

PART I

Developing a Community Genuine Progress Index

Materials for Community Development Planners

History

Early in 1999, the Nova Scotia Citizens for Community Development Society approached GPI Atlantic to propose development of a community-level Genuine Progress Index to assist community development planners in forging sustainable development strategies. Several communities expressed interest and, after a period of consultation, it was agreed to develop the index as a pilot project in Kings County, Nova Scotia, in cooperation with Kings Community Economic Development Agency and a wide variety of community groups.

Purpose

- a) The selection of indicators is intended to help forge a community consensus on some important goals for social progress, and to stimulate a healthy debate on what such goals should be.
- b) An assessment of the strengths and weaknesses of existing social, economic and environmental assets can help provide a sound information basis for the evaluation of existing community development strategies and the development of new ones. The process can assist a community in developing a set of annual benchmarks of progress – annual report cards that help the community build on, nurture and protect its greatest strengths, overcome apparent weaknesses, and revise development strategies where necessary to attain greater long-term well-being and sustainability.
- c) Perhaps most importantly, the purpose is not only to develop a useful “product” for development planners to use. The *process itself* should be a thoroughly enjoyable and challenging educational tool – a way for the community to learn more about itself, to review the legacy it is leaving for its children, and to discuss the society it wants to create in the new millennium – the future it genuinely wishes to inhabit.
- d) A major objective of this project is to learn from mistakes, so that other communities can build on the Kings County experience. The project is being developed as a "pilot" that will be useful to other communities.

Proposed Outcome

The outcome will be a series of annual benchmarks that the community can use to assess its well being and progress, and that can assist in developing community development strategies.

Process

The process to date has involved the formation of six citizen's committees that have met regularly and played an active role in the last 12 months in identifying indicators and creating survey tools to gather the necessary information. There is also a management committee, and regular plenary gatherings open to all citizens and interested groups.

Update of Community GPI: August 2000

In February, 2000, with funding from the Business Action Program of the National Crime Prevention Centre, the Kings County community GPI project was extended to Glace Bay, in industrial Cape Breton. The survey design was completed by GPI Atlantic in July, 2000, with extensive feedback and assistance from the Social Survey Methods Division at Statistics Canada. Senior methodologists there did three full reviews, and the 104-page survey was fully field-tested.

During July and August, 2,000 questionnaires are being distributed in each community by a staff of nine full-time workers in each place. Results will be collected by early September, and will provide the most detailed community-level information on the determinants of health available in Canada. The questionnaire has sections on employment, health, voluntary work, peace and security, and impact on the environment, and includes a time use survey that will provide important information on the quality of life.

A database is being designed by the Population Health Research Unit in the Department of Community Health and Epidemiology in the Faculty of Medicine at Dalhousie University, where the information will be processed and stored. It is intended to report results back to both communities in the winter and spring of 2001, and to construct Genuine Progress Indices for both communities in 2001, based on the information collected.

APPLICATION OF THE GENUINE PROGRESS INDEX TO COMMUNITY DEVELOPMENT:

A Pilot Project in Kings County, Nova Scotia

March 31, 1999

The following notes were prepared for community development practitioners and students interested in developing more comprehensive measures of progress and sustainable development at the community level.

The document is a work in progress currently being discussed with Kings County Community Economic Development members in preparation for an extensive data gathering project scheduled for 1999-2000.

It is hoped the outcome will be a series of annual benchmarks that the community can use to assess its well being and progress, and that can assist in developing community development strategies.

Notes:

- 1) Nothing in the enclosed proposal is engraved in stone, but is simply designed to stimulate discussion, and to further the process of developing a coherent set of sustainable development measures for Kings County. Community input and decision-making on *all* the issues described in the following pages, without exception, are anticipated and welcomed.
- 2) The first three sections listed above have been discussed in earlier meetings. While they are definitely still on the table and open to further discussion, it is anticipated that the main agenda items for the March 31st meeting will be items 4 and 5, which have not previously been discussed.
- 3) Also, I thought it might be useful to flesh out some of the underlying assumptions and logic of the Genuine Progress Index in what follows, especially for those who are relatively new to the concept. I have probably gone into way more detail than necessary for many of you; so please feel free to skip over any materials with which you already familiar.

March 24, 1999

Dear CED Diploma Students,

In our opening module in early February, I mentioned to you that GPI Atlantic, in cooperation with Kings County community development agencies and workers, was developing community-level application of the Genuine Progress Index. This is the first step in developing these measurement tools for practical use and application at the community level.

Attached, for your interest, is a summary of the work-in-progress that is happening on this project. The attached notes are not a formal document, but are simply notes in preparation for a meeting with 35 Kings County community development planners scheduled for March 31. I hope you find things in here that are useful for your own work and which apply to your particular communities.

Good luck. I hope you are all well and thoroughly enjoying your CED study course as much as I enjoyed our stimulating weekend together.

Best wishes,

Ron Colman,
Director, GPI Atlantic

1. Purpose of the Project

1. The market statistics conventionally used as measures of progress can give a misleading picture of social well-being and economic prosperity. For example, natural resource depletion, toxic pollution, crime, divorce, sickness, gambling and accidents all stimulate economic activity, contribute to economic growth, and are counted as “progress”. By contrast, valuable activities performed without pay, like voluntary and community service work, child-rearing and household production, and the value of leisure time, learning and freedom, are invisible in the conventional economic accounts and count for nothing in our measures of progress. Equity, the quality of jobs, and other valuable non-market assets are also overlooked in our quantitative growth measures.

By contrast, the Genuine Progress Index, which integrates social, economic and environmental indicators into a more comprehensive measure of sustainable development, can assist communities in assessing their actual well-being and quality of life more accurately. Rather than the current-income accounting approach of our existing growth measures, the GPI explicitly distinguishes costs and benefits, assets and liabilities, and thus provides an opportunity for a community to mobilize itself around common objectives and articulate clearly its development goals. The indicator areas chosen for this first-stage Kings County project (#3 below), hopefully express a community consensus on some important goals for social progress, or at least will stimulate a healthy debate on what such goals should be.

2. An assessment of the strengths and weaknesses of existing social, economic and environmental assets can help provide a sound information basis for the evaluation of existing community development strategies and the development of new ones. The process can assist a community in developing a set of annual benchmarks of progress – annual report cards that help the community build on, nurture and protect its greatest strengths, overcome apparent weaknesses, and revise development strategies where necessary to attain greater long-term well-being and sustainability.
3. Perhaps most importantly, the purpose is not only to develop a useful “product” for Kings County. The *process itself* should be a thoroughly enjoyable and challenging educational tool – a way for the community to learn more about itself, to review the legacy it is leaving for its children, and to discuss the society it wants to create in the new millennium – the future it genuinely wishes to inhabit.
4. The project is designated as a pilot for rural communities. The Genuine Progress Index is still in its development stage at the provincial level, designated as a pilot project for the country by Statistics Canada, and scheduled for completion by the end of the year 2000. But the keenest interest has actually been expressed so far at the community development level. Kings County has volunteered itself as a “guinea pig” in experimenting with this community-level application. One major objective of this project is, therefore, to learn from mistakes, so that other communities can build on the Kings County experience. Training community development workers from other parts of Nova Scotia and the region in the new measurement tools can itself provide an economic development opportunity for Kings County.

2. Project Development: Stages and Phases.

There are three distinct stages in the proposed project, each of which is divided into several phases:

A. Planning Stage

- 1) **February, 1999:** *To identify the project's purposes and understand its objectives.* Our first two meetings have been devoted to this, and a few major points are summarized above.
- 2) **February:** *To broaden community representation, participation and interest in the project.* This was accomplished for the purposes of the planning stage between the first and second meetings, with a very wide range of diverse interests from all aspects of the community planning process represented among the participants at the February 24 meeting. As the project proceeds, this community base will continue to widen.
- 3) **March:** *To agree on the major topic areas to be covered.* This was discussed in our second meeting, on February 24, and our decisions to date are summarized below.
- 4) **March – April:** *To identify the specific information to be collected.* The material enclosed in this package begins our discussion on this stage, and our meeting of 31 March will carry this discussion forward. This stage begins to turn our indicator areas into specific sets of measures. Through continued dialogue in the coming weeks, this will be further refined.
- 5) **March – April:** *To select the sampling area, size and procedure.* Our second meeting opened discussion on this issue. This package of materials makes some more specific recommendations on these issues for discussion on March 31. We may be able to reach agreement on the basic information-gathering means and tools at this stage.
- 6) **March – April:** *To create the human resource / organizational base for the project.* Leonard Poetschke, representing the Citizens for Community Development Society, the lead agency in this project, met with the project Steering Committee in March to begin work on establishing a community-based project coordinator, to discuss funding issues, and to lay the groundwork for contacts with the educational community. The March 31 meeting should further discussion potential involvement of the educational community and of community-based groups in the implementation phase.
- 7) **April - May:** *Written draft report concluding planning stage, and outlining implementation stage.* This report will summarize our work to date, and describe the planned implementation of the project. A draft report could be discussed at our next scheduled meeting. A final report will then be presented to the two project sponsors: - HRDC and the Rural Secretariat.

B. Implementation Stage (Tentative)

- 1) **May:** *Contacts with and commitments from educational institutions and community groups to be involved in implementation:* Local high schools, community college, Acadia University, community-based organizations such as the small business and entrepreneurship centre. Discussions about incorporating project into existing and new curricula, identifying particular teachers and administrators with a strong interest in the work, and ensuring existence of facilities and equipment, including computer laboratories and support systems.
- 2) **May – July:** *Creating the curricula described above – in cooperation with the groups mentioned.*
- 3) **June – August:** *Identifying sources of information, costs and completing information-gathering tools.* This includes identifying and locating existing data sources both through Statistics Canada and county authorities; obtaining population rolls, maps and other sources for survey portion of data-gathering phase; and completing questionnaires, interview forms and time diaries. Community input is important in this phase to ensure that issues and questions of concern are covered, that questions are phrased correctly to avoid loaded words, response categories and biases, and to ensure that questions are clear and specific, not overly complex, and appropriate. Alternative scaling methods must be considered, and ethical questions about the data-gathering process, including privacy concerns, training, and interview processes should be discussed.
- 4) **August:** *Typing and duplicating questionnaires, interview forms and time diaries.* During this month, the materials for the implementation phase should be completed.
- 5) **August - November:** *Accessing, compiling and analyzing existing data sources,* including Statistics Canada census results by county; Small Areas Database custom tabulations; and existing county and local data and surveys.
- 6) **September:** *Training interviewers and explaining project to students and volunteers.*
- 7) **September – October:** *Administering questionnaires, conducting interviews, recording responses.*
- 8) **November - December:** *Inputting data and compiling results.* This can hopefully be done in conjunction with teaching on statistical methods and computer skills.
- 9) **January – February 2000:** *Summarizing and analyzing results.* This includes the preparation of tables, charts and graphs. Again this can hopefully be combined with constructive teaching and skills training in mathematics, social sciences, computer skills and statistics.
- 10) **March – April:** *Presentation of Kings County GPI results:* This stage will involve several tasks:
 - a) Preparation of written final report;

- b) Oral presentations to citizens groups;
- c) Press releases and articles in media to publicize results.

C) Using the Results and Outcomes: Spring – Summer 2000.

This stage is not officially part of the project. However it is anticipated that four major outcomes will result, all of which can become practical initiatives in the spring and summer of the year 2000, and lead to concrete action:

- 1) The results may be used to assess the strengths and weaknesses of Kings County's social, economic and environmental assets, to inform community development planning, and to assist in formulating new development strategies. How can the county build on, nurture, protect, and further strengthen its best assets? How can it begin to overcome areas of weakness that are impeding genuine progress. Good data and information in areas currently overlooked by existing market statistics can be a useful first step in the decision-making process.
- 2) The indicators, results and survey instruments can be used to create a clear and easily implemented annual set of benchmarks of progress. This process will require extensive community input and discussion to ensure that these benchmarks reflect a consensus in the community.
- 3) This Kings County project is set up as a pilot, both in terms of its own development objectives, and also for rural communities throughout the region. What can be learned from the victories and defeats of the previous year? What mistakes were made in implementing the project, and how can they be remedied in the future? How can the indicator sets and measures be expanded to include more variables of interest and concern to the community? For example, this year's project will begin to assess the sustainability of agricultural practices. What additional measures and questions can be added to improve the assessment in the future? Can the following year's benchmarks include the development of other resource sectors, such as forestry? Can the health variables be expanded and deepened?
- 4) Kings County representatives may travel to other communities interested in developing expanded measures of progress, to share their expertise, and to assist them in formulating their own locally appropriate indicators and data gathering instruments. For example the Colchester – Cumberland region has already expressed its interest in implementing a GPI project next year, and similar interest has already been expressed by several community representatives in Annapolis County. Hopefully, while remaining locally appropriate, the measures can be developed in such a way as to allow comparability between counties and jurisdictions. Representatives from other communities can also be invited to Kings County to learn about and observe the Kings experience. This training process for other communities can in itself provide a community development opportunity for Kings County.

3. Indicator Areas for Proposed 1999-2000 Project

The following main issues were identified at the Kentville meeting on February 24 for this first stage in the development of a community-level Genuine Progress Index. It is understood that the entire process is experimental and the list of components is not final. The existing issues that have been identified can be re-defined over time, and other indicators can be added in coming years until the community is satisfied that it has a complete set of measures that adequately express its development goals and objectives.

It is reasonable to think that it may take three to five years before Kings County has a final set of annual benchmarks of progress that represent a true consensus. In the meantime, there is no obstacle to using the knowledge gleaned at each stage of this development to improve, refine and revise existing development strategies in a practical way.

1) Well-Being of Families and Households.

As discussed at the February 24th meeting, “families” is understood here in the widest possible sense, and is certainly not confined to traditional models. It includes single parents, unmarried people, those with and without children. Our conventional models of progress focus heavily on jobs, around which our lives tend to be organized. However, this exclusive focus on paid work in our market statistics often tends to sacrifice the quality of our private lives.

For example, the workplace has generally not adapted to the new reality of dual-earner couples who tend to face serious time-stress in juggling job and household duties. Canadian women, in particular, have seen an actual decline in their free time in recent years, as they struggle to balance their jobs with a disproportionate share of household responsibilities that is almost unchanged over time. Children spend less time with their parents than they used to, and a growing number of Nova Scotian children now live below the low-income cut-off.

To what extent do Kings County residents share these problems? Focussing attention on the household as well as on the market economy will allow us to find out whether Kings County residents are more or less time-stressed than other Nova Scotians and Canadians; whether Kings County families share household duties among men and women more or less equally; whether they have more or less free time than they used to; how much quality time they are spending with their children; how many hours of unpaid work they put in as well as paid work; how many Kings County children live in poverty compared to the provincial average.

Conventional economic models view firms as producers and households as consumers. Because it is unpaid, household work is not counted or valued in our conventional measures of progress. By contrast, the Genuine Progress Index sees households as productive economic units performing work that has social and economic value, including direct investments in our human capital. That household work is assessed using time use surveys, which provide a fascinating portrait of the economics of daily life with which we are familiar anecdotally, but about which we have little “social” information.

How people spend their time *off* the job is critical to their quality of life. Focussing on the household allows us to find out more about how Kings County residents spend their precious time, and to assess the balance they have struck between their work and their private lives, in a way that market statistics alone cannot do.

2) *Voluntary and Community Service*

The voluntary sector provides services critical to our standard of living and quality of life. Helping the sick, disabled, elderly, children and youth, and other vulnerable groups, protecting the environment, working in community development, and serving the community and society in countless ways, volunteers and community-based agencies are the backbone of “civil society”. The voluntary sector is the epitome of participatory democracy, where people give to their communities because they want to, and its strength is often regarded as the acid test of how democratic a society really is.

Yet the vital work of volunteers is not measured or valued in any of our conventional economic accounts or measures of progress, because it is unpaid. By contrast, the GPI assigns specific value to voluntary work, and, as with unpaid household work, uses time use surveys to assess its strength.

What specific contributions do volunteers make in Kings County? How much time and money do they spend each week working for their communities? What type of work do they do and how dependent is our quality of life on their contribution? What is the demographic make-up of volunteers – their age, educational level, sex and marital status? Are more young people volunteering because they can’t find paid work? Are Kings County volunteers getting more time-squeezed and is this threatening the quality of community services?

Some government services have been cut in recent years, with the expectation that volunteers and communities will pick up the slack. Has this happened in Kings County? Have volunteers been able to compensate for cuts to government services? Are community-based agencies experiencing greater demands in Kings County, and what is their capacity – financial and human – to meet these demands?

Answering at least some of these questions can provide tremendous insight into the strength of our communities, and into the under-valued nature of the civic and voluntary work we often take for granted. By beginning to measure this work and giving it explicit value in our measures of progress, we are also acknowledging it and giving it recognition, which can help to give it strength.

3) *Employment and Underemployment*

Conventionally, we measure the number of jobs created. However, the Genuine Progress Index also examines the nature and types of jobs in more detail. Is job security increasing or decreasing? What percentage of jobs carry benefits, and what type of benefits? How has this

changed over time? Are more or less jobs in Kings County secure and “permanent” jobs, or are they temporary, contract and on-call jobs? How many newly self-employed people successful entrepreneurs, and how many are marginally employed? How sustainable are new jobs? The conventional unemployment rates do not provide us with this information.

In Canada as a whole, the last 15 years have seen an increasing polarization of hours. More people are unable to get the hours they need to make ends meet, or are over-qualified for the jobs they can find. They are “under-employed”. And more people are over-working than ever before, putting in longer hours as firms and government downsize and expect their remaining employees to maintain the same rate of output with a smaller staff. Statistics Canada reports that this growing polarization between the under-worked and the over-worked is the single greatest cause of earnings inequality in Canada today.

Is this an issue in Kings County? What *are* people’s hours of work? Is there hidden under-employment? Is a significant segment of the population over-worked? Are the under-worked and the over-worked both stressed, for opposite reasons? How are young people faring? Are they finding jobs which match their qualifications? If not, is the county experiencing a “brain drain”? If some of these important questions could be answered, Kings County community development planners might find innovative ways of creating new jobs, possibly re-distributing hours, to reduce stress on both sides of the equation.

