



The Canadian Rural Revitalization Foundation

*Seven Reports
on the Identification of Rural Indicators
for Rural Communities*

4. Local Institutional Capacity

Prepared for the Rural Secretariat
of Agriculture and Agri-Food Canada

Report Authors:
Angela Briscoe
Mike Burns

New Rural Economy Project, Phase 2 (NRE²)

September 2004

The New Rural Economy Project is an initiative of CRRF

Introduction

Institutional capacity is generally understood as a measure of the capability of an institution, or group of institutions, to perform key functions effectively and efficiently, and to operate in a self-reliant manner (Hopkins, 1996). More specifically, institutional capacity is the ability and competence of an institution to carry out mandated operations and produce outcomes by deploying the necessary resources within an appropriate structural context (Bhagavan & Virgin, 2004; VanSant, 2000). The inter-connectedness, sustainability and autonomy of institutions are also key features of institutional capacity (Bhagavan & Virgin, 2004; Hopkins, 1996; Lusthaus et al., 1995; McGuire, 1994; Morgan & Taschereau 1996).

Local institutional capacity (LIC) refers to the abilities, activities and potential of multiple institutions working in concert within a given area. Indicators of LIC allow for diagnostic and comparative analyses and facilitate the development of strategic responses to trends affecting all regions of Canada making them a necessary tool for policy and research objectives. The degree of institutional capacity in a given area can have a dramatic effect on the number of opportunities a region can identify and create. The development of high quality indicators can contribute to an increased ability to identify opportunities, existing and potential strengths, weaknesses and trends, as well as provide insight into the ways LIC might be mobilized to respond to specific needs.

Definition of Local Institutional Capacity

Most of the literature dealing with the measurement of institutional capacity approaches the issue from the perspective of individual institutional assessment, rather than local or regional diagnostic strategies, and from the perspective of developing nations rather than a regional Canadian perspective. As a result, much of the discussion of institutional capacity deals with indicators of institutional development in contexts where institutions are few in number and/or relatively newly established. As well, a significant share of the literature deals with indicators of institutional capacity to promote environmental sustainability, though this material has not been included in any depth here because it follows from a conception of institutional capacity that is not easily replicated in other spheres of institutional activity.

Within the material focusing on developing nations and individual institutions there is a significant body of literature that treats institutional capacity from a broad enough perspective to provide insight into the types of institutions and key capacity areas to be included in an assessment of LIC. While the general capacity areas are discussed below, none of the specific indicators derived from the literature have been included in this report because they are intended for individual institution-level assessment with a predominantly participatory and qualitative orientation. The indicators proposed below are informed by the literature but not taken directly from it.

MEASURING LOCAL INSTITUTIONAL CAPACITY

Rural Secretariat – Community Database Indicators

Within discussions of institutional capacity, institutions can be understood as entities with an organizational structure, with human, technical and financial resources, and with “normative relationships, rules and action patterns” (Hopkins, 1996: 4; see also Bhagavan & Virgin, 2004). It has been argued that assessments of institutional capacity should include knowledge-generating institutions, government entities, NGOs, and community-based organizations (Bhagavan & Virgin, 2004). The World Bank has also developed an approach to sector-wide institutional capacity assessment, which includes three levels of analysis: the political-structural level, the administrative-systems level, and the technical-sectoral level (Morgan & Taschereau, 1996). Together, these provide an idea of the parameters or scope of a complete analysis of LIC.

Based on their review of the literature on institutional capacity, M.R. Bhagavan & I. Virgin (2004) have identified the following key capacity areas that tend to be identified for comprehensive institutional assessment: 1) Information & knowledge, 2) Competence & ability, 3) Governance, institutional economy, institutional finance, 4) Technical & infrastructural resources, 5) Policy arena, and 6) Policy instruments. Indeed, each of the authors reviewed here has designed a matrix of capacity areas consisting of various approaches to defining and classifying these key elements.

Bhagavan & Virgin focus on institutional capacity as indicated by competence (human resources, knowledge & skills), resources (technical & financial) and structures (relations, rules, values, behaviour). They argue that institutional assessment should consider the availability and accessibility of information, the ability of institutions to mobilize financing, and the availability of knowledge and skills, recruitment procedures and training.

