Began as a Healthy Communities Initiative, one of several in the state, funded by the Colorado Trust
- Broad citizen-participation process involving 400 citizens
- Focus on four main issue areas – affordability, child and youth development, social capital: a "sense of community", and regionalism and regional cooperation
- Report is a "living document" published on-line with links to indicator data that can be updated on an on-going basis

Primary Uses:

- Community snapshot
- Guide for local donors for prioritizing funding

Main Sectors Affected:

- Private organizations – foundations, donors

Notable Functions and Outcomes:

- Decision-making guide for the Community Foundation and local donors to determine funding priorities
- Decision-making guide for local hospital to target service populations
- Source of general data about the community for local businesses, esp. realtors
- Visioning process led to formation of YouthNet, focusing on youth issues in the community, and the Neighborhood Initiatives Program (now defunct)
- Built energy and momentum behind existing organizational efforts, including WindSource (alternative energy), Resource 2000 (recycled building supplies), and the Boulder County Youth Service Corps
- Contributed affordable wage data to the Boulder County United Way needs assessment

Figure 4 – Case Study Summaries (cont.)

Sustainable San Mateo County
Indicators for a Sustainable San Mateo County

Year Indicators Program Started: 1992
Reports Published: 1997, 1998, 1999, 2000

Unique Features:

- Located in a suburban county between San Francisco and Silicon Valley
- Volunteer-driven
- Cities and county contribute funding
- Indicator reports updated annually
- Have a business task force that holds industry-targeted forums

Primary Uses:

- Data source

Main Sectors Affected:

- Government

Notable Functions and Outcomes:

- Raised awareness about sustainability
- Provided a better understanding of community characteristics and trends
- As a data source for the City of Half Moon Bay, the indicators saved the city approximately $100,000
- Data source for the San Mateo County Economic Development Association's strategic planning project
- Influenced a county official's decisions around land use, affordability, and child care
- Provided rationale and support for the county's program to identify populations at risk for Hepatitis C
- Reinforced the idea for the San Mateo County Visioning Project; provided a model and information source
- Education tool for a business leader's efforts to promote smart growth with the business and development community

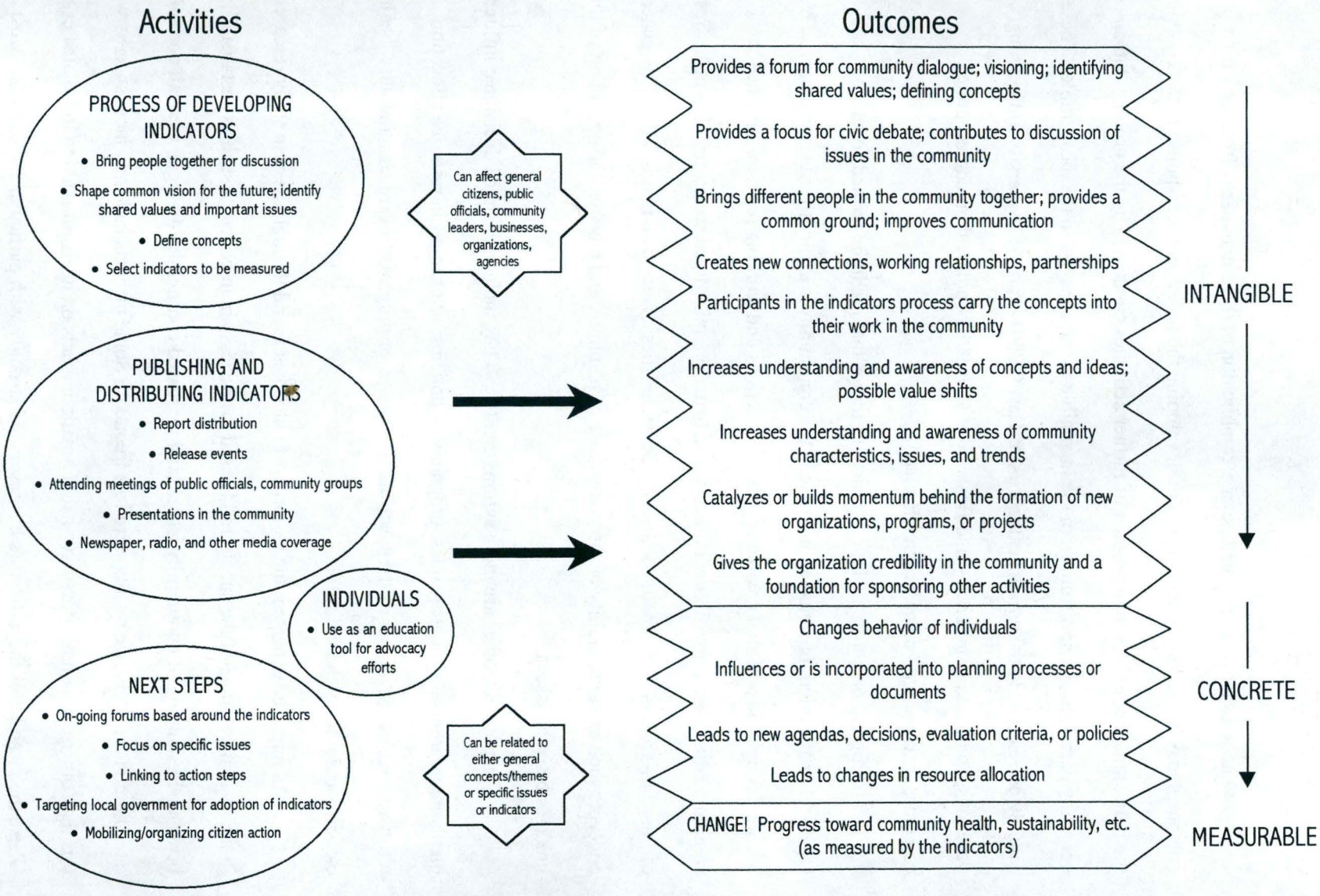

Figure 5 – Schematic Diagram of Activities and Outcomes of Community Indicators Programs