In conventional economics, relying on quantitative growth statistics alone, jobs are always dependent on more growth. From the GPI perspective, a range of other job creation strategies might be explored within the existing job structure. There have been innovative experiments in creating good part-time jobs with pro-rated benefits and job-sharing possibilities, as well as phased retirement options in order to re-distribute work hours and provide more jobs. The Netherlands, for example, has a 3.6% unemployment rate and the lowest annual hours of work of any industrialized country through such strategies. Might such models apply to Kings County conditions and circumstances?

One interesting experiment carried out in the New York State civil service in Albany, New York, gave employed mothers the option of taking off the summer school vacation to spend quality time with their children, with guaranteed re-entry into the work force when school resumed in September. Their jobs were then given to college students desperate for summer work, and the government saved money, because the pay rates for the students were less than those for the women they replaced for 10 weeks. It was a win-win-win situation. Parents had time with their children when they needed it, students had jobs, and the government saved taxpayers’ money.

Might such innovative options be applicable in Kings County? Again, looking at and measuring employment in a broader perspective, that also includes qualitative factors, concern for household and child care responsibilities, the value of free time, overcoming under-employment and the reduction of stress, opens up a range of policy and planning options that are not considered in more conventional job-creation strategies.

4) Peaceful and Secure Society

One of the greatest social assets that produces direct and indirect social and economic benefits is a peaceful and harmonious society with a high degree of personal security and safety. A certain sign that this asset is depreciating in value and eroding is a sustained and significant rise in crime rates. Ironically, such a crime increase actually makes the GDP grow and is counted as a contribution to our economic growth and prosperity. The more money is spent on prisons, courts, police, burglar alarms and security systems, the more our economy grows, which in turn is taken as a sign of progress.

These days people admire the United States economy, with its record growth rates and we often hear economists compare our situation unfavourably with the American model. But imprisonment is one of the fastest growing sectors of the American economy, growing by an average of 6.2% a year throughout the 1990s. The U.S. today imprisons more of its population than any other country in the world except for Russia, nearly 0.7% of its population. Everyone talks of economic growth as a boon, but are there some types of economic growth we don't want. Like crime, divorce, toxic pollution, sickness, accidents and natural resource depletion all make the economy grow!

Unlike the GDP, the Genuine Progress Index goes down when crime goes up. Conversely, when crime rates go down, the GPI goes up, since the savings in prisons, police and burglar alarms can be spent on more productive and welfare-enhancing activities. The GPI explicitly values a peaceful and secure society as a social asset and counts crime as a cost rather than as a gain to the economy.

What does crime cost Kings County in an average year. How many residents are victims of theft or assault? How much did they lose to crime? How secure and safe do people feel? Is fear of crime growing in some areas of the county? Are there some neighbourhoods where people do not feel safe walking alone at night? How much do businesses spend in a year on security and surveillance equipment? How much do they estimate losing per year in shoplifting? How much extra do consumers pay for these costs? How many residents suffer from violent crime? Is it increasing or diminishing?

And who are the criminals? What is their demographic profile? Do more people lock their doors now than 10 or 20 years ago?

If we can answer some of these questions and know how the answers change over time, then we know whether we are making progress towards a more peaceful and secure society. If we know a little about the offenders, perhaps we can target social programs to particular groups that have a risk of offending. By making peace and security an explicit value in our measures of progress, we can at least stop sending the misleading signal to our policy makers and to the public that more crime is good for the economy, as our conventional measures now indicate.

5) Soils and Agriculture

Our human economy is completely dependent on the natural world for resources and ecological services. Yet our conventional economic measures of progress view the economy in complete isolation from the environment. In fact, the more trees we cut down and the more fish we sell, the more our economy grows. Our natural resources count for nothing in our conventional accounts. It is as if a factory owner were to sell off his machinery and count the income as profit. The reduced flow of services in the future is not taken into account.

By contrast, the Genuine Progress Index views our natural resources as natural capital assets, just as community service and security are seen as social capital assets, and as the raising of children is seen as an investment in human capital. The conventional economic measures understand only one form of capital – produced capital. For the GPI, soil erosion and degradation signifies a depreciation of natural capital. Every millimeter of eroded soil means less food security for the next generation. If our agricultural practices are to be sustainable, then the capital asset on which our food supply is based – the soil – must be protected and maintained in good health.

For the breadbasket of Nova Scotia, the richest agricultural region in the province, this is not a theoretical question. A set of sustainable development measures for Kings County would be incomplete without a set of indicators of progress towards sustainable agriculture. Can we develop a set of criteria to assess changes in soil quality over time, the effect of agricultural run-off on water quality, the extent of dependence on chemical pesticides and fertilizers, the extent of adoption of conservationist measures, rotation planting, organic farming methods, and so on. Sustainability also includes social and economic criteria – what is the state of farm income; the ratio between input costs and revenue; the conversion of prime agricultural land to other uses?

There is no doubt this will be a controversial area, and one that goes to the heart of the Kings County economy. But I feel confident that we can devise a set of measures of progress in this area that will be superior to the misleading signals now conveyed by the conventional criteria alone, in which output yield is counted as growth and progress, but the sustainability of the methods over time is ignored.

In the long run, we are acting not only for the interests of the present generation. Measuring progress towards sustainable agriculture must be in the very best interests of future generations of residents of Kings County. The soils of this region are unsurpassed, and one of the greatest economic assets the county possesses. How can they be protected for the benefit of generations to come?

5) Discussion on Health and Education

The five areas listed above will be the main ones studied in this first phase. They are by no means exhaustive or descriptive of all major issues of concern. But they do represent a blend of social, human, personal, and environmental criteria that reflect directly on the state of our quality of life, and which are certainly measures of progress towards sustainability.

If we can successfully balance our home and work life without undue stress; if our community and voluntary service sector is strong; if jobs provide real security of livelihood and employ residents' skills; if our society is peaceful and secure; if our soils are healthy and our agricultural practices sustainable, then we are making undoubted progress as a society, and our development strategies are working to enhance the quality of life of Kings County residents both in this generation and in future generations.

In short, these five indicator areas make a strong start in applying the Genuine Progress Index to the local community. However, it was also felt that we should at this stage at least indicate the intention to expand the measures of progress to other vital and important areas in the future. A very modest beginning will be made on health measures by including at least a couple of health indicators, like trends in asthma and cancer rates, with the understanding that health measures need to be far more fully developed the next time round.

It was also agreed at the February 24th meeting (and also at the very first meeting in early February) that each of the above five components should contain an explicit education component. How this is to be done is still up for discussion. For example, what kind of skills training does the voluntary sector provide its participants? Do jobs enable young people to use their education and qualifications? If not, how can we attract the kind of industry that will do so? Do we have a brain drain? How can farmers be educated in more sustainable agricultural practices? How successful are rehabilitation and education programs for youth offenders? These might be examples of ensuring that learning and education pervades each indicator of progress.

4. Measures, Data Needs and Survey Questions

The following are suggested to initiate discussion on the details of the GPI application in Kings County at the March 31 meeting. No final decisions need to be made at this stage, and these data needs can be refined and revised over the coming months. It may be an idea for participants to take what follows, as well as the outcome of our March 31 meeting, away with them for discussion with stakeholders and other interests in the county.

It should also be emphasized that the goal is not to create a "perfect" and complete GPI for Kings County in the first stage. In many cases, data sources may be identified, but there will not be time or resources to complete all the data gathering, investigation and analysis. The development of the GPI should be regarded as a continuous work in progress, providing gradually better and more comprehensive information to community development planners over time. The goal is to complete whatever is possible within one year, with full acknowledgement of data gaps and omissions, and then to assess the results and decide how to develop the index further.

In some cases, excellent data are already available and need to be gathered and analyzed. However, for a more comprehensive assessment of the state of Kings County's quality of life, most data on the indicator areas described above will need to be generated through surveys, questionnaires and time diaries. Much of what we need is not currently available at the county level.

If the *process* or learning about ourselves is as valuable as the product and results, then the “person-power” for some of the data generation and analysis might be generated through the school system. Some classes, led by inspired teachers, might want to take this on as a remarkable learning tool to study statistics, economics, social sciences, and computer skills in a very practical setting that binds the students to their roots and teaches them about their own county and region. So much textbook learning is abstract for students. This could be a great opportunity to take it into the field, and to learn real research skills that will be useful to them in their later careers.

1) Existing Data Sources

The data gathering process should begin with an investigation of existing data sources. The most relevant of these should be compiled, presented and analyzed at an early stage, so that we can see what we have and what its limitations are.

In particular there is quite a wealth of good data available at the County level in Statistics Canada’s Census statistics, and also in the Small Areas Database. I have begun to investigate these. Unfortunately, most of the useful data is available on a “custom tabulation” basis for which a fee is charged. For about \$500 we can get an excellent profile of materials on Kings County from the last (1996) census and the most recent data from the Small Areas Database. If we want to construct some time series, to see how basic demographic and economic factors have changed over time, which I think we do want to do, then it will cost more. But even if we go back to the last four censuses, for a 20-year perspective, we should be able to get a tremendous amount of material for \$2,000.

Kings County may already have done this, in which case there is no need to duplicate work already under way. If not, then we should build this into the budget for the implementation stage. Again, we shall collect a lot more than we can actually use in this first year, but the remainder will be available as an excellent archive for further research and investigation at later stages.

It is important to note that despite the emphasis on the *differences* between the GDP and GPI approaches to measuring progress, the Genuine Progress Index does not reject the conventional market statistics as relevant. On the contrary, they are very much included, and the GPI simply seeks to *broaden* the scope and range of what is measured, and to put the market statistics into a larger perspective. For example, in order to assess trends in citizens’ time stress, we need to know *both* about their hours of household work, which are currently excluded from the conventional accounts, *and* about their paid work hours, which are included.

Thus, access to and compilation of existing demographic and economic statistics on the County is an essential starting point. In fact, this material will actually allow the implementation of the survey phase, since we will need to observe demographic compositions within the county in order to set up a statistically sound stratified random sample of the county population (see section 5 – sampling procedures).

In addition to the Statistics Canada information, Kings County undoubtedly has its own archives and statistics, and keeps its own records. I have no familiarity with what is currently available in the county archives. But this is also a first step in the investigation.

Agriculture Canada and the Nova Scotia Department of Agriculture and Marketing will also have a wealth of information at the county level that will be essential for the *Soils and Agriculture* component of the study. The Agricultural College in Truro will also have good county-level materials available. Existing soils data can be accessed in this way, and we can determine what kind of further soil sampling may be necessary beyond what is already on record. Jennifer Scott, our GPI soils and agriculture expert, will be happy to advise from her knowledge on what is currently available and where.

There will also be official crime statistics, employment data, health information and other information from a variety of sources. The GPI contribution here is an integrative one that serves to illustrate the linkages between social, economic and environmental variables. We are not attempting to re-invent the wheel, but will use whatever is currently available as a starting point. Beyond that we shall need to generate county-level data and information. The following sections deal with these data needs.

2) *Survey of Values*

Part of the questionnaire should assess some of the core values of Kings County residents. We should not hide the fact that any index of progress is based on a set of values. We are always asking the question “progress towards what?” In fact, even the prime architect of the GDP, Simon Kuznets, warned against the way the GDP is used today, as an overall measure of progress:

The welfare of a nation can scarcely be inferred from a measurement of national income....Distinction must be kept in mind between quantity and quality of growth, between its costs and return, and between the short and the long run....Goals for ‘more’ growth should specify of what and for what.¹

In our obsession with “more” growth, we have long forgotten Kuznets’ admonition. But it is clear that any “cost-benefit” analysis must assess what is a cost and what is a benefit. Ultimately that rests on an underlying set of values. For example, if Kings County decides to reject an industrial plant that would spew heavy metals into the environment, then “environmental quality” is an underlying value which, in this case, overrides the alternative value of “more growth, more jobs”. On the other hand, the county may then feel a special responsibility to create alternative employment opportunities to compensate for the potential jobs lost by the rejection of the industrial plant.

In short, we want to find out whether the actual values and priorities of Kings County residents match the assumption in our new measures of progress. Existing measures of progress, based on a prevailing consumer ethic, unquestioningly assume the dominance of materialist values. “Well-

¹ Simon Kuznets, quoted in *The New Republic*, October 20, 1962; and in Clifford Cobb, et.al., “If the GDP is Up, Why is America Down?”, *Atlantic Monthly*, October 1995, page 67.

being” is widely associated with consumption levels. The more income and possessions we have, the better off we are.

We cannot hide the fact that the Genuine Progress Index openly questions the current dominance of this materialist ethic, and brings some vital non-material measures of progress into the core of our accounting process. The subtraction rather than addition of crime costs to our measures of progress argues that citizens prefer a peaceful and secure society to the economic activity generated by more prisons, police, lawyers and burglar alarms. Rather than looking at the output and jobs created by crime as an economic gain, the GPI regards them as a “cost” to society. Instead, the savings generated by lower crime rates are seen as potential investment in more productive and welfare-enhancing activities. A non-material value like a peaceful and secure society is given the status of a social “capital asset” subject to depreciation and requiring explicit valuation and re-investment.

Security, equity, environmental quality, community service and strength, knowledge, health, the nurturing of children, and free time, are all explicit values in the GPI and are regarded as social, natural and human capital assets, at least equal in importance to market or “produced” capital. This does not mean that well-being is unrelated to income level or possessions. But it does argue that well-being encompasses a wider range of meaning and a broader set of values that are frequently given lower status on a policy agenda dominated by economic growth criteria.

However, if we are to question the current dominance of the materialist, consumer ethic, we must find out whether this assumption resonates with residents of Kings County. Carefully worded questions may be asked to test the existing hierarchy of values in the county. This would be a remarkable way for the community to learn about itself in a profound sense and to probe some underlying assumptions.

For example, I recently compared two studies in which workers were asked whether they would be willing to reduce their work hours to trade income for more free time. Only a small percentage of workers wanted to work less if this meant a reduction in income. However, a Finnish study added one crucial component to the question: “Would you be willing to work less hours for less income, if you knew this would help create new jobs for those who are unemployed?” 55% of workers said yes. In other words, workers were asked if they cared about others, as opposed to simply protecting their own interests – and the results changed dramatically.

One interesting study testing values was a 1995 Merck Family Foundation-sponsored survey in the United States. Some of the issues raised in that study were specifically designed to examine the balance between material and non-material values, and thus address one of the basic purposes of our own study, as described on page 2 above. Here are a few of the 34 questions asked in that survey, as samples of what we might consider including in our Kings County questionnaire. Needless to say, we can construct our own questions:

- Respondents were asked to rate on a 10-point scale each of the following values they apply as important “guiding principles” in their lives, including: “responsibility; family life;

friendship; generosity; religious faith; prosperity and wealth; financial security; career success; pleasure/having fun; freedom.

- Respondents were also asked to rate on a 10-point scale their deepest aspirations – “I would be much more satisfied with my life: (examples):
 - if I were able to spend more time with my family and friends
 - if there was less stress in my life
 - if I felt like I was doing more to make a difference to my community
 - if I had a nicer car
 - if I had a bigger house or apartment
 - if I had more nice things in my home.”
- Respondents were also asked if they “strongly agree, agree, are uncertain, disagree, or strongly disagree” with certain opinions, such as:
 - “The ‘buy now pay later’ attitude causes many of us to consume more than we need.”
 - “Buying and consuming is the American way.”
 - “Today’s youth are too focused on buying and consuming things.”
 - “Most of us buy and consume far more than we need; it’s wasteful.”
 - “Material wealth is part of what makes this country great.”
- Respondents were also given the same range of choices from strongly agree to strongly disagree concerning the major changes needed to protect the environment, including the following:
 - “I believe that protecting the environment will require most of us to make major changes in the way we live.”
 - “I believe my own buying habits have a negative effect on the environment.”
 - “I believe Americans cause many of the world’s environmental problems because we consume more resources and produce more waste than anyone else in the world.”
 - “If everybody in China, India, and Latin America consumed as much as Americans do, that would destroy the environment.”
- Respondents were also asked to agree or disagree on the same 5-point scale with several opinions and viewpoints about children and future generations, such as:
 - “We focus too much on getting what we want now and not enough on future generations.”
 - “Today’s youth are too focused on buying and consuming things.”
 - “I am concerned about the values that children are learning from their parents.”
 - “Most American children are very materialistic.”
- Respondents were also asked to agree or disagree on the 5-point scale with several statements comparing themselves to previous generations, including:
 - “Compared to my parents at my age:
 - I have more possessions.
 - I am more financially secure.
 - I am more successful in my career.
 - I am happier.”

- One set of questions in the survey attempted to assess how financially squeezed Americans feel. Again, respondents were asked to agree or disagree on the 5-point scale with statements like:
 - “I spend nearly all of my money on the basic necessities of life.”
 - “I spend nearly all of my money on things that are necessary to life comfortably.”
 - “If I wanted to, I could choose to buy and consume less than I do.”
- Another set of questions aimed to assess how ready people were to take action to consume less and change their lifestyles accordingly. They were given three choices to respond to a list of possible actions. The choices were:
 - “That’s a good idea; we should move ahead with it.”
 - “That’s a good idea, but I’m not ready to do that.”
 - “That’s not a good idea.”

Some of the possible actions were:

- “Use our possessions longer instead of buying new things.”
- “Spend more time on community service projects and less time shopping.”
- “Spend less money so we can save more.”
- “Watch less TV than we do now.”
- “Buy fewer toys for our children and grandchildren than we do now.”
- “Drive our cars less than we do now.”
- “Spend less time working and earn less money than we do now.”

Many of the Merck survey questions were particularly concerned to assess attitudes towards materialism and consumerism. But it is possible to construct a wider range of questions on values that encompass the particular issues with which we are concerned in the GPI study, including issues like personal security not included in the Merck survey.

3. Time Use Surveys

“Time is money” well represents our current market-dominated approach to measures of progress. We regard a human being’s precious time as a commodity to be traded in the market place for a particular price, and we organize our lives around the work place where that transaction most commonly occurs. Our personal and family lives are subject to work place demands, and we generally regard “time” as a commodity in short supply. We talk about “saving” time and “spending” time, market idioms, rather than “passing” time.

By contrast, the Genuine Progress Index regards “time” as “time” (not only as money) – precious and valuable in its own right, rather than as a dependent variable available to be sold to the highest bidder. The *quality* of time as well as its quantity is an issue in the GPI.