The Canadian Public Health Association has developed a framework which, while relevant primarily to the health care sector in Canada, mirrors many other authors' and organizations' emphasis on the importance of management, knowledge and skills, leadership, and institutional networking, information sharing and research for institutional capacity building initiatives. In addition to these elements, Lusthaus et al. (1995) point to the need for strategic planning and niche management as key ways to enhance organizational capacity. Similarly, the IMF (2002) has presented a conceptual approach to capacity assessment that prioritizes information management (capacity to gather, analyze and apply information), resource management (capacity to access and mobilize resources and to forecast and produce outcomes through service provision and project implementation) and governance (transparency and legitimacy, capacity to make and enforce regulations, policies and reforms).

Morgan & Taschereau (1996) provide an overview of the World Bank's approach to “macro-level” institutional assessment. This approach deals with assessment through three broad areas: forces in the external environment, institutional factors, and inter-institutional linkages. The forces in the external environment

MEASURING LOCAL INSTITUTIONAL CAPACITY

Rural Secretariat – Community Database Indicators

include “administrative and legal, political and economic, social and cultural” factors, including stakeholder analysis; institutional factors include “history and mission, culture, leadership, structures, human and financial resources, formal and informal management systems, and an assessment of performance” (Morgan & Taschereau, 1996: 12¹).

Jerry VanSant (2000) has regrouped the major components of institutional capacity into the following categories: 1) institutional resources - legal structure and governance, human resources, management systems and practices, financial resources; 2) institutional performance - program results, networking and external relations, application of technical knowledge, constituency empowerment; and 3) institutional sustainability - organizational autonomy, leadership, organizational learning.

VanSant’s paper also includes a review of existing assessment and measurement models, two of which are particularly relevant to the analysis of LIC: the Organizational Assessment Capacity Tool (OCAT) and the Institutional Strength Assessment (ISA) model. The major capacity areas identified in OCAT are governance, management practices, human resources, financial resources, service delivery, external relations, and sustainability. A report by USAID also outlines the key areas addressed in the OCAT, as well as identifying the strength of the tool for deriving numeric capacity scores from qualitative assessments and empirical observations (USAID, 2000). The ISA model uses many of the same capacity areas as the OCAT, but adds organizational learning and the use and management of technical knowledge as two critical dimensions to consider in any institutional assessment (VanSant, 2000).

Conceptual Definition

From the various approaches outlined above, it is possible to develop an integrated conceptual definition to be employed for the development of indicators. *Local institutional capacity is understood as a community-level measure, where institutional capacity is the competence of institutions to access and manage resources, to carry out key functions, and to initiate structural reform when necessary in order to maximize the first two capacities and ensure institutional sustainability.* This conceptual definition is representative of the major capacity areas common throughout discussions of institutional capacity. One of the many strengths of this approach from a conceptual perspective is that it includes institutional adaptability as a feature of capacity, which has been loosely associated with the concept of autonomy but not emphasized in its own right.

Indicator Development

Following from the conceptual definition, which is modeled after the structure of OCAT and the major areas identified throughout the literature, the following

¹ Page number corresponds to PDF document.

MEASURING LOCAL INSTITUTIONAL CAPACITY
Rural Secretariat – Community Database Indicators

operational definition can be adopted: local institutional capacity is the aggregated capacities of individual institutions in a given census sub-division (CSD)² or census consolidated sub-division (CCS)³, where institutional capacity is characterized by the competence (demonstrated practical ability) and autonomy (legal and structural ability) of institutions in the following activity areas: 1) accessing and managing resources (financial, human, and technical, including accessing and managing information); 2) carrying out key functions (providing information, services and training; contributing to social and economic progress); and 3) initiating structural reform when necessary in order to maximize the first two capacities and to ensure institutional sustainability (through internal governance and inter-institutional relations).

Based on this operational definition, below are some of the key elements that should be accounted for in an LIC index:

The capacity to access and manage resources

1. Management practices: management of human, financial and technical resources, organizational learning, strategic planning

Indicator	Rationale	Operational Definition
Employee Evaluations	Employee evaluations promote the quality of human resource management which, in turn, promotes proper use of financial resources leading to higher institutional capacity	Not Available (N/A)
Budgetary performance	Strong economic performance indicates high institutional capacity	N/A

2. Human resources: availability of skilled and knowledgeable labour force, effective recruitment and training procedures

Indicator	Rationale	Operational Definition
Multilingualism	In Canada, multilingualism of workers indicates institutional capacity to respond to multi-cultural public and to access & share intra/international resources & knowledge (Mitra, 2001; Commissioner of Official Languages, 2004)	Percentage of bilingual individuals (i.e.: knowledge of both English & French) at the

² A census subdivision (CSD) is the general term for municipalities (as determined by provincial legislation) or an area treated as municipal equivalents for statistical purposes (Statistics Canada, 2004). Geographic boundaries are based on 2001 Statistics Canada census definitions. CSDs with populations of less than 250 people have been excluded from this analysis since the values become unreliable due to confidentiality transformations.

