IISD REPORT

Measuring the Performance and Impact of Community Indicators Systems: Insights on frameworks and examples of key performance indicators

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June 2012

Prepared for Peg: A community indicator system for Winnipeg
www.mypeg.ca

International Institute for Sustainable Development

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Summary

Community indicator systems (CISs) are growing in number across North America, Europe, and Australia in an effort to improve evidence-based decision making in government, businesses, and civil society. By providing open access to data and information on community well-being, CISs generally aim to build the knowledge and capacity of communities to work together to improve wellbeing. However, there is currently a dearth of research on the extent to which CISs are achieving positive impacts on community well-being. Similarly, the research on monitoring and evaluation (M&E) systems and best practices of CISs is limited. Hence, CISs currently have few resources to which they can turn to design and improve upon their evaluative practices and overall program performance.

This exploratory study addresses this research gap on the M&E practices and procedures in use by CISs, asking: *What key performance indicators are CISs using to measure program outcomes and impacts on the community?* Key performance indicators (KPIs) are qualitative or quantitative measures that assess the performance, progress, and impact of a project, program or organization. In relation to CISs, KPIs provide the data and information with which to answer questions such as: Is the CIS performing well in relation to its goals and objectives? *Is the CIS improving over time? Are people in the community receiving and using information provided by the CIS?* and *Are the resources devoted to the CIS actually leading to a positive impact on community well-being?*

Although this study was initiated with the original intent of informing the development of an M&E system for "Peg"—a CIS for Winnipeg championed by the United Way of Winnipeg and the International Institute for Sustainable Development (see Box 1)—our findings are intended to serve as a public resource that CISs can use to plan, implement, and improve upon existing or prospective M&E systems. Hence, the purpose of this paper is twofold: (1) to disseminate our findings on the KPIs currently in use among a sample of CISs; and (2) to stimulate discussion and subsequent research on existing M&E systems in use by CISs and on the value of evaluation and KPIs for the growing number of CISs around the world.

> **BOX 1. PEG, A COMMUNITY INDICATOR SYSTEM FOR WINNIPEG**
>
> The Peg community indicator system was launched in beta form (www.mypeg.ca) in November 2010 and featured 14 community indicators related to the cross-cutting issue of poverty reduction. Since this time, work has continued on the development of community indicators for eight theme areas, completion of the website functionality, and research on KPIs for community indicators systems (this paper) and mechanisms for catalyzing community collaborations toward measureable improvements in the indicators.

In this study, we surveyed 25 CISs on their use of KPIs for measuring program performance, progress, and impact on community well-being. In total, 38 different examples of KPIs were reported among a total of 59 KPIs provided by respondents, clustering within seven broad categories:

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- Policy/community action (eight examples reported);

- Indicator use (eight examples reported);

- Comments and anecdotes (three examples reported);

- Training and assistance provided (two examples reported);

- Event participation, subscriptions, inquiries (14 examples reported);

- Citations in media and publications (seven examples reported); and

- Website statistics (17 examples reported);

ACTION

AWARENESS

The 38 different KPIs provided by the responding CISs—and the seven broad categories into which they fit—relate well to a range of results-based management frameworks widely used by government agencies, private firms, and civil society organizations for planning and evaluation purposes. These frameworks typically show a progression of impacts from passive (examples of increased awareness) to active (examples of action) which help program planners and evaluators to coherently organize and capture immediate and longer-term outcomes. Essentially, when organized within a well-defined evaluation framework, KPIs can add substantial value to CISs by collectively framing issues of importance, providing deep insights into program performance, illustrating strengths and weaknesses, identifying opportunities for learning and improvement, and pointing towards overall impact.

Looking ahead, we recommend two distinct yet inseparable courses of action for subsequent research and practice in this area:

- There is a need for more research to enhance the understanding of the evaluative practices of CISs. The current dearth of research and investigation on the M&E practices of CISs leaves much still unanswered, suggesting that the likely returns of subsequent research will be high.

- There is a need for more sharing of best practices related to CIS M&E systems. Our findings illustrate that the M&E practices of CISs vary widely, with some CISs only tracking website statistics or not tracking KPIs whatsoever, whereas others are conducting large surveys and publishing the results. Given that the activities, objectives, and goals of most CISs are very similar, there is significant potential for organizational learning, reflection, and networking via information sharing between CISs. Existing communication networks for CISs— such as the Canadian Sustainability Indicators Network (CSIN) and the Community Indicators Consortium (CIC)—would be the ideal locations for such M&E sharing platforms.