But even from the quantitative point of view, time performs an interesting and important function in the Genuine Progress Index. A hidden and underlying assumption of the materialist, market ethic is that growth is limitless – more is better. The economy is seen as infinitely

expanding. The GDP is always growing. In fact, if it ceases to grow, we regard this as a very serious problem, and describe the ensuing situation as a “recession” or worse – a depression, if the GDP actually shrinks.

From a natural resource perspective we now know that this assumption of limitless economic growth is questionable. Scientists speak of the “carrying capacity” of our resource base, and are concerned whether eroding soil, reduced forest cover, lower fish catches, acid lakes and streams, atmospheric carbon dioxide concentrations and a depleted ozone layer indicate a reduced capacity of the earth’s ecological services to support human economic activity.

Future food and resource security may not necessarily be compatible with limitless economic growth. Two scientists at the University of British Columbia, William Rees and Mathis Wackernagel, calculated that if all the world’s population were to consume resources at the rate that Canadians do, we would actually need two extra planets earth to support this level of global consumption.

In other words, either we need most of the world's population to continue living in poverty, or else we must raise the question of “limits” to our consumption and economic growth. (Increased consumption – often called “consumer confidence” – actually drives economic growth, and is one of the two standard ways of measuring GDP. As the sum total of all goods and services exchanged for money, GDP can be measured either as total industrial output or as total spending).

While these resource concerns are now widely accepted, it is less often understood that time is equally a potential *limiting* factor to economic growth. Both resources and time are currently seen, from the materialist perspective, as dependent variables which can be exchanged for money in the market economy. Their use, depletion and yield drive economic growth. But if time is seen as time, a precious resource in its own right – an independent variable with value worth protecting, rather than a dependent one – then the perspective shifts radically.

Unlike economic growth, and like natural resources, time is limited. We all have only 24 hours of it in a day, and whether we are “rich” or “poor”, we only have a limited life span with a limited number of years on earth. From the GPI perspective, what we do with that time, and how we pass it, is a core concern worthy of close attention on its own terms. We know that some people feel they are “wasting” their lives, or wishing they had spent more time with their children while they were growing up, or doing what they really wanted to do.

I read an interview with the chief executive officer of a large U.S. corporation, who earns \$4 million a year and works from 6am to 10pm daily. Asked by the interviewer what he does aside from work, he answered “sleep.” From a “time use” perspective, we might question whether this signifies an “impoverished” lifestyle, even if conventional materialist and market criteria define the man as “rich”.

Providing information on “time use” is therefore central to the GPI, allowing us to evaluate alternative uses of time. Without making any judgements on what anyone “should” do with their time, we can at least provide data that goes to the heart of our everyday quality of life. Simply by

looking clearly and carefully at how we spend our 24 hours can be extraordinarily revealing of people's priorities, interests, lifestyle, and life quality. Contemplation of the results can lead to subtle behaviour shifts and re-ordering of priorities.

Time use surveys can also reveal how successfully we manage to balance our home and job responsibilities; whether community service levels are increasing or declining; how much time parents are spending with their children; whether the accumulation of "time-saving" devices in the household is actually saving time in household chores; how much time is spent commuting; whether people are putting in longer work hours; how we spend our leisure time – are we watching more or less TV, engaged in more or less sports; socializing more or less?

Time use surveys can also reveal interesting (and perhaps embarrassing) realities about gender relations and gender equity: How is the gender division of labour in the household changing in response to women's increased participation in the labour force? How much free time do working mothers have, and what does their typical day look like? And we can find out how time-stressed people are, and which demographic groups are the most and least time-stressed.

In other words, measuring time as time, rather than simply as money, can be extremely revealing of fundamental everyday quality of life issues that affect all of us without exception. Time use surveys put the dominant market statistics into a larger perspective that includes our private and personal lives, our community and voluntary service, our family lives and our free time. In that sense, time use surveys are truly neutral. By simply measuring time as time, they eliminate the hidden bias that often leads job commitment unquestioningly to dominate our lives. For many people, this may not be a problem, and the GPI does not tell people how they "should" live their lives. But the time use survey may well lead some to re-order their priorities.

In this way and because it is inherently limited, a 24-hour time use survey perspective, just like a set of natural resource accounts, raises the challenge of operating our economy within natural limits rather than ascribing to a myth of limitless growth that may well be both socially and environmentally unsustainable.

This is not a new observation. Aristotle wrote about this economic reality quite plainly and eloquently 2,400 years ago in ancient Athens. He argued that trade was infinitely more dangerous than farming as an occupation because it created the illusion of wealth without limits, whereas the soil and its productivity acted as a sane and natural restraint to wealth and growth. He also wrote at length on the absolute necessity for leisure time as an essential prerequisite for civic participation in and contribution to the political community – for him the highest human endeavour. Without free time to listen, learn, contemplate, consider alternative views, and debate, true "citizenship" itself was not possible. Perhaps it is time to rediscover that ancient wisdom.

As a start time use surveys simply tell us how we are passing our time, and what we are doing with our time. Statistics Canada experts have acknowledged that the most accurate time use survey tools are time diaries, in which respondents fill in, for a period of 48 hours, or even one week, how they spend their time in 15-minute blocks. Comparisons with other survey tools reveal that these diaries are much more exact than oral or written questionnaires that rely on the

respondents' memory. The diaries are coded in such a way that the results can easily be entered into computer programs.

We are most fortunate to have here in Nova Scotia one of the world's leading experts on time use research. Dr. Andrew Harvey, of the Department of Economics at St. Mary's University helped design the first Statistics Canada time use surveys, and conducted some of the earliest research in this area. He is President of the International Association for Time Use Research, and heads a Time Use Program at St. Mary's University. He has advised European governments on constructing time use surveys and has conducted seminal comparative international time use research for the United Nations.

Dr. Harvey has provided continuous ongoing advice to the GPI project in Nova Scotia, and reviewed the time use materials in detail. I have specifically consulted him on this Kings County project and solicited his advice. He also happens to be an extremely generous, helpful and good-humoured person, and I would strongly suggest that he be invited to advise on the time use component of our project. We could not find a more expert consultant anywhere in the world.

From materials made available by Dr. Harvey, and from Statistics Canada's past time use surveys, I would suggest that the following time diary components be included in our study to shed light on the first two indicator areas discussed in section 3 above. To give some idea of how the diary, which Kings County residents would be asked to maintain for a few days, actually looks, the following is presented in one possible diary format (There are several types of diaries, but the following is a simple one to administer):

Instructions: Please indicate for each hour the time you actually spent on various activities. Under the appropriate activity, write the number of minutes you spent on that activity. Note that “primary child care” refers to time spent exclusively relating to a child, while not engaged in any other activity. Minutes for the activities in each column should total 60. (Note: There are actually 24 hour columns: about 10 are given here as samples)

	A.M						P.M.				
	6	7	8	9	10	11	12	1	2	3	ETC
Paid Work											
Commuting											
Other travel											
Cooking/Washing Up											
Housekeeping											
Maintenance/Repair											
Other household work											
Household shopping											
Primary child care											
Civic/voluntary activity											
Education											
Sleep											
Home meals											
Other personal											
Restaurant meals											
Socializing at home											
Other socializing											
Watching TV/VCR											
Reading											
Movies/Entertainment											
Active Sports											
Other active leisure											
Other (please specify)											

The activities in column one are defined for respondents. For example:

Housekeeping: Cleaning house, laundry, mending, arranging and straightening things.

Shopping: Groceries, clothes, appliances, home furnishings, repair shops, post office, etc.

Education: Attending classes or lectures, training and correspondence courses, homework

Other Socializing: Visiting or dinner with friends, neighbours or relatives, parties, dances, nightclubs or bars

Movies/Entertainment: Movies, theatre, sports events, fairs, concerts, museums, etc.

Other Active Leisure: Walking, pleasure trips, hobbies, painting, playing music, etc.

4. Time Stress Questionnaire

As part of the 1992 General Social Survey, Statistics Canada asked respondents 10 questions concerning their perceptions of time. Positive responses to seven out of the ten questions were defined as “high” levels of time stress, which are often precursors to health problems; and four out of ten positive responses indicated a “moderate” level of time stress. The results were graded according to age, gender, marital status, and presence of children, in order to assess which demographic groups suffered the highest levels of time stress.

It would be interesting to see how Kings County residents compare with the Canadian averages here. Do residents here live a more relaxed lifestyle, or are they as time crunched as other Canadians?

The 10 questions are:

1. Do you plan to slow down in the coming year?
2. Do you consider yourself a workaholic?
3. When you need more time, do you tend to cut back on your sleep?
4. At the end of the day, do you often feel that you have not accomplished what you had set out to do?
5. Do you worry that you don't spend enough time with your family or friends?
6. Do you feel that you're constantly under stress trying to accomplish more than you can handle?
7. Do you feel trapped in a daily routine?
8. Do you feel that you just don't have time for fun anymore?
9. Do you often feel under stress when you don't have enough time?
10. Would you like to spend more time alone?

5. Other household questions.

Needless to say, we can add any other questions of interest concerning household life to the survey. It would be interesting, for example, to find out about use of paid child care, including hours of paid child care per week, percentage of income spent on child care, etc.

Some time use surveys also ask where the particular activity took place and with whom? Some ask the respondent to rate the “enjoyment” level of each activity. The 1986 General Social Survey also asked respondents if they were “very happy”, “somewhat happy”, “somewhat unhappy” or “very unhappy”. And it asked them to rate whether they were somewhat or very satisfied or dissatisfied with various aspects of their lives: -- their health, jobs, free time, finances, housing, friendships, living partner or single status, family relationships, and self-esteem, as well as with their lives as a whole.

6. *Voluntary Activity and Community Service*

There have been two Statistics Canada national surveys on volunteer activity, one in 1987 and the second in 1997. From these extensive surveys, a few important questions may be taken to assess, on an annual basis, the extent, type and nature of voluntary activity in Kings County and the strength of community-based agencies. We should bear in mind that community service makes a direct contribution to the standard of living and quality of life in the county.

Understanding voluntary work better, and measuring its strength regularly, will accord the voluntary sector the recognition it deserves and help ensure that it has the resources and support to accomplish its important work. Here are a few examples of the issues and types of questions asked in the two national surveys, from which we may wish to select a few:

1. Respondents were asked about the *type* of voluntary activity in which they engaged: fund-raising; member of board or committee; providing information or education; organizing or supervising events or activities; office and administrative work; sports coaching; providing care and support; participating in self-help mutual aid group (like AA); collecting, serving or delivering food; maintaining or repairing facilities; first aid or fire-fighting; protecting the environment or wildlife; or any other activity.
2. They were also asked about the types of organizations they worked for.
3. “Of all the things you did in the past year, how important were your volunteer activities to you? Were they very important, important, not very important, not important at all?”
4. Respondents were also asked about *informal* voluntary work, in which they provided help on their own, not through any organization: Did they give unpaid help to people outside their own household by visiting the sick or elderly, helping others with housework or child care, cleaning the environment, etc.? They were asked specifically whom they helped.
5. Respondents were asked whether they considered themselves very religious, fairly religious, or not very religious, and they were also asked about their income level.
6. Respondents were given 15 choices to assess their motivation in volunteering, and asked to assess these 15 types of motivation as “very important”, “somewhat important”, “not too important”, and “not at all important”. The motivations listed included: “meeting people, companionship”; “fulfilling religious obligations or beliefs”; “learning new skills”; “helping others”; “doing something you like to do”; “helping to promote your heritage”; improving your job opportunities”; “benefiting your children or your families”; “doing something with your spare time”; “having influence in community affairs or political life”, and so on.
7. “Has your work as a volunteer given you any new skills that you can apply directly to your job?” (Alternatives listed include: fundraising skills; technical/office skills; organizational/managerial skills; knowledge; communication skills; interpersonal skills).

8. “Overall, how satisfying has your experience as a volunteer been? Very satisfying. Somewhat satisfying. Neither satisfying nor dissatisfying. Somewhat dissatisfying. Very dissatisfying.”
9. Volunteers were asked if they would have given more hours to the volunteer organizations they served. If not, they were given a choice of reasons – time pressures; disagreements with the organization and staff; couldn’t afford expenses; lack of interest; and so on.
10. Since (date one month or one week previously), what were your total un-reimbursed out-of-pocket expenses that you had to put out in order to volunteer, including transportation, child care, meals, uniforms or equipment, etc.?
11. The time use survey described above should provide information on the actual hours spent volunteering. But it is worth comparing the diary information with respondents’ answer in a questionnaire. Therefore, respondents should be asked how many hours they spent volunteering during the last week. Preferably, they should be asked separately about the hours spent on formal (through an organization) and informal (on their own) voluntary work.

GPI Atlantic assessed the economic value of voluntary work in Nova Scotia according to what it would cost to replace existing voluntary work for pay. In other words, what would the hourly wage be to perform the equivalent work done by volunteers? The average for the province has been assessed at \$13.02 an hour (in 1997 dollars), using Statistics Canada’s “replacement cost” value for voluntary work in the province.

Using this same formula, and multiplying the number of volunteer hours by \$13.02, Kings County could assess the economic value of voluntary work in the county in comparison with other paid work. It will also be possible to assess the number of “job equivalents” provided by voluntary work and community service. This simple exercise does help raise the profile of a sector that is invisible in the conventional measures of progress, and accords recognition to the vital work performed.

The level of voluntary service can also be assessed in relation to existing levels of government social services. If there are cuts in the latter over time, the time use survey can help assess whether the voluntary sector in Kings County has been able to compensate for these cuts or not.

6) *Employment Data*

As discussed in Section 3, we are interested in assessing the quality and sustainability of jobs in Kings County as well as the overall number of jobs created. Thus we will need information on job security; proportion of jobs with different types of benefits; and trends in temporary, contract, seasonal, and on-call work as opposed to “permanent” work.

We will also wish to assess trends in hours worked, by asking respondents whether they are working under 20 hours a week, 20-29 hours, 30-34 hours, 35-39 hours, 40 hours, 41-49 hours, or more than 50 hours a week. Survey questions will be necessary to assess the degree to which

Kings County residents are willing to redistribute long work hours, including overtime, in order to create more jobs. What percentage of residents are willing to work less hours for less pay, for example, and if so, for how much less pay? What is the size of the income-time trade-off they are willing to accept? How do responses vary by income group, sex and marital status, and hours presently worked?

Unfortunately Statistics Canada's Labour Force Survey does not publish county-level employment data, but is issued only for larger economic regions. Before constructing any specific Kings County survey, it should be investigated whether a custom tabulation for county-level Labour Force Survey data is feasible; what it would cost, and whether the numbers surveyed actually provide meaningful information at this local level. I have not had an opportunity to undertake this investigation.

If we cannot obtain existing meaningful county-level data from the LFS, then we shall have to ask some of the same questions in our own survey. For example, under-employment levels are assessed by asking part-time workers about the reasons they are working part-time. If they cite business conditions, or their inability to find full-time work, they are labeled "involuntary" part-timers. If they are working part-time for personal, family or educational reasons, they are called "voluntary" part-timers. Only the former are considered "under-employed" if they have been looking for full-time work.

Included in the employment data should be information on commuting, especially: average distances traveled to work; average commuting times; mode of transportation; percentage of households with more than one vehicle; percentage of total household travel accounted for by commuting. This information is important not only from the employment, cost and time use perspectives, but also for environmental reasons.

If Kings County were interested, for example, in taking measures to reduce greenhouse gas emissions from transportation, and to embrace possible sustainable transportation options, this information would be most useful. What would it cost, for example, and what behaviour changes would be required to reduce vehicle miles traveled by 10% in the county?

Again, these questions are not normally raised in our conventional measures of progress, because the GDP counts more automobile travel and longer commutes as economic gain. The more money that is spent on fuel, repairs, roadwork, vehicle ownership and maintenance, and so on, the more the GDP goes up, which is considered a contribution to prosperity and well-being. By contrast, the GPI focus on *sustainable* development internalizes environmental costs, and counts commuting expenses as costs rather than gains. Unlike the GDP, the GPI goes up when commuting costs go down.

6) *Victimization Survey*

The Solicitor-General of Canada has eloquently stated the reasons for measuring the economic costs of crime:

Information on the cost of crime can serve several purposes:

- a) Cost data allow a complementary and, in some cases, a particularly meaningful way of quantifying the amount of crime in society;*
- b) By reference to such concepts as gross national product or constant dollars, cost data allow standardized historical comparisons of crime and the response to crime;*
- c) Cost data allow important comparisons between criminal justice and other basic social expenditures; and*
- d) Cost data allow comparative cost-benefit analyses to help evaluate social programs and contribute to social policy development....*

Until we link social issues to some economic cost concept, until we know more about the cost of crime to society, to victims, and indeed to criminals, we will be unable to answer our ethical questions to our own satisfaction. That is, ethical choices about crime demand knowledge about the consequences of crime.

Obviously, questions of efficiency demand cost information. But so too do the more fundamental questions about whether social programs and policies are working. If we think they are “working,” we still want to know at what price. When we wish to choose among beneficial programs, we will also want to know their relative cost.

Social policy and program development would benefit from knowledge about which crimes cause the greatest losses and which the least, and which groups or categories of people suffer the most heavily.²

From the point of view of the Genuine Progress Index, there are additional reasons to measure the cost of crime. Firstly, spending on prisons, police, courts, burglar alarms and security guards is currently measured as economic growth and as a contribution to our economic prosperity, thus sending misleading signals to policy makers. By contrast, the GPI regards these expenditures as costs and views savings from crime reduction as potential investments in more productive activities. For this reason it would be interesting to find out how much crime is actually costing Kings County residents annually.

Further, such an assessment of crime costs can lead to the consideration of cost-effective policy alternatives to reduce the crime rate. It can identify parts of the county where investments in crime prevention may be most productive. As a whole, the indicator can measure the county’s progress towards greater peace and security, a vital social asset that brings many direct and indirect social and economic benefits.

² Solicitor General Canada. *Canadian Urban Victimization Survey, Bulletin 5: Cost of Crime to Victims. 1985, Page 1.*

Needless to say, we should begin the investigation of whether residents of Kings County are safer and more secure than they were, and whether our society is more or less peaceful than it was, by examining trends in crime statistics as reported in official Statistics Canada, Justice Department, RCMP and municipal police statistics. However, there are serious limitations to the official statistics. For example, they do not reflect unreported crimes nor trends in crime reporting rates over time. They also do not provide information on victim losses and thus do not allow assessments of the economic costs of crime.