Outcomes may result from one or a combination of these activities. In other words, outcomes may be a result of the process of developing the indicators, a response to the content of the indicators, themselves, or a product of further activities conducted by the group. Outcomes generally occur along a spectrum from the intangible to the concrete to the measurable. These roughly correspond to the parallel categories of Hart (2000) - raising awareness, influencing decisions, and tracking progress - and Besleme et al. (1999) - political outcomes, policy outcomes, and change - presented in Chapter 1.

Intangible outcomes include a variety of things that might be termed social and organizational capital, meaning an increase in the community's ability to solve problems. This occurs through the potential created by new connections and working relationships, better communication between different interests, and better organizational structures. It's also a result of raised awareness, both about community characteristics, issues, and trends, as well as general concepts such as sustainability or the importance of planning, and a better understanding of the linkages between issues.

Concrete outcomes are more action oriented. They include changed decisions; influences on planning processes; new agendas, programs or policies; or changes in resource allocation. The ultimate goal, at the far end of the spectrum, is change, or progress toward sustainability, health, etc., as measured by the indicators.

As might be expected, the majority of outcomes found through the case study research lie in the intangible range of the spectrum. Raised awareness about concepts such as sustainability, better understanding of community issues, and increased community dialogue were all commonly cited outcomes. Concrete results were less frequent. Some projects have had more success with this than others. The indicators have had dramatic impacts on decision-making in isolated cases, where the message of the indicators has resonated strongly with particular individuals. Most

often, this occurs when individuals involved in the process of developing the indicators bring this influence into their work as public officials, business leaders, etc. Actual change as measured by the indicator, as a result of the influence of the indicator, was found in only a single isolated case, with the Sierra Business Council: citizens in Plumas County, California responded to an indicator from the Wealth Index showing high teen birth rates by implementing action that dramatically lowered rates in the next measurement period.

Communication and Connections

These types of outcomes were reported for all of the case studies, across the board. Many respondents talked about the indicators' role in providing a forum for discussion in the community, providing a focus for civic debate, bringing people together and facilitating conversations between different interests. Respondents for the Sierra Business Council and Sustainable Seattle commented that the indicators had provided a common ground, a common language for communication. Respondents from the Boulder County Civic Forum and the Sierra Business Council said that the indicators had encouraged better dialogue. In the Sierra, one respondent even noted that they had "changed the nature of the debate." People argued less about facts. The indicators "raised the level of the argument to be more respectful."

The indicators also provided a forum for community visioning and identification of shared values and goals, as well as defining concepts such as sustainability in terms relevant for the community. This was a significant function in the three case studies that had extensive community involvement processes to create the indicators: Sustainable Seattle, the Boulder County Civic Forum, and Vital Communities.

In all of the case studies, the indicators fostered personal and professional relationships to one degree or another. In most of the case studies, respondents also talked about how the

indicators process had educated and inspired participants, who carried the ideas out into their work in the community. It built a network of people as a foundation for further work. Many of them have used the indicators as an education tool to advocate for issues of concern, including sustainability, smart growth, the need for community visioning and planning, and songbird protection. Another benefit cited by respondents in four of the five case studies was that the indicators had given the organization credibility and visibility in the community. This was a foundation of support for and interest in other activities that the group was sponsoring, or might sponsor in the future.

Raising Awareness

Most of the awareness raising described by respondents was related to general concepts and general information about the community, rather than specific issues. For all of the case studies, respondents talked about increased awareness of concepts such as sustainability and the need for planning to preserve quality of life. Respondents also talked about how the indicators had provided a broad, holistic perspective and increased understanding of the linkages between issues. Perspectives varied within each case study about the degree that the indicators had helped to raise awareness. Several respondents thought that the indicators had not reached enough people yet, had only impacted a small core group, or were mostly "preaching to the choir" and not to any new congregation.

The indicators have raised awareness about general community characteristics and trends in their function as a source of general data about the community. In three of the five case studies, this seemed to be the most common use of the indicators. This was especially true for the Sierra Business Council because most of their jurisdiction is rural and good data sources are scarce or nonexistent. In two of the case studies, respondents said the indicators had provided a

better understanding of where the community is and where it's going, which helps to inform decision-making. As a data source, the indicators have been used by a variety of groups for diverse purposes, ranging from providing a general snapshot of the community for realtors or economic development agencies, to businesses for marketing strategies, to activists advocating for particular issues.

In very few instances have the indicators brought any new issues to the forefront. However, with all of the case studies, respondents talked about how the indicators have contributed to discussions about issues. Issues of interest vary by community, but many of them have been growth and sprawl-related, such as traffic, housing affordability, loss of open space, and resource consumption. Several social issues have also been important, such as juvenile crime, high school drop out rates, teen birth rates, drug and alcohol abuse, and income distribution.

Outreach and media coverage varied among the case studies. All had received local newspaper coverage around release of the indicators. Most reported difficulty with getting press attention between printings. Those that lacked funding had not done much as far as outreach activities. The Sierra Business Council has done extensive outreach, traveling to local meetings, forums, and workshops across its large region to deliver PowerPoint presentations and distribute the Wealth Index. Sustainable Seattle has done very little outreach. Vital Communities has done very little, but has recently shifted its focus to individual planned events centered around specific indicators/issues. Sustainable San Mateo County made efforts to distribute its reports to every elected official and attend some community meetings. The Boulder County Civic Forum has attended many community events and meetings, and has recently adopted the approach of targeting four specific issue areas and will hold forums around those. A couple of the case studies were working on programs to incorporate the indicators into school curricula.