Given the growing number of CISs around the world, it is becoming increasingly important to evaluate what practices, procedures, and institutional environments allow CISs to maximize their potential for enhancing community well-being. Thus, we hope that the existing and growing array of research and practice on outcome/impact evaluations of social programs and policies (i.e., microfinance, education, health, etc.) can be applied to CISs in order to facilitate ongoing learning, reflection and improvement.

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Introduction

The inadequacy of GDP per capita as the predominant measure of progress and well-being has become increasingly recognized over the last two decades among policy-makers, researchers, private firms, and citizens around the world (Stiglitz, Sen, & Fitoussi, 2009; Sen, 1985, 1999; UNDP, 2011). Although GDP per capita and other conventional measures of economic and material conditions undoubtedly capture an important component of well-being—particularly in the international development context where threats posed by resource scarcities to the well-being of the world's poorest are amplified (Evans & Evans, 2011)—such measures fail to tell the whole story. For instance, a wide range of material and non-material goods that are important to individual well-being are often ignored or under-valued in these conventional measures, such as environmental goods and services, personal relationships, political voice, vulnerability and resilience, household labour, community engagement, and personal agency/autonomy (Sen, 1999; Stiglitz, Sen, & Fitoussi, 2009). Additionally, conventional measures focus largely on means rather than ends, in that the material goods which are the primary focus of these measures are merely useful for the sake of pursuing some higher end (i.e., a good life, life satisfaction, happiness).

Hence, the last two decades have witnessed the emergence of a wide range of initiatives, organizations, publications, and committees aimed at investigating and developing better measures of progress and well-being. These efforts have only intensified in recent years in response to economic stagnation in many rich countries, increasing environmental degradation, and growing income inequalities. Many of these efforts have been international in scope—such as the Human Development Index, the OECD Better Life Index, and the Commission on the Measurement of Economic Performance and Social Progress—yet a diverse range of individual communities have also developed their own indicator systems to define and measure well-being according to local concepts and priorities related to human flourishing.

Located primarily in North America, Europe, and Australia, these "community indicator systems" (CISs) provide open access to data and information on community well-being in delimited areas (e.g., neighbourhood, city, county, district) in an effort to enhance the knowledge and capacity of the community to work together to improve well-being. In other words, CISs provide a new piece of social infrastructure for analyzing and disseminating trends in community well-being. CISs identify and track the issues that matter most to the community, encouraging evidence-based decision-making and collective action among community members and decision makers in public institutions, private entities, and civil society organizations.

Given the recent proliferation of CISs, it is becoming increasingly important to evaluate their effectiveness at achieving organizational goals and objectives and, ultimately, whether they are having a positive impact on community well-being. However, the research on monitoring and evaluation (M&E) systems and best practices of CISs is limited. Hence, CISs currently have few resources to which they can turn to design and improve upon their evaluative practices and overall program performance.

This exploratory study addresses this research gap on the M&E practices and procedures in use by CISs, asking: *What key performance indicators are CISs using to measure program outcomes and impacts on the community?* Key performance indicators (KPIs) are qualitative or quantitative measures that assess the performance, progress, and impact of a project, program, or organization. In relation to CISs, KPIs provide the data and information with which to answer central questions in many M&E frameworks, such as: *Is the CIS performing well in relation to its goals and objectives? Is the CIS improving over time? Are people in the community receiving and using information provided by the CIS?* and *Are the resources devoted to the CIS actually leading to a positive impact on community well-being?*

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In this study, we surveyed 25 CISs on their use of KPIs for measuring program performance, progress, and impact on community well-being. This study was initiated with the original intent of informing the development of an M&E system for Peg[1], a CIS for Winnipeg; however, our findings are intended also to serve as a public resource that CISs can use to plan, implement, and improve upon existing or prospective M&E systems. The purpose of this paper is hence twofold: (1) to disseminate our findings on the KPIs currently in use among a sample of CISs; and (2) to stimulate discussion and subsequent research on existing M&E systems in use by CISs and on the value of evaluation and KPIs for the growing number of CISs around the world.