For these purposes, the most useful tool is a victimization survey. These surveys, for which data are not available at the county level, are conducted infrequently – once every five years at the national level, compared to biannually in the United Kingdom and annually in the United States. For this reason, we should include in our Kings County survey some questions asking residents whether they have been crime victims and finding out information about their actual losses.

Colin Dodds has been the principal researcher for the GPI Costs of Crime module, and I have asked him to examine the major victimization surveys on record, both from this country and elsewhere, and to extract a sampling of questions that might be appropriate for the Kings County GPI project. The following give an indication of the type of questions that can be asked. Again, we can decide here on what is most appropriate, and add questions that have particular relevance to local conditions. There are separate sets of questions for individuals and for businesses:

a) Personal Victimization

- Have you been the victim of a crime in the last year? (If “yes”, ask following questions):
How many times?
- If so, did you report the incident(s) to police?
- Were you the victim of any of the following crimes? (Please specify): theft, motor vehicle theft, robbery, fraud, break and enter, vandalism, sexual assault, assault, other (please specify). Also indicate which were reported and which unreported.
- Was property or money lost during the incident(s)?
- If so, what was the value of the property or money taken during each incident?
- Were you compensated for the loss: by insurance; by other means (specify)? If so, to what extent?
- Was the property or money recovered? All? What portion (value)?
- Did the incident result in any change to your daily routine? Specify:
 - Time off work? # days lost?
 - Days in bed? # days lost?
 - Cancellation of plans/activities? #days lost?
- For each incident, please give details of direct post-incident expenses (costs incurred from personal funds):
 - Doctor bills?
 - Medication?
 - Counselling?
 - Other (please specify)?
- Were there any other direct or indirect costs suffered due to the crime?
 - moving house, job loss, divorce, etc. (please specify cost estimate)

For all respondents, including non-victims:

- Were you a witness in a criminal court case? If so, how many days in court?
- Were you a juror in a criminal court case? If so, how many days in court?
- In either case, what costs did you incur?
- How much did you spend in total on legal fees and expenses in the last year?
- Have you installed locks, burglar alarms, security fence, bought a guard dog, or any other security device:
 - If so, please specify type and cost of purchase and installation.

b) Business Victimization

- Has your business been victimized by crime in the last 12 months?
- If so, how many times?
- What time of day did the incident(s) occur?
- How many of these incidents were reported to police?
- Please specify the loss per incident?
- Please estimate the annual value of stock lost to pilfering, employee theft, shoplifting.
- Were you compensated for your loss – by insurance; other means (please specify)?
 - If so, what percentage of the loss was reimbursed?
- Was lost property or money recovered? All? What percentage (value)?
- Are your business hours affected by the threat of victimization?
- In the last 12 months, did you: (Where applicable, specify annual cost):
 - Install electronic surveillance equipment?
 - Install other form of security system?
 - Install locks, bars or shutters?
 - Employ security staff?
- Please estimate your total annual business expenditures on crime prevention and detection.

7) Soils and Agriculture

I have asked Jennifer Scott, who is presently completing the GPI provincial soils and agriculture accounts, to select the indicators she considers most applicable for the Kings County study. Following are her suggestions and recommendations, in her own words. As you will see, she assesses sustainability in ecological, economic and social terms. We might begin to look over her suggestions at the March 31 meeting. But I suggest that perhaps a separate session with stakeholders on this particular issue would be appropriate early in the implementation phase. As this is not my area of expertise, I would like to have Jennifer come to Kings County for such a meeting.

From Jennifer Scott – prepared for March 31 meeting, Kentville:

Potential Indicators for Assessment of King's County Genuine Progress in Agriculture.

I have picked out what I think are the most important indicators from a very long list. However, I have also included the entire list of indicators at the end for reference. You may want to try to gather information on more indicators than the ones I've outlined below.

Section 1: Resource / Ecological Capacity

1.1. Land capacity. Find out how much land (class 2 & 3) is available for farming in the County. Is it increasing or decreasing over time? Because new good farmland cannot generally be "created" after it has been taken out of agriculture, the amount of good land available has to be assigned a high value.

Information source: Statistics Canada has this information. This information may have already been compiled by Federation of Agriculture reps or other advocates.

1.2. Soil quality / productivity. There are two related indicators I would suggest looking at: soil organic matter, and % of agricultural land in sod (= hay, pasture, or other soil-building perennial).

Soil organic matter is reported for every soil sample sent in for analysis at the Harlow Institute in Truro. As far as I know, a copy of every soil test result is sent to the ag rep where the farmer is located. Check with the local ag rep. Ideally an average figure for soils in the county over time would be best. Make sure to divide the results between annual crops and perennial crops. Also, the method of measuring soil organic matter changed in 1994 I believe -- make sure to take this into account.

Percent of agricultural land in sod. This is an indication of soil-building capacity. The information is available from Statistics Canada, or you could include it in a farmer survey. Find out what percentage of the sod has manure added to it. Sod + manure = best way to increase soil organic matter. [Dykelands are a different matter altogether]

1.3. Livestock quality / productivity.

1.4. Water quality. Find out what percentage of households on wells have water that is considered safe for drinking. This % should be assessed over time. Information source: if you can assure that people will be honest, survey results may be best. Actual water tests are really the only reliable way to know. The tests should be done in spring or fall, and should include bacterial contamination as well as nitrate, conductivity, and pesticide residues (which are very expensive). The Department of Environment or Health may be helpful as information sources. There was a study done in 1990, but it was not comprehensive. CARP may also have figures on river water quality from King's County that could be used.

1.5. Environmental quality. It would be good to do a cost/benefit analysis of biocide use. Biocides include the use of herbicides, pesticides, and fungicides/fumigants. As a ROUGH guide, organic food production tends to have an average yield of 20% below conventional yields. Another ROUGH figure is that NS growers use biocides on approximately 20% of their production (it is likely somewhat higher in King's Co.). Therefore, calculate 20% of 20% of the total value of agricultural production in the County (4% of the total), and compare that figure to the total amount used to purchase biocides in the county (plus an estimate of external costs associated with the biocides such as regulation, disposal of containers, incremental health costs, water quality costs, loss of beneficial organisms and other wildlife, and the odd spill or storage accident -- a very conservative estimate would be to double the purchase price).

You could ask farmers on the your survey (1) how much they spend on all biocides [defined clearly] in production and storage, and (2) the percentage of their production for which they use biocides. Or you could estimate the amount from Statistics Canada figures. Statistics Canada figures for these items tend to be under-reported. Also, keep in mind that cosmetic and home use of biocides for lawns, parks and golf-courses can be much more concentrated than on farms.

The second important indicator for environmental quality would be % of rural areas (or farms) that have natural habitat. This would include woodlots with a variety of trees in them, native grass, wetlands etc. Source: your survey. The Blomidon naturalist society may have figures on this (??).

1.6. Degree of waste. I would concentrate on two indicators here: amount of clean material diverted from landfills for productive use on farms, and energy use efficiency. The first could be estimated from your municipal waste diversion staff. These would include items such as leaves or table scraps that go back to producing food.

The second indicator is much more complex, but extremely interesting. Include on your survey a question which asks farmers how much gas, diesel, propane, and electricity they use. This can be converted to calories of energy. Then ask them what they produce, and how much. This result can also be converted to calories (reduce this amount by about 5% to account for waste). If we use more energy in the production of food than the energy value of the food itself, we have to ask ourselves if indeed our agriculture is efficient¹. The non-renewable energy sources have a high value because they, like good farmland are finite.

Section 2: Economic Capacity

2.1. Investment. The indicator I would choose here is return on investment. Ask farmers how much they have invested in their farm. This would include the amount of money that is tied up in the operation (cost of land, buildings, equipment, and annual operating costs including interest). Then ask what their net income was on their tax statement. Net income divided by investment is the return on investment. If it is less than the interest on a RRSP, people will be less willing to farm in the long run. These kinds of figures are available on a provincial level at the Department of Agriculture, but not on a county level (as far as I know). The Statistics Canada

agricultural census might have this information on a county level. Look closely at their definitions.

Another aspect of investment to pursue would be amount of money a farmer spends in NS, and in King's County. The question on the survey might be: What portion of your farm expenses are for products and services purchased (a) in King's County, (b) outside of the county but inside NS, and (c) outside NS.

2.2. Income. In addition to the net farm income figure above, it would be informative to look at three other indicators: (1) variability of net farm income, (2) % of farm income not derived from farm production, and (3) % of retail food price that goes to the farmer.

(1) Ask for net farm income over the last ___ years (whatever you feel is reasonable). If the standard deviation of income is high, that does not indicate progress. If it is low, that is a better indication. It would be informative to separate this kind of information by type of farm operation. (I would suspect the poultry and dairy farmers to have less income fluctuation than the hog producers). This information is also available from Statistics Canada censuses.

(2) These figures are available from Agriculture Canada/Statistics Canada on a provincial level, but I'm not sure if it's available on a county level. Therefore, on your survey, ask farmers to break down the household income into the following categories:

- amount of gross and net household income derived from farm production
 - amount of gross household income derived from subsidies/grants
 - amount of gross and net household income derived from other businesses or off-farm work.
- (Gross = all income before deducting expenses, net = income after deducting expenses including depreciation and interest on loans)

(3) Ask what % of the retail price of the farm product ends up in the farmer's net income. For example, farmer A sells 10,000 lbs of beef for 30 cents a lb (after deducting expenses), or s/he earns \$3,000.00 net from selling that beef. The average retail price per lb for that farmer's beef is 2.50. Therefore, 12% of retail price ends up in the farmer's pocket. Another example reported in Rural Delivery: George Foote has an orchard and apiary between Kentville and Berwick. He gets 15 cents/lb for wholesale apples that are sold retail for \$1/lb. Therefore he gets 15%, but you'd have to find out what his NET earning is to get the real percentage -- which might be only 5 or 10%. If he sold apples on the farm for .75 cents/lb, he might get closer to 70 or 80% of the price. Strive for average prices so you don't get mired in complexity. This information is not available from Statistics Canada.

2.3. Multifactor productivity. This is measured by dividing total value of farm products (farm receipts) by (total capital value + total labour value). [This is a bit difficult because some farmers don't pay themselves or family members a wage]. It is easy to find information for total capital value (in 1986 it was 239.5 million for King's County's 711 farms = 337 thousand/farm), and total value of farm products in Statistics Canada agricultural censuses. I'm not sure yet how to get an accurate labour figure. This might have to come from your survey.

2.4 Income/debt ratio. Divide average net income by average farm debt. Available from Statistics Canada census. I'm not sure if it's available at the county level.

3. Social capacity

3.1 Rural infrastructure. The key indicator is number of farms over time. If you use Statistics Canada information, watch the definition changes. Another important indicator is support businesses: you would probably have access to figures showing how many businesses support the farm sector, and their gross income, as well.

3.2 Resilience. All of these indicators are hard to measure easily -- although very important. Perhaps for now it would be sufficient to just look at variability of farm income in 2.2 above.

3.3 Concentration of ownership. Size distribution of farms over time -- an easy set of figures to get from Stats Can. Size distribution of food retail outlets over time. This might be obtained from the RDA staff (?). Size here refers to amount of sales.

3.4 Employment. This is an area not well covered by Statistics Canada. Their categories are too general. Try to find out how many people, over time, have been employed in the agricultural sector (on farm and in farm-related businesses). Another indicator is net income of people working on farm (including owners)/ hours worked. There is no solid measurement for this. It might have to be a survey question. This would be very important information to gather. A third indicator would be degree of satisfaction with work. All farm workers, from owners to casual labourers would have to be asked "Is this work interesting?, Do you like it?, Would you choose this type of work for your kids?"

3.5 Agri-Culture. A difficult item to measure, but one of the most important aspects of farming according to some. There could be questions on your survey of farmers like: "How do you rate a farmer's status in society in King's Co.? (e.g. from 1-10)", "Are there adequate learning opportunities for young people in agriculture?", and "What keeps you farming?" -- and see how many farmers write in cultural comments like "I like the way of life" or "It's a great way to raise a family" etc.

Final note: remember on the farmer survey to ask what type of farm operation the farmer is running. They should include main products as well as all others. This way, the information can be divided up by farm type. Also, any subjective questions should have some numerical values to choose from. E.g. "In your opinion, how would farmers' status in King's County be rated from 10, very high, to 1 very low." or "How much do you like your work? Please rate from 10, like it a lot, to 1, hate it."

(Appendix: Following is the complete set of indicators developed by Jennifer Scott for the GPI soils and agriculture accounts. You may find other indicators of interest here that are not included above)

Indicators for Genuine Progress in Agriculture -- Working Copy
Table 1. Resource/Ecological Capacity

Criterion	Indicator	Link To:
1.1 Resource capacity	A. available farmland (class, arable, grazing, mixed)	1.2 E
	B. conversion of land into and out of farming transportation (class, arable, grazing, mixed)	
	C. physical land flexibility ratio	3.2 H
Summary balance: amount and value of assets - amount and value of losses		
1.2 Soil quality/ productivity	A. soil pH	1.2 N
	B. soil organic matter or C (stock/flow)	1.6 E
	C. soil fertility status or soil N (stock/flow)	1.6 D
	D. crop insurability	
	E. % of land in monoculture, rotation, perennial (land use)	1.1 A, 1.2 B
	F. soil aeration/drainage/compaction/structure (aggregate stability)	1.6 D, 1.2 E
	G. soil buildup/erosion	1.2 E, 1.2 B
	• soil cover (H)	1.2 E
	• soil depth (I)	
	• soil conservation practices (J) (e.g. cover crops, forage etc)	1.2 E
• effect on productivity (K)	1.2 Q	
L. soil biological activity		
S. soil CEC/electrical conductivity/exchangeable ions	1.2 B, 1.2 C	
T. soil contamination / retirement	1.4 A	
Summary balance: amount and value of assets - amount and value of losses		
1.8 Crop quality/ productivity	A. crop yield and variability of yield	
	M. change in use of fertilizer over time	1.2 N
	N. fertilizer use efficiency (manure and synthetic)	1.4 F
	O. other input use efficiency (including energy, biocides)	1.2 B, 1.7 F
	P. crop stress tolerance, compete with weeds, pests, disease resistance (in general resilience)	1.5
	Q. crop quality x yield (nutrition/storage/final value/safety/GMOs)	
	R. quality of livestock health/carcass quality x yield	1.3
Summary balance: amount and value of assets - amount and value of losses		

1.3 Livestock quality	A. production per input (input use efficiency)	1.2 O
	B. production per acre	
	C. production per animal	
	D. rate of loss / life expectancy	
	E. health care costs (antibiotic use, scrapie slaughter etc)	
	F. ability to withstand stress (resilience)	
	G. balance between production and use of livestock feed	2.2 J
	H. livestock product quality x yield (safety)	1.2 Q
Summary balance: amount and value of assets - amount and value of losses		
1.4 Water quality acc't	A. contamination	1.4 F, 1.2 T
	B. sediment, suspended solids/turbidity in lakes, rivers, streams	1.2 G, fish forest acc't
	C. amplitude of water availability	
	D. water availability/quality (including drinking water)	
	E. availability of water suitable for livestock / irrigation	
	F. nutrient input e.g. P, N (freshwater and marine)	1.2 N, fish
	G. wetlands and other natural water purification systems (trees)	1.6 I
Summary balance: amount and value of assets - amount and value of losses		
1.5 Genetic resource quality/eco- resilience	A. species diversity on farms (& resilience) [livestock/crop interaction]	
	B. cultivar diversity	
	C. breed diversity	
Summary balance: amount and value of assets - amount and value of losses → 1.6 J, 1.2 P&Q		
1.6 Environmental quality	A. use of biocides (cost/benefit) and efficiency of use	1.2 O, 1.6 H, 1.4 A, 1.2 T
	B. use of biological controls	
	C. air pollution & greenhouse gas storage - emission	
	• nitrous oxides	
	• carbon dioxide	1.2 B
	• methane	
	• others	
	D. pest damage / pollinator & predator benefits	1.6 A
	E. natural habitat on farms (woodlots, shelterbelts, native grass, wetlands)	1.2 G, Forest account.
	F. biodiversity (including soil micro-orgs)	1.5, 1.6 I
G. degradation of other areas for agricultural inputs & substitution efficiency (e.g. peat bog mining)		
H. % of organic farms (now in NS, ~.5%, Canada, 1%)		
Summary balance: amount and value of assets - amount and value of losses		

1.7 Resource stock (waste or recovery?)	A. amount of material diverted from landfills (clean organic matter/carbon)	1.6 E
	B. waste	
	C. renewable (nutrients, carbon, water)	1.4F, 1.6E, 1.4D,1.2C
	D. non-renewable (plastic, others)	
	E. level of recycling	
	F. energy use efficiency (input/output)	1.2 O
Summary balance: amount and value of assets - amount and value of losses		

Summary balance, natural resource (used for the Canadian System of Environmental and Resource Accounts within the National Accounts by Statistics Canada, Econnections):

Natural resource assets, opening balance

Resource production

Resource use

Waste consumption

Waste output

Changes in natural resource assets

Natural Resource assets, closing balance

Table 2. Economic Progress (compare with Agriculture Canada’s indicators of sustainability)

Criterion	Indicator	Link To:
2.1 Investment	A. Department of Agriculture budget	Table 4
	B. Agriculture Canada budget (N.S. portion)	Table 4
	C. Farm investment (multiplier)	
	D. locally spent E. out of province	2.2 F
	F. Total gross investment	
	G. Return on investment	
	2.2 Income / Expense	A. net farm income / variability of farm income
B. farming income as a % of total farm income		
C. subsidies to farmers/others		
D. subsidies as a % of net farm income (economic dependency ratio)		
E. Costs (including capital) as a % of farm income And farm income as a % of receipts (around 10% in NS)		
F. Farmgate price of food and % of price of food that goes to farmer		1.2 Q, 1.3 H, 3.2 J
G. use of equipment and energy as a % of income		1.2 N, 1.2 O
H. Creation of jobs/income		3.1 D
I. balance between production and use of livestock feed		1.3 G
J. Tally of true “benefits/costs” from tables 1-4, and compared with income (income/cost ratio)		

2.3 Productivity (multifactor)	A. output/input (capital and labour) [use figures from 2.2 for this]	1.7 F, 1.2 O
2.4 Equity (in terms of assets)	A. total value of farms B. total value of other assets (including know-how and other social assets from Table 3) C. improvement/depreciation (depletion) of resource base (from table 1)	
2.5 Debt	A. farm debt B. debt written off C. level of debt per farm as an index of well-being D. Income/debt ratio	Table 3 Soc.
2.6 Effect of trade	feeds into 2.2A: effect of trade policies on net farm income	2.2 A

(P.S. No net worth in fisheries -- capital not used to capacity. -- 2.2 F)

For a rough idea of progress, add the following items

2.1D/F --	Total Gross investment within the province:
2.2A --	Total Net income (profit):
2.2E --	Total Net Benefits/Costs (from all tables):

For increasing levels of refinement, possibly multiply the more complete efficiency figures by the amount above.