The indicators have also been promoted and used as an education tool in advocacy efforts by individuals, described previously. In Seattle, they were incorporated into workshops for the city's Neighborhood Planning program.

Influencing Decisions and Other Concrete Outcomes

The influence of indicators on decision-making varied, but was somewhat limited for most case studies. As stated before, the indicators have had dramatic impacts on decision-making in isolated cases, where the message of the indicators has resonated strongly with particular individuals. Most often, this occurs when individuals involved in the process of developing the indicators bring this influence into their work as public officials, business leaders, etc. Besides these few cases, the indicators have had little or no impact.

Respondents for Vital Communities agreed the indicators had had little or no influence on decisions, other than a possible influence on planning by contributing to discussions about community issues. The advocate for songbirds thought his outreach efforts might have influenced some individual maintenance practices with grasslands. In Boulder County, the indicators were being used to determine funding priorities for grantmaking by the Community Foundation and other philanthropic donors, but had little or no effect on public decisions. In San Mateo County, most respondents thought the indicators had probably influenced local city and county decision-makers to some extent. One county official reported using the indicators to evaluate land use decisions, to better understand housing affordability issue, and to help with approving projects and prioritizing funding for child care. They also lent support for the county's Hepatitis C program, though they weren't the reason for initiating the program.

Sustainable Seattle and the Sierra Business Council have seen perhaps the most influence on decisions from their indicators. Sustainable Seattle had a few strong advocates in public

office, some of whom had been involved in the indicators process, who reported using the indicators as a policy guide, though they could not cite any specific decisions made as a result. A current city council member reported that the indicators guided his thinking. A county official, who was not involved in the process, was quoted in the newspaper as referring to the indicators as his "textbook." The indicators were also reported to be a policy measure in a former mayoral administration. One respondent thought that the indicators had had a "subliminal indirect influence on what happens in the city." These effects seemed to be mostly in response to the general concept of sustainability, rather than specific indicator data.

Several instances of influencing decisions for public and private entities were cited for the Sierra Business Council, including influencing a bank manager's loan approval criteria, and guiding the decisions of several county officials on specific decisions. Sierra Nevada's Wealth Index has had perhaps the most influence on decisions of any of the case studies. Some were responses to the concept of preserving and balancing the three types of capital; however, most were in response to specific issues or data.

In some cases, the influence of indicators on decision-making has led to changes in resource allocation. For the Sierra Business Council, the indicators influenced Inyo County decisions around funding for social programs and the arts. For the Boulder County Civic Forum, in addition to the influence on private charitable contributions, the indicators may have had an indirect influence on the county's funding of the Boulder County Youth Corps. In San Mateo County, the indicators may have influenced funding for child care.

The indicators catalyzed or contributed to the formation of new groups, programs, etc. in three of the case studies. For Vital Communities, the process of developing the indicators lead to the formation of The Trails Alliance, a coalition of different interest groups advocating for better trails in the region. In most cases, the formation of new groups or programs was indirect. For the

Boulder County Civic Forum, the planning process that preceded the indicators led to the creation of both the YouthNet report and the Neighborhoods Initiatives Program. For Sustainable Seattle, advocacy from a participant in the indicators led to the formation of a new directorship in the City of Seattle government – the Office of Sustainability and the Environment.

The indicators have influenced or been incorporated into planning processes in three of the case studies. In San Mateo, the indicators validated the need for a county visioning process and provided a model for the process and an information source for the accompanying indicators. In Seattle, the indicators had an indirect influence on the city's Comprehensive Plan, with participants in the Sustainable Seattle indicators process also working on the comprehensive plan. In the Sierra Nevada, the Wealth Index provided the conceptual guide and model for the Inyo County 2020 Forum and provided information that led to the Placer County open space planning and ballot initiative.

Sustainable Seattle's indicators have influenced four other local indicators efforts (the city's comprehensive plan indicators, the county's growth management plan indicators, the Communities Count social and health indicators, and a set of information and technology indicators) and have provided the model for dozens of other community indicators projects nationally and internationally.

Tracking Progress

Tracking progress was not a big emphasis for any of the case study programs. For most of the programs, respondents said that the indicators had not been out long enough or there was not enough data to establish trends or draw definitive conclusions. However, a few trends were observed. In Boulder County, the problem of affordability is getting worse and vehicle miles traveled (VMT) is increasing. In San Mateo County, indicators related to congestion, housing

affordability, and child care have shown negative trends. In Seattle, a few are stable, and a very few are improving, but most indicators are headed downward. In the Sierra Nevada, natural capital is declining, most of social capital is doing very well, and the economy has improved in the past decade. However, equity is a problem; prosperity is not reaching everyone. Some places are booming and some types of people are doing well, but not everyone.

Sectors Affected

For the case studies overall, government was the sector most affected. For Sustainable Seattle and Sustainable San Mateo County, government was clearly the sector most affected, with limited influence in other realms. For the Sierra Business Council, all sectors had been affected to some degree, but government the most and businesses second. Vital Communities had not had much impact on any sector, but probably government the most of any. The Boulder County Civic Forum was the exception. Their indicators had had the most impact on the private sector, in the form of influencing the Community Foundation and other charitable donors in their funding decisions. The project had some limited impact on government also. Sustainable Seattle was also an exception in the sense that they have had much more impact outside the region than inside.