This paper is divided into four sections. First, we review the added value of evaluation and KPIs to the learning, adaptive management, and overall performance of CISs. Second, we describe the study's methodology. Third, we present the main findings of the study, including the list of KPIs currently in use by the surveyed CISs. Fourth, we briefly illustrate two M&E frameworks for managing KPIs that can foster deeper and more substantial inferences about the complex and diverse impacts of CISs on public policy, collective action, and community well-being.

The Value of Evaluation and KPIs

Program evaluation is an objective process of answering questions related primarily to program effects, implementation, and purposes. It is most often associated with an assessment of program outcomes and impacts, yet it can also include an analysis of processes, cost-effectiveness, implementation, and underlying theories of change, among other components of interest (see Posavac, 2011; Dale, 2004). In this paper, we focus primarily on outcome/impact evaluations, which assess a program's achievement of desired outcomes and impacts. Although program evaluations utilize a wide range of qualitative and quantitative methodologies and are conducted for many different purposes, they nevertheless almost always involve the identification of key questions to be answered by the evaluation (Kusters et al., 2011; HM Treasury, 2011). Hence, although we frame our analysis largely in reference to outcome/impact evaluations, the findings and evaluation frameworks we present are applicable to a wide range of program evaluation methodologies and questions.

For the majority of CISs (including Peg), the intended impact is to build the knowledge and capacity of the community to work together to achieve and sustain the well-being of current and future generations by providing open access to accurate, un-biased, and comprehensive data and information on well-being in the community. In comparison to, say, a child vaccination program where the causal link between vaccination and child health is clear, stable, and can be attributed to the program itself with relative ease, assessing and isolating the impact of CISs on community well-being poses substantial challenges. For instance, community well-being is affected by a wide range of variables exogenous to CIS activities, such as national and sub-national policy-making, economic trends, and environmental degradation. Similarly, the impacts of CISs are diverse and are thus dependent on numerous moderating variables (i.e. "support factors") that differ in each community, such as the openness of decision makers to CIS data and the level of political engagement among community members. Moreover, the causal link between CIS data and improved community well-being is convoluted, indirect, and, has not been empirically investigated in any significant detail.

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[1] The Peg community indicator system was launched in beta form (www.mypeg.ca) in November 2010 featuring 14 community indicators related to the cross-cutting issue of poverty reduction. Since this time, work has continued on the development of community indicators in eight theme areas, completion of website functionality, and design of an M&E system for capturing program outcomes and impacts on the community.

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Hence, carefully designed outcome/impact evaluations are of particular importance to CISs, providing crucial information on program performance and effectiveness, enhancing accountability to community members, and identifying/mapping the actual paths through which CIS data influences community well-being in practice. With this information in hand, CISs can make informed decisions to adapt program activities, policies, and procedures to improve program implementation, and effectiveness—and, ultimately, achieve greater positive impacts on community well-being. For instance:

- Evaluations can inform a CIS of who is using the system and for what purposes. CISs attract a diverse range of users that access CIS data and resources for different purposes, such as government departments and agencies, politicians, academics, students, business owners, and general community members. Understanding who is accessing this information and for what purposes provides a better indication of how a CIS is achieving community impact.

- Evaluations can inform a CIS as to how well users' needs are being met. Because of the diversity of users and their purposes for using a CIS's data and information, the needs of users vary widely. By gathering data and information on how well these needs are being met, CISs can make adjustments accordingly.

- Evaluations can be used to improve the activities of CISs. Beyond the provision of data and information, many CISs distribute newsletters and reports, organize workshops and community events, and collaborate with other actors in the community to improve well-being. By measuring the performance and outcomes of these activities, such as the number of participants and their perceptions, a CIS will be in a better position to reflect and improve upon them.

- Evaluations can help a CIS to understand why particular program components may be effective or ineffective. Even in cases where the variables influencing program effectiveness (or ineffectiveness) may seem obvious, objective evaluations are crucial for uncovering the relative importance and inter-relationships among these variables, deepening the organization's understanding of variable dynamics, and providing validation to external stakeholders.

- Evaluations can assess the achievement of outcomes and impacts of a CIS. Without evaluation, CISs cannot objectively or accurately determine the achievement of desired outcomes and impacts.

- Evaluations can help various external groups with an interest in the CIS understand the influence of the CIS on community well-being and what changes could help the CIS to maintain positive achievements over time. Information collected in evaluations can be especially useful when making a case to potential donors that are not familiar with the work and impact of the CIS.