Another way to present the information might be an index figure for each separate section, like 2.5C, level of debt per farm as an index of well-being.

Also, thresholds will have to be established (similar to Tony Charles' "minimum sustainability is achieved if.."). For example, if investment in agriculture results in more than, say, 20% of that money flowing out of the province, then we have to count that as a "cost". Or, in a similar vein, if NS citizens are spending more than 25% of their food dollar on imported items, our 'progress' is in question. Or, if input subsidies account for more than 20% of net farm income, again, this will be a cost. What is a 'good' level of debt to have? 0%, 10%? What is a reasonable way to set the thresholds?

Table 3: Social

Criterion	Indicator	Link To:
2.1 Rural infrastructure	A -# of farms (# of farms lost/yr) B -average age of farmers and age 'spread' knowledge/longevity C -diversity of farm operations a range of markets D -employment opportunities (on farm, rural areas) E -proximity and # of support businesses F -proximity of farming neighbours G -proximity and # of social infrastructure (e.g. schools, hospitals)	3.5 3.2 figures from 3.6, 2.2 J

3.2 Resilience concentration of (this might go to ownership table ???)	<ul style="list-style-type: none"> A -range of markets (including agri-tourism, organic etc) B local C out of province (% of cash receipts from exports) D -security of markets E -% farm product sold within province F -% of food consumed produced locally G -avg. # of kms food has to travel to consumer pollution/road H degree of diversification/specialization on farms I -degree of specialization/diversification within the province J - food security index 	<p>3.3 D</p> <p>(calculate costs)</p> <p>1.2 Q, 1.3 H, 3.3 D. 2.2 A, etc.</p>
3.3 Equity (fairness)	<ul style="list-style-type: none"> A -distribution of income B -size distribution of farms C -degree of concentration of ownership -farms D - degree of concentration of ownership -processors, distributors, retailers 	
3.4 Health (Stress)	<ul style="list-style-type: none"> A -off farm income (from table 2) B -hours worked off-farm/on-farm C -income /-hours worked on-farm D -health of farm families / accidents E -domestic violence F - farm foreclosures G - status of farmers in community, society 	<p>3.1A, 2.5</p>
3.5 Knowledge base & longevity	<ul style="list-style-type: none"> A -opportunities for learning B -apprenticeships C - farm start-ups D - farm culture 	
3.6 Employment (operator and hired labour)	<ul style="list-style-type: none"> A [3.1 D] employment opportunities (on farm, in rural areas) B [3.4 C] income / hours worked C free time / leisure / rest D degree of drudgery (repetitive tasks, monotonous tasks, hours worked per day above 9 or 10, etc) E degree of satisfaction with work (is it interesting, do you like it, would you choose this type of work for your kids?, what would you change?) 	<p>2.2 A</p>

Feeds into 3.1 D

5. Sample Size and Research Methods

1. *General Recommendations:*

Four general recommendations seem essential to the success of this project:

- 1) As stated in the purposes in section 1, the *process* of collecting data is at least as important as the product. The entire exercise should be seen as a stimulating and provocative educational tool, that enables Kings County residents to learn about themselves and their neighbours, to interact constructively in the process of gathering information, and to mobilize their resources. The research should be an enjoyable process that excites curiosity.

If the process stimulates a debate on the goals and objectives of community development in the County; if it leads residents to examine the legacy they are leaving their children; if they contemplate and discuss more deeply the kind of society they want to create in the area in the new millennium, then the project will have achieved its most important goal – arguably more important than the statistical results themselves.

- 2) It seems critical to involve educational institutions in the project. The assumption here is that the data gathering and analysis will be a voluntary effort (though it will require a paid coordinator). If particular teachers can be found whose imagination is fired by the project, parts of the project would be make outstanding classroom learning experiences. Students can learn powerful research skills that will stand them well in their future careers; they can learn statistical and computer skills; how to analyze data and construct tables, graphs and charts; they can learn about agriculture and natural resources, and about each of the content areas of the study; and most importantly, they can learn about their own community and their own roots.

As a teacher, I know from experience how much classroom learning can be abstract and apparently distant from the students' experience. Without sacrificing anything in the standard curriculum, participation in this project can bring some of that learning down to earth, and relate it directly to vital local and social issues of current concern. The very *process* of administering surveys and questionnaires, and conducting interviews, can enable students to interact in a friendly, intimate and constructive way with members of their own community with whom they might otherwise not have contact. They can hone their interpersonal, communication and interview skills.

It would seem possible to include senior high school students in the process; as well as particular community college and Acadia University classes. There is no need for “mass participation” here. But particular classes led by certain inspired teachers may wish to play a role. In addition, the computer laboratories and facilities at these educational institutions could be used , with the agreement of school administrators, to record, process and analyze data.

Presentations on the project to county school board members and teaching staff would be a good step to take this spring, and well before the end of the academic year. Ideally, the curriculum, and the project's relationship with existing learning materials, could be developed during the summer months, and the project would be in place and ready to go when schools resume in September, 1999.

It should be understood that this method proposed here is very much slower than hiring professional survey consultants to carry out the study. There are such firms and they could administer the project expeditiously, with the results complete within a few months, and certainly before the end of the calendar year. But in terms of cost savings, for the enormous benefits that derive from the project being carried out directly by the community itself, and for the educational purposes described in (1) above, it would seem wise not to take the professional route, but to take a longer, slower and more relaxed route by emphasizing the learning aspects of the project.

- 3) Particularly if we adopt the path recommended above, and because this is an experimental pilot project in its design, we should look forward to and be prepared for many mistakes. We are not creating a final, fixed form for our new measures of progress. They should be seen as continually subject to revision, improvement and refinement over time.

It must also be recognized that our materialist, market-based measures of progress have been with us for decades, and have been particularly dominant since the Second World War when the GDP began to be used. While the shortcomings of this system as a measure of genuine progress are now widely acknowledged and recognized, the creation of a new, more comprehensive index of progress and sustainable development does not happen overnight.

Kings County has been courageous and generous enough to step forward as a guinea pig in experimenting with the use of new measures at the community level. But the experimental and provisional nature of what we are doing should not be forgotten. In this process it is therefore essential that aspirations and goals remain as high as possible, while expectations of outcomes remain extremely humble and modest.

Personally, I am delighted that Kings County has willingly and enthusiastically taken the lead in this process of developing new measures of genuine progress, and I hope that benefit will accrue to the county in years to come, as representatives of other jurisdictions come to the area to study the successes and failures of our experiment. Hopefully, as a result, they will do a better job than we did. We also can learn from our own mistakes and gradually build a set of measures of progress that, in Silver Donald Cameron's recent article on the GPI in *The Globe and Mail*, expresses the type of future we genuinely wish to inhabit.

- 4) We should definitely avail ourselves of some expert advice on survey methods. In any case, interviewers will need to be trained before they go into the field. This advice can either come from a willing academic expert, perhaps at Acadia University, or by bringing in a Statistics Canada trainer. The latter option would cost us some money for a short course. I have consulted on this question with the Assistant Director of Statistics Canada's regional office,

and he informs me that there is also a school course on the subject. If we can find a local expert willing to help in this area, so much the better.

2. Sample Size and “Cluster Sampling”

The original plan, as discussed at the February 24 meeting, was to examine two communities with different characteristics within Kings County, each of about 10,000 – 12,000 population, in the hope that this would lead to some interesting comparative analyses. However, since that meeting, there has been interest expressed both in examining Kings County as a whole, and also in surveying the total population of a very small area.

Using the entire county as our population group is not a real problem in terms of sample size required (see below), but it may pose some difficulties in terms of travel, especially if high school students are to administer the questionnaires and surveys. It would be good to discuss the pros and cons of this issue at the March 31 meeting. I am open to whatever the community decides on this.

The accuracy of the results we obtain from our data is directly related to the size of the population sample surveyed, and the amount of confidence placed in research results generally goes up as the size of the sample goes up. Two basic factors determine the size of the sample we need to gather the data for our project:

- a) the confidence level we expect in the results; and
 - b) the margin of error.
- a) We can never be 100% certain that sample results accurately reflect the opinions of the total population, had they all been surveyed. The “confidence level” therefore refers to the risk of being wrong. When we hear that the results of a survey are regarded as being accurate “95% of the time”, it is the confidence level to which reference is being made. For some types of research, in medicine for example where the risk of errors can have serious implications, a 99% confidence level and a very small margin of error are expected. But for our purposes, a 95% confidence level would be completely acceptable, and is the standard expectation for reputable studies.
- b) The “margin of error” refers to the range of values that can occur when we use a sample result to estimate a value for the population as a whole. For example, a 5% margin of error means that if 50% of the survey sample says “yes” to a question, then the result for the population as a whole would lie in a 5% range, that is between 37.5% and 42.5%.

The larger the sample size surveyed, the smaller the margin of error for the population as a whole. In other words, according to statistical tables, if our population is 25,000, and we survey only 100 people, then if 50% of the sample answers “yes” to a question, the percentage of the population saying “yes” could actually be as high as 62% and as low as 38%, a very wide margin of error. If we survey 250 people, and if 50% say “yes”, then the margin of error narrows considerably, but could still be as high as 57% saying “yes” or as low as 43%. If we survey 1,000 people among our 25,000 population, then the percentage

saying “yes” could be as high as 53% and as low as 47%, a much more acceptable margin of error.

Statistical tables exist to estimate the margin of error for different sample sizes and according to the percentage agreeing or disagreeing with a question. A standard text in the field that contains these tables is J.L. Fleiss, *Statistical Methods for Rates and Proportions*, Wiley-Interscience, Toronto, 1973.

Both the confidence level and the margin of error are a matter of choice. I would recommend that, in order for the results to have an acceptable level of precision, to be relatively safe in our conclusions, and to command respect from the research community, we combine a 95% confidence level with a 5% margin of error.

The following table (from Fleiss, above), gives the survey sample sizes necessary for populations of 1,000 or more for 95% confidence level with a 5% margin of error (plus or minus 2.5%):

<i>Size of total population</i>	<i>Sample size required</i>
1,000	278
2,000	322
5,000	356
10,000	370
25,000	378
Larger than 25,000	384

As can be seen, the sample size required does not increase proportionately as population goes up. As pointed out by members of our Kings County working group, collecting data for the whole county is not, statistically, a problem. The issue is one of logistics rather than sample size.

One possible solution to the logistical problem is to survey population *clusters* rather than to cover the whole geographical territory. Cluster sampling is an acceptable statistical method, frequently used when the population is spread out over the a large geographic area. However, the clusters chosen require prior analysis to ensure that they are demographically representative of the population as a whole. In other words, we need to be sure, for example, that we do not allow convenience to bias the results towards the views and experiences of town dwellers rather than farmers.

If we had the willing cooperation of three or four high school classes in particular parts of the county, we might choose the surrounding areas for the cluster samples. If we choose to go this route, I would definitely advise consulting with an expert to ascertain demographic representativeness and to ensure that the technique does not bias the results. Cluster sampling requires more expert advice than setting up basic stratified random samples spread among the whole population.

Bearing in mind preferences expressed to me since the February 24 meeting, the remarks above express my own recommendation on sample size at this stage:

- 1) that the entire population of Kings County be our population group;

- 2) that we employ cluster sampling methods dependent on where interest and cooperation from educational institutions is most forthcoming;
- 3) that we solicit expert advice in setting up our samples;
- 4) that we use at least the sample size recommended for a 95% confidence level and 5% margin of error.

3. Sample Size and Interpretation of Results

There is a further problem with sample size, which I have discussed with Dr. Harvey in the Economics Department at St. Mary's University. He cautions that references made to results being accurate within 3% more or less 95% of the time actually refer to the population as a whole. However, in interpreting results from the time use surveys he has designed, some of the most interesting issues refer to differences between the sexes, and between age groups, household types and different types of employment status. If we are to do so, however, we can no longer use the 95% confidence rate and 5% margin of error, because our sample size has dropped in direct proportion to the number of people within each of those socio-demographic categories.

For example, we might be confident in using our results to state that Kings County residents have, on average, a certain number of hours of free time per week, or spend a certain average number of hours with children (when averaged over the entire population). But if we confine our statements to parents, if we want to compare married to single parents, if we further want to compare employed single parents with unemployed single parents, or the characteristics of dual-earner and single-earner families, then we no longer have the same confidence level. We would need to adjust our sample size up accordingly if we want to make such comparisons with confidence.

The examples given are, of course, where the real interest lies. Simply stating averages for the population as a whole has a much more limited utility, particularly for policy purposes where the goal is to target programs where they will be the most useful and cost effective.

Dr. Harvey warns that there is very often confusion about this issue, even in reputable circles and most certainly in the press, when interpreting the results of a survey. The more detailed socio-demographic comparisons are often made on the false assumption that the same confidence level and margin of error still apply as in the population as a whole.

For these reasons, and dependent of course on the support that is forthcoming from schools and volunteers, I would strongly suggest that we increase our sample size as much as possible beyond the minimums established in the statistical tables for the population as a whole. Literally, the larger the sample size, the more meaningful and accurate will comparisons between different socio-demographic groups be, and the more useful will be the results for policy makers and planners.

Otherwise we will, strictly speaking, have to make continuous adjustments to our confidence level and margin of error, depending on our socio-demographic comparisons and the particular

results we are interpreting. In simple terms, we want to be sure that we have a statistically significant segment of each important socio-demographic group in which we are interested.

I would recommend that at least the following divisions be considered as vital in providing meaningful results and comparisons and that they be adequately represented in our sample size:

- gender: male and female;
- marital status: single and married;
- presence of children: none, one, two, three or more;
- age groups: 15-24, 25-44, 45-64, 65+ (to allow meaningful statements about youth, the elderly, etc.)
- employment status: full-time employed, part-time (less than 30 hours/week) employed; unemployed. Further details are desirable on those working 50 or more hours a week, and on the portion of part-timer work that is “involuntary”.
- Income levels: at least under \$20,000; \$20,000-\$29,999; \$30,000-\$39,999; \$40,000-\$49,999; \$50,000-\$59,000; \$60,000 plus.
- Educational level: less than high school graduation, high school graduation, post-secondary diploma, university degree.

The average population proportions within each category are easily accessible in the Census data. The critical issue is having statistically significant representative samples of each of these groups within our overall survey sample to allow for meaningful comparisons. For this reason, we should strive for the largest possible sample size.

4. Sampling Types: The Stratified Random Sample

There are a wide range of sampling methods. One of these, cluster sampling, has already been discussed above. Without going into the details of these methods here, the one that appears clearly appropriate for our purposes is known as a “stratified random” sample. Put simply, deliberate stratification of the survey sample allows for the representation of particular population segments or sub-groups as discussed on the previous page. A simple random sample could completely miss an entire sub-group. Again, expert advice is desirable in setting up stratified samples.

Once the stratified sample needs are determined, there are several alternative methods for ensuring that the samples are truly random, and not biased towards particular results. One method commonly employed is first to divide the total number of people on a population list (municipal or electoral rolls for example) by the desired sample size. For example, if our population count is 70,000, and we want to survey 1,800 people, the division produces 39. We would then pick every 39th person on the rolls, provided that the population list is not arranged according to certain characteristics that will bias the results.

Alternatively, researchers sometimes assign a number to each name on the population list, and then use standard Tables of Random Numbers to select the survey sample. The tables are set up, so that an entire column of numbers can be selected from the table with certainty that the outcomes will not be biased. The numbers from the selected table columns are then matched with

the assigned numbers on the population list. The alternative methods of random sample selection are straight-forward enough that expert advice is not really necessary for this step.

6. *Research Methods and Issues*

As mentioned in section 4, reliance will initially be placed on gathering whatever information is available from existing and published sources. Beyond that, some custom tabulations on Kings County data from the census forms and from the Small Areas Database will be requested from Statistics Canada. As noted, the costs are manageable and will be included in the implementation stage budget.

For the considerable information described in section 4 that is not readily available from existing databases, a combination of telephone work, interviews, and written questionnaires and time diaries will likely be necessary to generate the data needed. I would recommend that reliance be placed on written questionnaires and time diaries, which will have to be prepared, well laid out, coded, typed and duplicated during the summer months. In order to explain the time diaries, the purposes of the project, and to ensure cooperation in completing questionnaires, preliminary interviews with the sample population are highly desirable. Telephone contact will be required to set up these interviews.

Studies have demonstrated that between 2.2 and 4 telephone calls per person on average are required in order to set up an interview. Once that is accomplished, the written materials should be personally handed out at this interview, with full explanations, and a time set for the interviewer to pick up the completed written materials.

Telephone interviews have limited utility for our purposes, because it is difficult for respondents to check and rate priorities in lists they cannot see, and because the complexity of the issues being examined requires that respondents have time to consider and contemplate their answers.

Written questionnaires have the disadvantage of sometimes frightening or intimidating respondents, because there seem to be “legal” implications in writing something down, and because these are often associated with “government”. Literacy issues may also be a problem in some cases. Relying on simple mail-back questionnaires is likely to reduce severely the number of surveys returned, and raises questions about whether the intended respondent actually filled out the forms.

For this reason, although time-consuming, the written materials are best combined with personal interviews to explain what is required and to pick up the completed forms. In cases where literacy is a problem, the interviewer may be able to assist in the completion of the questionnaires. Care must be taken that interviews be conducted in a relaxed environment, hopefully without other family members wandering around. Interviewers will certainly need to be trained in advance.