³ A census consolidated subdivision (CCS) is a group of adjacent CSDs aggregated with a proximate larger CSD (Statistics Canada, 2004).

MEASURING LOCAL INSTITUTIONAL CAPACITY
Rural Secretariat – Community Database Indicators

Indicator	Rationale	Operational Definition
		CSD level
Education	Level of education is an indicator of skills and knowledge. Specialized and professional education and training are recognized as indicators of institutional capacity (Bhagavan & Virgin, 2004; Hopkins, 1996; IMF, 2002)	Percentage of individuals with a post-secondary education at the CSD level
Highly skilled workers	Indicates extent of highly skilled human resources available to institutions which, in turn, contributes to local institutional capacity	Percentage of workers employed in intellectual and managerial occupations at the CCS level
Self-Employment	Individuals who are self-employed are not working in institutions, thus negatively affecting local capacity	Percentage of workers who are self-employed at the CSD level

3. Financial resources: ability to secure and mobilize funding, adequacy of financial resources available

Indicator	Rationale	Operational Definition
Provincial spending on education, health and social services	Indicates relative level of financial support & importance placed on institutional activity by provincial government	N/A
Provincial and Municipal spending on Labour and Employment	Indicates relative level of financial support & importance placed on institutional activity by provincial and local levels of government	N/A

4. Technical resources: application of technical knowledge, access to information, technology and research

Indicator	Rationale	Operational Definition
Computer Access	Availability and use of computers indicates the speed and ease of access to information as well as the efficiency of inter- & intra-institutional communication practices which contributes to high local institutional capacity	N/A
Business High Tech and Computer Software Applications (i.e.: broadband Internet	Availability and use of high-tech and computer applications indicates the speed and ease of access to information, application of technical knowledge as well as the efficiency of inter- & intra-institutional communication practices which	N/A

MEASURING LOCAL INSTITUTIONAL CAPACITY
Rural Secretariat – Community Database Indicators

access, web conferencing, conference calls, interactive website, etc.)	contributes to high local institutional	
Institutional Research and Development Spending	Indicates application of technical knowledge and investment in research for institutional development	N/A

The capacity to carry out key functions

5. Performance of key functions: provision of services, products, constituency empowerment, contribution to social progress and well-being

Indicator	Rationale	Operational Definition
Education	Presence of employment in education sector indicates the local existence of key institutions to carry out valued functions (i.e.: education and research) as well recruit, train and employ workers which contributes to high institutional capacity	Percentage of workers employed in education at the CCS level
Government	Presence of employment in government indicates the local existence of key institutions to carry out valued functions as well recruit, train and employ workers which contributes to high institutional capacity	Percentage of workers employed in government at the CCS level
Health and Social Services	Presence of employment in health and social service sector indicates the local existence of key institutions to carry out valued functions as well recruit, train and employ workers which contributes to high institutional capacity	Percentage of workers employed in health and social services at the CCS level

The capacity to initiate structural changes & ensure sustainability

6. Governance: legal structure, impact of policies and laws affecting institutional governance and inter-/intra-institutional relations

Indicator	Rationale	Operational Definition
Institutional Internal Reforms	Indicates capacity to govern autonomously and that organizational learning is taking place which is a strong indicator of high institutional capacity	N/A

MEASURING LOCAL INSTITUTIONAL CAPACITY
Rural Secretariat – Community Database Indicators

7. External relations: networks with other institutions and stakeholders, public relations

Indicator	Rationale	Operational Definition
Collaborative Initiatives and Valued Outcomes	Emphasis is given throughout the literature to the importance of networks between institutions and desired valued outcomes which are both strong indicators of local institutional capacity	N/A
Media Representations of Institutional Effectiveness	Indicates how the public perceives (both positively and negatively) the performance of institutions which is also an indicator of local institutional capacity	N/A

8. Sustainability: leadership, institutional autonomy, organizational learning, security of revenue/funding sources, niche management