Phasing Over Time

Achieving outcomes from the indicators is definitely a progression. It takes a while for the organization to develop credibility in the community and for word to get out about the indicators. In general, not many respondents could comment in detail on the phasing of outcomes over time because there was a sense that even having the indicators out a few years was not

enough. A Boulder County respondent said, "Those of us who have been around all agree that after you put out your first report, you're still in diapers. You need to be out three to eight years. There have to be long term commitments." Very few indicators programs have been out for more than a few years. Seattle is one of the only programs with indicators more than seven years old.[11] This program has reached a transition point where they feel the group has done all it can do with the indicators as they are and they need to move on to next steps. This includes having the indicators adopted or somehow incorporated into the city's administration, and/or moving on to other activities to promote sustainability. The director commented, "We were really out on the edge when we created these indicators. And now that edge has moved out. Indicators aren't such an edgy thing anymore."

Achieving Project Goals

Replies for all case studies were mixed regarding how well the indicators program had achieved its goals and how much the indicators were helping to achieve the overall goals of community sustainability, health, etc. Program administrators had more positive responses than other respondents. Respondents for Vital Communities thought the program was achieving its goals to some extent and in small pockets, but that it hadn't reached many people yet. Boulder County respondents thought the program was achieving its goals to some degree, but that it was a developmental process. The Sierra Business Council director thought the indicators were definitely achieving their goals and were making a difference. Other respondents for that case study gave mixed replies.

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[11] The Jacksonville Community Council, Inc. is the only longer-running program that I know of, with indicators dating to 1985.

Some of the San Mateo County respondents thought the indicators were achieving their goals of raising awareness in the community and were helping to achieve the overall goal of sustainability. Others thought they were not having much impact. Seattle responses ranged from extremes of emphatically positive to very critical. One respondent thought that talent and energy of the good people involved in the process could have been put to better use toward more concrete action. Another thought that it would be hard to find another program that had had more impact because of the extent to which the indicators and the concepts behind them had become integrated into local government. Others thought they were not reaching enough people.

Summary of Factors Affecting Outcomes

Factors Facilitating Desired Outcomes

For this analysis, I categorized factors as content, process/people, organizational, strategies, and time and place. Some overlap exists between categories. A variety of factors were cited for all of the case studies. However, the factors considered most important tended to correspond with the overall approach of each group. For those that emphasized the process of developing the indicators, such as Vital Communities and Sustainable Seattle, process/people factors were considered most important. For those that focused on content, such as the Sierra Business Council and Sustainable San Mateo County, respondents emphasized content factors. Boulder County had a balance of both.

In terms of content, respondents of four of the case studies (excluding Vital Communities) talked about the importance of the indicators being clear, informative, and easy to understand and use. Respondents also mentioned the importance of using well-researched, accurate and unbiased information and presenting it in a factual, objective, and neutral way.

Respondents talked about the importance of good writing, good graphics, and professional presentation. Overall, the clarity and usefulness of the information was most valued as far as content. In fact, the only content-related comment for Vital Communities was that it might have done too good of a job of avoiding controversy by not including enough interpretation with its data. A couple of respondents thought that flexibility in responding to community members' comments and suggests contributed greatly to the credibility and usefulness of the data. Using original research was a positive factor mentioned in one case study.

The commitment of the core group of people involved in the process was one of the most frequently cited factors, especially for Sustainable Seattle, the Boulder County Civic Forum, and Sustainable San Mateo County. The fact that the process engaged a wide range of community members was cited by respondents of four of the case studies. Having leaders from across the spectrum was also mentioned. For the Sierra Business Council, having the group comprised mostly of respected business leaders gave tremendous credibility to the project in a very conservative, rural area. A related factor is the efficiency of the meeting process which was essential because business people typically do not have the patience or time to waste with long meetings. Also for that group, the special leadership of the director was cited. For Sustainable Seattle, the expertise of the volunteers and the professional knowledge and skills they brought to the indicators work was considered extremely valuable. For the Boulder County Civic Forum, the focus groups were thought to contribute by personalizing the data and giving participants a sense of ownership.

The credibility of the organization was one of the most important factors mentioned in all of the case studies. This is achieved through a group's actions, its membership and representation, being apolitical and neutral, and its status as a non-governmental entity. (For the Sierra Business Council, it was achieved through being a business-based organization, as

described previously.) Other organizational factors were mentioned, as well. For Sustainable Seattle, having YMCA as a sponsor institution greatly aided the group. For the Sierra Business Council, having a full-time staff person committed solely to the indicators contributed to its success. For the Boulder County Civic Forum, moving to the Community Foundation aided development of a broader constituency, which ultimately strengthened the group. Other factors include staying true to the group's mission, having a few key strategic funders who stayed committed to the project, and the longevity of the group.

Strategically, partnering and linking with other organizations to gather data was mentioned for two of the case studies. For Vital Communities, using volunteers to gather data was also considered to be helpful because it educated more people. For Vital Communities and the Boulder County Civic Forum, focusing on and sponsoring events around specific indicators was considered very effective. For the Sierra Business Council, doing the presentations and getting the information out there have been critical. For Sustainable Seattle, the decision to focus solely on the indicators was important, and then getting the report out built momentum behind their efforts. For Sustainable San Mateo County, press coverage and publicity, and distribution to public officials have been important strategies.