From the perspective of our educational objectives, the interview process need not be a burden. On the contrary, it can be an excellent opportunity for our young people to get to know county

residents and to gain insight into their different lifestyles. The process itself can be constructed as an exercise good-neighbourliness and learning, rather than seen as a burdensome and time-consuming task.

In sum, the following sequence of activities is necessary to generate the data that are not available from established sources: (Steps 1-7 will be undertaken in the fall of 1999):

- 1) Student surveyors and interviewers would be trained;
- 2) Questionnaires would be pilot-tested;
- 3) Respondent sources and their phone numbers, addresses and means of access will be identified;
- 4) The respondents would first be contacted by telephone;
- 5) Interviewers will distribute and explain written materials, and arrange pick-up times;
- 6) In some cases, where there are literacy problems, interviewers may assist in recording answers, perhaps at a separate meeting;
- 7) The information gathered will be entered into computers, using previously prepared materials such as coded key-punch computer cards, and collated and aggregated;
- 8) In the winter and spring of the year 2000, the data would be summarized and analyzed; tables, charts and graphs will be prepared; and the information and results will be presented.

The written questionnaires themselves, as is apparent from section 4 above, will contain a wide variety of nominal, ordinal and rating scales plus rank ordering, interval scale questions and checklists. For the purposes of simplicity, closed questions will be preferred to open ones, although some questions will require specification by the respondent (see for example *Victimization Survey* questions above). These different rating scales are explained in more detail in the excellent primer on community research prepared by the Ontario Ministry of Tourism and Recreation, *Enjoying Research? A 'How-To' Manual on Needs Assessment*. Geared to communities, this manual would be an excellent text on research methods and skills for high school students and volunteers involved in the project.

The manual also gives good advice on writing questionnaires to avoid the following common errors: loaded words and response categories; unintentional biases; vague or inappropriate words, phrases and questions; and unnecessary complexity. Hopefully, some of these potential errors can be avoided by basing our Kings County questionnaires and time diaries on established Statistics Canada sources, using comparable questions and categories in order to enable meaningful comparisons with provincial and national data.

6. Afterword

You may feel overwhelmed at the magnitude of the proposed project. But I thought it best to lay it out as completely as possible at this early stage, so that there are no illusions or later misunderstandings about what is involved. Two qualifications, mentioned earlier, should be repeated here to defuse the likely sense of “overwhelm”.

First, although I have tried to give as complete a picture as possible at this stage, it would be foolish to strive for perfection in all the parts. This is a community-based project, where the

people-energy created and the learning experience generated have their own intrinsic rewards, aside from any results produced. Good research can be exciting and enjoyable in its own right, and there is a tremendous opportunity for the community to learn about itself even if not all the steps and parts outlined above are followed to the letter.

There is no expectation that the county will immediately and within a year have an ideal or perfect set of benchmarks of progress. This is a pilot project and we are at an early experimental stage, testing the waters of an exciting new system for measuring genuine progress. If all that is achieved is a stimulating debate on the type of society Kings County residents want to create for themselves in the new millennium, this will be a more important accomplishment than any set of statistics could ever be.

In short, if the underlying meaning and purpose of the entire exercise is always borne in mind, I think it is possible to short-circuit the possibility of getting overwhelmed by the details. The Genuine Progress Index does challenge the dominance of our thinking, our institutions, and our policy processes by quantitative, materialist market statistics alone. By merely introducing the idea of more comprehensive measures of progress that include non-market, non-material social, economic and environmental criteria and assets, we have already broadened the debate and the range of policy options immeasurably. The statistics and the detailed implementation of this project simply support and provide concrete evidence for that wider objective. It may be better to end this reading by returning to the purposes outlined on page 2 than by getting bogged down in the details of the research methods at this stage.

Secondly, nothing in this proposal, as mentioned at the start, is written in stone. It is just a proposal. There is nothing at all to prevent radical reformulations of this entire project. After further consideration, you may wish to cut certain sections or indicator areas, to substitute others, or to change the types of information sought. For the project to have any meaning, it must represent community concerns and interests. Please do not hesitate to form the entire project in any way you wish. This detailed proposal is simply designed to put it all on the table for discussion.

Thank you again for your courage and daring in being willing to experiment with these ideas and methods. The present time, at the dawn of the new millennium, is ripe for this type of discussion about how we can create the type of society we want our children to inhabit and how we can measure our progress in getting there. And your willingness to jump in so willingly is a tremendous testimony to the profound understanding that already exists in Kings County on the core issues of sustainable development. I hope you find these materials useful in some way, and look forward to seeing you on March 31.

Yours sincerely,

Ronald Colman,
Director, GPI Atlantic

Final Report of the Survey Development Phase

To: N.S. Citizens for Community Development Society -- Leonard Poetschke
From: Ronald Colman, Director, GPI Atlantic

Re: Completion of Community GPI Survey Design Phase

21 July, 2000

Dear Mr. Poetschke,

I am very pleased to report to you that the survey design phase for the Kings County Genuine Progress is now complete, and that the final version of the questionnaire is presently at the printer. Two thousand (2,000) copies of the 104-page questionnaire, plus 2,000 large envelopes will be delivered to Kentville on Tuesday or Wednesday of this week for delivery to the staff there, who will take it into the field.

As you know, since this is a pilot project and since we are developing instruments that can be replicated by other communities, GPI Atlantic has made every effort to ensure that the survey design phase was fully and properly completed, with expert validation at every stage. I am very happy to report that I am now completely confident that we have a first-rate data collection tool that will yield results never before available at the community level in Canada. The following tasks were all successfully accomplished to bring this prototype for a community Genuine Progress Index survey to completion.

- 1) Expert review of draft questionnaire by Senior Methodologist, Jane Mulvihill, Social Survey Methods Division, Statistics Canada, Ottawa. Ms Mulvihill spent many days reviewing the questionnaire in great detail, line by line and word by word, and provided outstanding feedback. There were at least six very lengthy telephone conversations with Ms Mulvilhill, spread over 10 days to review fine points of phrasing and meaning, and to re-word questions for greater clarity.
- 2) Two weeks were then spent incorporating all the Statistics Canada feedback, re-writing many questions, changing the organization of sections, revising virtually all the instructions, and completely redoing the food consumption section and time use survey.
- 3) The revised questionnaire was then field-tested. Four informal tests produced further revisions, and 24 formal tests were then conducted under actual field conditions by a team of interviewers. Length of survey, question ambiguities, respondent reactions, and usability of results were all carefully tested by a staff of four.
- 4) I then spent two full days reviewing the test results with the staff testers/interviewers, and then incorporated all the test feedback into another review and iteration of the questionnaire

aimed at clarifying and simplifying questions, refining the instructions further, changing the order of several questions, and so on.

- 5) At the same time, the questionnaire was reviewed by Dr. Andrew Harvey, Director of Time Use Research, Department of Economics, St. Mary's University, and president of the International Association of Time Use Research; and by Chris Jackson, in the Chief Statistician's Office, Ottawa. Both gentlemen gave detailed advice and feedback on re-formatting the time use survey and re-writing the instructions. Their feedback was incorporated into a newly designed and formatted time use survey, with an entirely new 5-page section demonstrating to respondents in sample form how the time use diary is completed.
- 6) The newly revised questionnaire was then reviewed for a second time by Jane Mulvihill, Senior Methodologist, Statistics Canada; and her detailed feedback was again incorporated into a newly revised questionnaire.
- 7) That fourth revision was then reviewed by Paul Kelly, Questionnaire Design Resource Centre, Social Survey Methods Division, Statistics Canada, Ottawa, for advice on formatting. Mr Kelly spent three full days reviewing every detail in the questionnaire, and sent several pages of detailed advice, on the basis of which the questionnaire was again revised line by line, with particular attention to question formatting, simplifying and clarifying instructions, and eliminating further ambiguities of phrasing.
- 8) At the same time, the food consumption section of the questionnaire was dropped and replaced, on Statistics Canada advice by a food consumption diary, which was newly designed, formatted, reviewed and revised by Jeff Wilson, of the GPI Atlantic staff.
- 9) The entire questionnaire was then re-formatted by a professional typist/graphic designer, Carol Johnstone of Windword Graphics, who also did the final layout in of the time use survey, and prepared the questionnaire in camera-ready form for the printer. Ms Johnstone also entered a number next to each check box in the entire questionnaire, so that each answer has a code-able number, to allow compatibility with data input coding procedures.
- 10) The questionnaire then went through three separate professional editing/proofreading iterations by Dr. Irene Nowaczek, a professional editor, Anne Monette (of GPI Atlantic staff), and Ken Macdonald (GPI Atlantic). Their observations of remaining typographical errors, misplaced numbers, slight formatting improvements, punctuation improvements, and other details were incorporated by Ms. Johnstone into the final version.
- 11) During this process, the random sample for Kings County was selected, through cooperation with the Electoral Commission and HRDC, and arranged alphabetically for individuals (rather than households as originally obtained) both by name and by street address. As a result of Statistics Canada feedback, the original sample size of 1,500 was increased to 2,000 in order to allow two full cross-tabulations of data with a confidence level of 95% and a margin of error of plus or minus 2.5%. An additional 1,500 names were obtained as back-up

in case of non-response, and also because of the necessity of eliciting additional respondents in the 15-18 year old age bracket.

12) As a final stage, Hugh Gough, senior methodologist in Statistics Canada's Social Survey Methods Division in Ottawa, assisted in the writing and design of a confidentiality and consent agreement with respondents. This document was also reviewed by Mike Pennock, Research Director, Department of Community Health and Epidemiology, Faculty of Medicine, Dalhousie University, where the data will be stored on a secure computer facility.

IN SUM, all stages in the survey design phase have now been successfully completed, including expert review and validation of the data collection tool by senior Statistics Canada staff, proper field-testing of the questionnaire, extensive revisions, re-formatting and professional design of the entire questionnaire, complete redesign of the food consumption diary and time use survey sections, entry of data input code numbers, and proper and secure randomization of respondent sample.

The questionnaire is complete and ready to go into the field. Needless to say, we will have a big job of data entry, data processing, analysis of results, and reporting of results back to the community in the coming fall, winter, and spring. But I am now confident that Kings County will have the best and most complete information about itself of any community in Canada, and that this can form an extraordinarily useful basis for successful community development strategies.

On behalf of the GPI Atlantic staff who have participated actively in the survey design phase, I would like to say that it is a real pleasure cooperating in this project with the Nova Scotia Citizens for Community Development Society. I would like formally to extend our congratulations to the Society on the establishment of a Kings County chapter to oversee and take responsibility and ownership for the further development of this important project in the years ahead. In particular the new Kings chapter will ensure that the extensive results of the GPI work are turned into real action for the benefit of the Kings community.

Good luck in the data collection phase of the Kings GPI that the Citizens for Community Development Society is carrying out in the coming weeks. I look forward to further fruitful cooperation in our mutual goal.

Yours sincerely,

Ronald Colman, Ph.D,
Director, GPI Atlantic

COMMUNITY GPI DEVELOPMENT PROJECT

FINAL REPORT

Survey Development Phase *Kings County Nova Scotia*

July 2000

This project was undertaken to assist the community of Kings County to design and prepare to administer a comprehensive survey questionnaire. The survey is intended to help the community identify what is important and to set benchmarks against which the community can measure genuine progress in its efforts for community and individual betterment. This phase of the project also included a preliminary survey and data collection for Agriculture and Land Use in the County.

Prepared For Participating Partners

HRDC Kentville
Canada Rural Secretariat
Kings CED Agency

Prepared by

Nova Scotia Citizens for Community Development Society
966 Prince Street (P.O.Box 181)
Truro NS, B2N SC1 (902) 897-1167

In Association with

GPI Atlantic
P.O. Box 489,
RR#1 Tantallon NS. B0J 3J0 (902) 823-1944

And

Citizens of Kings County

FINAL REPORT – SURVEY DEVELOPMENT PHASE

Overview

1. Background

Development of this community survey for Kings County is part of a three-phase project for research and development of a prototype community Genuine Progress Index (GPI). Initiated by the Nova Scotia Citizens for Community Development Society in association with GPI Atlantic, the project has two primary objectives. The first is to develop, test and present a model for other communities to use in preparing their own GPI. The second is to help the community of Kings county, through the prototype use of this tool, to gather the information needed to build a consensus on what is important to the community and to define benchmarks that can be used in the future to track progress in achieving individual and community betterment.

Phase I of the project, financed by HRDC Halifax and the Canadian Rural Secretariat, was completed in June 1999³ This work identified Kings as the test community and, with the participation of local volunteers, chose priority indicators to be developed and prepared a work plan and project proposal to undertake this work.

The results of this work and the project proposal were presented to a group of 11 Federal and Provincial department representatives in July. While the project was endorsed and supported by all present, only HRDC and the Rural Secretariat were prepared to commit funds. In consequence, only the survey preparation phase could proceed, although in later discussions, a preliminary survey in the agriculture sector was added as part of this phase.

Funds from HRDC, Kentville region, were advanced immediately and the work groups that had been formed in Phase I set to work to develop the questionnaire and begin to organize to conduct the survey. While considerable work was done in the fall, the balance of the funds required was not available until March 2000, resulting in delay and loss of volunteer energy. Much of this lost time and energy has now been made up and this report reflects the extensive work that has been done to prepare the launch of the community questionnaire to some 2500 of the approximately 60,000 county residents.

³ The Phase I report presents the organization and participation and the reports of the work groups. The Appendices include: Details of Data Needs and Sources for Agriculture; Working paper on the Application of the GPI in Kings County; and Project Plan for Phase 2. These papers are available from the Society for \$12.00 each or \$30.00 for the set.

2. Work Completed

Survey Questionnaire

The primary product of this current phase of the project is a completed, validated, tested and formatted survey questionnaire and selection of a representative sample of the population. The questionnaire and the details of the work undertaken are set out in Section II of this report.

In work groups for each sector, the volunteers together spent, literally, hundreds of hours developing a consensus on values to be tested, indicators to be developed and survey questions that would provide the needed information. The product of this work was a set of draft questions in the following sectors of community interest:

- Well Being
- Volunteer Activity
- Employment/Underemployment
- Peace and Personal Security
- Health
- Soils and Agriculture
- Ecological Footprint

The resulting sections were then consolidated to provide an integrated questionnaire. This draft underwent an intensive and extended interactive review with Jane Mulvihill, Senior Methodologist, Social Surveys Methods Division, Statistics Canada for validation, testing, formatting and sample selection. The final questionnaire has now been printed and, with the assistance of officers from Halifax and Kentville HRDC, the sample has been selected and distribution of the questionnaire begun.

Soils and Agriculture

Agriculture and agricultural land use is a critical element of the economy and community life in Kings County. Accordingly as part of this phase of the project, it was agreed that, for this sector, the questionnaire developed would be tested with a small group of farmers before being expanded at a later date to include a valid representative sample.

In the event, a mix of 8 different farms businesses were selected based on product mix, size, organic and inorganic. Intensive interviews of four to four and one half hours were conducted. The full report on the questionnaire and the results of the survey are set out in Section III of this report.

Communications and Public Participation

From the beginning it has been a central priority of this project to involve the community in all aspects of the work, leading to full take-over of the long-term activity by the community. The

extent of community involvement in preparation of the questionnaire was set out in the earlier interim report and, for convenience, is attached as an appendix to this report.

Subsequently, volunteers were solicited and trained to make public presentations to community organizations to provide information about the project and to encourage others to step forward to help with the survey. This work, in addition to identifying volunteer participants, has resulted in significant financial contributions to the next phase of the project by the East Kings and Central Kings Community Health Boards and by the Kentville Rotary Club.

A pamphlet was prepared for general distribution, also attached as part of the appendix, and the local community cable TV ran a half hour interview with Dr. Ronald Coleman on the GPI and the Kings Community GPI project. There is growing interest on the part of the local media and the coverage is being expanded as the project moves into the survey phase.

3. Future Action

Citizen Management of the Program

Apart from the research in how to develop a community GPI, the fundamental objective of this project is to set in place a community structure that can:

- Analyze the results of the survey and provide relevant information to all of the agencies, community groups and other bodies involved in action for community betterment;
- Initiate the work to develop further “benchmarks” of values, aspirations and status in areas such as fisheries, forestry, education and other sectors of priority to County residents;
- Design and apply the most appropriate means to measure the success of the community over time in generating “Genuine Progress”.
- Conduct continuing analysis of the measurements of progress, providing the information to all who can use it to bring their own activities closer in line with real community values, aspirations and opportunities for betterment.

Exploration with possible groups to lead this citizen management activity led to the conclusion that no existing group in the county felt it had the mandate to reach across all sectors and interests that will be incorporated eventually into a GPI for the County. It was agreed by the Plenary Citizens Group to take advantage of the offer of the NS Citizens for Community Development Society to make available the legal structure of the Society to establish a local organization to take on this challenge.

Accordingly, the Society’s by-laws are being amended to allow the formation of community chapters which will develop and manage the community GPI. This structure will allow the society to support the transfer of the initiative to interested communities throughout the province.

In line with this decision, an interim Kings Board has been created pending a full organization and strategy development session in the fall. The officers are:

Gary Cere	Chair
Canon Syd Davies	Secretary
Richard Hennigar	Treasurer.

Those who participated in the development of the project, the work groups to develop the questionnaire, the volunteers who are participating in the survey and the community at large, are being encouraged to join and help shape the program and take over the challenge of long term direction.

Conducting the Survey

The new Kings Community Board has engaged a project co-ordinator, a community liaison co-ordinator and seven field supervisors to conduct the survey. Funds are still required but, to date, the project has received financial or in kind support from the following:

- GPI Atlantic providing technical support and making available some funds from a companion project provided and approved by the National Crime Prevention Centre (Business Action Program)
- Human Resources Development Canada – Kentville office
- Central Kings Community Health board
- Eastern Kings Community Health board
- Kentville Rotary Club
- Kings CED Agency (services)
- Nova Scotia community College – Kingstec Campus (office facilities and computer equipment)
- Population Health research Unit, Dept of Community Health and Epidemiology, Faculty of Medicine, Dalhousie University (Analysis)

With these funds and services in hand, the survey phase of the project has begun and efforts are being continued to raise the necessary funds to complete this phase and the analysis phase to follow. The Community Liaison Co-ordinator, together with board members are engaging and organizing training for volunteers to help conduct the survey, assist in the office and accompany survey staff as required for security. The procedure for the survey is as follows:

- The survey sample has been divided up among the seven trained field staff;
- The staff will hand deliver and mail the information brochures in pace with the set-up of appointments.
- Volunteers who know respondents are being asked to phone and encourage participation.
- Phone calls by survey staff and volunteers are made to set appointments
- Surveys will be hand delivered with explanations and instructions.
- Follow-up calls made to answer questions, encourage participation and arrange for pick-up
- At pick-up, surveyors will ask respondents to check completeness before sealing completed questionnaire in the envelope and handing over.