Indicator	Rationale	Operational Definition
Employee Assessments of Leadership Quality	Interviews or surveys of institutions' employees about the quality of leadership and examples of organizational learning (CPHA; Morgan & Taschereau, 1996; VanSant, 2000)	N/A
Municipal and Provincial Funding	Amount of money municipalities and provinces direct towards institutions is an indicator of local institutional capacity	N/A

To summarize, the formula used for our operational definition of local institutional capacity (LIC) focuses on 7 key indicators and appears as follows:

Table 1:

Local Institutional Capacity Index Formulation

<p>Local Institutional Capacity (LIC) =</p> <ul style="list-style-type: none"> + % of bilingual individuals (CSD level) + % with a post-secondary education (CSD) + % employed in intellectual and managerial occupations (CCS) - % self-employed workers (CSD) + % employed in education (CCS) + % employed in government (CCS) + % employed in health and social services (CCS)
--

MEASURING LOCAL INSTITUTIONAL CAPACITY
Rural Secretariat – Community Database Indicators

Evaluation of the Indicator

This formula to measure LIC uses standardized scores, or Z scores⁴, in order to calculate this index. The following table presents the general characteristics of CSDs in Canada for the LIC index:

Table 2:

Local Institutional Capacity: Average Characteristics of CSDs in Canada

LIC index	N	Minimum	Maximum	Mean	Std. Dev.
1996	3626	-14.028	17.604	-0.021	3.831
2001	4014	-17.025	17.752	-0.004	3.717

The following table presents a breakdown of CSDs across the provinces and territories of Canada in the LIC index:

Table 3:

**Local Institutional Capacity:
Average of CSDs by Province**

Province	1996	2001
Newfoundland	0.062	-0.427
Prince Edward Island	-1.861	-0.905
Nova Scotia	0.816	0.667
New Brunswick	1.622	1.181
Quebec	1.160	1.099
Ontario	1.467	0.360
Manitoba	-0.409	0.027
Saskatchewan	-3.651	-3.043
Alberta	-1.875	-1.819
British Columbia	0.888	0.335
Yukon	6.116	7.108
Northwest	7.372	6.614
Nunavut	7.978	8.775
Total	-0.021	-0.004

As we see in the table above, the highest average of local institutional capacity was found in the three territories of Canada. This may be due, in part, to their relatively small population sizes and heavy reliance on government institutions for employment. Nunavut had the highest rate of LIC with CSDs, on average, having an 8.8% level of LIC in 2001. Among the ten Canadian provinces, capacity was highest in New Brunswick with a rate of 1.2% in 2001. The lowest rates of LIC were found in the province of Saskatchewan where CSDs, on

⁴ Z scores are a special application of the transformation rules. The Z score indicates how far and in what direction an item deviates from its distribution's mean, expressed in units of its distribution's standard deviation (Hoffman, 2002).

MEASURING LOCAL INSTITUTIONAL CAPACITY
Rural Secretariat – Community Database Indicators

average, had a –3% level of capacity. This may be the result of the fact that a large portion of Saskatchewan's industry involvement is agriculturally based. Table 4 presents a LIC breakdown of CSDs by Urban/Rural type⁵ of CSD:

Table 4:

Local Institutional Capacity: Average of CSDs by Urban/Rural Type

urban area/rural area type	1996	2001
urban core	2.939	3.029
urban fringe	1.933	1.456
rural fringe, in CMA/CA	1.243	1.166
urban, outside CMA/CA	0.603	0.354
rural, outside CMA/CA	-0.759	-0.708
Total	-0.022	-0.008

As we see in the table above, LIC was found to be highest in urban core CSDs. The level of capacity in urban core CSDs averaged 3% in 2001 and was relatively stable over the 5-year period. On the other hand, rural CSDs had the lowest level of LIC. Urban areas tend to have greater access to education, government as well as intellectual and managerial occupations, all of which positively contribute to the LIC index.

One weakness of the index is that it does not include many of the possible indicators mentioned in the literature. Our index is restricted to using Canadian census data supplied to us by Statistics Canada and as a result, many of the institutional level indicators have been omitted from our index.