For three of the case studies, respondents mentioned factors related to the timing of the indicators efforts and the type of environment in which they occurred. For both Vital Communities and Sustainable Seattle, respondents talked about how people were excited and inspired by the concept of what they were doing. For Vital Communities, the idea was gaining national momentum, which meant that funding was available. A Sustainable Seattle respondent recognized that the initiative occurred in an already very environmentally-conscious community, which increased interest and receptivity to the ideas. For Sustainable San Mateo County, one respondent observed that there was a need for what they were doing; it filled a vacuum.

Factors Inhibiting Desired Outcomes

Lack of funding was one of the biggest obstacles mentioned for the case studies. Not having adequate funding to pay staff to coordinate activities and having to rely on volunteers were common challenges. The stability of funding was also an issue, summed up by the director of the Boulder County Civic Forum: "We have a long-term view and a 12-month budget." The director of Sustainable Seattle talked about the difficulty for groups of that nature to make a compelling case to funders because the mission is so comprehensive, the results often subtle and difficult to measure, and the goals long-term.

Decision-making was another organizational challenge cited by respondents. Vital Communities is an extreme case where the process became very lengthy, cumbersome, and to many, very unproductive because of the attempt to make all decisions in a purely community-driven, democratic way. Respondents reflect that they would have benefited greatly from having a smaller core group making decisions, with feedback then derived from the community. For Sustainable Seattle, not incorporating sooner may have affected their productivity overall. They experimented with a non-hierarchical structure, which made decision-making difficult and ultimately, they may not have accomplished as much as they could have.

In addition to Vital Communities' decision-making challenges, other obstacles in the process of developing the indicators mentioned by the case study respondents included: dealing with the large amount of material available; coordinating all of the different opinions expressed; getting good representation in the group to maintain credibility; facilitating discussions between opposing views and getting people to be open-minded about other people's views; keeping people engaged over time; and simply keeping the whole process going.

Respondents mentioned a number of content-related factors that were difficulties. The availability of data was a major one, both in terms of finding meaningful data for some things and finding data at an appropriate geographic scale. Several respondents commented on the difficulty of capturing phenomena such as sustainability or town center vitality in a discrete set of measures. For the Sierra Business Council, it was difficult to find natural capital data that would tell a compelling story and to find measures that were uniform across the numerous counties in the region. Time lags in the data were also mentioned as a problem in some case studies. Two of the case studies found that their audiences wanted data at smaller geographic scales. The lack of original research was a factor for one case study. When all of the data can be found in other sources, it does not necessarily grab people's attention. Several respondents mentioned the drawback of having to leave out data in order to be concise. Respondents in two case studies talked about how the indicators tend to beget more questions; more things come to light that need to be measured. It's hard to ever have a complete set. Respondents also mentioned that it was often difficult for people to understand what the data means; more interpretations are needed. All of these factors inhibit the effectiveness of the indicators in telling a compelling story, capturing people's attention, and being useful for people.

Respondents talked about difficulties with the nature of the indicators, themselves. In general, the information is technical and doesn't grab people's attention. According to one respondent, "They're boring. They're only interesting to bureaucrats." A respondent for Sustainable Seattle talked about difficulties with the long-term nature of the indicators. It takes too much time to see trends and it's hard to have staying power with current *and* future elected officials. Priorities change. Values change. By the time you obtain useful information about trends, it might not be meaningful to anyone. Another Sustainable Seattle respondent talked about difficulties with trying to address a broad theme such as sustainability. It's hard to see

results from the indicators because it's hard for anyone to take responsibility for them. They address complex, interrelated issues, require coordinated action among a number of different parties, are long-term, and cover a large geographic area.

Resoundingly, the most challenging factor has been getting the word out to people, getting attention, and getting the indicators used. Respondents from every case study talked about the need for better distribution and outreach strategies, better ways to make the material come alive for people, and to connect with it, and the need to create better links to policy and action. One respondent criticized the indicators for not addressing what to do to change things. Others felt that the indicators need to be accompanied by an action plan or presented in a way that would better facilitate their being incorporated into strategic thinking.

Conclusions and Recommendations

Outcomes and Expectations

This research showed a number of outcomes at the intangible level, a few at the concrete level, and almost none at the level of measurable change. It might be easy to become discouraged about the prospects for community indicators in helping to achieve important goals such as sustainability, community health, or quality of life. However, I don't think the outcomes that are being achieved should be discounted for two reasons.

First, intangible outcomes provide the foundation for future change. Besleme et al. (1999) describe political (intangible) outcomes as building blocks for future policy, and policy (concrete) outcomes as incremental steps in the process toward real change. Measurable change only occurs as a result of multiple repeated policy, or concrete outcomes. But policy is not

formed without the right political environment. Intangible outcomes help to create that environment, even though their results may be difficult to detect or measure.

Second, it's important to keep in mind the nature of the kinds of problems the indicators are attempting to address. The one instance of measured change that occurred (the Sierra Business Council) was an isolated case where the solution was relatively straightforward. An interviewee for the Sustainable Seattle indicators made an important observation that the nature of comprehensive issues such as sustainability or community health is that they are extremely complex. Solutions are not straightforward or simple and often involve the coordinated action of multiple parties. It's difficult to achieve progress partly because it's difficult for any single party to assume responsibility for them.

For these two reasons, we should expect a slow process. Many interviewees expressed this. It takes time just to get the word out about the indicators, and then people need to see things multiple times before it begins to change their thinking. The lack of widespread notable outcomes is not an indication of failure. Further, the success of indicators programs in getting information into the hands of more people should not be discounted. Information is power. It leads to more informed decisions and inspired action. In this way, indicators are empowering both citizens and decision-makers, though the results may take some time to manifest.

Factors to Focus On

Given those observations about outcomes, several factors emerged in the research as key to helping indicators programs become more effective in creating change.