The first survey will be going out on 27 July and it is intended that all will be completed by 31 August.

Public Information

Action is underway to obtain widespread coverage of the survey and its purposes. The local media are behind the project and will be presenting continuing news stories as the project unfolds. In addition to the progress of the survey, weekly news stories will be developed from the results of the agriculture survey and it is intended to set up some public debates and discussions. Churches will be presenting information in their weekly church notices and clubs and organizations are being approached to circulate information to their members.

Summary Notes

Despite mistakes and unpredicted problems, as befits a major research and prototype development project, the Kings Community GPI, to this point, has been hugely successful. The final questionnaire, developed with extensive community participation and thanks to Statistics Canada, is a highly professional document which closely reflects the community input and which will withstand challenges to its validity. It is regarded by professionals in the field as unique in its examination of many interrelated issues affecting crime, health, education, environment, income and employment and other factors and it will be generating valuable information not available from other published material.

The Survey Instrument: Work to Prepare the questionnaire

The survey design phase for the Kings County Genuine Progress is now complete and the final version of the questionnaire is presently at the printer. Two thousand (2,000) copies of the 104-page questionnaire, plus 2,000 large envelopes will be delivered to Kentville on Tuesday or Wednesday of this week for delivery to the staff there, who will take it into the field.

Since this is a pilot project developing instruments that can be replicated by other communities, GPI Atlantic has made every effort to ensure that the survey design phase was fully and properly completed, with expert validation at every stage. This work has generated a first-rate data collection tool that will yield results never before available at the community level in Canada. The following tasks were all successfully accomplished to bring this prototype for a community Genuine Progress Index survey to completion.

1. Expert review of draft questionnaire by Senior Methodologist, Jane Mulvihill, Social Survey Methods Division, Statistics Canada, Ottawa. Ms Mulvihill spent many days reviewing the questionnaire in great detail, line by line and word by word, and provided outstanding feedback. There were at least six very lengthy telephone conversations with Ms Mulvilhill, spread over 10 days to review fine points of phrasing and meaning, and to re-word questions for greater clarity.

2. Two weeks were then spent incorporating all the Statistics Canada feedback, re-writing many questions, changing the organization of sections, revising virtually all the instructions, and completely redoing the food consumption section and time use survey.
3. The revised questionnaire was then field-tested. Four informal tests produced further revisions, and 24 formal tests were then conducted under actual field conditions by a team of interviewers. Length of survey, question ambiguities, respondent reactions, and usability of results were all carefully tested by a staff of four.
4. Two full days were then spent reviewing the test results with the staff testers/interviewers. The feedback was all incorporated into another review and iteration of the questionnaire with Statistics Canada aimed at clarifying and simplifying questions, refining the instructions further, changing the order of several questions, and so on.
5. At the same time, the questionnaire was reviewed by Dr. Andrew Harvey, Director of Time Use Research, Department of Economics, St. Mary's University, and president of the International Association of Time Use Research; and by Chris Jackson, in the Chief Statistician's Office, Ottawa. Both gentlemen gave detailed advice and feedback on re-formatting the time use survey and re-writing the instructions. Their feedback was incorporated into a newly designed and formatted time use survey, with an entirely new 5-page section demonstrating to respondents in sample form how the time use diary is completed.
6. The newly revised questionnaire was then reviewed for a second time by Jane Mulvihill, Senior Methodologist, Statistics Canada; and her detailed feedback was again incorporated into a newly revised questionnaire.
7. That fourth revision was then reviewed by Paul Kelly, Questionnaire Design Resource Centre, Social Survey Methods Division, Statistics Canada, Ottawa, for advice on formatting. Mr Kelly spent three full days reviewing every detail in the questionnaire, and sent several pages of detailed advice, on the basis of which the questionnaire was again revised line by line, with particular attention to question formatting, simplifying and clarifying instructions, and eliminating further ambiguities of phrasing.
8. At the same time, the food consumption section of the questionnaire was dropped and replaced, on Statistics Canada advice by a food consumption diary, which was newly designed, formatted, reviewed and revised by Jeff Wilson, of the GPI Atlantic staff.
9. The entire questionnaire was then re-formatted by a professional typist/graphic designer, Carol Johnstone of Windword Graphics, who also did the final layout in of the time use survey, and prepared the questionnaire in camera-ready form for the printer. Ms Johnstone also entered a number next to each check box in the entire questionnaire, so that each answer has a code-able number, to allow compatibility with data input coding procedures.
10. The questionnaire then went through three separate professional editing/proofreading iterations by Dr. Irene Nowaczek, a professional editor, Anne Monette (of GPI Atlantic

staff), and Ken Macdonald (GPI Atlantic). Their observations of remaining typographical errors, misplaced numbers, slight formatting improvements, punctuation improvements, and other details were incorporated by Ms. Johnstone into the final version.

11. During this process, the random sample for Kings County was selected, through cooperation with the Electoral Commission and HRDC, and arranged alphabetically for individuals (rather than households as originally obtained) both by name and by street address. As a result of Statistics Canada feedback, the original sample size of 1,500 was increased to 2,000 in order to allow two full cross-tabulations of data with a confidence level of 95% and a margin of error of plus or minus 2.5%. An additional 1,500 names were obtained as back-up in case of non-response, and also because of the necessity of eliciting additional respondents in the 15-18 year old age bracket.
12. As a final stage, Hugh Gough, senior methodologist in Statistics Canada's Social Survey Methods Division in Ottawa, assisted in the writing and design of a confidentiality and consent agreement with respondents. This document was also reviewed by Mike Pennock, Research Director, Department of Community Health and Epidemiology, Faculty of Medicine, Dalhousie University, where the data will be stored on a secure computer facility.

IN SUM, all stages in the survey design phase have now been successfully completed, including expert review and validation of the data collection tool by senior Statistics Canada staff, proper field-testing of the questionnaire, extensive revisions, re-formatting and professional design of the entire questionnaire, complete redesign of the food consumption diary and time use survey sections, entry of data input code numbers, and proper and secure randomization of respondent sample.

The questionnaire is complete and ready to go into the field. Successful response will provide Kings county with the best and most complete information about itself of any community in Canada, and that this can form an extraordinarily useful basis for successful community development strategies.

Land Use and Agriculture

1. Development of the Questionnaire and Process

A committee of farmers and agriculture-related volunteers in Kings County developed a questionnaire using the list of indicators developed for the provincial agriculture Genuine Progress Index. The purpose of the questions was to get information on important indicators not available from other sources, and to find out from interviewed farmers what indicators of progress were most important to them. The questionnaire was tested and modified further with the help of Barb McLaughlin, Agricultural Statistician, Statistics Canada, Agriculture Division. When the questionnaire was ready, a sample of twelve farmers on eight farms was interviewed to get an idea of priorities and trends.

The sample was carefully chosen to include a number of different farm types that exist within the county (Table 1). The last census in 1996 indicates that there are 707 farms in Kings County. Our sample is not at all representative as it includes just over 1% of County farms. It was also important to include small and large farms; diversified and specialty farms; conventional and organic farms; and to speak with both men and women.

Table 1. Profile of Interviewed Farmers

Farm	Years of experience	Size of farm (acres)	Items sold from farm	Farm category	% of farms in County with similar category (1996)
A	47	400	hay, apples, some pulp wood (presently stopped farming)	fruit	20
B	28	28	garlic (organic)	vegetable	9
C	42	800	carrots, onions, peas, chicken and turkey broilers, grain	poultry	11
D	30	40	apples	fruit	20
E	6	50	breeding stock: sheep, cattle, pigs, and chickens (partly organic)	misc. specialty	14
F	38	309	milk, beef, grain	dairy	8
G	30	250	grain, pork, beef	hog	7
H	12	175	beef, vegetables, berries, grain & hay (certified organic)	beef	18

The interview process required a serious commitment on the part of the interviewers and the farmers being interviewed. Each interview took from two to four hours of focused attention. Half of the farmers approached to do the interview refused because of time constraints and a reluctance to share personal information publicly. Contacting farmers, explaining the purpose of the questionnaire and the concept of Genuine Progress also took more time than anticipated.

It was critical to start with a small sample in order to have the in-depth conversations needed to embark on this work properly. Farmers we spoke with have a better understanding of GPI and a stake in its development. Feedback from farmers who were interviewed was positive.

After the preliminary results were compiled, two of the most active committee members (both farmers) reviewed the results and contributed feedback. They suggested we present the final report results at a meeting July 18. Everyone who contributed to the entire project cycle and other interested farmers have been invited to this meeting.

In addition to the results from interviews, a review of county agriculture statistics and studies was used to analyze trends and evaluate indicators of progress. This analysis is presented in the body of the report.

2. Questionnaire

This questionnaire appears as it was used to interview farmers. Notes on the effectiveness of the questions and suggested changes have been added in square brackets.

Kings County Farm Interview Questionnaire

Notes for interviewers:

- The farmer being interviewed can choose to skip any question that makes them uncomfortable. We will not use any farmer's name in the report, but we cannot guarantee anonymity because of the small number of people being interviewed. All farmers being interviewed will receive a copy of the report.
- Don't hesitate to let the farmer stray from the questions if you are finding the info interesting!
- Have an extra copy of the questionnaire to give to the farmer
- If the farmer says something like: "there are more benefits to using manure", then ask "what benefits?" Follow up and get more detail.

Purpose:

In a strict sense we are looking at a number of costs and benefits associated with agriculture. Together we will be able to use that information, plus your suggestions, to determine actions that could increase benefits relative to costs.

In a broader sense, we are finding out from farmers what "progress" and "quality of life" mean. Also, we'd like to find out what actions are needed to have real genuine progress, and what actions are needed to improve quality of life.

The information in the preliminary report, based on in-depth interviews with 8 farmers, and other available information, can be used by farmers in Kings County. We hope the ideas of "genuine progress" and "quality of life" will become frequent topics of conversation.

The questions are for 1999 unless otherwise specified. In some cases information from 1991 may be useful.

General description

- 1) How many years have you been farming?
- 2) How many people contribute to the farm (can be family members, employees, owners)?
Full time _____ Part time _____ (1991, 1999).
- 2) For each full-time contributor, what proportion are male/female (1991,1999).
- 4) How big is the whole farm? (Number of acres or hectares) (1991, 1999) [Include the amount of rented land here]
- 5) What proportion of the farm is presently in

- 5) • woodland? (acres, ha, or proportion of farm)
 - 6) • farmyard (including house, barns, storage, greenhouses)? (acres, ha, or proportion of farm)
 - 7) • perennial crops (= 3 years or more, not including pasture/hay) (acres, ha, or proportion of farm)
 - 8) • permanent pasture/hay (= 3 years or more without plowing) (acres, ha, or proportion of farm)
 - 9) • rotated pasture/hay (=2 years or less, rotated with other crops on a regular basis. acres, ha, or proportion of farm)
 - 10) • annual crops (acres, ha, or proportion of farm)
 - 11) • other land (please specify: gravel pit, bog, marsh, hedgerow etc.) (acres, ha, or proportion of farm)
- (* Please: 1991 and 1999 proportions if possible.)
- 12) Amount of leased or rented land (acreage and use) (1991,1999). [The amount of land the farmer is leasing should be included in #4-11 above. Here we should ask, “how much land is rented out to other people (acreage and use)?]
- 13) Do you trade land with other farmers? How long? Why? [a very effective question -- indicates ability to carry out rotations and motivations for adding diversity to crop rotations]
- 14) What items do you sell off your farm? (list) Do you have value added processes as well?
- 15) What is the item you sell most of? (name)
- 16) What is the value of farm products consumed by the farm family and employees? [Specify *replacement value* of farm products if they would have to be purchased. This question is very important as it shows on some farms how much value is generated in food that never shows up in the ‘accounts’. It also shows how self-reliant the farm family is, and how much they like to eat the food they produce.] [The only other question we thought we should have added is: “Where do you buy your groceries?]
- 17) Are there any unusual or special features of the farm? (e.g. dykeland (acres or ha), very sandy soil, steep slopes, next to residences...)
- 18) Is there anything about the farm you are particularly proud of? Several things? List and short description. [This question provoked an amazing response. It is a very good question to include even if the survey is shortened.]

Resource description

Soil:

- 19) What is the dominant soil texture on the farm? (sandy, sandy loam, sandy clay loam, silty, clay loam, clay...)

20) Do you have records on soil organic matter from soil tests on your farm (try to get detailed records here)? If so, what comments do you have regarding the organic matter levels on your farm over time? What are your observations about soil quality in general over time? [More effort needs to go into getting detailed records or this question is not worth asking as a quantitative question. It *is* nevertheless worth asking as a qualitative question. It would be good to ask the farmers to add comments about soil biological activity (soil life) as well as soil organic matter.]

21) What proportion of land in crops [cropland = land growing crops that are harvested including fruit, forage, grain, vegetables] is bare [has no cover] over the winter? (*has it always been about this proportion? Note if different in other years.). Note if using living cover or mulch (bale-buster). [Great question for erosion potential.]

22) Have you taken actions over the years to improve soil quality? What are they? (description) [Add: “have these actions changed over the last 5 years; 10 years; 20 years?”] [Also add another question: “Do you think the productive capacity of soil on your farm has improved, stayed the same, or declined over the last 10 years/20 years? Why? How can you tell?”]

Crop Quality and Productivity:

[In general the quantitative questions were not very successful on farms that don’t have record-keeping as a priority. In hindsight, it would be better to identify farms that keep records, and focus the quantitative questions on those farms. Perhaps farms that are in the farm records programs could be singled out for these questions. The qualitative questions are enough for the rest of the farms.]

23) What is the approximate value of crops produced on your farm this year? (1991, 1999) [Estimating *replacement value* for crops used to feed livestock was a challenge! It would be better to change this question to read: what is the approximate value of crops sold off your farm this year? List all crops, and value of each. For farms with livestock, ask a separate question: “What is the *replacement value* of crops fed to livestock?”.]

24) Do you have an estimate for % cullage/dockage of crops for this year? (1991, 1999) (this could be expressed as a % of total crop production, or a monetary value) Ask what is done with cullage -- does it get used for something else (feed, cider?) and is the farmer paid for it at all?

25) Do you use synthetic fertilizer to fertilize crops? Which crops?

26) How much money on average did you pay for synthetic fertilizer in the last year? (1991, 1999) [including application costs]

27) Do you have any comments about synthetic fertilizer applications? (e.g. is it getting more or less expensive relative to the benefits of fertilization? Do you have to apply more/less to get the same results as previous years - in general?)

28) Do you use lime? How much money did you spend on lime in the last year? (1991, 1999) [including application costs]

29) Do you have any comments about lime applications? (e.g. is it getting more or less expensive relative to the benefits? Do you have to apply more/less to get the same results as previous years - in general?)

30) Do you use animal manure to fertilize crops? Liquid, solid, or combination of the two? Which crops? What is the proportion of manure used that comes from off the farm?

31) Is any of the manure you use composted? (amount, comments).

32) How much money on average did you pay for manure in the last year? (1991, 1999) [including application costs]

34) Do you have any comments about manure applications? (e.g. is it getting more or less expensive relative to the benefits? Do you have to apply more/less to get the same results as previous years - in general?

35) How much money on average did you pay for crop protection products and services in the last year? (1991, 1999) [including application costs]

36) Do you have any comments about crop protection products and services? (e.g. is it getting more or less expensive relative to the benefits? Do you have to apply more/less to get the same results as previous years - in general?)

Livestock quality/productivity [livestock farms only]

37) What is the approximate value of livestock/livestock products produced on your farm this year? (1991, 1999) [excluding non-food related stock such as horses, pets etc]

38) What are the approximate costs associated with the production of livestock/livestock products on your farm this year [excluding vets and drugs]? (1991, 1999) [This question should be replaced with: “What is the approximate cost of purchased feed and supplements for livestock?” This change is to exclude large capital costs such as breeding stock or capital costs associated with housing and computer systems.]

39) What are the approximate health care costs for [food-producing] livestock this year? (1991, 1999) [this includes vets, antibiotics and other medicines, pesticides, hoof work, value of culled animals or milk that can't go in the tank etc.]

40) What proportion (in terms of volume or monetary value) of livestock feed is produced

- on the farm?
- off the farm, but within the county?
- off the farm, outside the county (1991, 1999)?

Water quality/capacity:

[This set of questions on water quality was not really worth asking -- there is too much confusion on the subject. The confusion stems from water quality problems not being a direct function of on-farm practices.]

41) What is the drinking water source for people on the farm? (well, town, roof, purchased?) (1991, 1999)

42) If drinking water is purchased, what % of time do you feel it has to be purchased? (1991, 1999)

43) If you have a well, how deep is it, and what type of well is it? [e.g dug, spring fed, drilled -- get some description -- is it lined with rocks, crocks, describe where the well is located -- near the house, barn, 100 feet from the house towards the barn...] (1991, 1999)

44) If you have a well, is the water tested? What are the results? (1991, 1999)

45) Do you have surface water on your farm? If yes, do you have any comments about the surface water quality?

46) Do you irrigate on your farm? What are your yearly costs associated with irrigation? (1991, 1999) Are your costs for irrigation going up/down/staying the same relative to the financial benefits of irrigation?

47) What recommendations for action would you have to reduce risk from drought? [This is the question that elicited the best responses.]

Energy:

48) Do you have any comments about energy use efficiency on your farm? (1991, 1999) Do you have ideas for improving energy efficiency? What would you need to implement them? [Most farmers focused on equipment efficiencies. Perhaps the interviewer could prompt in other areas such as design changes.]

[Add another two questions here for farms that keep these kinds of records handy: "What do you spend on fuel and electricity in 1999; 1991?" And: "What are your costs for labour in 1999; 1991?"]