A good evaluation that provides detailed and objective information for enabling improvements in program performance must be preceded by a period of careful design and deliberation on the key questions to be answered by the evaluation and the methods for answering these questions. In other words, a CIS must carefully articulate what it wants to learn from the evaluation and how it will collect this information. A common approach to designing M&E systems is to identify KPIs that will serve as metrics for tracking variables of interest in the evaluation (as articulated in the key questions of the evaluation). The major advantages of this approach are threefold.

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First, KPIs help to frame evaluation questions as specifically and objectively as possible and facilitate the identification of appropriate data collection methods. In other words, KPIs help evaluators to think through the design of the evaluation by dividing broad evaluation questions into smaller and more manageable pieces and helping to identify the extent to which key questions are answerable, which in turn helps to identify the specific methodologies needed to collect the appropriate data.

Second, as a consequence, well-defined KPIs provide objective and unambiguous information (to the extent possible) on program performance and impact. In other words, KPIs reduce the likelihood of evaluators and program staff basing their findings and subsequent program-related decisions on subjective intuitions, vested interests, or dogmatic predispositions. Over time, program staff can develop vested interests that may inadvertently bias them towards providing overly favourable internal evaluations. Similarly, external evaluators often feel pressured (both explicitly and implicitly) by program staff and key stakeholders to over-emphasize positive findings and under-emphasize problem areas; otherwise, their findings may not be accepted by the organization or they may not be hired to undertake similar evaluations (Posavac, 2011). Although favourable evaluations may boost staff morale and satisfy primary stakeholders in the short run, such evaluations only perpetuate existing problems and constraints on program performance and stifle organizational learning and adaptation in the long run. Hence, when KPIs are carefully identified before data collection is conducted, they keep program staff grounded in reality by mitigating the opportunities for vested interests to manipulate or misinterpret evaluation results.

Third, KPIs provide tangible empirical evidence of a program's performance and impact that can inform subsequent program planning and implementation and enhance accountability to stakeholders. Well-defined KPIs organized within a coherent evaluation framework illuminate the paths through which CIS activities are having an influence on community well-being, which paints a clear picture of program performance that can be easily grasped by community members, potential funders, and other relevant stakeholders. Additionally, KPIs can provide longitudinal data to assess the achievement of goals and objectives against a baseline or future target. Consequently, KPIs provide hard empirical evidence to funders, policy-makers, and, most importantly, community members on the value of a CIS to the community, how it is performing over time, and where improvement is needed. In effect, KPIs enhance accountability to stakeholders and generate community buy-in, providing an objective and understandable picture of what a CIS is doing, to what extent it is influencing community well-being, and where improvements can be made.

Methodology

In this study, we surveyed 25 CISs on their use of KPIs in M&E systems related to program performance, progress, and impact on community well-being. CISs were selected from an incipient internal database of CISs that had been compiled in a recent desk-based analysis, with all CISs in the database being surveyed. The geographic distribution of the CISs is as follows: United States (20), Canada (3), Australia (1), United Kingdom (1). CISs in this database were intended to represent best practices among existing CISs and were identified between October and November 2010 via CIS networks (e.g., Canadian Sustainability Indicators Network (CSIN) and the Community Indicators Consortium (CIC)), links and mentions on websites of other CISs, and internet key word searches.

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All 25 CISs in the database were surveyed via email in December 2010 and asked how they were measuring improvements or changes in program activities and impacts on the community over time. In other words, CISs were asked what KPIs they were using to measure program outcomes and impacts. Of these 25 CISs, 13 responded, listed in Table 1. Responding CISs listed the KPIs they were using (if they were using KPIs), allowing us to collate all responses we received into a list of KPIs currently in use by the surveyed CISs.

TABLE 1. RESPONDENTS

	INDICATOR SYSTEM	LOCATION
1	Community Indicators Initiative of Spokane, Washington	Spokane, Washington, U.S.
2	Community Indicators Victoria	Victoria, Australia
3	Jacksonville Community Council Inc.	Jacksonville, Florida, U.S.
4	Metropolitan Philadelphia Indicators Project	Philadelphia, Pennsylvania, U.S.
5	Metropulse	Chicago, Illinois, U.S.
6	Minnesota Compass	Minnesota, U.S.
7	North Dakota Kids Count	North Dakota, U.S.
8	Pinellas County Community Indicators	Pinellas County, Florida, U.S.
9	Regional Data Cooperative for Greater New Haven, Inc.	New Haven, Connecticut, U.S.
10	Spartanburg Community Indicators Project	Spartanburg, South Carolina, U.S.
11	Sustainable Pittsburgh	Pittsburgh, Pennsylvania, U.S.
12	Sustainable Seattle	Seattle, Washington, U.S.
13	Truckee Meadows Tomorrow	Reno, Nevada, U.S.