Funding is a major critical factor. So many other things flow from it: good research, good publications, and outreach efforts. Better and more stable sources of funding are badly needed for indicators programs. The Sierra Business Council, in many ways the most successful

program of the five, has been able to accomplish what it has in large part because of the funding it has obtained.

Community ownership needs to be fostered. This has been a core part of the success of many groups. It gives the project credibility and builds support for implementing the ideas. Ways to do this include having representative community participation in the process of developing the indicators and being flexible and responsive to community-member suggestions.

Good decision-making is absolutely essential. Grassroots, community-driven efforts need a sound methodology to accompany their good intentions, or else they might get bogged down in their own process, and ultimately undermine themselves. Broad-based community participation should be coupled with a small core group for decision-making.

Having a few champions is important. These people actively promote the ideas and the product, give it visibility in the community, and put it to work in their own decision-making. Many of the outcomes observed in this research have flowed from the actions of a few key individuals or champions.

Credibility of the organization is a key foundation for successful indicators programs. This is established in many ways, including the people involved, the actions of the group, and the quality of the indicators themselves. It's essential to have the right people involved. Who that is may vary from group to group. For some, it's important to have broad-based and inclusive community participation. In the case of the SBC, having respected leaders from the business community involved is what gave the project credibility.

Good content also contributes to credibility, and is the foundation for success once the initial process of developing the indicators is over. The indicators need to be clear, accurate, informative, and easy to understand and use. They need to speak to relevant issues for the community and include interpretations to help people make sense of the data. Including

indicators based on original research, such as surveys or new calculations, like the Boulder County Civic Forum's affordable wage data, also increases their impact.

Being culturally sensitive is important. Some projects, such as Sustainable Seattle have benefited greatly from being in an environmentally conscious and receptive culture. Of course, this can't be replicated in other places, but a clear message emerges that the project must be relevant for the place it's located. The Sierra Business Council used a very unique and different approach, tapping the business community, using terminology appropriate in a rural and conservative region, and speaking to the specific concerns of the region. The underlying philosophy may be no different than a sustainability project, but they achieved good results by adapting their language and methodology to the local culture.

Outreach and education are clearly one of the weak areas in many indicators programs. A tremendous amount of effort, thus far, has been put into the creation of indicators, partly because few models existed and many efforts have been experimental and groundbreaking. In many cases, when the process was completed, little energy or funding was left for outreach to disseminate the indicators in the community beyond report distribution. Another reason for the successes of the Sierra Business Council is its tremendous outreach efforts.

Focusing on particular indicators has been a successful strategy for both Vital Communities and the Boulder County Civic Forum. Publications and planned events targeting major issues of concern in the community captures far more attention and contributes much more meaningfully to community discussions. It also has more potential to lead to action.

The biggest task on the agenda for all indicators programs and perhaps the biggest unanswered question is how to create better ties to action. Besleme et al. (1999) concluded this from their research. The results of this study point to the same conclusion. Better ties to policy and action steps were cited as a significant need in all case studies. Indicators alone are not

enough. Additional actions (represented by the circle in the lower left corner of Figure 5) are required.

A variety of paths can be taken. Sponsoring forums on specific target issues, as the Boulder County Civic Forum is doing offers a way to convene important stakeholders and decision-makers around those issues and to facilitate discussion of action that can be taken. The Sierra Business Council has produced a follow-up publication *Planning for Prosperity: Building Successful Communities in the Sierra Nevada* as a guide for planning decisions in the region. They also sponsor leadership workshops, and form partnerships with communities interested in actions to address specific local issues. Sustainable San Mateo County hosts industry-targeted forums to discuss specific actions that businesses can take.

Sustainable Seattle has reached the point where they feel they have gone about as far as they can in terms of influencing decisions with the indicators without getting government to adopt and institutionalize them, so this is where they are currently focusing their efforts. Respondents in other groups thought that the independent, non-profit sector was the most appropriate sector for an indicators project because it could maintain better credibility and be an effective convener of different groups in the community. However, this may limit the potential for influencing public decisions. Clearly, no one solution is ideal, and the best prospects for influencing decisions may vary from program to program.

Are Indicators a Worthwhile Effort?

Given the many positive benefits respondents reported, I would say that indicators *are* a worthwhile effort. They can yield many intangible benefits that provide a foundation for change. They build connections between people, foster discussion in the community, and can be a great education tool to raise awareness. Even in their role as simply a source of data about the

community, many positive results have flowed from people taking that data and making use of it in planning, advocacy, or decision-making. These efforts are leading to progress, albeit slowly and incrementally, toward sustainability and community well-being. With attention paid to the factors listed in the previous section, indicators programs could become even more effective.

The key message is that simply producing the indicators is not enough. As has been observed by many people in the indicators field throughout history, they are not a substitute for action. Getting the information and the message out to people is the first component of action. In most cases, the indicators have not reached enough people yet. Their impact is primarily concentrated in a small, highly receptive group.

So far, the majority of the effort of indicators groups has been focused on developing the indicators because: 1) no models existed and the group had to "invent the process" along the way; and 2) using a grassroots, community-driven, participatory process requires a great deal of energy. Now that some good models are available, perhaps the process of developing the indicators will not be quite so intensive. As far as the energy required for the type of process engaged, groups should carefully consider the tradeoffs between devoting all of their energy and resources to a highly participatory process, and saving some for subsequent steps. A participatory process has many benefits including fostering community ownership, building group credibility, educating participants, etc.; however, outreach and action may yield greater benefits. Certainly, some sort of community participatory process is needed to establish a foundation for the group. However, conscious decisions should be made to ensure effective decision-making in the group and to find ways to be as efficient as possible.