Future Research

Many indicators of local institutional capacity are institutional level variables. In future, studies may want to be directed towards collection of institutional level information in order to better understand exactly how the inner workings of these institutions and its workers affect capacity. This would also provide a more complete and comprehensive understanding of local institutional capacity. Such an initiative could target quantifiable indicators such as those related to budgetary performance or access to technical resources, given that these should help bolster the existing capacity index. More qualitative analyses of institutional capacity, such as research on inter-institutional dynamics that impede or promote collaboration, would also be extremely worthwhile. While the two approaches present different methodological requirements, both would contribute equally to an assessment of local institutional capacity.

⁵ These breakdowns include urban core, urban fringe and rural fringe and distinguish between central and peripheral urban and rural areas within or outside of a census metropolitan area (CMA) or census agglomeration (CA) (Statistics Canada, 2004).

References

BHAGAVAN, M.R. AND I. VIRGIN (2004) Generic Aspects of Institutional Capacity Development in Developing Countries, Stockholm Environmental Institute: Sweden,
[http://194.22.240.110/sei/seipubs.nsf/Lookup/3F111A378DFE5FF541256E40003D6819/\\$file/Generic%20Aspects%20Inst%20Cap%20Dev.pdf](http://194.22.240.110/sei/seipubs.nsf/Lookup/3F111A378DFE5FF541256E40003D6819/$file/Generic%20Aspects%20Inst%20Cap%20Dev.pdf)

Canadian Public Health Association “A Strategic Plan for Capacity Building in Primary Health Care: Canada’s International Immunization Program – Phase 2”,
[http://www.acdi-cida.gc.ca/INET/IMAGES.NSF/vLUIImages/CapacityDevelopment/\\$file/CPHA-StratPlanCapBuild-E.PDF](http://www.acdi-cida.gc.ca/INET/IMAGES.NSF/vLUIImages/CapacityDevelopment/$file/CPHA-StratPlanCapBuild-E.PDF)

Commissioner of Official Languages (2004) “Toward an Equal Partnership: Official Languages in the Federal Public Service”, News release, March 29, 2004, Report of the Commissioner of Official Languages, http://www.ocolclo.gc.ca/archives/nr_cp/2004/2004-03-29_e.html

HOFFMAN, H.S. (2002) “Statistics Explained: Internet Glossary of Statistical Terms”, <http://www.animatedsoftware.com/statglos/sqzscore.htm>

HOPKINS, T. J. (1996) “Capacity Assessment Guidelines – The Programme Approach: Assessment Levels and Methods” Prepared for UNDP, Management Development and Governance Division,
<http://magnet.undp.org/cdrb/CAPLEV1.htm>

IMF Staff (2002) “The Role of Capacity-Building in Poverty Reduction”, March 2002, <http://www.imf.org/external/np/exr/ib/2002/031402.htm>

LUSTHAUS, C., ANDERSON, G. AND MURPHY E. (1995) “Institutional Assessment – A Framework for Strengthening Organizational Capacity for IDRC’s Research Partners”, IDRC

MCGUIRE, M., RUBIN, B., AGRANOFF, R. AND RICHARDS C. (1994) “Building Development Capacity in Non-metropolitan Communities”, Public Administration Review 54(5): 426-33

MENTZ, J.C.N. (1997) “Personal and Institutional Factors in Capacity Building and Institutional Development”, ECDPM Working Paper No. 14, Maastricht: ECDPM

MITRA, S.K. (2001) “Language and Federalism: The Multi-Ethnic Challenge” International Social Science Journal, 53, 1(167): 51-60

MEASURING LOCAL INSTITUTIONAL CAPACITY
Rural Secretariat – Community Database Indicators

MORGAN, P. AND TASCHEREAU, S. (1996) “Capacity and Institutional Assessment: Frameworks, Methods and Tools for Analysis”, Prepared for CIDA Policy Branch, June 1996, [http://www.acdi-cida.gc.ca/INET/IMAGES.NSF/vLUIImages/CapacityDevelopment/\\$file/1996-06-02Tools\(Wkshp6\).pdf](http://www.acdi-cida.gc.ca/INET/IMAGES.NSF/vLUIImages/CapacityDevelopment/$file/1996-06-02Tools(Wkshp6).pdf)

USAID Center for Development Information and Evaluation (2000) “Recent Practices in Monitoring and Evaluation TIPS: Measuring Institutional Capacity”, Number 15

VANSANT, J. (2000) “A Composite Framework for Assessing the Capacity of Development Organizations”, Prepared for USAID
http://www.aidsalliance.org/ngosupport/resources/323_composite_framework.pdf