In this exploratory survey, respondents were not asked if their KPIs were situated in an evaluation framework, what challenges they had encountered, what process they had gone through in selecting KPIs, or many other descriptive questions that are relevant to understanding the evaluative practices of CISs. Moreover, the list of KPIs generated from this study represents only 13 CISs, a small proportion of existing CISs. Hence, our understanding of M&E systems in use by CISs remains highly limited, giving much scope for future research to expand this knowledge base.

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Findings: Examples of KPIs used by CISs

Survey results demonstrate wide variation in data collection methods, the number and types of KPIs being tracked, and whether or not KPIs are being tracked at all. Of the 13 responding CISs (Table 1), nine were actively tracking KPIs of some variety to measure program performance and impacts on the community. In total, 38 *different* examples of KPIs were reported among a total of 59 KPIs provided by respondents, which cluster within seven broad categories:

- Website statistics;

- Citations in media and publications;

- Participation in events, subscribers, and inquiries;

- Training and assistance provided;

- Comments and anecdotes;

- Indicator use; and

- Policy/community action.

The majority of KPI examples (21 of 38) were observed in the first three categories covering website statistics, citations, and participation. Additionally, KPIs in these categories were reported most frequently by CISs—such as website hits (reported by eight CISs) and the use of indicators in information sharing (reported by four CISs)—with all nine CISs that reported KPIs being represented in these three categories. The observed clustering of KPIs in these categories comes as little surprise given that most CISs share common goals (e.g., influencing decision making, catalyzing collective action), information dissemination platforms (i.e., open-access online data), and that KPIs in these categories are comparatively easy to measure.

On the other hand, although the last two categories covering indicator use and policy/community action toward improving well-being account for 13 of 38 different KPIs reported, only four of the nine CISs that reported KPIs are represented in these two categories. Further, these four CISs reported conducting user surveys to investigate program performance and impact in more detail (see, for instance, West, Davern, & Wiseman 2010); something which none of the other CISs reported doing. Hence, in general, CISs may be more reluctant to obtain the data needed to answer questions more directly related to indicator usage and policy/community action given the greater demands on scarce time and resources. Finally, only one CIS was reportedly tracking improvements in the indicators themselves. Table 2 lists all 38 different examples of KPIs reportedly in use by the surveyed CISs.

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TABLE 2. LISTING OF KPIS IN USE BY RESPONDENTS

CATEGORY	KPIS	TIMES REPORTED
Web Statistics and Usability	1. Website hits (number of visits)	8
	2. Website hits + (number of visits, number of page views, number of pages per visit, average time on site, number of absolute unique visitors)	4
	3. Statistics related to Facebook, Twitter (e.g., followers, mentions, likes)	2
	4. Usability of indicators, framework, data, online links and resources	1
	5. User satisfaction with website (e.g., navigation, report creation capabilities)	2
Media and Publication Citations	6. Number of media impressions/distributions of electronic reports, surveys, and other publications	1
	7. Explicit use of indicators or campaigns in information sharing (e.g., citations and quotes in traditional media, blogs, government reports, etc.)	4
	8. Citations and references of data to funders in grant proposals and reports	1
	9. Number of organizations showcasing the campaign and survey on their websites	1
Event Participation, Subscribers, Inquiries	10. Number of talks given in a year	1
	11. Subscriptions to newsletter/mailing list; "open" rate, "click through" rate	2
	12. Attendance at in-person presentations and meetings	1
	13. Requests for brochures and special reports	1
	14. Inquiries to web site/what people are asking about	1
	15. Attendance at town meetings and other events	2
	16. Number of organizations participating in the partnership	1
	17. Number of valid survey responses	1
	18. Number of surveys taken by members of partner organizations or general public outside of random survey	1
	19. Attendance for speakers' series	1
	20. Number of volunteers signed up at speakers' series	1
	21. Attendance at regional conference	1
Training and Assistance	22. Percentage increase in the number of community members trained on data usage	1
	23. Number of technical assistance requests responded to	1
Comments and Anecdotes	24. Collected comments (any means of communication)	1
	25. Anecdotal information via observations, word of mouth	2
Indicator Use	26. Most frequently accessed community indicators	2
	27. Types of users (academic, non-profit, government, etc.)	3
	28. How many indicators users utilize in their models	1
	29. How many projects users save to their accounts	1
	30. Use of indicators, framework, data, online links and resources (e.g., for policy development, research, community engagement)	1
Policy/Community Action	31. City Council action in declaring city as a "happiness city"	1
	32. Partnership actions based on survey results	1
	33. City policies impacted by survey results	1
	34. Number of other cities taking up campaign	1
	35. Institutionalization of indicators in decision making	1
	36. Explicit use of indicators in decision making	1
	37. Instances of cross-institutional priority setting and collaboration attributable to CIS	1
	38. Improvements in the indicators themselves attributable to the CIS.	1
Total	39. Different KPIs reported	59*