Indicators seem to be a good starting point for sustainability and other community well-being efforts. They lay a foundation of information about the community and about the community's goals. They bring people to the table, improve communication, and foster

discussion in the community. They give the group credibility and a place in the community as an important contributor to discussions. They establish a role for the group as a neutral facilitator with the capability to convene different interest groups and people from different sectors to address issues of community concern. The group can have longevity beyond local government, where priorities may shift with every election, and they have the ability to reach out to the business community. Indicators groups should go forward from this foundation, utilize their position as a community facilitator, and begin to convene groups and build links to tangible action.

Theoretical Implications and Areas for Further Research

In terms of the theoretical arguments of Innes (1989, 1990, and Innes and Booher 1999b) and Cobb and Rixford (1998) explored in the last part of Chapter 2, the results of this research show that both process and content factors are significant. It would be difficult to rank either as being the most important. Certainly, many results flowed from the process of developing the indicators – the shared learning that took place, the connections made, and the further activities of relevant stakeholders who participated. However, outreach seemed to be just as critical a factor. The content often spoke for itself when it was clearly presented, informative, addressed issues of concern, and was disseminated effectively.

Cobb and Rixford's observations are very relevant in that many respondents spoke of the need to answer the "so what?" question. In other words, the indicators need to do more than point out issues; they also need to point out solutions. While a general philosophy is usually behind the community indicators (a strategy that Cobb [2000] would applaud), they are not necessarily based on theories about what needs to happen next. They are not analytical in that sense. The need for better ties to action is a big struggle for indicators programs.

The issue of how indicators can be better tied to action is the area perhaps most ripe for further research. Most indicators projects are so new that it was difficult to find case studies for this research that would have yielded any results yet. It will be important to track these projects over time to gather further information about what kinds of outcomes are occurring and what strategies are most effective to build the critical information-action link. This could be accomplished in several ways, including collecting anecdotal evidence of successes, implementing surveys across a large number of projects, or using in-depth case studies of single or multiple projects.

It would also be useful to explore whether indicators are actually measuring sustainability, as this underlies the question of whether they will actually lead to greater sustainability, ultimately. This would require an examination of existing models and criteria of sustainability, and development of a theoretical model with which to compare case studies.

APPENDIX A

WEB SITES LISTING COMMUNITY INDICATORS PROJECTS

Global Cities
www.globalcities.org/

Hart Environmental Data
http://www.subjectmatters.com/indicators/Resources/Communities.html

International Council for Local Environmental Initiatives (ICLEI)
http://www.iclei.org/la21/onestop.htm

Redefining Progress
www.rprogress.org

Sustainable Communities Network
www.sustainable.org/

Urban Quality Indicators Newsletter
http://people.mw.mediaone.net/cyoakam/index.html

APPENDIX B

LIST OF INTERVIEWEES

Sustainable Seattle

1.	Lee Hatcher	Executive Director, Sustainable Seattle
2.	Richard Conlin	Seattle City Council Member; Sustainable Seattle co-founder/ volunteer
3.	Tom Hauger	Strategic Planning Office for Mayor of Seattle
4.	Jim Diers	Director of the Department of Neighborhoods, City of Seattle
5.	Steve Nicholas	Director of the Office of Sustainability & Environment, City of Seattle; Sustainable Seattle co-founder/volunteer
6.	Bob Watt	Director, Seattle Chamber of Commerce

Sierra Business Council

1.	Amy Horne	Research Director, SBC (oversees the Wealth Index)
2.	Robert Haydon	Chair of SBC Advisory Committee; President of Placer Sierra Bank
3.	Katherine Evatt	Foothills Conservancy, Volcano, CA
4.	Lee Goodin	Mayor, Amador City
5.	Ron Mittelbrun	Director of Amador Economic Development Corporation, Amador County
6.	Vicki Russell	Vice President, Union Bank, Mammoth Lakes, CA
7.	Tom Dowlan	President, Yosemite Bank, Mariposa, CA
8.	Julie Bear	Inyo County Supervisor

Vital Communities of the Upper Valley

1.	Len Cadwallader	Executive Director, Vital Communities
2.	Delia Clark	Former Executive Director and co-founder of Vital Communities
3.	Jennifer Schiffman	Former Vital Communities volunteer and staff member (worked on indicators)
4.	Eugenia Hamilton	Vital Communities Board Member; Senior Vice President of the Dartmouth Hitchcock Alliance (health care)
5.	Dan Lambert	Vermont Institute of Natural Science; Vital Communities volunteer (songbird indicator)

Boulder County Civic Forum

1.	Bruce Swinehart	Executive Director, BCCF
2.	Susan Foster	Former BCCF Director; member of BCCF Executive Committee
3.	Josie Heath	Member of BCCF Executive Committee; President of the Community Foundation Serving Boulder County
4.	John Sackett	Chair of BCCF Executive Committee; CEO of Avista Adventist Hospital (funder)
5.	John Tayer	Member of BCCF Executive Committee; Public Relations Director of Roche Colorado Corporation (funder)

Sustainable San Mateo County

1.	Marcia Pegels	Founder of SSMC, Former Chairwoman
2.	Kim Gelfand	Executive Director, SSMC
3.	Ruth Peterson	SSMC Board Chair
4.	Jerry Hill	San Mateo County Supervisor
5.	Clem Maloney	Environmental Safety Manager for Lyngso Garden Materials, SSMC volunteer (liaison to business and environmental community)
6.	Mary McMillan	Deputy County Manager; Project Manager for Vision 2010 project
7.	Deberah Bringelson	San Mateo County Economic Development Association (SAMCEDA)

APPENDIX C

INTERVIEW QUESTIONS

Primary Interview Questions

History:

1. I understand the indicators project was undertaken in 199____ and [an] indicator[s] reports was/were published in _____. Is that right? Could you briefly describe your role in the project?