Economic Capacity

49) How much money (or what proportion of all expenses) did you spend this year for the farm business [estimate is ok]

 in Kings County?

 Outside of Kings County but within NS?

 Outside of NS (1991, 1999)?

49A) How much money (or what proportion of all income) did you receive this year from selling farm products

in Kings County?

Outside of Kings County but within NS?

Outside of NS (1991, 1999)?

50) Would you like to comment on the level of income you get from farming? (is it enough for the work and investment you put in? Has it gone up or down over the years? Does it fluctuate significantly over time? Other comments?)

51) What is the value of unpaid labour on this farm?

52) Do you produce farm products that are sold in a retail setting?

53) If yes, what percentage of the retail price of your product are you getting? (or, what is the average retail price of the products per lb or kg or litre, and what price are you getting per lb or kg or litre) (1991, 1999)

Work:

54) Are you satisfied with your work on the farm? Rate from 1, completely unsatisfied, to 10 completely satisfied. (1991, 1999)

55) Would you like to comment on your work satisfaction? (would you recommend this kind of work for children and others who may come to you for advice?) [If you like it, why do you like it?]

56) Do you want your children or other relatives to take over the farm?

57) If another opportunity came up, would you take it and stop farming?

Agriculture:

58) How would you rate a farmers' status in society? Rate from 1, very low, to 10 very high. (1991, 1999)

59) What is (are) your motivations for farming? (1991, 1999) list and include comments.

60) Would you like to make other comments about the positive and negative aspects of farming for you? [This question could be taken out, because it is covered in #70 and #71]

Civil Society

61) Do you feel the provincial government Department of Agriculture is doing a good job? Rate from 1, very poor, to 10 very good. (1991, 1999) [Most respondents were reluctant to answer this question. They were much more likely to respond to the questions below.]

62) Would you like to comment on specific things they do really well, and specific things they could improve?

63) Would you like to comment on specific things farm organizations do really well, and specific things they could improve?

64) Do you feel that government subsidies are effective? Rate from 1, not effective at all, to 10 very effective. (1991, 1999) [Again, not a good response to this question -- it should be removed.]

65) Do you have comments about

- Specific subsidies that are very effective?
- Specific subsidies that could be improved?

66) In your opinion, what are the most important values associated with farming that are generally not counted or recognized by society? [Great responses to this question!]

67) If you could change taxes and fees you pay to the government associated with farming, what would you change? Specific examples?

68) How have government taxes and fees changed for you over time? [This could be eliminated.]

69) How would you describe your relationship with people who buy the food you produce? Rate from 1, no contact; distant, to 10 regular contact; high degree of understanding. (1991, 1999). If you have regular contact, what are your customers saying to you of interest? Has this changed over time?

Genuine Progress

[These questions were very good although some time is required to think about them. They would be good for a group discussion, where farmers can react to each others ideas.]

70) What has changed for the *better* on your farm / in your community over the time you have been farming?

71) What has changed for the *worse* on your farm / in your community over the time you have been farming?

72) Can you give examples of specific things that improve (or would improve) your quality of life on the farm?

73) What would agricultural **progress** in the future look like for you? Can you describe it?

74) What would you do with a million dollars?

APPENDICES

ORGANIZATION AND PARTICIPATION

Evaluating existing social, economic and environmental assets and transactions can help provide a sound information base to modify and broaden community development strategies. The process can assist a community to develop a set of annual benchmarks of progress – annual report cards that help the community build on, nurture and protect its greatest strengths, overcome apparent weaknesses, and revise development strategies where necessary to meet aspirations for greater, long-term well-being and sustainability.

Perhaps most importantly, the purpose is not only to develop a useful “product” for Kings County. The *process itself* should be a thoroughly enjoyable and challenging educational tool – a way for the community to learn more about itself, to review the legacy it is leaving for its children, and to discuss the society it wants to create in the new millennium. It is an opportunity to share in developing the benchmarks and measures of progress toward the future the community genuinely wishes to inhabit.

The project is designated as a pilot for rural communities. The GPI is still in its development stage at the provincial level, designated as a pilot project for the country by Statistics Canada, and scheduled for completion by the end of 2000. But the keenest interest has actually been expressed at the community level. Kings County volunteered itself as a “guinea pig” in experimenting with this community-level application. One major objective of this project is, therefore, to learn from mistakes so that other communities can build on the Kings County experience. Training community development workers from other parts of Nova Scotia and the region in the new measurement tools can itself provide an economic development opportunity for Kings County.

2. Participation

In consequence of these opportunities, under this project the community GPI is being developed by, not for, the community. Through the good offices of Kings CED Agency, invitations to participate went out to many individuals, groups and organizations. Over 60 people attended at least one of the three plenary sessions and, of these, over 40 have participated in at least one of the 3 meetings held by each work group. The response, energy and interest have been outstanding and bode well.

In addition, as indicated in the lists that follow, people from more than 40 groups and organizations are participating. Two people whose names are on the list wish to participate but have been unable to attend a session as yet.

PARTICIPANTS – KINGS COMMUNITY GPI PROJECT

Abbey, Gale	Kings CED agency	Mary DeRoche	Coastal Communities Net
Baird, Lois	Greenwd Family Res CNN	McMullen, Glenn	HRDC
Banks, Thomas.	West Kings Com CED	Meldrum, Ted	Kings Co Parks & Rec.
Bearden, Jack	Dept Ed & Culture	Metcalf, Jerry	Kings CED
Cann, Chris		Misner, Belinda	Harbourville Restortn Soc.
Cann, Roger	E Kings Com Health Brd	Morgan, Fredr'k	Acadia ACSBE
Caven, Andrea	Kings CED agency	Mosher, Jennifer	TRCH & Rec Kings CED
Cere, Gary	C. Kings Com Health Brd	Pelham, Suzanne	CAPRE
Crawford, Donna	Horticulture NS	Pleasant, Jerry	Acadia CSBE& CEI
Currie, Harry		Prozinski, Piatra	Com College (COGS)
Davies, Beverly	Dept Ed & Culture	Redden, Sherry	Career Resource Centre
Davies, Sid	C Kings Com Health Brd	Richards, Darrell	Chair Kings CED Tech
DesRoches, Mary	Coast&Rural Com Net	Ross, David	KCCEE
Eaton, Janet	Netfor Creative Change	Salsman, Betty	Family/Commity Serv. Co.
Ells, Glen	Farmer	Scott, Jennifer	GPI Researcher
Enman, Jennie	HRDC	Slawnwhite, Gary	Valley Regional Hospital
Gould, Richard	Public Health Services	Simpson, Elizbeth	Chryslis House
Griffiths, John	Wood Lot Owners, Kings	Smith, Gary	New Minas RCMP
Hawbolt, Steve	CARP	Smylie, Sandra	ACSBE, CED Facilitator
Hebert, Pearl	CEI/ACSBE/KCCE	Spicer, George	Tourism Committee CED
		Strong, Cindy	Kingston/Greenwood CHB
Hennigar, Richard	Suprima Farms Limited	Swetnam, Bill	Kings CED Ariculture Com
Hirtle, Donnie		Tatlock, Roger	The Flower Cart
Ilsley, Earle	Access NS	Trinacity, Michael	Sport & Rec Commision
Ilsley, Preston	West Com Health Brd	Thomas, Valerie	V.R. Hospital
		Thompson, Bob	Parole Services
Johnson, Michael		Tugwell, Maurice	Acadia U. Dept Econ
Legge, Jerry	S21 Scientific Tech. Inc.	VanOstrand, Neil	Organic Farmer
MacDonald, Holly	CEI	Bent, Erica	Insect and Pest Monitoring
		Walker, Janice	Horton Band
MacDonald M.	Kings CED agency	White, Jenny	Hall's Harbour CDA
MacKinnon, A.J.	Kings CED agency	Young, Denise	Valley Waste Res Mngmnt
Madeira-Voss, I.	Dept Ed & Culture	Zaichkowski, Terry	New Minas Youth Centre
Marshall, Robin	Kings CED agency		

WORK GROUPS – KINGS COMMUNITY GPI PROJECT -

Management Group

Hennigar, Richard Suprema Farms Limited
 Madeira-Voss, I Dept Ed & Culture
 McMullen, Glenn HRDC
 Not Named Peace and Security
 Prozinski, Piotr Com College (COGS)
 Tugwell, Maurice Acadia U. Dept Econ
 Colman, Ron Resource
 Poetschke, Len Resource

Education and Health Advisory Group

Madeira-Voss, I Dept Ed Culture
 Hennigar Richard Suprema Farms Ltd
 Gould, Richard Public Health Services
 Davies, Beverly Dept Ed & Culture
 Eaton, Janet Net for Creative Change
 Smylie, Sandra ACSBE, CED, Facilitator
 Illsley, Earle Access NS
 Bearden, Jack Dept Ed & Culture

Well Being and Volunteer Sector

Chris Cann
 DesRoches, Mary Coast&Rural Com Net
 Hennigar, Richard Suprema Farms Limited
 MacDonald, Holly CEI
 Meldrum, Ted Kings Co Parks & Rec
 Misner, Belinda Harbourville Restor Soc.
 Salsman, Betty Family/community Serv
 Tatlock, Roger The Flower Cart
 Thomas, Valerie V.R. Hospital
 Zaichkowski, Terry New Minas Youth Centre

Peace and Personal Security

Ross, David KCCEE
 Legge, Jerry S21 Scientific Tech. Inc.
 Simpson, Elizbth Chryslis House
 Smith, Gary New Minas RCMP
 Walker, Janice Horton Band

Employment

McMullen, Glenn HRDC
 Crawford, Donna Horticulture NS
 Enman, Jenny HRDC
 Hebert, Pearl CEI/ACSBE/KCCEE
 Pelham, Susan CARPE
 Pleasant, Jerry Acadia CSBE& CEI
 Redden, Sherry Career Resource Centre

Soils and Agriculture

Prozinski, Piatra ComCollege (COGS)
 Swetnam, Bill Kings CED Ariculture Com
 Vent, Erica Insect and Pest Monitoring
 Hennigar, Richard Suprema Farms Limited
 VanOstrand, Neil Organic Farmer
 Morgan, Fredr'k Acadia ACSBE
 Hawbolt, Steve CARP
 Ells, Glen Farmer
 Scott, Jennifer GPI Researcher

Kings County Brochure

***‘What is important
to you?’***



*Kings
Community Economic
Development Agency*

**An Invitation to build a
‘Genuine Progress
Index’ for Kings County**

February 1999

*In partnership with [The NS Citizens for
Community Development Society] and*



We can only carry out this project with your help - so we will shortly be coming round to your doors and asking you questions about your life in the Kings community. You are also invited to attend any of the events which will be happening in your local community to discuss the GPI project – details will be posted.

Public Sector Funding Partners

- *Human Resources Development Canada*
- *The Canadian Rural Secretariat*

Private Partners

There are over forty local organizations and agencies participating in the Kings County GPI project.

For more information, please contact

Andrea Caven
Development Officer, Kings Community Economic Development
Agency

An Invitation to build a 'Genuine Progress Index' for Kings County

'How do we know whether the precious quality of life that we value in Kings County will still be with us in ten, twenty, or thirty years time?'

.....The truth is that not only are we not really sure, but we have no way of finding out. Currently, we measure progress using the 'Gross Domestic Product' (GDP), which counts all economic growth as 'progress' without examining its effect on our society and environment. This means, for instance, that the more trees we cut down and the more fish we sell, the more the GDP grows, even as our natural resources are depleted.

'What we measure and count is a sign of what we value as a society.'

Increases in crime, gambling, accidents, and pollution all make the economy grow. And while we count harmful activities as "progress" in the GDP, we ignore the value of volunteer work and unpaid work in households, simply because no money is exchanged.

In fact, the economy can grow even if our actual standard of living is declining, if inequality is growing, if our society is less peaceful, if we are more stressed out, and if our environment is becoming degraded. Clearly not all growth means a better quality of life. The problem is that until now we've had no other way of measuring 'genuine progress'.

However, there is now an historic opportunity in Kings County to assess our real strengths and weaknesses - and in so doing to determine our aspirations for the future of our community.

The new measure of progress that we are developing in Kings County is the 'Genuine Progress Index' (GPI) - an idea evolved from the limitations of the GDP. The GPI looks at *how* we spend our money rather than simply *how much* we spend, and can therefore better evaluate our quality of life by looking at the costs and benefits of different types of economic development.

NS Citizens for Community Development and



This is part of a commitment to 'sustainable development' - a pledge to preserve our environment and quality of life for our children

'No-one knows better than those who actually live and work in Kings County what is important and what is needed here'

- which is why volunteers from a wide variety of community associations in Kings County have identified six sectors that are 'Genuine Progress Indicators' of our quality of life. These are:

- The Well-being of Our Families and Households
- Our Communities - our volunteer and care-giving networks
- The Quality of our Jobs
- Peace and Security
- Soils and Agriculture
- The Ecological Footprint

For example, what is

- The value of our volunteer work, unpaid housework and childcare
 - The cost of underemployment and the stress of overwork
 - The costs of crime
 - The costs of pollution and the depletion of our natural resources
- These are all vital issues that are invisible in the GDP.**

We will not stop here: - Using the structures of community participation that we have set up we can also develop indicators to help us assess our standards of health and education, and we can build strategies of community development designed to ensure a genuinely prosperous future for our children.

This pilot project in Kings County is a first step in introducing the GPI to communities throughout Nova Scotia- and is therefore a unique opportunity for citizens in Kings County to pioneer the move towards more genuine prosperity in the whole of Canada.

Above all, this project is a way of working together to learn more about ourselves and life in our community - ensuring that we enter the millennium with a set of genuine indicators of progress to help us chart a healthy and productive future in Kings County.

Glance Bay Brochure

‘What matters to you?’



An Invitation to build a ‘Genuine Progress Index’ for Glance Bay

June 2000

GPI Atlantic in partnership with the National Crime Prevention Centre (Business Action Program), NS Department of Economic Development Summer Employment Program, Human Resources Development Canada, Cape Breton County Economic Development Authority, Enterprise Cape Breton Corporation, Citizens for Community Development Society.

(continued from inside)

Quite simply, in the GPI, a healthier population, less crime, greater livelihood security, a strong voluntary sector, and a clean environment are signs of progress. This seems obvious, but the GPI is actually quite different from our current measures of progress, in which more crime, more sickness and more pollution make the economy grow and therefore appear as signs of well-being.

So the Genuine Progress Index really corresponds to our common-sense understanding of well-being and prosperity. Once it's ready, we can take what we learn from the GPI to build strong and safe communities, and to design strategies of community development that ensure a genuinely prosperous and secure future for our children.

We are pioneers! The Glance Bay and Kings County GPI are actually pilot projects for Nova Scotia and for Canada, so what we do here can actually help many other communities. But we can only carry out this project with your help - so we will shortly be coming round to your doors and asking you questions about your life in Glance Bay.

Our questionnaire is a very big one, and it will take you quite a while to complete. We'll leave it with you for a week. But we ask you *please* to take the time and fill it all out, and to see this as a true investment in our community. This is a way of really learning about ourselves and about life in our community so that we can build a better future for our children.

With a set of genuine indicators of progress, we can enter the new millennium with a clearer sense of direction and a clear set of goals and objectives that can chart a healthy and productive future for Glance Bay and its people. Thank you for your time and cooperation!

For more information, please contact
Ken Macdonald, GPI Glance Bay, at 849-1963

GPI Atlantic is a non-profit research group that is building an index of well-being for Nova Scotia. Core funding for the Glance Bay GPI is provided by the National Crime Prevention Centre (Business Action Program)

**An Invitation to build a
'Genuine Progress Index' for Glace Bay**

'How do we know whether the precious quality of life that we value in Glace Bay will still be with us in ten, twenty, or thirty years time?'

... The truth is that not only are we not really sure, but we have no way of finding out. Currently, we measure progress using the 'Gross Domestic Product' (GDP), which counts all economic growth as "progress" without examining its effect on our society and environment. This means, for instance, that the more trees we cut down and the more fish we sell, the more the GDP grows, even as our natural resources are depleted.

'What we measure and count is a sign of what we value as a society'

Increases in crime, gambling, accidents, and pollution all make the economy grow. And while we count harmful activities as "progress" in the GDP, we ignore the value of volunteer work and unpaid work in households, simply because no money is exchanged.

In fact, the economy can grow even if our actual standard of living is declining, if inequality is growing, if our society is less peaceful, if we are more stressed out, and if our environment is becoming degraded. Clearly not all growth means a better quality of life. The problem is that until now we've had no other way of measuring 'genuine progress'.

However, there is now an historic opportunity in Glace Bay to assess our real strengths and weaknesses - and in so doing to determine our aspirations for the future of our community.

The new measure of progress that we are developing in Glace Bay is the 'Genuine Progress Index' (GPI) - an idea evolved from the limitations of the GDP. The GPI looks at how we spend our money rather than simply how much we spend, and can therefore better evaluate our quality of life by looking at the costs and benefits of different types of economic development. **This is part of a commitment to 'sustainable development' - a pledge to preserve our environment and quality of life for our children.**

'No-one knows better than those who actually live and work in Glace Bay what is important and what is needed here'

- which is why volunteers from a wide variety of community associations in Glace Bay have identified five sectors that are 'Genuine Progress Indicators' of our quality of life. These are:

- The Well-being of Our Families and Households
- Our Communities - our volunteer and care-giving networks
- The Quality of our Jobs
- Peace and Security
- The Ecological Footprint

For example, what is

- The value of our volunteer work, unpaid housework and childcare?
- The cost of underemployment and the stress of overwork?
- The costs of crime?
- The costs of pollution and the depletion of our natural resources?

These are all vital issues that are invisible in the GDP.

We will not stop here: - Using the structures of community participation that we have set up we can also develop indicators to help us assess our standards of health and education, and we can build strategies of community development designed to ensure a genuinely prosperous future for our children.

This pilot project in Glace Bay is a first step in introducing the GPI to communities throughout Nova Scotia - and is therefore a unique opportunity for citizens in Glace Bay to pioneer the move towards more genuine prosperity in the whole of Canada.

Above all, this project is a way of working together to learn more about ourselves and life in our community - ensuring that we enter the millennium with a set of genuine indicators of progress to help us chart a healthy and productive future in Glace Bay.