Note: this represents the total number of KPIs reported by the surveyed CISs, regardless of whether the KPI was already reported.

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Analysis and Discussion

Frameworks for Identifying and Organizing KPIs

Individually, each KPI provides just one piece of the puzzle vis-à-vis program performance and impact. User satisfaction with website capabilities, citations in the media, the number of CIS-organized events, and knowledge of the purposes for which the indicators and data are being used each illuminate an important component of a CIS's performance and impact, yet clearly no single KPI can answer every key question in an evaluation. Further, given the wide range of KPIs that can be used in a single CIS evaluation, it is difficult to extract key themes and findings from the data without organizing the KPIs into an overarching evaluation framework. Such frameworks group key evaluation questions and their concomitant KPIs into relevant analytical categories that allow the data to "speak" collectively, which illuminates common trends, relationships between KPIs, and both aggregate and activity-specific program performance.

The 38 different KPIs provided by the responding CISs—and the seven broad categories into which they fit—relate well to a range of results-based management frameworks widely used by government agencies, private firms, and civil society organizations.[2] For illustration, we briefly consider two such frameworks (Figure 1): (i) the spectrum of policy impact developed and used by the International Institute for Sustainable Development (IISD) for tracking examples of project impacts; and (ii) the results-based management framework used by the Government of Canada and as refined by the Canadian International Development Agency (CIDA).
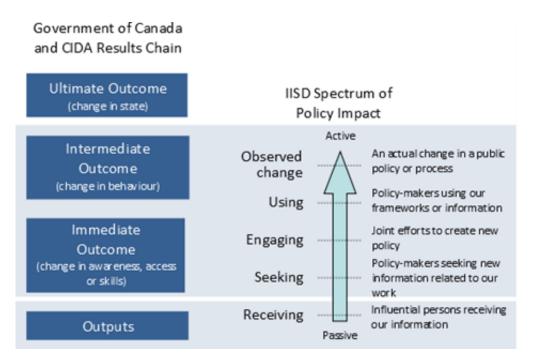

FIGURE 1. EXAMPLES OF RESULTS-BASED MANAGEMENT FRAMEWORKS

[2] For more examples and deeper analysis of results-based management frameworks, see IUCN (2004), Dale (2004), Posavac (2011), Kusters et al. (2010), and Cummings (2000).

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The results-based management framework used by the Government of Canada for departmental planning and reporting includes three outcome levels. An *ultimate outcome* is "the highest-level outcome that can be reasonably attributed to a policy, program, or initiative in causal manner, and is the consequence of one or more intermediate outcomes having been achieved" (CIDA, 2008). Ultimate outcomes are long term and represent a desired change of state within a target population. An *intermediate outcome* is defined as "an outcome that is expected to logically occur once one or more immediate outcomes have been achieved ... these are medium-term outcomes and are often at the change of behaviour level among a target population" (CIDA, 2008). And an *immediate outcome* is described as "an outcome that is directly attributable to a policy, program or initiative's outputs ... these are short-term outcomes and are often at the level of an increase in awareness (skills and access) of a target population" (CIDA, 2008).