2. What is the stated purpose of the indicators project? (Who was the intended audience? What were the intended outcomes?)

3. To what extent was the concept of sustainability part of the overall design?

4. Could you tell me a little about the process involved in developing the indicators?

   - Who organized or initiated the effort?
   - How did they come to the idea of using indicators? Was it the primary focus?
   - Who was involved in the development of the indicators? What involvement was there from government, non-profits, the business community, citizen leaders, the general public?
   - How long did the process take to develop the indicators?
   - Was there funding? How much and what was the source?
   - How has funding changed over time?
   - How were the categories/indicators chosen?
   - What were the biggest challenges in the process of developing the indicators?

5. What is the current focus of activities?

Structure:

6. What is the organizational structure for the indicators program?
   - Leadership?
   - Funding?
7. Have any partnerships related to the indicators been developed in the community? Have local organizations, businesses, nonprofits, or public entities (such as the city council or planning commission) been involved with the program?
8. Who gathers the data? Who develops the graphs and text?
9. Has there been a process for revising the indicators? Who is involved in that?
10. Are the indicators associated with a specific set of goals or policies?
11. Have the indicators been linked to an action plan of any kind?

Outcomes:

12. First, could you tell me briefly how the indicators were presented to the community? Are there on-going efforts to publicize them? (press releases, report distribution, community meetings, presentations, etc.)
13. What was the general reception to the indicators in the community? (Among different groups – public officials, business community, etc.)
14. To what extent do you think the indicators have helped to raise awareness of the issues? Have any issues come to the forefront as a result of the indicators?
15. Are there ways the indicators have entered public life such as being cited in the media, being mentioned in public speeches or political campaigns, being used in school curricula, etc.?
16. Have any new coalitions, organizations, or programs been formed as a result of the indicators process?
17. Are the indicators being used by public entities in any way, such as in planning or decision-making? Have they influenced any agendas? Has any public action been taken in response to an indicator?
18. Have any business groups, nonprofits, citizen groups, or other private organizations cited or made use of the indicators? or changed their programs or focus as a result of the indicators?
19. Are there any particular indicators that have proven to be very popular or influential? Controversial or unpopular?

20. Have particular categories attracted more interest than others? If so, which ones?

21. What trends have the indicators shown? Do trends vary by category?

22. Are the indicators providing a good overall picture of the health/sustainability/quality of life in the community?

23. Are the indicators complete? If not, why and what's missing? Why? (political reasons, data availability, ease, etc.) Are some categories better or worse than others? Which ones?

24. Has there been any rethinking of the indicators (desire to change them)?

25. What do you think have been the biggest successes of the indicators program so far? Have there been any unexpected outcomes?

26. In what ways do you think the indicators have benefited the community?

27. Has there been a phasing over time of the outcomes of the indicators project (things that happened immediately, things that took a long time to develop)?

28. What do you think are the drawbacks or weaknesses of the indicators or the indicators program?

29. What factors do you think have contributed the most to the successes of the indicators?

30. How would you compare the importance of:

    - the process of developing the indicators, in terms of who was involved and how the process took place?
    - the content of the indicators themselves?
    - the organizational structure or the leadership or commitment of those involved?
    - anything else that comes to mind?

31. What have been the biggest stumbling blocks or mistakes?

32. To what extent would you say has the indicators program met its intended goals (the stated purpose mentioned at the beginning of the interview)?

33. How much have the indicators contributed to the overall project of _____?

Conclusion:

34. Are there any other things you'd like to add that you think I should know for this research?

35. If I wanted to get the perspective of someone in the community who has worked with the indicators – put them to use in some way – is there someone you could recommend I talk to?

Secondary Interview Questions

1. In what ways have you/your organization been involved with the indicators program?
2. From your perspective, what is the purpose of the indicators?
3. In what ways have you used the indicators in your work/organization?
4. What has been most valuable about the indicators for your organization?
5. Have the indicators led to any policy or program changes or influenced any agendas within your organization?
6. Has your organization made any new contacts, developed new partnerships or working relationships as a result of the indicators or the process of developing the indicators?

   Have you seen this occur with other entities or organizations within the community?
7. How well received do you think the indicators were within the community?
8. Which sectors of the community have benefited the most or made the most use of the indicators? (business, government, private organizations, etc.)
9. To what extent do you think the indicators have helped to raise awareness of the issues? Have any issues come to the forefront as a result of the indicators?
10. Have the indicators influenced any public decisions or agendas? (such as triggering policy changes, new policies, new programs, new committees or task forces, changes in resource allocation, or being incorporated into planning processes?)
11. Have the indicators been used by any businesses, organizations, non-profits, citizen groups, etc. or influenced any decisions or agendas?
12. Are there any particular indicators that have the most useful or influential? Controversial or unpopular?
13. Have particular categories attracted more interest than others? Which ones?
14. What do you think are the drawbacks or weaknesses of the indicators? Of the indicators program?
15. In what ways do you think they have benefited the community?

16. What things do you think have contributed to the success of the indicators program?

17. How would you compare the importance of :

    - the process of developing the indicators, in terms of who was involved and how the process took place?

    - the content of the indicators themselves (the things they are measuring)?

    - the organizational structure or the leadership or commitment of those involved?

    - anything else that comes to mind?

18. Do you think the indicators are helping to achieve the overall goals of sustainability, a healthy community, etc.?

19. Do you have anything else to add that you think I should know for this research?

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