This framework relates closely to IISD's "spectrum of policy impact" framework, which organizes KPIs into five categories, from passive to active, according to the type of behaviour observed, including: *receiving*—influential persons *receiving* information created; *seeking*—policy-makers seeking new information related to IISD's work; *engaging*—joint efforts to create new policy; *using*—policy-makers using IISD's frameworks or information; and observed change—an actual change in policy or policy process.

Both of these frameworks help program planners to carefully think through the possible effects of program interventions and what steps need to be taken for ultimate outcomes to be achieved. From an evaluator's perspective, these frameworks are tools for combining KPIs into distinct analytical categories that paint a clear picture of program performance, strengths and weaknesses, opportunities for improvement, and overall impact. By comparing the two frameworks, it can be seen that receiving behaviour relates to outputs, seeking and engaging behaviours correspond to the immediate outcome level, and using behaviour and observed policy change relate to the intermediate outcome level.

The four results-based management categories used by CIDA and the five categories of the IISD spectrum of policy impact allow for a large number of KPIs to be coherently organized into an evaluation framework for measuring performance, outcomes, and impact of a CIS on community well-being. Each category provides different yet equally important information, from receiving and outputs to observed policy change and ultimate outcomes. Although CISs may be most concerned with ultimate outcomes (i.e., changes in community indicators themselves), KPIs at this level pose substantial measurement difficulties and require significant time and resources. On the other hand, measuring and tracking lower-level outcomes—such as citations in the media, attendance at events, or even followers on Twitter—place far fewer demands on organizational resources and are much easier to accurately measure over time.

When organized within an evaluation framework such as IISD's spectrum of policy impact or the widely used results-based management framework, these KPIs can collectively frame issues of importance, provide deep insights into program performance, illustrate strengths and weaknesses, identify opportunities for learning and improvement, and point towards overall impact (Swanson & Bhadwal, 2009; Davis & Kingsbury, 2011). In other words, a large number of website hits (*receiving*), newsletter subscribers (seeking), individuals engaged in the development of the CIS (*engaging*), and citations in the media and government reports (*using*) collectively provide a strong indication of the impact of a CIS regardless of whether policy changes or changes in community indicators themselves can be attributed to recent CIS activities.

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Conclusion

As a tool for reflection, learning, and improvement, evaluation is of great value to CISs. Carefully designed outcome/impact evaluations elicit detailed information on program performance and impact, enhance accountability to stakeholders, and map the paths through which CIS data and interventions influence community well-being in practice. Moreover, a well-defined set of KPIs organized within a coherent evaluation framework can help CISs to divide broad evaluation questions into more specific and manageable pieces, overcome vested interests and subjective biases, and provide hard empirical evidence of program performance and impact that can be used to engage stakeholders and to inform future planning and implementation.

Looking ahead, we recommend two distinct yet inseparable courses of action for subsequent research and practice in this area. First, there is a need for more research to enhance understanding of the evaluative practices of CISs. The current dearth of research and investigation on the M&E practices of CISs leaves much yet unanswered, implying that the likely returns of subsequent research will be high. In this exploratory study we have mapped the KPIs in use by a small sample of CISs, yet we have not even begun to examine different evaluation frameworks in use among CISs, what challenges they have encountered, how they selected KPIs, what methodologies they used to collect data, and so forth. Hence, our understanding of M&E systems in use by CISs remains highly limited, giving much scope for future research to expand this knowledge base.

Second, there is a need for more sharing of best practices related to CIS M&E systems. Our findings illustrate that the M&E practices of CISs vary widely, with some CISs only tracking website statistics or not tracking KPIs whatsoever whereas others are conducting large surveys and publishing the results. Given that the activities, objectives, and goals of most CISs are very similar, there is thus significant potential for organizational learning, reflection, and networking via information sharing between CISs. Existing communication networks for CISs—such as CSIN and CIC—would be the ideal locations for such M&E sharing platforms.

Given the growing number of CISs around the world, it is becoming increasingly important to evaluate what practices, procedures, and institutional environments allow CISs to maximize their potential for enhancing community well-being. We have little doubt that the majority of CISs provide high-quality data on community well-being, yet the actual direct or indirect impact of CISs on communities is currently unknown. Thus, we hope that the existing and growing array of research and practice in outcome/impact evaluations of social programs and policies (i.e., microfinance, education, health, etc.), can be applied to CISs in order to facilitate ongoing learning, reflection, and improvement.

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